

**Handbook T-X**

**CIERMMI Women in Science**

**Humanities and Behavioral Sciences**

**MARROQUÍN-DE JESÚS, Ángel**

**OLIVARES-RAMÍREZ, Juan Manuel**

**VENTURA-OVALLE, Dulce María de Guadalupe**

**CRUZ-CARPIO, Luis Eduardo**

*Coordinators*

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# **ECORFAN CIERMMI Women in Science**

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## **Volume X**

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The Handbook will offer volumes of selected contributions from researchers who contribute to the scientific dissemination activity of the Colegio de Ingenieros en Energías Renovables de Querétaro A.C. in their areas of research in Humanities and Behavioral Sciences. In addition to having a total evaluation, in the hands of the directors of the Colegio de Ingenieros en Energías Renovables de Querétaro A.C., the quality and timeliness of its chapters, each individual contribution was refereed to international standards (RESEARCH GATE, MENDELEY, GOOGLE SCHOLAR and REDIB), the Handbook thus proposes to the academic community, recent reports on new developments in the most interesting and promising areas of research in the Humanities and Behavioral Sciences.

**MARROQUÍN-DE JESÚS, Ángel. PhD**  
**OLIVARES-RAMÍREZ, Juan Manuel. PhD**  
**VENTURA-OVALLE, Dulce María de Guadalupe. MsC**  
**CRUZ-CARPIO, Luis Eduardo. BsC**

Coordinators

# CIERMMI Women in Science T-X Humanities and Behavioral Sciences *Handbooks*

Colegio de Ingenieros en Energías Renovables de Querétaro A.C. – Mexico.

October, 2021

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## Prologue

In this handbook you will find poured, new knowledge, compiled in book chapters, written by a vast diversity of researchers from multiple places of the republic, with topics of different nature referred to the humanities and social sciences. You will discover topics of great interest, including some topics related to sports.

Historically, women have had a complicated path for their education, therefore, they have had a delay in scientific participation, however, the Amazons of knowledge have always existed, Hypatia of Alexandria is the first woman mathematician of which there is a record, which means that through time these innovative and intelligent women have been present in all times, and in turn have had to make their way and have fought for an equal role in the scientific and labor field until today.

In recent decades, the idea has been promoted to girls and young women the possibility that they can choose any career that interests them, without distinction, having the possibility to enter the wonderful world of discovery and find satisfaction leaving a scientific legacy for current and future generations.

Worldwide, UNESCO reports that women researchers worldwide are only 30% and constantly multiplying, because they have become increasingly involved in this work of scientific development, in order to make scientific contributions that help society and allow the potentialization of resources for growth in various areas of science.

Being a good scientist, is not a matter of gender (Salas, 2017), it is a matter of ability and the desire to be a facilitator of life for all.

*PONCE-CARBAJAL, Nancy  
LÓPEZ-WALLE, Jeanette M.*

## Introduction

The Colegio de Ingenieros en Energías Renovables de Querétaro A.C. (CIER-QUERÉTARO), and its chapters of Renewable Energy, Industrial Maintenance, Mechatronics and Informatics, technical sponsors of the International Interdisciplinary Congress on Renewable Energy, Maintenance, Mechatronics and Informatics, CIERMMI 2021 has as general objective to establish a space for discussion and reflection on issues related to the areas of: renewable energy, industrial maintenance, mechatronics and informatics with the participation of students, teachers, researchers and national and international speakers, promoting the formation and consolidation of research networks. Contributing to provide a space for dissemination and discussion of the presentations of students, graduates, academics and researchers, representatives of various higher education institutions, research centers in our country, as well as educational institutions beyond our borders. Promoting the formation of research networks between different institutions. Offering a space for undergraduate, master's, doctoral and postdoctoral students, in which they can present the progress of the research they carry out in their different educational centers. Providing a space in which study groups and members of academic bodies, linked to the curricular program of renewable energy, industrial maintenance, mechatronics and computer science careers, can present the research work developed within their institution and in collaboration with other national or international educational institutions. Establishing a training space for the attendees, through the development of specific lectures and conferences.

This volume, Women in Science T-X-2021 contains 8 refereed chapters dealing with these issues, chosen from among the contributions, we gathered some researchers and graduate students from the 32 states of our country. We thank the reviewers for their feedback that contributed greatly in improving the book chapters for publication in these proceedings by reviewing the manuscripts that were submitted.

As the first chapter, *Gutiérrez, Mejía, Terán and Acuña*, present Prototype of an electronic system for innovation in the Papillomavirus test registration process, as the second chapter, *Arizmendi, De La Torre and Meza*, will talk about Women as literary creation: a diachronic-representative journey, as third chapter, *Arteaga, Alvarado, Castañeda and Torres*, present Intellectual biography of Latin American academic women, as fourth chapter, *Ramírez, Díaz and Figueroa*, propose Flipped classroom a model for autonomous learning, as fifth chapter, *Ponce, López and Méndez*, as the sixth chapter, *Otero*, developed Educational innovation through techno-pedagogical tools in virtual education, as the seventh chapter, *Juárez, Silveyra, Aguilar and Cuevas*, will discuss Necessary pedagogical innovations: university internationalization initiatives and virtual environments in front of COVID-19, as the last chapter, *Quitl, Nava And Jiménez*, focus on Comparison of adaptation and family cohesion among adolescents with and without suicide risk in Tlaxcala.

*MARROQUÍN-DE JESÚS, Ángel*  
*OLIVARES-RAMÍREZ, Juan Manuel*  
*CRUZ-CARPIO, Luis Eduardo*  
*VENTURA-OVALLE, Dulce María de Guadalupe*

*Coordinators*

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## **Chapter 1 Prototype of an electronic system for innovation in the papillomavirus test registration process**

### **Capítulo 1 Prototipo de un sistema electrónico para la innovación en el proceso de registro de la prueba de Papilomavirus**

GUTIÉRREZ-ENRÍQUEZ, Sandra Olimpia†\*, MEJÍA-ARREDONDO, Norma Isela, TERÁN-FIGUEROA, Yolanda and ACUÑA-ARADILLAS, Jorge Martín

*Universidad Autónoma de San Luis Potosí, School of Nursing and Nutrition, Mexico.*

ID 1<sup>st</sup> Author: *Sandra Olimpia, Gutiérrez-Enríquez* / **ORC ID:** 0000-0003-2719-766X, **CVU CONACYT ID:** 215601

1<sup>st</sup> Co-author: *Norma Isela, Mejía-Arredondo* / **ORC ID:** 0000-0001-5251-0414, **CVU CONACYT ID:** 865578

2<sup>nd</sup> Co-author: *Yolanda, Terán-Figueroa* / **ORC ID:** 0000-0002-6118-639, **CVU CONACYT ID:** 78254

3<sup>rd</sup> Co-author: *Jorge Martín, Acuña-Aradillas* / **ORC ID:** 0000-0002-3169-2623, **CVU CONACYT ID:** 1127068

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S. Gutiérrez, N. Mejía, Y. Terán and J. Acuña

\* sguetierr@uaslp.mx

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## Abstract

The present work aims to show the results of the effectiveness of the prototype of an electronic system for innovation in the registration process of the Papillomavirus test. This is a technological innovation project, carried out in a University Health Center in which 32 records of patients who underwent test during the project execution period were included. The system was implemented by all the nurses who work in the Women's Care Module. Three dimensions were evaluated: structure (official indicators), process (registration) and results (staff satisfaction with the management of the system). Thus, the electronic system meet the structure indicators established by Official Mexican Standards. The percentage of completeness of the records was high in three sections: entry into the system, identification of the unit and HPV molecular biology. Most of the staff are satisfied with the handling of the electronic system, so it can be concluded that the prototype of the electronic system was effective in recording the information. Its design and implementation will make the work of health personnel more efficient.

**Information technology, Papillomavirus, Nursing records, Nursing process, Uterine cervical neoplasms**

## Resumen

Objetivo: mostrar los resultados de la efectividad del prototipo de un sistema electrónico para la innovación en el proceso de registro de la prueba de Papilomavirus. Metodología: Se trata de un proyecto de innovación tecnológica, realizado en un Centro de Salud Universitario en el que se incluyeron 32 registros de pacientes que se realizaron dicha prueba en el periodo de ejecución del proyecto. El sistema fue implementado por la totalidad de enfermeras que trabajan en el Módulo de Atención a la Mujer. Se evaluaron tres dimensiones: estructura (indicadores oficiales), proceso (registro) y resultados (satisfacción del personal con el manejo del sistema). Contribución: el sistema electrónico cumple con los indicadores de estructura establecidos por Normas Oficiales Mexicanas. El porcentaje de completitud de los registros fue alto en tres apartados: ingreso al sistema, identificación de la unidad y biología molecular del VPH. La mayoría del personal está satisfecho con el manejo del sistema electrónico, por lo que puede concluirse que el prototipo fue eficaz para registrar la información. Su diseño e implementación permitirá hacer más eficiente el trabajo del personal de salud.

**Tecnología de la información, Papilomavirus, Registros de enfermería, Procesos de enfermería, Neoplasia de cuello uterino**

## 1.1 Introduction

Sexually transmitted infections (STIs) have a major impact on sexual and reproductive health worldwide and are considered to be among the five leading causes of medical care in adults; every day, more than one million people contract such an infection. Human Papillomavirus (HPV) infection is one of the most common STIs and the World Health Organization (WHO) estimates that more than 290 million women worldwide are infected with the virus. Annually, high-risk oncogenic HPV causes 528 thousand cases of cervical cancer and 266 thousand deaths (World Health Organization, 2019). In Mexico, in week 53, in the month of December 2020, 32 new cases of malignant cervical tumor were diagnosed, 15, 929 of mild and moderate cervical dysplasia and 2, 231 of severe cervical dysplasia, the states that registered the highest rate were Jalisco, Veracruz, and Oaxaca; the accumulated volume of cases was 2,246, (Secretary of Health, 2020). In relation to the latter, the decrease in service provision as a result of the SARS-CoV2 pandemic should be considered.

Persistent infection with high-risk HPV (types 16 and 18) is the necessary cause of the disease; these types are present in more than 70% of all cases of cervical cancer (General Directorate of Health Information, 2019). Thus, since 2009, molecular HPV testing was implemented in Mexico as a strategy of the Timely Detection of Cervical Cancer (DOCACU) program to increase the effectiveness of cervical cancer screening and as one of the means of primary detection in women aged 35 to 65 years (Apud, 2013).

One of the lines of action to improve the DOCACU program is the development of Health Information Systems, which aim to increase the quality of care and processes, through new technologies that contribute to the efficiency of procedures, clinical records and early diagnosis (Pan American Health Organization, 2016; Apud, 2012; Diario Oficial de la Federación, 2007). Health personnel, specifically nurses, are involved in the timely detection of cervical cancer by taking the HPV identification test. However, problems have been reported in the legibility, accuracy and completeness of the data (Gutiérrez-Enríquez *et al.*, 2017), which hinders both administrative processes and patient care, as well as the delivery of timely results. For this reason, it is necessary to design and implement new systems that make the activities performed by service providers more efficient and help increase the quality of the health program. For this reason, an electronic system was designed to register the HPV or Papilomavirus test result request and report form, through a technological innovation process project, with the purpose of systematizing the information, having a database and reliable reports of the users, reducing waiting times and improving the follow-up and location of the patients in case of finding positive cases, which require immediate localization. Based on the above, the objective of this study is to show the results of the effectiveness of the prototype of an electronic system for innovation in the Papilomavirus test registration process.

## 1.2 Methodology

Technological innovation project, carried out in a university health center in San Luis Potosi, S.L.P. Mexico. It started in phase 1 and ended in phase 5 according to NASA's "Technology Readiness Level" technology maturation stages (NASA, 2017). According to the National Council of Science and Technology of Mexico (CONACYT), it is a technological development project, which is defined as the systematic use of knowledge and research directed towards the production of materials, devices, systems or methods including the design, development, improvement of prototypes, processes, products, services or organizational models (CONACYT, 2019).

PHP (Hypertext Pre-processor) an open source language, specially designed for web development, was used to program the software. For access, a unique key and password were provided to each user, who entered the system through a web page. Because the prototype was in the testing phase, an internal test of the system components was performed, so that its application would be similar to its final application in more advanced phases according to the TRL methodology, for which reason only 32 records of patients who were scheduled for HPV testing during the study period were used. Four professionals who make up the entire staff of the Women's Module, whose function at the health center is to perform this type of test, participated using the prototype. Personnel who were not directly involved in the Timely Detection of Cervical Cancer (DOCACU) program were excluded.

Three instruments were applied for data collection that evaluated three fundamental aspects of the system: a) structure, with a checklist, including interoperability, processing, interpretation, confidentiality and security of the electronic records; b) process, with an observation guide to verify the recording of data in the electronic system carried out by health personnel; it is based on the instructions for filling out the format: "high-risk human papillomavirus (HR-HPV) test result request and report" issued and used by the Secretary of Health of San Luis Potosi, Mexico; and c) result, with a survey of satisfaction with the system, in which questions were asked with Likert-type answers: (1) not satisfied, (2) not very satisfied, (3) regularly satisfied, (4) satisfied and (5) very satisfied. For the analysis of the health personnel's satisfaction with the use of the system, three dimensions were established: structure, process and result, as shown in Table 1.1.

**Table 1.1** Criteria evaluated in the satisfaction of users with the use of the electronic system

Dimension	Evaluated system criteria
Structure	Completeness of the system Ease of access Immediate availability Data security Clear screens Allows integration Accuracy in recording
Process	Ease of data entry Menu: easy to use Menu: fulfills functions Speed Ease of operation Updating of records Does not accept missing data
Result	Usefulness as an administrative tool Adaptability to staff needs Usefulness to improve quality (service) Time saving Legibility of the record Completeness of the record Accuracy of the record

*Source: Own elaboration*

The electronic records system was divided into 5 sections for analysis: system login (user and password), patient identification (CURP: Unique Population Registry Code, name, entity of birth, municipality of birth, age, usual residence, local phone, cell phone, email and affiliation), alternate contact data (name, address, entity, municipality, local phone and cell phone), unit identification (institution, entity/delegation, jurisdiction, municipality and medical unit) and molecular biology for HPV detection (type of test, first time or subsequent, date of previous study, date taken, reason for detection, sample to be sent to the laboratory, name and RFC of the sample taker).

Data processing was carried out with the IBM® SPSS® Statistics 22 statistical package, which was used to organize the data. The project was approved by the Academic Committee of the Faculty of Nursing and Nutrition of the Autonomous University of San Luis Potosí and the University Health Center. The participating professionals signed a letter of informed consent and the confidentiality of the data was guaranteed.

## 1.2 Results

Table 1.2 shows, in terms of structure, that the electronic system complies with most of the guidelines established to guarantee the processing, confidentiality, interpretation, security and use of standards and catalogs of electronic health record information, complying with the guidelines of the Mexican Official Standards: NOM 024 SSA3-2010 based on electronic health record information systems. However, it does not comply with the indicators for requesting diagnostic aids and communication support, since due to the stage it is in, it does not yet have interoperability with the laboratory in charge of analyzing the samples.

As can be seen in Figure 1.1, the results of the registration process, in the section on entry into the system, the percentage of compliance was 100%. In the patient identification section, 40.6% of the data were incomplete and 59.4% were complete. In relation to the alternate contact data, 6.3% of records were not made, 50% were incomplete and 43.7% were complete. Regarding unit identification and molecular biology for HPV screening, 100% were complete. On the other hand, the results of health personnel satisfaction with the use of the electronic capture system showed that the majority of participating health personnel expressed satisfaction in each dimension: structure (54.2%), process (53.6%) and outcome (64.3) as shown in Figure 1.2.

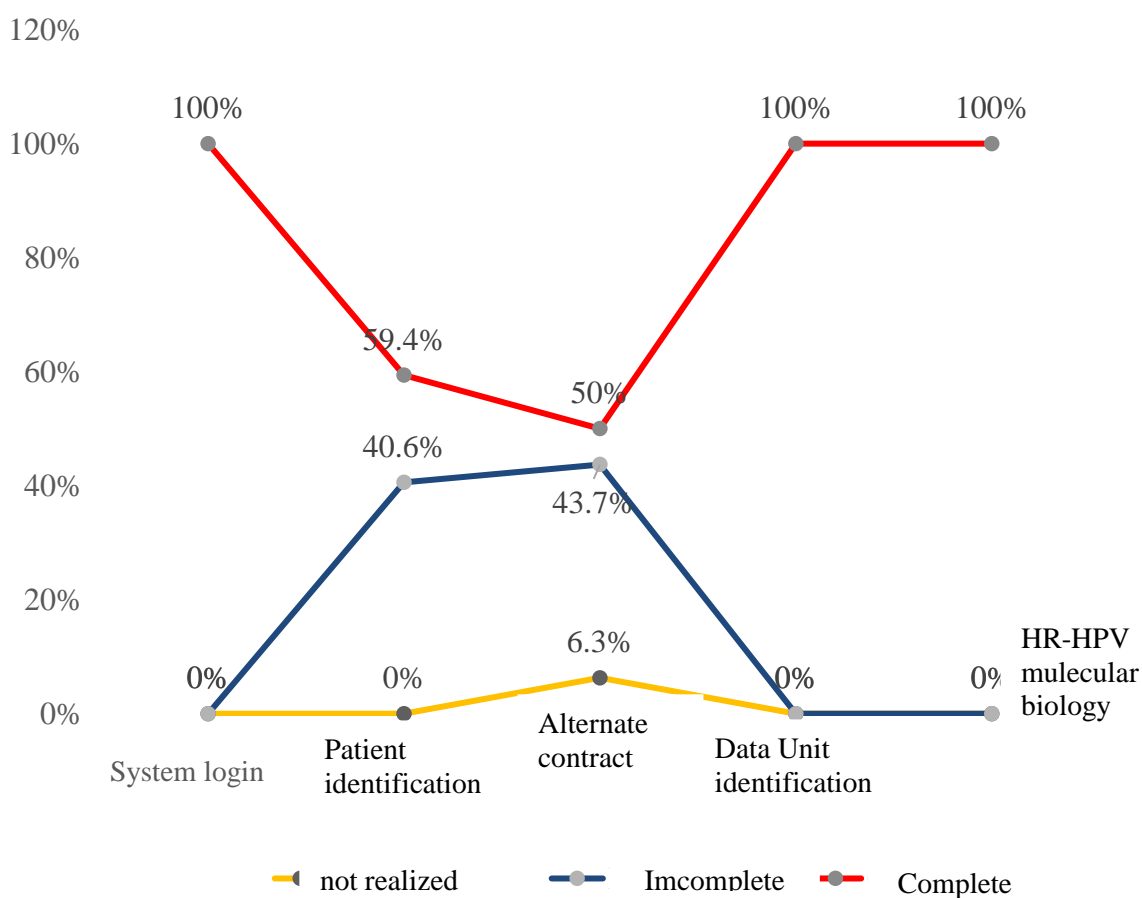


**Table 1.2** Characteristics of the electronic system based on the indicators of the Mexican Official Standard

Indicator	Observations	Compliance
Infrastructure	Computer equipment, printing and internet connectivity.	Completes
Security	Access through username and password	Completes
Authentication	Identifies users and each health professional. Authenticates users before allowing access.	Cumple
Request for diagnostic assistants	Allows registration of results. Present past and current results. Identifies the person responsible for generating results.	Does not complete
Clinical communication support	Maintains communication with laboratory. Sends request to recipient (laboratory). Receives notification of request received.	Does not complete
Clinical information management and review	Creates electronic single request form. Displays patient identification (screen). Uniquely identifies healthcare staff.	Completes
Demographic data management	Stores established identification and demographic data.	Completes
Record and update medical history	Validates filling with the minimum information, displays and classifies data chronologically.	Completes
Patient directory	Has a directory (patients) that allows their identification and location.	Completes
Report generation	Generates request records and daily reports for printing.	Completes

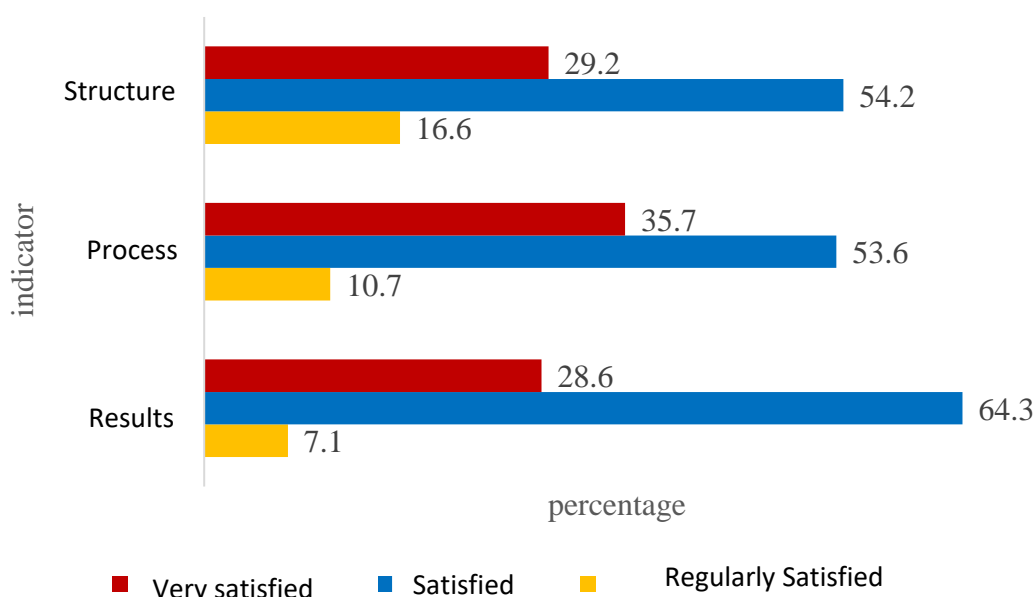
Source: Instrument for the evaluation of the structure of the Electronic System based on Norma Oficial Mexicana-024-SSA3-2012, Electronic registry information systems for health. Health information exchange.

**Figure 1.1** Evaluation of the capture process of the prototype of the electronic system for recording HPV test data, according to the official format of the Mexican Ministry of Health



Source: Instrument for the evaluation of the structure of the Electronic System based on Norma Oficial Mexicana-024SSA3-2012, Electronic registry information systems for health. Health information exchange

**Figure 1.2** Health personnel satisfaction with the use of the electronic system: structure, process and outcome



Source: Instrument for the evaluation of the structure of the Electronic System based on Norma Oficial Mexicana-024SSA3-2012, Electronic registry information systems for health. Health information exchange.

Table 1.3 shows that the majority of health personnel (75%) are satisfied with the structure indicators, the sections that stand out in this area being: "ease of access, clear screens and allows integration". The service providers are also most satisfied in the process indicator and the most outstanding items are: "easy to use menu, speed and does not accept missing data". In the outcome indicators, most of the staff (75%) are satisfied and the most outstanding items were: "usefulness as an administrative tool, adaptability to staff needs, usefulness to improve quality, readability, completeness and accuracy in the record".

**Table 1.3** Satisfaction of health professionals with the use of the electronic system for recording data from the HPV request and results reporting sheet based on the dimensions of structure, process, and outcome

Criteria	Level of satisfaction		
	Regularly Satisfied %	Satisfied %	Very Satisfied %
<b>Structure</b>			
System completeness	25 (1)	50 (2)	25 (1)
Ease of access	25 (1)	75 (3)	0
Immediate availability	25 (1)	50 (2)	25 (1)
Data security	25 (1)	50 (2)	25 (1)
Clear screens	0	25 (1)	75 (3)
Allows integration	0	75 (3)	25 (1)
<b>Process</b>			
Ease of data entry	25 (1)	50 (2)	25 (1)
Menu: easy to use	0	75 (3)	25 (1)
Menu: fulfills functions	25 (1)	50 (2)	25 (1)
Speed	0	75 (3)	25 (1)
Ease of operation	0	50 (2)	50 (2)
Updating of records	25 (1)	50 (2)	25 (1)
Does not accept missing data	0	25 (1)	75 (3)
<b>Result</b>			
Usefulness as an administrative tool	25 (1)	75 (3)	0
Adaptability to staff needs	0	75 (3)	25 (1)
Usefulness to improve quality (service)	0	75 (3)	25 (1)
Time savings	0	75 (3)	25 (1)
Legibility of the record	0	50 (2)	50 (2)
Completeness of the record	0	25 (1)	75 (3)
Accuracy of the record	25 (1)	75 (3)	0
	0	75 (3)	25 (1)

Source: Instrument for evaluation of the outcome (satisfaction) of the electronic system

## 1.4 Discussion

The evaluation of the information system was carried out through three main indicators: structure, process and result, which were analyzed to verify its functioning and effectiveness in relation to the quality of the records for HPV sampling. The structure complies with most of the criteria established by the national agencies that regulate electronic health record information systems (Official Journal of the Federation, 2012), however, being a prototype in stage 1, according to the "Technology Readiness Level" methodology (NASA, 2017), there are some applications that need to be developed such as the request for diagnostic aids and clinical communication support, where information flows are maintained between health personnel directly related to a clinical event, such as sending the HPV test request to the recipient (laboratory), notifications of request received and generation of results reports (Official Journal of the Federation, 2012), it is expected that a next phase, the system will meet these indicators.

This development and its structure provides a reference for the design of medical information exchange systems between health institutions, since it is important to adopt intelligent algorithms that support the management of large volumes of data and the diversity of standards, terminologies and vocabularies to convert electronic health systems into intelligent entities capable of assisting in decision-making (Ojeda-Carreno et al., 2017). On the other hand, the ergonomics of the systems (organization, content, interface and technical) and usability (quality or characteristic of a product), allow for a detailed evaluation of their use and application, through the established criteria of the regulatory bodies (Almeida *et al.*, 2016).

In relation to the evaluation of the process indicator of the electronic system, an improvement is identified in the HPV test data registry, since it is a tool that allows having quality information, which in addition to being used for capturing patient data and generating daily reports, can be used for inter-institutional information exchange and health personnel can immediately consult information related to DOCACU program users. The above is related to the results of a study on health information systems, which concluded that electronic information systems are tools that collaborate in the fulfillment of institutional objectives, in addition, the authors mention that, in order to have a high quality clinical information platform, the primary capture of data should be as expressive as possible (Pinheiro et al., 2016). Thus, the use of information technologies allows the collection, systematization, structuring and storage of valuable information in the health sector (Oliveira et al., 2016).

The records of HPV tests performed in the electronic system are legible and accurate, however, there were some variations in completeness, with greater frequency in the fields corresponding to the following: e-mail, another telephone and another address, due to the fact that the users did not provide these data to the health personnel, which are of great importance for their location; this lack of information is not attributable to the electronic system, but to the patients who attend the screening, since the system is programmed to be filled out in a mandatory manner, therefore, it is necessary that the decision makers of the health institutions implement the necessary measures so that the patients have the complete identification data before the test is performed.

Regarding the results of the electronic system, the health professionals who participated expressed satisfaction in the three dimensions: structure, process and outcome, similar to what was obtained in a study on the success of information systems, where it was concluded, that user satisfaction is due to the way the system is structured and its operational quality, responding favorably to electronic health record systems (Yu and Qian, 2018). The health professionals who participated in this study also pointed out, in general, the difficulties in following up cases and locating users who require treatment, which coincides with a study on the expectations and level of satisfaction of users of the DOCACU program in Mexico, which concludes that having a quality program can achieve greater attachment on the part of program users, since they also perceive limitations with the follow-up of care (Gutiérrez-Enríquez *et al.*, 2016).

The migration of records from a manual system to an electronic one provides numerous advantages, since the use of information technology can considerably improve the quality of programs and services, as has happened in other contexts where the implementation of new technologies is the best solution to obtain effective results, since a large volume of information is handled (Orduña, 2014). One of the advantages of having an electronic system is the possibility of concentrating user data in an accessible, easy-to-use site that optimizes resources. The participants in this study stated that they were very satisfied with the use of the new work tool; however, a slight resistance to the transition from paper to electronic formats and to the use of new technologies was observed; this result is similar to that found by some authors in studies on barriers in the implementation of electronic health record systems, where the main problems were the following: user resistance, lack of training and education, and concern about data security (Gesulga *et al.*, 2017).

On the other hand, other authors conclude that the incorporation of electronic tools in the work of the nursing professional, promote and assist in decision making to improve quality, therefore, health care providers have the ability to positively influence the quality of care, through the successful implementation of this type of information tools (Walker, 2016; Wani and Malhotra, 2018). Likewise, the strategy for adoption is crucial in the success of these innovations, as hasty implementation can result in lack of acceptance by users of the systems.

One of the main challenges of this prototype is to increase the training period for health personnel, as well as to provide direct accompaniment, with the aim of ensuring user acceptance and obtain a good implementation over time, as pointed out by researchers on the subject, where they mention that to ensure successful acceptance; it is necessary to track the long-term effects, since as the staff becomes familiar with the system, the workflow improves (Baumann *et al.*, 2018; Dos Santos and Marin, 2018), likewise, they mention that coping with complexity in the implementation of new systems requires greater horizontal communication and collaboration (Sidek and Martins, 2017), as information technologies have a strong effect on organizational change and productivity (Ben-Assuli, 2015).

## 1.5 Conclusions

The electronic system had a positive impact on the records performed by health personnel based on the three indicators evaluated: structure, process, and outcome. The benefits expressed by the participants with the use of the platform were the following: ease of use and access, attractive and user-friendly system, good information management and decreased time spent on records, however, it is recommended to continue with the development of the system and implement it in other work scenarios, with the purpose of reaching the commercialization phase.

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## Chapter 2 Women as literary creation: a diachronic-representative journey

### Capítulo 2 La mujer como creación literaria: un recorrido diacrónico-representativo

ARIZMENDI-DOMÍNGUEZ, Martha Elia†\*, DE LA TORRE-ZEPEDA, Laiza Sabrina and MEZA-GARCÍA, Gerardo

*Universidad Autónoma del Estado de México, Humanities Faculty, Mexico.*

ID 1<sup>st</sup> Author: *Martha Elia, Arizmendi-Domínguez* / **ORC ID:** 0000-0002-5162-4855, **CVU CONACYT ID:** 202204

ID 1<sup>st</sup> Co-Author: *Laiza Sabrina, De La Torre-Zepeda* / **ORC ID:** 0000-0002-9021-2802, **CVU CONACYT ID:** 367514

ID 2<sup>nd</sup> Co-Author: *Gerardo, Meza-García* / **ORC ID:** 0000-0003-4428-9312, **CVU CONACYT ID:** 277320

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M. Arizmendi, L. De la Torre and G. Meza

\* [mearizmendid@uaemex.mx](mailto:mearizmendid@uaemex.mx)

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## Abstract

The following essay intends to show women presence in some scripts, mainly narrative, by authors and shea uthors who decided to recreate them in the literary artwork. The twentieth century will be the encompassing component and some of its decades, the encompassed parts; the classification follows the desire to deepen into those mentioned she characters which are already part of the Mexican literature history. We began the journey in 1903, with *Santa*, by Federico Gamboa and ended in 2009, with *The Insurgent* by Carlos Pascual, covering a little the present century, given the importance of some script that address the framework theme: women as a literary creation. We consider it important to mention that the contributions of this study are two, one, as its name indicates, highlighting the presence of women as creation in the literary work and, another, which, although we know, according to the Language Royal Academy LRA, character is a masculine noun, we propose, at least in this essay, to create the female noun: SHE CHARACTER, WOMEN CHARACTER as new noun.

## She character, Woman, Literary creation, Narrative, Mexican literature

### Resumen

El presente ensayo tiene la intención de mostrar la presencia de la mujer en algunos textos, principalmente narrativos, de autoras y autores que decidieron recrearla en la obra artística literaria. El siglo XX será el componente englobante y, algunas de sus décadas, las partes englobadas; los cortes obedecen al deseo de profundizar en esos mencionados personajes femeninos que ya forman parte de la historia de la literatura mexicana. El recorrido lo iniciamos en 1903, con *Santa*, de Federico Gamboa y lo terminamos en 2009, con *La insurgenta* de Carlos Pascual, abarcando ya un poco el presente siglo, dada la importancia de algunas obras que abordan el eje central del trabajo: la mujer como creación literaria. Consideramos importante mencionar que los aportes de este estudio son dos, uno, como el nombre lo indica, resaltar la presencia de la mujer como creación en la obra literaria y, otro, el que, aunque sabemos, según la Real Academia de la Lengua, personaje es sustantivo masculino, proponemos, al menos en este ensayo, crear el femenino y hablar de PESONAJA.

## Personaja, Mujer, Creación literaria, Narrativa, Literatura mexicana

### 2.1 Introduction

When we decided to write this chapter, it was difficult to determine the line, the paradigm that we should follow to talk about something close, linked and meaningful to women and about women. First we thought about mentioning the she writers who had stood out in literature field, those who opened a gap with their creations and keep up with writers; and not only in literature, but in the other arts; after that establish an author-work-reader relationship but this complicate our work development, because our virtual target audience should have been aware of many theoretical positions in order to avoid to turn this work into a long list of theorists and its contributions, even though we will do it in a measured way; in order to avoid being pedantic and crass or offensive. We had several interests but finally we decided to make a recount of she characters created in the literary work that have left their mark on effective Mexican history.

It was necessary, to define the time line to follow; the twentieth century will be the benchmark and, some of its decades, the synchronic parts that will show the origin, evolution and purport of those she characters created in the Mexican narrative, a privileged genre in our work. We must clarify that discontinuity will operate in those synchronous parts, because it would take a hundred years and, not precisely *One Hundred Years of Solitude*, to mention at least one work from each period.

Select narrative as the study genre implies talking about both a novel and a short story; despite this, we will make some considerations as an allusion to some works of another genre in which such an important figure is set; therefore, our objective is to display women participation as a character in literary artwork.



Thus, we make the initial hypothesis as a question, which will be solved once this is achieved. How are women characterized and what their condition in the literary work is? We refer to the character of the works analyzed in this study because, although in some of them the man also appears, we only include him to highlight her performance in the plot development.

We won't divide the work by chapters because of the subject developed, in addition to the fact that there is only one section that we call Development Board; Sorting will be given only by the years in which the author and work appear and later we will analyze woman involvement and how each writer typify her as a character within his work.

We are going to start from a preliminary involvement, and it is precisely that when praising woman, both the real and the conceived in the literary work. Even if the LRA states that "character" is a masculine noun and it isn't a feminine form, from now on we will state SHE CHARACTER.

## 2.2 Development board

To begin our journey, we are pleased to talk about *Santa*, Federico Gamboa's masterpiece, who in 1903, breaks schemes and typified a woman who is a victim of her context and society, still influenced by the nineteenth-century conception; *Santa* is a literary work which conceives the pure and holy woman, just that this Santa rewrites history and that society that despised her so much, and becomes in her victim. Regarding to *Santa*, Joaquina Navarro believes: "Critics have appreciated well, in some cases, the disproportion between the moral-sentimental tone of this novel and the accumulation of sensual realism detail that fills the text" (1992, p 217).

In that case, *Santa* stands as one of the first she characters who have left a mark in Mexican literary history because, seen from here and now, she is not the vulgar despised prostitute but the redeemed woman who bravely emerges from her condition, not acquired, but imposed.

The lead Santa, tells her story to the first customer she meets, telling him that she is from Chimalistac, she has lived for a while with her mother and siblings who work for a factory. Her customer is Marcelino Beltrán, a military man who, doesn't care about her history, and tells her to surrender to him. But because of her carelessness, Santa becomes pregnant, Marcelino does not care, and she has an abortion, as a result of this her family throw her out of their house (Guerrero, 2010).

During the '30s decades Nellie Campobello was the woman who was known in Mexican cultural environment who, without a doubt, unveiled the deepest female soul recesses:, who not only ventured into the letters, but in other cultural spheres, she was a choreographer, dancer, poet and storyteller and knew how to show her talent in each of these tasks. She is an example of what a woman can achieve, in a hostile environment.

In 1931 she published *Cartucho* considered by some as a novel and by others, including the author herself, as a stories collection, as mentioned in the subtitle. A girl character is the one who tells the stories recreated in the Mexican Revolution settings; Despite being a girl, her visual capacity and her photographic memory provoke a contradictory acceptance and, that is Campobello's contribution: to create an infant character with a privileged mind, who manages to catch the reader of all times, because this work updating recreates horizons.

Nellie Campobello achieves with this Revolutionary narrative something that few authors from the same literary movement have achieved: to establish a time and a location that the lead of a fast-passing war occupies, like a pendulum that swings to the rhythm of the cries in favor of the Genara. commanding. Sometimes is the Villa general, other times the Carranza one. In the midst of all this cries and shooting, the girl's gaze, fills with imagination sometimes the one who is already dead, other times the one who is about to die., It is the girl's voice which flows among the soldiers' legs and the high horses' legs, so that's how the little Hermes, jumps from one point to another and lets us fall into cartridges men and women's point of view from the war center (Reyes, 2015).

From the fifties onwards, specifically during the sixties, Mexican narrative recreates a series of elements which appear in literary works, which characterize and distinguish them from those of other periods; for example, the subject matter locations, the chronological break, the different points of view, the freshness in the language, the subject matter incorporation with differentiated updated treatment. This happened not only in Mexican production, but also in the rest of Latin America literature.

In 1954, Carlos Fuentes created a woman who is to become a mold for other she characters, but also for other works and even other literary genres. In "Tlactocatzine in a Flemish Garden", a story included in *The Masked Days*, the author has taken a historical passage from Mexico and from those who constituted it: Carlota and Maximiliano and places the story in Mexico City, in an old house with a large garden with a peculiar smell and, through historical awareness and historical characters fictionalization use, brings Carlota to the present; he defines her as a ghost, an entity lost in time, time in which she has remained, and which brings her back to her beloved to win him back, through the letters she writes to him and leaves them here and there. :

24 Sept. [...] the evergreens scent has spread throughout the house; its intensity was particular in the bedroom. There I waited for a new missive, another sign from the old woman. [...] Again, the brush of long and stiff skirts near the door; there was the letter:

"My beloved:

*The moon has just risen and I hear it sing;  
everything is so indescribably beautiful "* (Fuentes, 2001, p. 43).

The evergreens flowers, give the idea of perennially, of suspension in a defined time and location, the bedroom and the garden,

[...] I was dozing in the armchair, facing the window, when I was awakened by the evergreens scent. Without hesitation I stared into the garden – there she was, detaching the flowers, forming a bouquet in her small yellow hands ... She was an old woman ... She must be eighty years old, at least, but how did she dare to enter, or where did she enter? as she detached the flowers, I looked at her: slim, dry, dressed in black. Skirt down to the ground that was gathering dew [...] (Fuentes, 2001, p. 40).

Time is perpetuated in those places, where Fuentes concretized the story and determines the characters immutability depiction because, according to Emmanuel Carballo, "[Fuentes] is capable of painting a situation with a few sentences and to give life to a character who can tell a story and skillfully weave a plot, who knows how to graft fantasy world onto reality in such a way that the reader is unaware of the instant in which he passes from one world to another" (1986, p. 102).

By 1955, Juan Rulfo formally appeared on the Mexican literary scene with the first of his novels *Pedro Paramo*, "I CAME TO COMALA because they told me that my father, a certain Pedro Paramo, lived here" (2002, p. 9). In this novel, despite the fact that we can say it is novel with a male character, woman presence manages to unite the actions and place herself far above the development of the story.

The she characters in this work are outlined apparently by Rulfo, weak and submissive, but in represented objectivities layer, there are details which allow us to determine that their actions are very different. Dolores, Susana, Damiana, Dorotea, Eduviges, despite being subdued at times, Rulfo pulled the story strings and made men develop different attitudes from the first one. Susana washes her "guilt" in the water and like a phoenix she emerges clean from the mud to become the archetype of a new she character, besides, she locks herself in a kind of madness to procure and defend herself from others, thus deceiving her father, who commits incest with her. A smart woman.

Susana San Juan hears the wind blowing against the closed window. She is lying with her arms folded behind her head, thinking, listening to the night sounds; she is listening how the night comes and goes without stillness, the sounds dragged away by the wind breath. Then it stopped. They have opened the door. [...] Through her closed eyelids she glimpses the light flame[...] - Is that you, father? (Rulfo, 2002, p. 92).

Dolores, "Doloritas" succeeds Juan Preciado, her son, look for the absent and powerful father and make him place him by her side with her remorse, Pedro Páramo never manages to forget her. Eduviges Diada takes Dolores Preciado place, the night of her wedding with Pedro. The two of them deceived him.

>> I willingly, eagerly slept with him. I strapped myself to his body; But the day before revelry had left him exhausted, so he spent the night snoring. All he did was wrap his legs among my legs.

>> Before dawn I got up and saw Dolores.

I said:

>> --Now, you go. This is already another day (Rulfo, 2002, p. 23).

The play begins with a man arriving to Comala, Juan Preciado, sent by a woman, Dolores Preciado, his mother, and ends when Pedro Paramo dies, along with a woman, Damiana. “He leaned on Damiana Cisneros's arms and tried to walk. After a few steps he felt, pleading inside: but without saying a single word. He struck a sharp blow against the earth, and he was crumbling as if he was a pile of stones” (Rulfo, 2002, p. 123).

With this we reiterate what had said above, women in this work gain an unprecedented strength when they stand next to a man, even as powerful as the one who gives this work's title, Pedro Paramo. But they do not become opaque, they do not shrink; on the contrary, they increase their stature, enhance their being and increase their selves, their being as woman.

In 1958, Carlos Fuentes raises women's status. In the depiction he makes in *Where the Air is Clear*, the entity appeared in “Tlactocatzine...” becomes a city; the theoretical paradigm changes, it leaves behind the stylistics and takes up semiotics. We no longer speak of a character, but of an actor. The city comes to life and it is assumed as action.

[...] Come. Let yourself fall with me in our city lunar scar, sewers handful city, vapor crystal and mineral frost city, city all our forgetfulness presence, carnivorous cliffs city, immobile pain city, immense brevity city, stopped sun city, long burns city, simmering, city with water around its neck, rogue lethargy city, black nerves city, three navels city [...] woven in amnesia city, childhoods resurrection, feather incarnation, bitch city, famished city, sumptuous village, leprosy and sunken cholera city. Incandescent tuna. Wingless eagle, stars snake. Here it was our turn, in the most transparent region of the air, what can we do. (1973, pp. 20-21).

The same happens in *Ojerosa y pintada*, Agustín Yáñez's novel in which a year later, 1959, places the actor, the city, devoid of identity. He speaks of Mexico City beset by technological advances, but, at the same time, he places it in a place close to the gods, as the gods daughter, as the poetry: *Erato* (Ἐρατώ, 'loving') Muse; lyrical poetry (love song) muse. The city, despite its condition, dresses up. “OJEROSA y PINTADA HAS BEEN CONSIDERED as Mexico City's x-ray at the end of the fifties with its splendors and miseries. From this perspective, the numerous characters appeared on it are conceived as a social class archetypal representatives, of a way of thinking, of a generation” (Marquet, 1989, p. 9).

In 1962 and 1964, Fuentes once again depicted she characters who have transcended their time and location barriers, *Aura* and “The doll queen”, respectively. In the first, “The anima idea is present, considering that according to Jung, when *Aura* / *Consuelo* merges with *Felipe*, a kind of continued life is produced, immortality perhaps, because *Felipe* and *Consuelo* are tied to their past, that is why she tries to rebuild her life and remain forever young” (Arizmendi, 2008<sup>a</sup>, pp. 38-39).

Fuentes makes this work as a singular one, the story turned to one self, included in a latent self, it is this, a short novel or *nouvel*: “READ THAT ANNOUNCEMENT: AN OFFER OF THAT NATURE. It is not made every day. You read and reread the add, It seems to be addressed to you, to no one else” (2002, p. 11). *Felipe Montero* goes to the advertisement address, after the first time in which he could not enter. He finds a dirty and smelly house, the old smell of confinement, makes him uneasy, because, in addition, the smell emanating from the garden stuns and intoxicates him; It should be noted that *Montero* arrives at the house located in *Donceles 815* to apply for the job and he is hired to review and make a kind of the *Genara Llorente's* memoirs palimpsest, it was incomplete due to his death.

Fuentes turned to his own tendency to link the new with the old, once again the flowers, the evergreens appear in this work, in which he condenses in a present-past time and in which, he also merges location in the home-garden. Likewise, by condensing time, the author manages to fuse two characters into one, *Aura-Consuelo* and, on the other hand, *Felipe-Llorente*.

The house is the encompassing place; location where the actions take place, the garden is where, at some point, Felipe believes he sees someone, hears something distant, like an echo, something like murmurs, perhaps moans, which indicates someone else presence, but it is not, nothing exists, everything is "created" by Consuelo to trap him through Aura, in that splitting, in that alter ego Consuelo /Aura.

Felipe finds himself trapped, he believes he is in love with Aura and he looks for her; They have fortuitous encounters, just at night, in the dark, and when he kisses and touches her, her whole body gives off an smell just like the garden plants, currently he recognizes something disconcerting in Consuelo [...] you repeat to yourself when they are together, they always do exactly the same thing: they embrace, smile, eat, talk, enter, leave at the same time, as if one imitated the other, as if the one existence depended on the will of the other”(Fuentes, 2002, p. 52). What strange forces do these women possess that manage to make everything at the same time?

If we refer to Fantastic depiction, we are going to find the “explanation”, because “Fantastic is projected in the every day’s order rupture, narrated stories present the extraordinary in the facts conditional on the characters and provoke in them panic irruption when facing the unknown”(Meza, 2010, p. 41).

In this way, relationship between the characters becomes attractive for the reader, who has to contribute with his capacity and create his reading process to penetrate in and from work’s structure; which, written in the second person, in a "you" that hides the "I"; in a suggested narrative technique, in which writing is the hook to fish one of those characters: Felipe, then:

Characters settle Aura novel: Consuelo, Aura, Felipe and General Llorente (now dead) could only be emerged from the Fantastic Mexico: two apparent female lives which are closely intertwined, in a dark and lying existentialism, to that of an ambitious young historian Consuelo's husband, hired to write General Llorente’s memoirs: symbol of a continuity of a story buried in t Donceles 815 house in the downtown neighborhood. A love, suspense and death story where the monotonous routine course announces the unusualness of the dream-nightmare, fueling Felipe and Aura’s enlivening passion (Santibáñez, 2009, p. 60).

In "The doll queen" we find a narrative told in the first person; the story is simple: a young man who remembers his childhood with a girl named Amilamia, who is curious, enigmatic and mischievous, who gives him a card so that he will always remember her. The story consists of five parts given in present and past, the latte as a memory resource. “I CAME BECAUSE OF THIS ODD CHARTER, made me remember her existence. I found it in a forgotten book whose pages had reproduced a childhood calligraphy spectrum [...] from among the stained pages it felt [...] with the atrocious Amilamia calligraphy: Amilamia did not forget her little friend and you seek me as he drew it” (Fuentes, 2000, p. 27).

The drawing/memory relationship makes the young man (narrator) try to seek her, he thinks about how she will be like, how she will be after so long, at about fifteen years; He returns later to the place where they used to play and this is where the story begins to make sense, as he will find something out of the ordinary that will totally change his life.

Carlos - at the end of the story we have understood this is his name - goes to the described place on the little card drawing, crosses the pines and eucalyptus trees park, the great avenue and, finally, arrives at the house, knocks, insists and only "one hoarse and ragged breathing can be heard on the other side; the laborious blowing, accompanied by an unpleasant stale tobacco smell, seeps through the cracked hallway boards” (Fuentes, 2000, p. 34). The narrator's great surprise, who is on the other side of the door? Who is breathing with such difficulty? After several visits to the house, the narrator, between enchantment and reality, discovers the little female friend:

[...] Below-, the little leather and worsted shoes; and in front, at my fingertips., the small coffin raised on blue drawers decorated with paper flowers [...] that immobile and serene face, framed by a lace coping, drawn with rose-colored pigments: eyebrows that faintest light brush traced, closed eyelids, real, thick eyelashes, casting a faint shadow on cheeks as healthy as in the park days. Serious, red lips, almost on Amilamia's pout when she feigned anger so that I would come over to play. Clasped hands to her breast. A giggle, identical to the mother's, strangling that pasta neck. Small white shroud of the infant body, clean, docile (Fuentes, 2000, p. 45).

Clearly, the old, Amilamia's parents, desiring to have their daughter forever, had kept her intact, just like the girl the narrator had met. The little girl was there, as died in life, wrapped in silk and cotton. The author perpetuates eternal return idea when he maintains that this woman will always be alive; the girl who pretended to be part of the narrator's life, now she only remains as an ephemeral memory.

In this way, the doll / queen is a petrified, cold doll, but that will undoubtedly bring relief to the grieving parents, who, so as not to lose yesteryear image, their so beloved, in a rite in the middle of idolatry and egotism, they turned her on a wax doll, into a queen doll.

After almost a year and, with the memories close to the surface, Carlos returns to the house, which once witnessed of the two little ones meetings determined to be friends forever and, among the overwhelming rain and the yesteryear thoughts, he discovers the truth:

On the wheelchair, that deformed girl rests a hand on the knob and smiles at me with an unattainable grin. Her chest hump turns her dress into a curtain for her body: a white cloth to which, however, the blue plaid apron gives a coquetry air [...] she combs her straw coppery, permed hairstyle, without staring at me with an inquisitive and desolate air, but also yearning, now mysterious.

- No Carlos. Go away. Do not come back!

And from the house I hear, at the same time, the old man's squeaky wheezing, getting closer and closer:

- Where are you? Don't you know you shouldn't answer calls? Come back!

You devil's beast! Do you want me to spank you again? (Fuentes, 2000, pp. 47-48).

He was face to face with someone unknown, an elderly woman, dirty, smelly, withered and worn, in her twenties, who looked at him with suspicion and at the same time with affection. She was Amilamia, but not the girl, but the broken old maimed woman she had become and whom her parents hid because of her physical defect and their shame; She was not the one he had wanted to meet, she was a crippled and sick old woman. She in between games, tries to keep Carlos, she has recognized him from the first time she saw him and tries to relive the days spent by his side.

In "The doll queen", the old, rotten and dirty smell, triggers the narrative action that gives life to a ghost, a specter wandering through life and knowing that the only possible way is to live in hidden. And it is true, mystery sense given by the artistic pole emerges directly in the reader and he also hesitates, he also experiences fear, these conditions are from Fantastic narrative, because "The Fantastic is the hesitation experienced by a being who only knows natural laws, before an apparently supernatural event" (Todorov, 2006, p. 24).

"The doll queen" is a text in which time seems to have been stratified nationalized and, therefore, the eternal youth idea, of life continuity is evident in the narrative, therefore in perdurability is enclosed a detention form, and a past / present fusion, a recurring subject matter in the Fuentian narrative. Eternal youth is the framework theme which prevails in the short story, life continuity despite the curse of time, the return to the yore days. Jung (1990) he calls this anima, because according to him in the imperishable is enclosed a form of desire to stop time, a past / present fusion.

The anima constitutes a form of decadence and personality given through dreams, dreams, and reverie, factors that make women an animated being to conquer their own soul, their selves idealization. Beside that woman there is always a man who acts as a accomplice, who in order to idealize her needs to be a fully dreamer to make her live. This is what happens with all the characters in the works analyzed here.

It is essential, at this point, to refer to a work, which although its presentation source is not narrative, it is closely related to the discourse presented here, in accordance with the archetypal she characters in Mexican literature. In 1975, a year after the "peculiar" Rosario Castellanos' death, Fondo de Cultura Económica publishes *Just Like a Woman*, a dramatic work, farce, as the author herself defined it, in which she recovers her woman raised idea as in previous narrative works. From this work, we will only refer to the second act to show the author's concern for the women role played for a long time and which sometimes they continue to play.

The quoted work has an individual character; the appellative structure is given in three acts, which are independent one from the other not in thematic but structural, because in some way they are linked, each one can be read without separately. In the first act, women from and in a beauty, salon symbolize body love and control they have over it.

In the second act, in our concern, a journey through history, women who have shaped it appear; although, as the author says, “not all of them are there / nor are they all there”; for these reason "we see the Spaniards through La Malinche, the Post-colonial through Sor Juana, the war of Independence through Josefa Ortiz de Domínguez, the French occupation through Carlota, the Mexican Revolution through Adelita" (Szurmuk, 1994, p. 42), we have added a brief comment to this quote “the presence of Rosario de la Peña’s poetry”.

These women are not the only leads in our country history, but they are those mythologized in and by social Mexican imaginary which looks at them through the lens with which the greats, the heroes, are appreciated, to the heroines. “Just Like a Woman characters travel through Mexican history and the world as leads. The author who brings to life the historical consciousness, this to past and fro present, anticipating a future to come, and brings them to here and now, as participants” (Arizmendi, 2010b, p. 262).

Rosario Castellanos traverses through Mexican history, through some of its leads, the last one appears, not in rank order, but chronologically, in addition to the one given by the author, Adelita, a woman dedicated to her country Revolution cause, who would be fortunate as the previous ones, each one in her time and place, to be mythicized in songs, clothing and ideology. In *Just Like a Woman* she is, perhaps, the only one who grieves, her sorrow because the undertaking result of in which she participated; Adelita says, when maintaining a dialogue with Sor Juana:

ADELITA: There was one role, many roles. With the modest ten million deaths sum we achieved to turn Mexico into an immense a file cabinet.

SOR JUANA: But history books mentioned Revolution triumphed.

ADELITA (*Pointing at Lupita.*): If It has triumphed, would this girl be here? Would there be girls like her, with parents like hers, with sweethearts like hers, with lives like hers?

LUPITA (within herself): Well, when I compare myself with you, with any of you, I think I was very lucky and that I won the lottery and that [...] (1975, pp. 136-137).

In the third and last, different ways of life appear for women in a world in which modernity traps them, they feel released. and all they do is to repeat schemes, adding value to men and declare them as himself owner. and theirs.

Therefore, on one side, the author has titled this work as farce, thinking literature should not be rigorous and stuffy, but rather as a mere collection of joyful experiences which demonstrate its condition; the satire and irony present in *Just Like a Woman* pages express women’s feelings in there, through a playful language that goes from humor to pathetic feminine reality, as Patrice Pavis points out, “Thanks to farce, spectator takes revenge on reality conditioning; the beatings and liberating laughter defeat inhibition and tragic anguish, under the mask of buffoonery and poetic license”(1998, p. 205).

In any case, we do not stop thinking Rosario Castellanos wanted to show women imposed role and creates another in which she was the lead of herself, in which, without a doubt, she would perpetuate herself as a woman with her achievements and failures, in which she established herself as the owner of herself, her thought and her body, although the truth is that by getting ahead of her time, a limited and expired Western time, Castellanos leaves us with a great breath of hope and at the same time problematic, because her literary work it leaves a possibility, a vein, which, as Galeano thinks, is an America’s open vein.

We insist on our conception of this work: “Rosario Castellanos respects these women investiture, preserves them as history has perpetuated them; respect the myth we have about them; however, through irony, she changes their role and presents them as flesh and blood women, like any other person, with legitimate time knowledge in which they lived, but from their selves" (Arizmendi, 2010b, p. 264).

In the 1950s, Emilio Carballido, better known as a playwright, due to the quality and quantity of works he produced in all theatrical genres, prints on narrative an original stamp; Although with few works, he showed his already known versatility; in these, she characters harden their temperament, overturn their passions and create conflictive environments. We will refer succinctly to his narrative work, in which, without a doubt, he also showed virtuosity signs in creating characters that are repeated over and over again, not only in the writers work, but also in other writers production, who in them glimpsed true archetypes. We will begin mentioning the author's contributions, which we limit to his novels characteristics identification, these represented objectivities always appear in Carballido's treatment: location, characters, technique, extension, etc.

Writing technique is linear and leads the reader to reveal hidden meaning in it.[...] Location is the province, the town or the field, and in this landscape presence is privileged. [...] Subject matter revolves around experience, initiation, knowledge, sexuality and love. [...] Time is short; "leisure" time, usually vacations. [...] Framework theme is given by love conflicts between the characters. [...] Style gains strength when location is related to characters and, thus, creates a mystery residence, as a suspense technique. [...] Works relevance is product of the relationships established between, holydays and love conflicts, with knowledge, love and sex or, well, first sexual encounter. [...] Most of the characters are middle-class youth. [...] Woman appears as conflicts generator, and man takes part in those (Arizmendi, 2008, pp. 43-47).

Women in these works do not act alone, men also appear, who are involved in these conflicts, which they did not create, but were imposed on them. Adan and Martha in *The Rusty Weathervane*, Max and Isabel in *The North*, Mario and Hortensia in *The Sun*, Lisardo and Angela in *The Devil's Visitations*. These are the characters created by Carballido to develop the story, along with the male characters which also works as support for it.

In his second novel: *The golden rooster*, Juan Rulfo's work, inconsiderate by critics because they attributed it film script features, appeared in 1980 in the golden rooster and other cinema scrips, presented and edited by Jorge Ayala Blanco. Due to the "Remarkable plasticity, literary language density, the story structure and the depiction the characters make), *The golden rooster* a novel rich in purely literary elements, even its structure shows it to us" (Arizmendi *et al.*, 2007, p. 13).

In order to reinforce this novel idea, we express what Jorge Ruffinelli affirms, regarding the content of this work: "The golden rooster's eighty pages written as a narrative, offer the opportunity to search for literary more than documentary value in them. And it has it, in the story setting or in many, generous prose moments" (1980, p. 56).

All the aspects, regarding this work genre, are supported by what Milagros Ezquerro affirms:

Interestingly, the golden rooster, despite being considerably shorter than Pedro Paramo, is more a novel than Pedro. I will explain. Traditionally, novel exhibits a narrative thread that develops, more or less in a linear way, throughout the textual location, focusing the lead interest: this is what strictly the golden rooster does. (1992, p. 685)

A lot has been said about this or that character who seriously impacted reader audience who was discovering him during the literary work reading process; Here, they become role models, entities that, even though they are fictitious, give life to others in different scripts and in different locations. Literary characters of all times have served as raw material to create other cultural products: sculptures, statues, paintings, but what interest us here is the literary work characters emergence, those who, due to their universal value, have transcended location / temporary borders. and settle in the here and now as if they were the first.

This is particularly the case of Bernarda Cutiño, the Caponera, character in the golden rooster, a woman who creates paradigms and contradictions universe within which she rises as an archetype, in that her primordial condition that engages and captivates the other, the others. who considers her as illusion, fortune and life giver?

Bernarda Cutiño, possess a strong, virile sounds name; It is a man's name and she is like that, abrupt, rapturous, manly.

Such Bernarda Cutiño was well known singer with a lot of thrust and great ability to cope; such as she sang, she was good at making a fuss; although she did not allow to be touch by anyone. Strong, beautiful and supportive and changeable mood ... Her body was agile, hard- and soft-bodied, and when she raised her arms, her breasts almost burst her bra ... A great temperament woman, wherever she went she brought her cheerful air, in addition to being good at singing Mexican corridos and old songs (Rulfo, 1992, p. 337).

And so it is, Bernarda is not intimidated by anything, to nobody, her position as a festival singer makes her always be beside the mariachi, other she singers, men, because she is the one who orders and decides what should be done ; she, with her name loaded with masculine sonorities, with her bad temper make her looks like a brave mare guiding her horses. And this depiction is not accidental, according to Carlos González Boixo.

This is why, most of the she characters in Rulfo's work also have matriarchal features: Dorotea, Eduviges, Damiana, Dolores, in Pedro Paramo, Felipa in "Macario", Natalia's mother in "Talpa", Matilde Arcangel in the short story with her name; [however] Of particular relevance is the mother character in the golden rooster. Her existence and, after his death, her memory, will be decisive (1992, p. 556).

The Caponera possesses an unbreakable strength which just she could destroy, because, as we have declared, her passion freedom, she lives for and to, she just could break it and that is when she decides to live first with Lorenzo Benavides and later with Dionisio Pinzon, her soul made, because in them there is a complement, what Pinzon does not possess, is possessed by Bernarda and vice versa. It might be thought that by stay isolated with Dionisio in Santa Gertrudis 'house, Bernarda is annihilated, but this is not the case, she decides when to stop and does it in an unexpected way. Her passion for drinking causes her to have two deaths, one symbolic and the other real.

Bernarda dies while she is alive, it is a metaphorical death, because when she is consumed little by little by alcohol, confinement and a sedentary life, she feels inert; she will be the woman tied to the chair, subjected to man and glued to alcohol; Her freedom lies in the will loss, in the absence of being she; and she is not free, actually that fate is precisely the filter that drags her into her being emptiness.

Bernarda's fall is precipitating by herself, night after night she drugged submerged by alcohol, which she has always consumed "The glass was filled again, now from the bottle t the waiter left on the table. Bernarda Cutiño tasted it and then slurp a long, eager sip. It seemed to revive herself. " (Rulfo, 1992, p. 345), just that this time there wouldn't be hope, Bernarda is petrified and finds the only pleasure she can have; her death is imminent, but it is "her" death, she looks for it and finds it "- She cannot wake up... She is dead" (Rulfo, 1992, p. 357).

The Caponera is one of Rulfo's great achievements, because "More than a brave and untamed heroine, or the typical tomboy who draws on national cinema folk comedy, La Caponera proposes a new archetype. She is the free female and reluctant to any sedentary life way" (Ayala, 1986, p. 15).

The latest 20th century narrative in Mexico undergoes substantial changes, both in genres and in language; now in the topic treatment, now in the mass media resources use, as well as in other arts loan to literature. As a social criticism, this period works is interested in power, sexuality, feminism, family values, heroes' demystification and in pursuit of personality, myths or characters with whom it can transcend.

From this perspective, in 1997 and 1998, Rafael Ramírez Heredia and Rosina Conde created two works: With M from Marilyn and The Genara, respectively, in which female presence can be appreciated from their title.

The first develops a story, one of many which have been written about Marilyn Monroe's life and presence, in which she was named with "Beauty", "Goddess", "the Great Lady", the "Blonde" and many more qualifiers, she was connected to José Baños: an obscure film director, who idolizes her and who discovers a tremendous plot against her. "The Goddess entered to another restroom, the one in at her the Hilton hotel room" (Ramírez, 1997, p. 187). "Will the Great Lady be aware of what she knows? " (Ramírez, 1997, p. 243). Monroe's personality reaches unexpected airs, in such a way that not only in social imaginary, but in the work itself, this she character is worthy to be a model, as a cast for others who will come later.



Rafael Ramírez Heredia presents, with that subtle writing that distinguishes him, the difficult path Marilyn Monroe actress had to overcome, at the same time he narrates the Goddess visit to Mexico City, when she was going through one of many difficult moments of her life. Her passion for drugs and alcohol, destroyed one of her most faithful marriages, with Arthur Miller.

This is a singular work, a novel in which detective tone, and true story are combined, all framed in a fictional story, in which a national cinema era and an episode in Mexican life current moment is portrayed.

Bermúdez stayed at his table, but José did not, he sought Dolores complicity, he had met months before during Mother's sin filming, where he hanged about with Libertad Lamarque. Dolores's eyes were luminous [...] Something watery existed in them, as if they were going to cry because of the Indian compliments, or for the enormous memories carried around (Ramírez, 1997, p. 80).

Work in its appellative structure, is divided into three main sections, with suggestive names: Ever since, by then, then; the first is developed into 10 sections unnamed, only with a Roman numeral, in the second just 4 and the third 7, narrated from a third singular person: him. "The smell of lotion running across the body, the iridescent hair from the Vaseline touch, the gazed that emerged from between the shirt, the newspaper opened in his hand, José Baños moved his face forward without leaving his gaze fixed somewhere" (Ramírez, 1997, p. 15).

In *The Genara*, Rosina Conde manages to create a woman as a product of today's society, in which technological advances unleash certain existential crises in Genara, a she character with masculine sounds name who unfolds to create a story, her story. Through telephone use, the fax, the e-mail and the rumor, the author updates the epistolary genre and is knitting the story Genara wants.

Tijuana, BC, September 6, 1989

Dear Luisa:

You don't know the torture! Help me! I really don't know what to do. Fidel looked for me and has threatened to come for me if I don't arrange to meet him elsewhere. What should I do in these cases, little sister? Well by the time you read this note, who knows what had happened to me then.

I love you.

Genara (1998, p. 64).

Conde immortalizes a typical woman or atypical? which represents all those who are involved in life's whirlwind they had to live but also that society has imposed on them. The author's narrative is impregnated with voices, which rescues from an environment, the jargon used by population, a mixture of cultured and popular and in which rumor predominates; become into writing technique.

In this work, Conde presents Tijuana as a city in slow development, in contrast to Mexico City, because the latest generates a rapid development which traps like a whirlwind its inhabitants -"And it is just the location in which play actions and its characters depiction are located. The author describes these cities, the first as a consolidation of customs and traditions and the second as the unbridled capital which destroys everything" (Arizmendi, 2010, p. 4).

In this work foreshadowing there is a particular situation, it was written in pauses; the author sent "short stories", short stories to a Tijuana newspaper; reader audience was made up, for the most part, by women, despite the fact that Conde never thought of a defined target reader. This led that sector comments created curiosity and increased newspaper's circulation. Suddenly, its setting took place: when all its parts were integrated, it became a novel with specific and well-known features in literary theory field, as is well noted on the back cover of the 2006 edition:

*The Genara* by Rosina Conde has been considered one of the epistolary genre novels on the Internet founder. Originally published in releases in *Diario 29*, *El Nacional*, in Baja California, *The Genara* became a collective work inspired and fostered by its readers rumor and comments, who spoke of her as if she was an acquaintance in the neighborhood. (Conde, 2006).

Although it is true epistolary genre has become a bit out of use, it is also true the author updates it and makes use of technological advances to achieve an intimate communication way, as Puig did at the time, Torri and Kafka, to name writers from different eras and latitudes. “The Genara, when it appeared in 1998, marked an indefinable in Mexican narrative voices the slow repetition. Expressing itself in the most traditional female writing genre, epistolary, it was at the same time the first novel on the Internet” (Gargallo, 2006, p. 9).

The Genara careful reading indicates that presentation path is narration, although the way oscillates between intimate, personal writing and mass communication, just as the cities alluded vivid representation, one of them passive, quiet, intimate, and the other active, collective, dangerous, huge.

As part each artistic / literary work structure are engravings, photographs, images or drawings, according to Genette paratexts, which not only illustrate or color a section, but also is part of each work meaning. As Umberto Eco points out,

Visual communications range from institutionalized systems (diagrams, traffic signal code, etc.) to communication processes (from photography to painting), to others of a cultural nature (iconographic codes), up to the different grammars, syntax and lexicons that seem to govern architectural communication and the so-called objects language” (1989, p. 35).

The 1998 edition was presented on the cover a very colorful photograph or engraving that, in addition to the title and the author's name, showed a man and three women. When we read the work and associate content to this engraving, we infer it is about Genara's father, mother and sister: young women have a very clear, natural smile; man has a forced one and woman a distracted face, a distant look; although we also read between lines that it is not, certainly a happy family, as we know, it is disintegrated, even if they live together, because “Rosina Conde's narrative shows a world subject to fundamental masculine values, where she character, irreverent to any family ties and any authoritarianism way reaffirms itself in opposition to the reality it confronts” (Gómez, 1990, p. 62).

Rosina Conde creates she characters capable of facing their destiny; They are capable of questioning the role imposed on them by a patriarchal, macho and dominant society which limits them and demands a “decent” woman behavior, so they are the ones who take control of their lives and social imaginary reality that assigns them, despite having few opportunities for personal and social development.

Based on these roles, Gabriel Trujillo (1991) comments that Rosina Conde's leads works are:

Beings that grope, that stumble, but that come back again and again to rise, to continue struggling for a utopia glimpse, for a light at the end of the tunnel. Beings outraged by a system defined by master/slave formula and that despite the makeup changes still rewards or punishes according to the developed behavior by the victim / dumb animal, which continues to be, in most cases, these days (6).

To start the end of this short journey, as we announced from the first lines, we do not want to omit a work, which also breaks continuity, at least in this communication discourse, in which Fernando de Paso typifies a woman who is part of this country history, the Second Empire, which is taken from the formality status and typified on News from the Empire (1987), Empress Carlota.

From this work, Seymour Menton (1991) points out del Paso's great achievement was to hold the fish hook, the reader, so that he would not lose interest in the thematic approach which had been addressed in so many works, it is enough to remember the already mentioned story, “Tlactocatzine in a Flemish garden”, or Crown of Shadow by Rodolfo Usigli, scripts in which, as in this one, through historical awareness, the use of historical characters fictionalization, as a narrative technique and intertextuality brings Carlota to the present, whom they demystify and present as a flesh and blood woman suffering her own hallucination.

It is for the aforementioned reasons we prefer to mention this great novel separately, not only for its length, but also for its polyphony, thematic transcendency and literary history contribution, because Carlota has been part of, motive and subject of countless works, not only literary, but other arts.

As we have mentioned, this one shows an important historical excerpt, as Iser (1993) mentions, literary scripts always has a historical substrate, which gives to move in location sensation as if you belonged to that epoch; We become script co-executors, which we concretize as a remote past in a progressive present in which the author depicts a she character, but beyond paper being, a woman who knew how to be ahead of her time and be ideological inspiration from others, it is shown Carlota was a key player in Mexican identity creation, she mocked the Vatican and her royal dynasty, she fled from her reality to become a Mexican woman prototype.

Although it has been said *News from the Empire* is a fictionalized story, we can affirm that it is a historical / biographical novel, it should not be forgotten a condition of what is narrated is that it contains a verbal setting, of course, a fictitious one. action, a location, a time and some characters which carry out situations, most of the times, conflictive or, at least, entangled to be appealing to the reader. Miguel Angel García explains: “[...] a script that, based on events may occur or totally fictional (story), is transformed into a narrative, thanks to the writer’s style [...] through a coherent discourse, generally in prose of a certain length, destined to produce an aesthetic and referential effect on reader” (1998, p. 69).

Work define one from many women who defined social personality of the recently build Mexico. Carlota, a wealthy woman of high lineage, began her activity with a deep desire to stand out among her aristocratic family and forced Maximiliano to accept Mexican Conservatives offer, despite the fact he had progressive and liberal thoughts, which will lead him to defeat his job as the Second Mexican Emperor.

My dear Carla knows how to govern; without her the needy classes Decree would not have been approved. You saw landowners’ reaction... And ours have been only modest attempts to do justice to the peons ... The Empress tears up for men whipped to the point of bleeding, families starving, laden laborers of chains ... Mexico is the first country in the world, with my Empire legislation, which creates a protective peasant law (del Paso, 1987, p. 346).

Claudio Guillén (2005) mentions there are at least three constituent elements of a work which identify its genre: representative passage, form and pattern. In this way, *News from the Empire* presents a narrative passage “to the question of whether López had been the Judas who is intended to be him, the old general answered emphatically no, those besieged in Querétaro situation was desperate, hunger and typhus decimated them” (del Paso, 1987, p. 558).

According to its shape, work is structured into 23 sections that have, as title, the place and date where actions take place, ranging from 1867 to 1927, t year in which Carlota died, imprisoned in Bouchout Castle. The prose rhythm, in the first chapters, slow, measured, just like the actions development time; Querétaro’s siege time and the final struggle between republicans and imperialists accelerate the rhythm, as the tempo does; reader has to activate his reading process and process quicker its concretization.

Narration assumed by Carlota at the end of the novel, from Bouchout Castle, returns at a slow and cyclical rhythm, because the story which begins from this location in 1927, ends there, in the same year, which makes the reader suppose the whole story has been determined only by Carlota's narrative elocution.

Patters refers to speech tone used in the play, it is exalted as well as ironic; Emotional when it refers to war actions carried out: Ironic when it makes fun of something or someone. However, we will say that it is a fiction / fictionalized reality, in which del Paso mixes and recomposes discourses; on the one hand, of the historical characters who appear as actors in the play and, on the other, of those created by him in fiction, giving them voice to detail what could have happened. “Dialogue between history from present perspective and history from past perspective reveals a third dimension, that of the virtual, what-could-have-happened” (Guillén, 2005, p. 352).

The foregoing amounts to mentioning that technique used by del Paso in this exciting script is the result

of the interweaving between the present and the deferred [called] trace (gram). Trace is the absent in the present mark. Therein lies aesthetic miracle. [...] Difference is the difference between two play states. The present state (of speech or of facts) is different from what is absent, and it differs. [...] Writing is the difference from reality (Díaz, 2005, p. 36).

We close this literary itinerary, but we do not want to miss the opportunity to speak of two works, already belonging to this century, which present a woman made she character who, without a doubt, surpassed past and present barriers, due to the fact that she was ahead of her era emerging as a true archetype. We refer to *Leona*, by Celia del Palacio and *The Insurgent*, by Carlos Pascual who fictionalize Doña Leona Vicario, a fighter in the Independence War who was submerged in anonymity for so long and rescue her.

It is well known that, on our country Revolution Centenary and Independence Bicentennial celebrations, publishing companies, writers and other dependencies, undertook the task of producing works that confirmed the historical moment some of the recognized characters from national history. Many have had the official seal, rather, officialist, and others, fortunately, have shared History with history in a serious and professional way. Just to name a few, we mention *Matamoros*, the glow in the battle, by Silvia Molina, *Zapata* by Pedro Angel Palou, *The Insurgent*, by Carlos Pascual, *Addicted to the Insurgency*, *Independence War's women* and *Leona* by Celia del Palacio.

The latter, through exhaustive research in files, offices and other materials, the author rescues from the near anonymity Leona Vicario she was held and presents, in *Leona*, life, ideological and political activity detailed vision from the Mexican Independence's heroine, who after living in splendor, is persecuted, besieged and must take refuge in a cave where she gives birth to her first daughter.

She fell in a faint a few meters from the cave entrance. They accommodated her as well as possible, laying out a straw bed in the natural cavity depths. [...] María Leona Camila gave birth to a girl; a girl who was a lump of pink flesh [...] a creature who screamed, proclaiming her arrival in the world, without realizing she was already a fugitive when she was just born (del Palacio, 2010, pp. 226-227).

Later on, we will know the girl will be called Genoveva, in honor of Brabant saint who lived a long time locked in a cave, repudiated by society due to her beliefs, accused, among other "crimes" of bigamy. "What day is today? What is today's saint? "The third of January, Leona." - Then she must be called Genoveva. Like the Brabant saint" (del Palacio, 2010, p. 229).

This work define one of the many women who had helped from underground, first as part of The Guadalupe and then passionately to the Insurgent Mexican sake, this was María de la Soledad Leona Camila Vicario Fernández from San Salvador, simply known as Leona Vicario; wealthy family woman and of rancid lineage. Leona began her activity as a courier, selling her jewels, waxes and properties and, finally, alongside Andres Quintana Roo, her beloved husband, as an active combatant in the Southern army, under Jose María Morelos and Pavon command.

The author does typifies a she character, but beyond being made of paper, a woman who knew how to be ahead of her era and be the others inspiration, as it is shown: she was a key play in the conspiracy, she mocked the Holy Inquisition, she escaped from a jail, became a Insurgents courier and depict herself as an indigenous person to flee from Mexico City.

To reaffirm Celia del Palacio's perception, we turn to Leticia Mora Perdomo when she states that in order to determine the work-she character condition it is necessary to place oneself in fiction framework and historical story, in such a way that: "Two imaginary are together in explanation search: the one that has been traced in the file sources and that of the sensitivity, in another expectations horizon, look for traces that have not been able to recognize themselves and have remained silent. Past and present come together to give us an answer"(2011, p. 268).

This woman made she character is, in short, the model, the cast from which many Leonas will emerge, with the described in the work features, because we ask who would dislike being named with any of the epithets with which the author qualifies her?

As a result of the careful reading of historical data, Pascual recreates History from the virtual angle, what could have happened and creates a novel in which History and history meet, thereby trying to establish the limits between one and the other, well, we insist, a condition of what is narrated is it should contain a fictitious verbal setting, location, time and figures that carry out the actions, then

Literary work task is to imagine what could have happened and present it as a fictional reality, because the verisimilitude contract allows it, and this is literature's sine qua non. That is why the author imagines what does not appear in the official history, rather, what the official history has not wanted to show and makes it known from the artistic perspective with ironic truth flashes (Arizmendi and Meza, 2012, p. 74).

The Insurgent story begins with Leona Vicario's death and it is divided into the hearing's days, statements, letters and testimonies of multiple public life personalities between 1821, the year in which Independence was consummated, and 1842, the year of Vicario's death and, according to the author himself in an interview:

It is a novel that aims to save and recall female role in the struggle for Independence. She is a figure that has always fascinated me and all of us who have done journalism at some point share perhaps the admiration for Leona (Vicario), because she is considered the first female journalist in Mexico (Montaño, 2010, p. 5).

This novel structure is innovative, although its presentation passage is narrative, dialogue predominates as a theatrical play. It is divided into scrimption, three sections called days, an appendix, a Habeas Corpus and a chronology. The sessions assume recording the testimonies function of those who were summoned to testify about Leona Vicario's life and political activity. In the first section, Pascual dedicates the work to the memory of so many women who died in combat, shot, hanged, imprisoned.

In the three days:

In the declarant's parade there are Vicar detractors as well as those who extol her heroism, her dedication to the cause and her political participation after Independence as the first journalist woman in the country also the first woman to appear before Congress. As figures we have family members, servants, inquisitors, military and politicians, Güera Rodríguez, Lucas Alamán, Carlos María de Bustamante, Valentín Gómez Farías, Nicolás and Víctor Bravo, Santa Anna himself and, through a letter, to Juárez as well as to Sebastián Lerdo de Tejada presented as a law intern in 1842 but who, three decades later and already as president of Mexico, recounted the events (Portnoy, 2010).

The first testimonies day takes place on August 22, 1842 and begins with the Don Fernando Fernández de San Salvador statement, Leona's uncle. The second is on August 23, 1842, it was read a letter that Don Benito Juárez García sends to Leona Vicario. The third and last is from August 24, 1842, in which the State of Mexico ex-governor, Valentín Canalizo, speaks against Mrs. Vicario.

Under the haste to justify whether if the recently deceased heroine deserves a state burial and to be named Meritorious and Sweet Mother of the Nation, the commission instituted by Antonio López de Santa Anna must collect in three days enough evidence and votes from various personalities from Mexico of the 1840s for such proposals (Portnoy, 2010).

Included in the Appendix are "Notes made by Mr. Sebastián Lerdo de Tejada, Mr. President, thirty years later, in August 1872" (Pascual, 2011, p. 231). In the Habeas Corpus section, the author advocates for Doña Leona and, among other things, says:

I sat down to write *The Insurgent*, like this with an a, because she was a complex woman, as they all are. Because I am not surprised, she has lived persecuted because even now she feels like following in her footsteps. Because she was born as a daughter of the Enlightenment and died as a Romanticism symbol. Because she is the first female journalist in Mexico, the first to speak before the National Congress, and because I believe she is the only Mexican woman — unless some seasoned historian corrects me — who has been offered state funerals (Pascual, 2011, p. 242).

It is very difficult to find in literature she characters who have participated in the construction of Mexico as a nation, because that place was almost always destined for man; However, as we mentioned at the beginning of this essay, Carlos Pascual claims the role that Leona Vicario played in that construction and presents her in the actions that he sustained alongside the insurgent combatants. In this way, it is understood History is presented as a source for creation and thus the literary artwork arises.

### 2.3 Conclusions

We begin this essay with a diachronic journey through some works in which woman appears as a literary creation, from the 20th century dawn, with *Santa* by Federico Gamboa to some, from the present century, to conclude with *The Insurgent* by Carlos Pascual, although last century production is weighted, it seemed to us important to mention some of the current one.

When reviewing these works, we come to the conclusion authors have created she characters that, through activities and entanglements, dreams and longings, they share with their peers and establish themselves as winners, like those who live forever. This treatment of the woman in the works analyzed refers us to the presence of a *return back*, which allows her to be always her, to commit t man and to make both of them one, because equality is in them.

All this is described in a union environment in which the eternal return becomes relevant, as an eternal feminine, an always being, an always appearing as typical she characters in Mexican literature.

There is no doubt that authors and she authors writing has delineated archetypal she characters, those that are a cast for others and are repeated in different eras and locations, and that appear again and again, crossing borders and creating new possibilities for updating.

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## Chapter 3 Intellectual biography of Latin American academic women

### Capítulo 3 Biografía intelectual de las académicas latinoamericanas

ARTEAGA-CASTILLO, Belinda†\*, ALVARADO-SÁNCHEZ, Martina'', CASTAÑEDA-MENDOZA, Edith''' and TORRES-ALEJO, Andrea''''

†*Instituto Iberoamericano de Historia de la Educación y Memoria Escolar (IIHEME), Mexico.*

''*Benemérita Escuela Normal Manuel Ávila Camacho, Zacatecas, Mexico.*

'''*Escuela Normal de Chalco, State of Mexico, Mexico.*

''''*Universidad Autónoma Metropolitana, Iztapalapa, Mexico.*

ID 1<sup>st</sup> Author: *Belinda, Arteaga-Castillo* / **ORC ID:** 0000-0002-8229-0042, **CVU CONACYT ID:** 236396

ID 1<sup>st</sup> Co-author: *Martina, Alvarado-Sánchez* / **ORC ID:** 0000-0003-1739-095X, **CVU CONACYT ID:** 240448

ID 2<sup>nd</sup> Co-author: *Edith, Castañeda-Mendoza* / **ORC ID:** 0000-0002-7371-2936, **CVU CONACYT ID:** 242657

ID 3<sup>rd</sup> Co-author: *Andrea, Torres-Alejo* / **ORC ID:** 0000-0003-3940-8700, **CVU CONACYT ID:** 364510

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B. Arteaga, M. Alvarado, E. Castañeda and A. Torres

\* barteaga@upn.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 text that we present here constitutes the progress of a collective investigation that emerged in the inter-institutional seminar on the history of women's education *Aquelarre* (Coven), named as a metaphor of the power of women and as a way to summon and describe the heterogeneous and vigorous group of academics that conform it, and who meet to debate, reflect and take action in the violent times in which we are living.

From our first meetings, it was clear that the reason that brought us together was the need to understand—more deeply—the academic and Mexican women that we are approaching in this paper. But, in which way can we determine the main characters of these narratives? In what manner can we approach them? How to explain the plots these women have weaved to become the text they wanted to become?

To apprehend these complex stories, we opted for a multidisciplinary perspective that combines history with gender perspective and intellectual biography. From there we tried to decipher the women summoned to our Coven. They are the Mexicans Luz Elena Galván (educational historian, author of multiple investigations and researcher trainer; we are focusing on her in this presentation), Belinda Arteaga and Marcela Santillán, as well as Peruvian Lucrecia Janqui. All of them willing to assert themselves to make their emotions, rational choices, alliances, proclamations and sedition acts visible. All of this with the intention of breaking apart, and emerging in the midst of silence, prohibition and obscurantism as victorious women who make their own way as they walk (as the poet once sung [reference to song]).

## History of education, Academic, Women, Gender, Intellectual biography

### Resumen

El texto que aquí damos a conocer, constituye el avance de una investigación colectiva que surgió en el seminario interinstitucional de historia de la educación de las mujeres *Aquelarre*, llamado así en parte como una metáfora del poder de las mujeres y, en parte, porque convoca y describe al heterogéneo y vigoroso grupo de académicas que lo integran y que se reúnen para dialogar, pensar y actuar en los violentos tiempos en que vivimos.

Desde nuestras primeras reuniones, tuvimos claro que lo que nos unía tenía que ver con la necesidad de comprender a las mujeres que estudian y que se desarrollan en los ámbitos académicos de nuestro país. Pero ¿Cómo identificar a las protagonistas de estas narrativas?, ¿Cómo acercarnos a ellas?, ¿Cómo dar cuenta de las tramas que construyeron para ser lo que decidieron ser?

Para aprehender estas historias de suyo complejas, optamos por una perspectiva multidisciplinaria que conjunta la historia con la perspectiva de género y la biografía intelectual. Desde ahí intentaremos descifrar a las mujeres convocadas a nuestro *Aquelarre*. Ellas son: las mexicanas Luz Elena Galván, Belinda Arteaga y Marcela Santillán, así como Lucrecia Janqui de Perú. Todas ellas dispuestas a sentarse a la mesa para visibilizar emociones, elecciones racionales, alianzas, proclamas y sediciones al conjuro de las cuales crearon alianzas, irrumpieron en medio del silencio, la prohibición y el obscurantismo y gozosas partieron para hacer camino al andar, como alguna vez cantó el poeta...

## Historia de la educación, Academia, Mujeres, Género, Biografías intelectuales

### 3.1 Introduction

The history of women, in plural, was transformed in the second half of the twentieth century, enriched by works like Simone de Beauvoir's *The Second Sex* and by social movements pervaded by feminism in all its manifestations. Certainly, a breakpoint came with the awareness that gender was a social and historical construct, and that being a woman, beyond any anatomical signs (like having specific genitalia), was a more complex issue that involved symbolic and cultural structures. Women, as we know, live in patriarchal societies that are characterized by inequality, violence and exclusion. They coexist with—or rather live alongside—men, who are most of the time opposed to any change in this hierarchical order and to any alteration of the gender relations that make of them the *Pater Familia*, the owner, the one who expresses and decrees.

It is against this *status quo*, whose history is complex and has long existed (but can be changed), that diverse feminisms raised questions trying to clarify these gender relations, along with their historicity and their possibility for transformation. One way to contribute to this, from our standpoint, was to make these women visible; women who, from the academia, chose to create crucial works and to build better, wiser and –with it– happier worlds.

These women had to struggle with the usual hostility of a social context in which they were not really accepted, and in which their academic work was constantly questioned. Today, the work of these warriors (for so they are) has gained visibility. Aquelarre’s historians have summoned them to help us delineate those threads that allow us to reveal their unknown and enigmatic lives, all done from gender-based, historical and biographical perspectives.

With this objective in mind, we made choices. First, and this was the most difficult, our theoretical framework was based on a transdisciplinary conception. This conception was integrated by three aspects: a perspective focused on gender, the history of education –that takes from social and cultural history– and intellectual biography. These, put together, granted us a way to articulate the binary relationships, that are never simple nor direct, between subjectivity/objectivity, past/present, rationality/emotion, design/vital project. We were aware of the fact that disciplines like biography, and focal points like gender perspective, had to deal with academic prejudices that invalidated them and questioned their very grounds. Nonetheless, we accepted the challenge that comes with the stance we are taking in exchange for the possibility to navigate within symbolic universes that made possible for us to learn, thoroughly, about the life, achievements and struggles of the women that we are studying in this paper.

### 3.2 Rise and fall of biography: between life and the pen

François Dosse has studied the history, debates and methodologies of biographical writing. He has made clear that writing a life story is indeed difficult, but it is also “a privileged way to start reconstructing an age from its hopes and fears”, making evident that individuality is present as well [in that age]: “writing a life story is still an unreachable deed, and yet, it keeps pushing the desire to narrate and comprehend it” (Dosse, 2017, p. 15).

In the last century and a half, history as a discipline fought to gain a reputable place in the social sciences. As it was achieving it, biography was also getting close to legitimacy through its links with literature, and its use of intuition, emotion and subjectivity as valid instruments in research.

The debate about biographical writing used to put the biographer in the place of the novelist, something that, according to the paradigms of that time, placed her/him away from the paradigm of a social scientist. This caused the biographer to be looked down on by historians, even though we can see the biographer is now placed in the centre of “the more innovative historiographical trends” (Pereira, 2008, p. 462).

But, regarding legitimacy, exactly what difficulties has biographical writing experienced? Despite the peak of biography as a discipline in United States, France, England and Mexico, “there is still some resistance in academia to tackle this genre because it keeps being considered an inferior form since it focuses on just one life, considering the context as mere background” (Bazant, 2018, paragraph 5).

Nowadays, the theoretical and methodological scope of biography covers the reconstruction of a particular life, as well as the study of the roles and contexts in which the biographer’s story develops. In this sense, it tries to weave a bridge between history’s more tangible sources (direct recorded data) and narrative (that implies an imaginative effort). Biography is thus a text that stands as both authentic and versatile:

... biography demands the use of all kinds of sources, [...] the study of one life inevitably leads to learning about other lives and other stories. Virginia Woolf, based on her own experience as biographer, aimed to merge the part of “truth in its hardest form” (solidity like granite) and the ethereal brightness of personality (intangibility like rainbow). Woolf [in her essay “The Art of Biography”] talks about the fact, or truth, which is able to evoke and engender the historical data. This data, next to the subject, is turned into something alive, unique and creative; the subject brings the fact to life, and not the other way around. Through someone’s personal history, we can brighten the past in many ways. (Bazant, 2018, par. 7).

Approaching life writing can be difficult. Since life's stories are elusive, "we need to have a panoramic and educated vision, and at the same time use intuition to detect the more elusive elements" (Bazant, 2018, par. 41). In this respect, through her own experience, Aurelia Valero presents at least three obstacles she has seen biography facing whenever this genre is evaluated from its basis.

- The limits of narrating a private life: This relates with the idea of acquiring a critical view of the subject's life from "the back door", that is, looking at the events of her/his personal life. All of this for the sake of bringing out the subject's possible misconducts, overlapping these events with her/his work.
- Trying to erase the subject: This approach proposes the removal of the biographed's feelings and personal experiences from the inherent value of the work; in here, the subjects are looked at through a lens of pure logic. So, to speak, the arguments should stand on their own, so they do not need anything more than its own coherence.

In this particular instance, the subject appears as a disembodied being who enunciates, articulating ideas that are completely dissociated from her/his ordinary life. This stance affirms that "the author's life is not relevant for her work, instead, what is important is the series of books that delineate her intellectual life, away from prosaic events" (Valero, 2013, 12m 30s). In this view, the value of experience, as well as the role of the author's personality in her own work, are questioned; the finite aspect of life is reduced in order to exacerbate the durability of the work.

- Life and its context are not the primal cause of a work: This stance presupposes that ideas do not come from interaction with other people, nor from shared thoughts. In this form of intellectual biography, the biographer has shown an overall disdain for aspects of everyday life, including family and objects.

This genre is born to counterbalance the extra limitation on privacy: "an attempt to norm the elements that, within that life, create meaning, and the elements that do not" (Valero, 2013, 14m 54s). In this regard, the work and its reception in public life is prioritized over the private aspects. This is done with the purpose of avoiding arguments where follies and failures existing in the author's life should not come to interfere with her/his intellectual output. Both life and thought are immeasurable; nothing should be said of the author, because knowledge, as an objective and universal paradigm, lies far away from the personal, domestic and private sphere.

Historians have attempted to mend this outlook on intellectual works by using the ability of intellectual biography to select any subject of study and emphasize the parts where the subject has dedicated to increase her/his knowledge. "Her/his context, experiences, objects and other subjects involved are never excluded from the narratives and contributions of intellectual works" (Valero, 2013). Following the line of Dosse, we can define intellectual biography as a "detailed study of the relationships between intellectual postulates and the trajectory of intellectual thought and praxis" (Gómez, 2021, p 80).

We can use such an outlook to write the intellectual biographies of these women and, with it, help counteract the incessant invalidation their research has been subjected to since it was first included as a professional and autonomous area of study. In this regard, Lourdes Alvarado has said that the critical view of historians tends to falter when it comes to the higher education of women: "except for occasional exceptions, they keep repeating this pattern in which certain assertions, always vague and ambiguous, are made; assertions that obliterate the very relevant—even if fewer—contributions that these women have made" (Alvarado, 2004, p. 13).

To draw closer the use of methodological hypotheses and current biographical perspectives in this paper, we started reviewing contemporary historiographical paradigms, as well as the history of women that has been proposed by the social historian Joan Scott. Because of her proximity with the historical narration of women, we reintroduce the paradigmatic *Nouvelle Histoire* (New History), a historiographical current started by Jacques Le Goff and Pierre Nora—belonging to the third generation of the Annales School that emerged in the 1970s.

We chose the *New History* precisely because it recovers “new points of view” and “new objects”. It is a history created as a response to “the traditional paradigm that focuses on the study of politics, religion and the state (Burke, 1996). Because of this, it paves the way for new research that includes relegated and vulnerable groups. This makes it relevant to our study, given that it provides the foundation for our histories of women.

The first half of the twentieth century saw the arrival of social history. This new discipline addressed subjects that had been previously discarded since they were considered objects that lacked history (such is the case of women). “Everything that was previously considered unchangeable, was now seen as a social construct that depended on variables that changed according to time and space” (Burke, 1996, p. 14).

In this research, we are recovering the social history that brings a multidisciplinary view to narrative and the narration of women’s life stories. It retrieves, as an object of study, the construction of the idea of “feminine” in different social levels. As mentioned, one of social history’s representatives, pertaining the study of women, is Joan Scott. It was with her that several questions started to emerge in this discipline. The uses, the ways they were enunciated, how they were implemented, justified and transformed over time, were all elements in the social and political life of women that gained relevance with her research (moreover about academic women). It was from these questions that they started noticing how these uses were being applied as a way to justify inequality, both at that time and throughout history. It is Joan Scott who insists that “human gender is in itself a question that can only be answered, bit by bit, through scientific research, made by scientists like historians” (Scott, 2009, p. 110).

The analysis of the intellectual biographies of women is often done reflecting on its use within a field in which the historian brings into play the epistemology of discipline, literature and human sciences. “Biography as a genre acquires this fundamental idea of bursting the absolutizing bubble and ending the distinction between a truly literary genre and a purely scientific dimension; since biography provokes hybridism and mixture, it also expresses the points of clash and collusion between literature and humanities” (Dosse, 2007, p. 24).

The limitations of the intellectual biography of women have often been a subject of debate between those who separate the life from the work of the authors, and those who see both as inevitably connected. “Intellectual biography is a way to break apart from established (crystalized) chronologies and the succession of isms that has characterized literary historiography. The latter ends up dehistoricizing their own subject when they narrow the individual’s sphere of activity. This is especially true for the study of women, since they have been first relegated, and then criticized when crossing to the public sphere.

That is why, in this research, we have decided to approach this genre from its link with the academic contributions made by women in the twenty-first century. Aurelia Valero has insisted that today, intellectual biography should not only recover the stories of distinguished and famous figures, likes renowned scientists and philosophers, along with their assertions and canonical work, but also pay attention to the events in their lives, connecting these with their intellectual production.

### **3.3 A hidden legacy: approach to the intellectual biography of Latin American women in academia**

This investigation proposes that the study of intellectual biographies of academic women is still a subject largely to be explored. This can be seen in the state of knowledge of this genre and in its specificity. We analysed what, how and who has mentioned and published on this topic during the last decade. To gather this information, we checked the official States of Knowledge of the Consejo Mexicano de Investigación Educativa (COMIE, Mexican Council of Educational Research), especially the file Estados del conocimiento 2002-2011 that is confirmed by seventeen volumes (we used two of them). The documents we checked were *Historia e historiografía de la educación en México Vol. 1* and *Historiografía de la educación en México Vol. II* (History and Historiography of Education in Mexico vol. I and II), both coordinated by María Esther Aguirre Lora. These two volumes were focused on women in academic and intellectual contexts.

Following this line, we also reviewed some online dissertations (from bachelor and postgraduate's degrees) in the academic sphere, that included the Centro de Investigaciones y Estudios Superiores en Antropología Social or CIESAS (Center for Research and Higher Studies in Social Anthropology), the Centro de Investigación y Estudios Superiores CINVESTAV (Centre for Research and Advanced Studies), Universidad Nacional de Pedagogía (UPN, National University of Education Sciences), the Universidad Nacional Autónoma de México (UAM, Metropolitan Autonomous University) and Universidad Nacional Autónoma de México (UNAM, National Autonomous University of Mexico).

From this exploration we can conclude that biography has indeed been used to narrate several educational projects, as well as the academic and ordinary lives of its agents (academics). We found their life and work narrated, as a testament in paper, by their students, colleagues and some children. Some biographies also featured women in different periods in Mexico's history. We realized that, through biographical writing, we can relate everyday life, including events in community life and social occurrences from academia or the medical world; this has been used to bring the reader closer to that fantasy lived in scholarly contexts and in the life of others with whom the biographee's life is shared.

In the COMIE archive, we found that the Mexican states that have taken up biography are San Luis Potosí, Zacatecas, Michoacán and Guanajuato. In none of these there were registered narratives made by academic women and scientists. In the two volumes that were analysed, we could only find the biography of five women: Amalia Schacht, Francisca Ruiz Castillo, Elsa A.R., Pirita Escalante and Rita Cetina. In the case of Amalia Schacht, we read about her career and how she faced the same difficulties women in academia face when they have to excel in three areas: studies, work and children rearing. With Ruiz Castillo, the document we found was focused on her life and work (coining forgotten histories). We also found the multifaceted log book of Elsa A.R., the biography of Pirita Escalante as teacher and, lastly, Rita Cetina, devoted teacher dedicated to the education of girls in Yucatan.

Biography moves from the hidden plane in which these lives exist to the exterior (the public sphere). It focuses on fragments of the lives of women, whose story is difficult to unravel, to figure out and to make public. The biographical practice is in this way a complex exercise that can only let us glimpse the twists and turns of the plot; it cannot quite see the motives and the combination of elements produced by recovering a life story. It allows us to see only "the detective search for the author, who is concealed in her own text, her own strokes, signs and scenes (Arfuch, cited in Leñero, 2016, p. 323).

From the postgraduate papers reviewed, and the articles found in the CIESAS, CINVESTAV, UPN, UAM and UNAM, we have identified a contribution to this narrative on the lives of women, although these are stories that are many times dissociated from the fields of science and academia. In the CIESAS, we encountered ninety-one papers that used the biographical mode for their dissertation. We considered only the most recent ones; five of these were written between 2013 and 2014, and they focus on the lives of the women involved in politics and activism. In these documents, biography is also used to give an account of the importance of memory when recovering the histories of armed movements that have included women. These investigations are:

- "Todas somos la semilla. Ser mujer en la política comunitaria de Guerrero: ideologías de género, participación política y seguridad" ("We're all the seed. Being a woman in the communitarian politics of Guerrero: gender ideologies, political involvement and security"), written by Ana Cecilia Arteaga.
- "Experiencias de las asociaciones femeniles evangélicas en el Sureste de México, 1870-1960" ("Experience of Evangelical Female Associations in the Southeast of Mexico, 1870-1960"), that contains five biographies of protestant women and their inclusion in the associative phenomena in Mexico.

- “Revisión histórica de la guerrilla en Guadalajara: las fuerzas revolucionarias armadas del pueblo (1972-1982)”. (“Historical Review of the Guerrilla in Guadalajara: The Revolutionary Armed Forces of the People, 1972-1982”). In this study, the author uses biography to recreate the revolutionary group of women that has been erased from canonical history. This specific section of the document is titled “Las FRAP y sus silencios en la comunidad de insurgencia” (“The FRAP and their silence in the insurgent community”). Here the author mentions the names of guerrilleras (guerrilla women) Montserrat Moreno Díaz and Dalia Gonzáles Hernández, whose nicknames were “Violeta” and “Paty”, respectively. The investigation announces explicitly how difficult it is to retrieve anecdotes and different events for the historical analysis of particular lives: “they are the original starting point for the narrative reconstruction of the past, that is also redeemed, like a big piece of a puzzle that had been lost and it is found to take its proper place in history” (Zamora, 2014).
- “Aquí la mujer se siente más responsable. Género y etnicidad Rarámuri en la Ciudad de Chihuahua. Entre relaciones de complementariedad y desigualdad” (“Here, women feel more responsible: Gender and ethnicity. Raramuri in the city of Chihuahua, between relations of inequity and complementarity”). This paper employs the biography of Feixa Carles (The Hourglass. Youth Cultures in Mexico), and articulates gender with ethnic inequality.

In the studies reviewed in the CIESAS, we could also find a document called “Mujeres transexuales y su reconocimiento legal en la Ciudad de México. Biografías y autobiografías de transexuales” (“Transsexual Women and their legal acknowledgement in Mexico City. Biographies and Autobiographies of and by Transsexual People”). In here, the author criticizes the use of biography to cover transsexual women, questioning the reach that the perception of what is “feminine” has, along with the codes, symbols, behaviour and language used to limit all women.

As to the CINVESTAV, we reviewed in its archives an intellectual biography titled “Habitar el universo: el tema del trabajo en el pensamiento político de Simone Weil” (“To Inhabit the Universe: Work as a Theme in the Political Thought of Simone Weil”), written by Carmen Revilla. In this, the author recovers fragments from the vast academic work of Weil, who integrates her perception with philosophical problems in the twentieth century. In the same way, from the studies we reviewed in the CINVESTAV, we recovered the text by Carmen Revilla, who unearths fragments from the extensive biography of Simone Weil, along with the problems she faced in the twentieth century field of philosophy.

In UAM we found an intellectual biography: “Autobiografía ficcionalizada en la narrativa de María Luisa Puga” (“Fictionalized Autobiography in the Narrative of Maria Luisa Puga”). In this document, we can find the life of a woman through the “feminine autobiography”, which uses memory, self-portrait, journal/diary, retrospection and autofiction. Finally, in UNAM, we reviewed documents that show the lives of women artists; such is the case of Nahui Olin, Mexican painter and poet. Other cases are the intellectual biographies, published in the form of magazine articles, about Brígida García Guzmán (a sociologist and demographer who worked as a professor and investigator in COLMEX) and Helena Antipoff (a renowned Brazilian educational psychologist).

### **3.4 Aquelarre: an interinstitutional project for the recognition of women in science**

In the 1990s, the world as we knew was shaken by generalized crises in the global systems that predominated at the time. This created events that a decade before were unthinkable; some examples are the dissolution of the USSR, a global economic crisis, the reorganization of production systems and climate change. All these new realities could not be explained properly by the old social theories, as they became insufficient for this purpose. As a result, there was a –now called– paradigm crisis that would come to affect, particularly, the social sciences (Wallerstein, 1990).

This crisis was associated not only with theoretical problems, but with events and historical processes that called into question the basis of even the most solid hypotheses that had before been considered universal (in the nineteenth century sense of the word). In this manner, the centre of debate for Marxism, structuralism and positivism, just to mention some, orbited towards new perspectives that, instead, emphasized the aspects that were formerly discarded and considered unworthy of study; with this, the debate shed some light on objects that had been rarely studied and problematized.

It is from such interpretations that we consider necessary to use some binary categories like identity/identities, social actors and totality/partiality, since they offer veins of meaning for the interpretation of social behaviour and for the encounter of humanity with its own subjectivity. The intervention of history and gender perspective as references and paradoxes contribute with elements that signal time (rhythm, cycles and duration), in addition to the hidden threads of collective development and the complex equation formed by the links between past and present, and the interrelation of subjects in patriarchal societies (usually Eurocentric and excluding).

Facing this ignominious data, social movements that are emerging compel us to build, from new, analytical and militant perspectives that go beyond simple explanations. These same perspectives open new paradigms and about new utopic views. In this sense, this text focuses on three key categories: genre/gender, history of women, and intellectual biography; all of which let us weave a framework in which we conceptualized the voice of the women presented in these biographies.

### **3.5 *Aquelarre* and its complex formula: history, gender, genre and intellectual biographies of women**

In the last decades, biography has been employed to give an account of the life and work of women from all walks of life and in different areas: social, cultural and professional. We can attest to the fact that, when writing life, we can recover stories that are ordinary, communal, regional, and even those that extend beyond their geopolitical borders thanks to the common places they share with another culture.

However, there is still uncertainty regarding the way narration makes visible these lives and their work, especially when it comes to Mexican academic women. It is true that biography has been benefited by adopting a gender perspective, and by working with disciplines like sociology and history, among others; despite this, the contribution it makes tends to be less analysed because of the emphasis that has been put in their private life; an aspect that has been seen as merely emotional, intimate and purely subjective. That is why this investigation becomes relevant, given that its objective is to bring to light the intellectual progression of this group of academics. They largely contributed to Mexico's scientific development while being able to combine reason and sentiment, both pertaining to the inner life, which is basically a reflection of the public one. These women were able to navigate these symbolic universes, in which they developed their critical thinking, their interactions and their work (all equally valid).

We are not of the idea to take up their biographies from the dogmatic perspective that sees history as a master of life that attempts to catechize their subject and influence their formation; historical subjects should not be formed or led, they should not be forced to highlight certain features and identities, or to promote certain values that produce political and ideological opinions. What we are aiming at is to build these lives in a way that they generate questions, provoke criticism and contribute –as best as we can– to the acquisition of a historical consciousness regarding being women while being academics and being intellectuals, without giving up their utopic ideals and without having to die trying.

From the panoptic vision we have selected, we have come up with several questions to be attended: Which are the contexts and subjects that connected our biographed academics with the intellectual and academic projects that were most relevant in their lives? What are the most emblematic moments they, themselves, identify and relate when referring to their own narrative? What are these women appealing to and how they express it? What projects they were able to develop and in what specific moments? In which institutions, with whom, and what strategies they used for that purpose? From their own personal outlook, what are their own perceived contributions to academia?

From these questions, we infer our main goal: to recover the intellectual biographies of Latin-American women and learn, through them, the many ways, strategies, alliances and dissolutions that they lived and faced. All of these served as practice for them, to be able to develop the academic projects that marked their lives and the field in which they worked.

Here we present our specific objectives:

- Explaining the context and subjective conditions that brought our biographees to the intellectual and academic projects that were defining for them and the field to which they contributed.



- To locate the emblematic moments that these women have identified in their own life's narratives.
- To pick up their main undertakings and place them in the context in which they lived.
- To observe, from their own point of view (as much as possible), and in detail, their contributions to their time and society.

### 3.6 From the History of Women to the Historical Analysis integrating a Gender Perspective

One of the most important movements back then (in the 1970s) was the French New History. This was a school of thought that involved the opening of history to other disciplines like geography and economy. This created a transdisciplinary exchange that allowed the explanation of historical processes from new perspectives. Such perspectives enabled the comprehension of the very complex phenomena that human beings were witnessing (whether in incredulity or horror).

The broad opening this French school created provided a niche for the presence and voice of a wide range of people; after this, it was not only heroes that appeared on histories, but men and women on the street, both just and impious, sane or mad (as they were categorized). Since then, history has fought many battles and, as a result, a promissory future is foreseen. One of the many benefits gained from these battles is, no doubt, the history of women and gender that started to be developed towards the middle of the last century.

It is necessary to point at the fact that there are no exact dates for the birth of this specialization in the discipline of history, but there seems to be an implied agreement upon two options. The first one indicates that the history of women emerges as a proposal connected to militant feminism, while the second one indicates that Simone de Beauvoir's *The Second Sex* started a new age in the debate about women and their stories in patriarchal societies that are marked by violence, exclusion and inequities. In the following decades, the growing number of studies on women's lives cleared the way for institutional spaces; from this on, there were new spaces inside centres of investigations, like universities, destined to this new type of research. Joan Scott (1991) talks about this:

In one of the conventional explanations upon this subject, feminist politics appears as the starting point... These explanations place the point of origin in the 70s, when feminist activists build a history that gave proof of the activity of women, explanations of their oppression and a motive for their actions... In the middle of this decade, the history of women widened its field of activity (through inquiries into their experiences) by documenting all the possible aspects in women's lives, what in turn propelled its own development.

In this sense, the history of women meant, from the beginning, a consistent effort to resignify their participation in the past and present of humanity, so as to recover their presence wherever their tracks had been blurred or erased. We can tell that this exclusion was deliberate, since anyone who – literally – writes history, finds women who often contend, reclaim, debate, seduce, act, beg, but never give up. Such women promote or oppose to change, all from a diverse standpoint; they also construct their own identities from collectives or their own particularity; they assume principles, build up agendas, form alliances, stage brakeage, go forward or backward, but they are always there, on stage, being part of the scene.

To consider their presence, voices, and representations imply a theoretical challenge. It was about elucidating between writing a complementary or a parallel story, as Virginia Woolf suggested when she asked [in *A Room of One's Own*]: “why should they not add a supplement to history?... so that women might figure there without impropriety? (Wolf cited by Scott, 1991, p.70).

They could either add this supplement or elaborate one more of the serial braudelian stories (after Fernand Braudel) that, as a worrisome Lola Luna denounced once: “It's significant from a theoretical perspective that in the congress' tables... dedicated to the state of feminist methodology and historiography, was placed as an adjacent of cultural history. This gave way to a very specific question from the masculine side as to the history of women is sectorial...” (Luna, 1994, p. 21).

They could also choose a third option: to write the history of women and men in relation with the general context of human history. This last alternative (that would prevail over the others) involved a critical reading of the epistemological assumptions in which traditional history (androcentric) rested, as well as the deep questioning of pretensions of totality, universality and sufficiency, according to Scott:

The history of women really entails the modification of history itself, because that it looks into the way in which this word came to be established... It should critique the relative priority given to the history of men over the history of women, exposing thus the implied hierarchy in nearly all historical accounts. What is more important, it raises questions about the integrity and blatancy of the usual subject of history: the universal man. (Scott, 1991, p. 72)

This new reading had many consequences. The first was the construction of a new and innovative gaze that took into account the experiences, discourses and practices of women that existed in a complex reality. It was in this same reality that diversity, interrelations and contradictions were practically inevitable.

That also implied the elaboration of categories that allowed historians to work with this object of study from its own specificities, and still be able to acknowledge that women interact in social and cultural contexts that are troubled by power relations in which men tend to have predominance, and in which both poles represent heterogeneous groups whose identities –like non stable equilibrium– are not fixed nor invariable. In this manner, the stages and sources, questions and hypotheses, required problematization in order to be capable of answering multiple challenges that comes with every creative effort. As Scott points when citing Gordon, Buhle and Shrom, it was about:

The inclusion of women that necessarily entailed the redefinition and extension of traditional notion of historic significance, in a way that covers both the personal and subjective experience, as well as the public and political ones... A methodology like this implies not only a new history of women but also a new general history... (Scott, 1990, p. 25)

Already in the 1990s, feminism had discarded the idea that the history of women was a serialized narrative that implied isolation of the protagonists from the social context inhabited, initially, by men and women alike. Contrarily, what predominated was the rewriting of history making these women visible, rescuing their voices, gazes and actions. But it would be necessary to introduce gender as a category to explain the connections, conflicts and interactions between human beings that are differentiated, not only by their sex, but by symbolic content and the identities that have been imposed/assign socially, historically and culturally to humans in general.

Following this logic, we can affirm that gender transcends the assumed presumption in which the body (physiology) determines our social role:

Gender can be used to designate social relations between the sexes. Its explicit uses reject any biological explanation ... Instead, gender denotes cultural constructions, a complete social [and historical] creation of ideas about roles and characteristics that are appropriate for women and men. Gender is, according to this definition, a social category imposed upon any sexuated body. (Scott, 1990, p. 28)

Regarding this, Tinat (in Berger, 2015) remarks:

Gender studies could be defined as the combination of researches that study women and men, the feminine and masculine, and everything that is displayed in between these two poles.

Even when the first stage of gender studies focused on deconstructing essentialist and biologicist paradigms of the sexes, other stages that came afterwards considered the concept of gender from a more relational characteristic. It was hence focused on power struggles and hierarchies. Throughout time, this conception has had more usage in the intersection with other categories like social class and ethnicity, that predominated social sciences.

In this way, we can assert that gender is not defined by bodies as unique, essential and ahistorical entities, but on the contrary, it is built culturally. Therefore, this is a territory delimited by symbolic marks whose content is closely linked to power and subversion. Casali writes about this in (2020):

What's true is that the sole fact of transgressing norms and delimitations (like the constructed idea of sex and gender) reflects the ability to recognize the cultural dimension of our gaze upon the world. No matter how much we as subjects try to construct a coherent narrative of our lives, imposed gender always reminds us that such a construction is arbitrary, polysemic and dependent on several factors; at the end none of this is written in stone.

And, definitely, the features that make us human vary socially, from culture to culture. Gender, as a category, admits several definitions that, depending on the emphasis and methodology given by every discipline, can have different resolutions. In this sense, history, from a gender perspective, is a discipline of inclusion. Beyond constraining itself with simple descriptions, it expands on the different depths of historical processes, along with the multiple and complex threads that are generated, and the presence and action of men and women who, with their voices, views, silences and struggles have constructed our social reality.

### **3.7 Biography as a historiographical genre**

In the nineteenth century, biography was not a genre taken up by historians with a positivist mindset, and neither by those who, from a Marxist and structuralist point of view, were embarking in the field of history. The main objections these frameworks had on biography were related to their rejection of subjectivity and their attachment to objectivism, the latter validating only certain analytical processes that followed restricted established guidelines about social behaviour. From that perspective, they came up with explanations that readily denied the validity of all narrative that was even remotely linked to subjectivity and individualism.

In the twentieth century, with the emergence of the Annales school of thought (around 1929), there was a change in the perception of history; it started to be considered a discipline founded in the investigation of primary sources that had to be interpreted through theory; it required a rigorous analysis by historians. These historians operated collectively from a view that included multidisciplinary perspectives that were interacting and dialoguing among continuously with each other.

The Annales historians not only built alternative theoretical paradigms that made possible the opening of traditional history, but they also turned their eyes towards new objects of study in which subjects, who had been previously marginated, forgotten and invisibilized by a previous historiography centred on power, were suddenly the centre of new investigations. These new actors (children, women, teachers, mentally ill and dispossessed, among others) would take a central place and make their voices heard.

Sooner than later, biography would transit to academia too (not excluding frictions), leaving behind the heretical and spurious place into which it had been forced. It went from that academic condemnation to climb to the –now well known- Biographical turn (in 1990) that brought:

Apart from the exponential growth in the number of biographies, a practice that included self-reflection on biography as a genre and as an instrument of knowledge. In the same way, the theoretical debate on the epicentre of biography in social studies (Pinna, G, 2013, pp. 189 -190).

The genre of biography, already placed in a safer/secured position within academia, showed the multiple possibilities offered by the narrative that recovers the plots that connect sociohistorical and cultural contexts (the age/time according to Hobsbawm) with the actor's subjectivity (those whose lives are being studied). It focused on the multiplicity of identities intertwined in human life, on the spaces of intimacy and on public expressions; it also put into focus what is said, what is silenced, the unknown with the known and, at the end, like Marc Bloch said –very accurately– the profoundly human side of the object of history.

In this scenario, it is not by chance, nor unexpected, the encounter with a perspective based on gender, since it comes with a cosmovision and a conscious choice of signs (clues) to understand and live inside the world (as part of it). It is in this way that biography is closely linked with the histories of women and gender. Standing in that field/genere it becomes possible to summon, name and make visible these protagonists, as they take the floor to enunciate their questions, concerns, desires, emotions and potentialities/latent qualities.

In consequence, it justifies the investigative efforts that precede this paper and that have allowed us to make clear their career paths joint with their life stories as Latin American women. We are thus able to account for their struggles, achievements and failures with a level of analysis that, quoting Johan Huizinga, confronts us with history in all its complexity.

By taking up biography, we do not intend to: “find its pathologies or neurosis but trying to find the threads that unite and motivate a human being to act, feel and behave in a certain way” (Bazant, 2018, p. 58). In sum, this investigation is about locating temporally some events in a woman’s life and explain them through the history of gender, which not only focuses on sexuality but on marks like ethnic origin, social class, religion and political ideology. It also focuses on how these marks influence her choices, actions and both intellectual and academic priorities.

In light of this, we are not trying to identify in which way these women have played their cards – so to speak – in a patriarchal society that is hierarchized, excluding and authoritarian as the Mexican one, but to define their projects and how they developed them even when having a clear disadvantage. The voices we are trying to recover through this investigation show us that, in many cases, women have been subjected to explanations that obliterate their circumstances (or even themselves), and it is our aim to show how, using a gender perspective, we can open spaces for their open involvement and active presence in spheres that had been traditionally closed to them, like work, academia and even the street.

We considered, in historical time, the medium-term conjunctures. This mainly because it allows for the historical reconstruction of the lives of these women, given its ability to describe different processes in periods of decades when profound cultural changes occur. By reading history through this lens we have been able to resume contemporary debates focused on gender, that tend to problematize not only the time in which these women lived, but also their world view and their practice.

Besides, seeing this dichotomy as a metaphor, we can point at the fact that the possible resolutions regarding identity that we women face are played within an essentialism of what is feminine and the relativism that gives validity to all and none; this last negates limiting structures like class, ethnicity, native language, religion and sexual orientation. As Lazreg points out (1990), the recognition of differences must include categories like class, race, religion, colour, etc. Acknowledgement cannot transform differences into divisions (differences enrich rather than set apart).

Another risk that this identification generates is the potential reduction in the ability to understand us (women) as a collective that is likewise joint by bonds and similitudes that place us in the same front. In this, there is a contradiction in the centre of anthropological practice. On the one hand, it attempts to understand, appreciate and interpret the cultural particularities in its own terms, when in this objective the ethnographic case studies have been fundamental. On the other hand, generalization as a problem, when the discovery of similitudes above diversity has led it to develop transcultural explanations ... (Sacks, 1989).

That said, the visibility of these symbolic connections between gender and other identity traces deserves our attention. Because of that, it is true that / In that sense, another element that is worth mentioning here is the use of binary dichotomies that have been used to classify women in a lower level. These are the opposites of private and public, body and representation, rationality and affectivity, among others. As such, they have been used to reproduce and legitimize dominance, not only in gender relations, but also involving ethnic discrimination and class exploitation. In sum, this investigation is about unravelling the complex thread of power networks that are generated and developed within patriarchal systems, societies and institutions; structures that are, in consequence, colonialist and capitalist too, since they are rooted in the same principles.

It is in this manner that we formulate the consideration of intersubjectivity as an alternative use to include that otherness, thus avoiding objectification and victimization of the other. In these stories we can verify a tendency of feminisms to blur the established borders of nations to get to a global–and in some way internationalist– perspectives that signal at the idea of gender identity been overpowering national identity.

In the complex equations risen from theory to explain changes and permanence, and which have marked the struggle endured by women, it becomes necessary to give an account of the progress towards diversity, multiculturalism and inclusion that we are seeing today. This inclusion is articulated in ethnic and social class elements that, currently, are heading towards a holistic reading of the distinct identities that are expressed by different groups of women.

### **3.8 Luz Elena Galván y Lafarga and her legacy in the history of education in Mexico**

The history of education in Mexico is a field of study that has grown over time. It focuses on educational processes and the different ways in which they develop. This focus has promoted a series of analyses and considerations that have enriched its own historiography.

Education can be seen as a historical process, that is, it is modified according to time and space (temporal and geographical loci). We can distinguish two of its objectives: on the one hand, it can provide knowledge and skills that will grant individuals the ability to cope and grow in their respective contexts. On the other, it can transmit the cultural elements pertaining their own society, what in turn will give them the opportunity to share a common identity and to feel they belong in a specific community or social group.

Historiographical contributions have opened a wide range of options for interpretation and comprehension of the state of education in Mexico. Several objects of study have been incorporated in these investigations and, at the same time, researchers have searched for new sources of information. As a result, the history of education has had notorious advances both nationally and internationally.

According to the theoretical and methodological lines followed by the historiography of education in Mexico, we can see three main foci in research that have shaped the analysis and conclusions on the educational processes of the past: social, cultural and regional history. One aspect that is important to note here is the fact that each one of these elements lacks a direct link with the other. Today, Mexican historiography considers the history of education –given its progress- as a specialized branch of history and gives an account of the relationships that can be developed between diverse methodologies of investigation (inquiry and analysis).

Presently, in Mexico, a network of researchers focused on our educational past has come together. This community of historians has been building the foundation of our current historiography on education. As we mentioned before, they have investigated diverse objects of study like women education, teaching, infancy, school culture, life in the school and regional history. This diversity has been approached thanks to their interdisciplinary effort, given that they have been able to use more theoretical and methodological instruments to widen the possibility of an accurate historical reconstruction to explain the processes they analyse. In short, the history of education in Mexico has become a dynamic field, in which the inquiries in public and private archives make of this area of study a very fertile one for future investigations.

Luz Elena Galván y Lafarga (1949-2019) worked in this scientific community; she was a prominent investigator whose contributions to the history of education are remarkable. Her relevance to the field can be seen in the fact that many of the topics taken up today were brought up by her. She coordinated and took part in the organization and publication of several works that, nowadays, have become almost mandatory reference books for all of us who develop an interest in the history of education in Mexico.

Because of this, we are going to have a first look into the reconstruction of Luz Elena Galván's intellectual biography. The purpose of this is to make an initial approach to her formative years and her beginnings as an education historian, and to cover later her most relevant works.

### 3.9 Mexico in the 1970s and 1980s: a complicated context

Before we embark on this voyage/before we start reviewing the biography of Luz Elena Galván, it is important to describe Mexico in the seventies and eighties, since this was the period in which she started her academic career. Operating under the premise that all human beings are historical subjects, meaning a product of serialized events, we are implying that the political, economic, social and cultural contexts shape their ideas, stances and actions, as said by Eric Hobsbawm (2003). We know that intellectual biography allows the biographer (historian) to get close to the biographed by means of an exercise that connects the subject's inferred thought with their professional practice (their production, so to speak). We can reconstruct the path made by the hard work that such a person took and do it under the assumption that a life is complex and endless, and that is why it can always allow for new interpretations, according to the problematic approach, even with the same known sources (Gómez, 2021, p. 80).

In this regard, we need to contextualize temporally the professional practice of our biographed. The period we are going to refer the most in this text is the administrations of Luis Echeverría Álvarez (1970-1976) and José López Portillo (1976-1982). Some of the most relevant aspects –politically, economically but also socially– are related to education.

The beginning of the seventies in Mexico marked also the beginning of a new administration (a six-year term), whereas Luis Echeverría had been elected President. His six-year term begun immediately in the middle of social upheaval that had been increased by the killing of students in 1968 (after the student movements); this unrest was “particularly rooted in groups of intellectuals, in universities and leftist dissidents” (Delgado, 2008, p. 440). Economically, he presented a reform to repair the issues that had been generated by the past administration with the so called “desarrollo estabilizador” (stabilizing development), implemented from 1954-1970; this economical model consisted in government intervention to maintain the economy free from inflation and devaluation. This model allowed for the country to be industrialized, but only created wealth for the people who owned those industries, subsequently increasing poverty and social inequity. The decision to intervene in economical politics was grounded in a nationalist discourse that discarded foreign interests.

In the field of education, there were new institutions created, a direct consequence of population growth. In Mexico City, public education schools in preparatory and higher levels were having a difficult time, since the number of students apt to enter these levels had grown beyond their level of accommodation. Universities like UNAM and IPN did not have the capacity to integrate these new students. In consequence, there were new institutions founded: Colegio de Ciencias y Humanidades (CCH, Sciences and Humanities College) in 1971, Colegio de Bachilleres (secondary school graduates) in 1973 and Universidad Autónoma Metropolitana (UAM, Metropolitan Autonomous University) in 1974. Private institutions also created new places for the growing population; according to the Asociación Nacional de Universidades e Instituciones de Educación Superior (ANUIES, National Association of Universities and Institutions of Higher Education), between 1970 and 1980 the number of students attending these tripled (ANUIES, s/r). An example of this is the Universidad Iberoamericana (Ibero-American University).

Regarding research, there were policies promoted aimed at creating “pertinent infrastructure in investigation and technological advancements”, particularly with the creation of Consejo Nacional de Ciencia y Tecnología (CONACyT, National Council for Science and Technology), that would come to replace the Instituto Nacional de Investigaciones Científicas (INIC): “From the seventies [...] there is a consistent effort in the reformulation of policies that would create the framework for scientific and technological development through institutions created specifically for that purpose” (Canales, 2007, p. 15). In this way, CONACyT was conceived as the institutional foundation in which future academic research would be built –through its support.

Despite this effort, Echeverría's administration did not end in the best way given the failed economic situation:

... it was difficult convincing the private sector to increase their investment [...], the last year of that administration was characterized by the dollarization of the economy, speculative practices against the Mexican peso, generalized capital flight, restrictive policies and stagnant economy [...] in an attempt to maintain the value of the currency through its exchange rate at any cost, the public sector was incessantly falling into debt (both in short and long term). (Delgado, 2008, p. 452)

In the next administration (López Portillo's), the government set a series of public policies to reduce social disparity: Alianza para la Producción de 1976 (Alliance for the Production of 1976), the Coordinación General del Plan Nacional de Zonas Deprimidas y Grupos Marginados (COPLAMAR, General Coordination for the National Plan of Depressed Areas and Marginalized Groups) de 1977 y el Plan global de desarrollo en 1980 (Global Plan for Development). In the education sector it was included a budget for the creation of the Universidad Pedagógica Nacional (UPN, National University of Pedagogy) in August 1978. However, it should be pointed out that Mexico was going through a heavy financial crisis that accelerated towards 1982.

In spite of this, they kept creating policies to continue promoting investigation. At the beginning of the eighties, it was first discussed the creation of the SNI, National System of Researchers (Sistema Nacional de Investigadores). With this institution, they were hoping to create awareness as to the relevance in the formation of researchers; they were also trying “to increase the income of scientists without having a general increase of minimum wages, especially after the devaluation that the country had been through a couple of years before” (Canales, 2007, p. 98).

The context described (even if very syntactically) gives a first glimpse into the world in which Luz Elena Galván started developing her career. She accomplished many things in her life, becoming an eminent figure in the academic and research fields in humanities; moreover, she achieved this in a time when institutions that were meant to advocate for this were just being founded.

### **3.10 Luz Elena Galván's approach to history and the history of education**

*The history of education, just like many other histories, belongs to the past; that past which, from one way or the other, we carry within us, both as a memory and as an inherent part of us.*

*Luz Elena Galván*

Luz Elena Galván y Lafarga, “Luce” as she was called affectionately, was born in Mexico City on January 22nd, 1949. She was an exceptional human being: an excellent academic and researcher, and always kind and polite to others. Colleagues and students alike speak well of her, stating the warm treatment they received from her and how this created many lasting relationships both with friends and co-workers.

From a very young age, she became interested in history. This interest had three relevant moments in its development. The first one happened in her childhood and adolescence (up until preparatory school); the second one during a trip abroad (to England), and the third one came to be when she was already in academia, by means of the interaction she had with eminent researchers: Enrique Florescano (1937-) and Guillermo de la Peña (1943-). In the following paragraphs we explain a little further these three stages.

Her first contact with this discipline occurred when she was a child. As a little girl, as she herself used to relate, one of her father's sisters had a liking for reading, especially history books. In the evenings little Luz Elena liked to go to her aunt's house to hear her reciting from them:

I had an aunt, my father's sister, that had worked as a secretary. She loved history, my aunt Clementina, and in the evening, she used to read to me history books, talking about Lucas Alamán and the history of Mexico. Then for me, well, it was like having adventures; as soon as I finished my homework I used to run to her house. There lived my grandma with my aunts, and none of them were married; a family of single women that lived just around the corner. Then I ran to their house and my aunt was already waiting for me to read me, and those were my happy evenings, with her reading pieces of history to me. (Historia Abierta, 2014, 3m 34s).

As years went by, Luz Elena Galván continued her studies; she reached preparatory school, which she studied in a private institute founded in 1903 by Marie Flavie Arnaud, from the Sisters of San José de Lyon, a Catholic order “whose dedicated labour was also the educational one”. (Torres, 1993). During this period, Luz Elena Galván had two professors that endorsed even more her interest in the past: Norma de los Ríos and Cecilia Greaves. At the time, Galván had not considered a career in history but, undoubtedly, through her own interest and the meticulous teaching of her professors, the seed she had been given by her aunt sprouted and blossomed, as she herself said: “The way in which they taught us both universal history and the history of Mexico was very exciting” (Galván, 2014, p. 45). It should be noted that even in this point, Luz Elena had shown a keen interest in human sciences.

By the year 1967, she had finished her preparatory studies and had the opportunity to travel to Europe, specifically England. She stayed there for three years. It was an experience that would change her life; in her own words: “the world opened to me” (Historia Abierta, 2014, 3m 09s). What she lived there changed her perspective, allowing her to see a world that laid out the possibility of professional improvement for women. We must remember that, in addition to this, coming into contact with people from different parts of the world (and their respective cultures) who showed interest in the history of Mexico, especially the prehispanic period and the Museo Nacional de Antropología e Historia (National Anthropology and History Museum, opened in 1964), she became aware of her lack of knowledge regarding her own collective past: “to top it all, I was a Mexican who did not know my own history” (Historia Abierta, 2014, 3m 26s). From this moment on, she understood her distance with the past, a past she had learned to love but had not delved into it enough, and she was determined to change that and to make it her life’s work.

She returned to Mexico in 1970 and acted on her resolution; she wanted professional growth, so she signed up to high education courses –event that we are going to see further in this text – and became a tourist guide in the aforementioned museum. Her skill in English was key in this development; she showed to be so good in this job that started to doubt which career should she pursue:

It was then that I started to discover what history and anthropology meant. Teachers like Eduardo Matos and Román Piña Chan, among many others, taught us the richness inhabiting that museum; that created doubt in me as to which path should I take: anthropology or history. (Galván, 2014, p. 45)

Finally, she chose the second option:

... the embarrassment for knowing next to nothing about my own history and nothing about the museum itself. That is why, when I returned to Mexico in the seventies, I signed up to the Universidad Iberoamericana and enrolled in a history major; the UNAM was still very turbulent due to the student movements –and their killing– in the 68’. It had closed many majors. The discipline of history was in the college of Philosophy and Letters, and it was the more stirred; teachers’ attendance was rare, they skipped class whenever they wanted and I did not like that, so I came to the Iberoamericana, my alma mater. (Historia Abierta, 2014, 5m 16s).

The days when she was not giving guided tours, she used to go to the library of the museum and study or do homework. In this academic context, Luz Elena interacted with historians who were already well known in the academic and intellectual world; this was an aspect in her life that widened her view. As she acquired more experience in here, both academic and at work, she assimilated this experience into her learning. Even before becoming a well-known figure in the field of historical investigation, she seemed to stand between anthropology and history as a mediator. She was more inclined towards history, as she herself stated, but even with that preference, anthropology was inevitably present in her personal life and in her approach to her work; by tossing in anthropology’s overarching capacity in her historical investigations, she was effectively trying to understand the past through the present. In this fashion, Galván achieved an interdisciplinary equilibrium that would reflect upon her researches and all her historiographical contributions. To understand more deeply Luz Elena Galván’s journey and the impression her trajectory made, we need to go back to her formative years in college. In 1970 she was admitted in the Iberoamerican University (former University Cultural Centre), as a history major. The university was private –and catholic – and had been founded, in 1943, by the Jesuit priest Enrique Torroella (1901-1984). This educational project was supported by the dean of UNAM, Dr. Rodolfo Brito Foucher (1899-1970). According to María Teresa Matabuena, Jesuits had an interest for higher education and they managed to establish this institution with a clear purpose:



... that, bit by bit, they continue to add to the major of philosophy more disciplines like history, social sciences, journalism, pedagogy and STEM sciences. Thus, in March 1943, they opened the Centro Cultural Universitario (University Cultural Centre), whose aim was providing a college education with a propensity to include a humanist and philosophical vies, given that, for them, these perspectives were in compliance with Christian thought and the principles of the Society of Jesus. (Matabuena, 2018, p. 27)

Luz Elena Galván, as previously mentioned, chose history as her career, not only as General History, but specializing in education. This focus led her to write a dissertation on the historical figure of José Vasconcelos and the founding of the Secretaría de Educación Pública (Secretariat of Public Education) in 1921. In her last year in college, she had the opportunity to enter the world of research through her job and newly created connections (the network she built in academia). In 1973, Enrique Florescano had founded the Seminar on the History of Education in the Department of Historical Investigation in the INAH; a seminar of which she would eventually become part. Her studies and her involvement in a variety of academic practices laid the foundation of her fruitful career as historian. It was in that space that she found and fell in love with research; as she recalls, in academia she learnt how to investigate, to find the right sources, how to register and annotate a document (a book or any text) and even how to redact any paper (whether reports, articles, or even chapters) (Galván, 2014, p. 45).

Shortly after, this seminar changed its management and Guillermo de la Peña Topete took on the position of director. He had been formed in sociology and anthropology and had studied in the Iberoamerican University too –just like Galván–, later earning a doctorate in the University of Manchester (England). When De la Peña took office as the director of the seminar on the history of education, he was already a professor and investigator in the Centro de Investigaciones Superiores del INAH (CIS-INAH, Centre for Higher Education Research), where he was part of the program of Anthropology of education (Antropología de la Educación). The CIS-INAH had been founded in 1973 by three eminent figures: Gonzalo Aguirre Beltrán (1908-1996), Guillermo Bonfil Batalla (1935-1991) and Ángel Palerm Vich (1917-1980). This centre had the objective of endorsing studies and investigations of current issues in the country (including education).

De la Peña had been assigned by Palerm to direct another seminar about Anthropology of Education, that lasted from 1974 to 1978. He invited the grantees of the seminar on the history of education to be part of this new project of investigation. Luz Elena Galván, along with Manola Sepúlveda and Patricia Greaves, incorporated to the project set in Casa Chata, in the municipality of Tlalpan. In that place she would come into contact with Beatriz Calvo, another grantee. In this manner, Galván started her career as an investigator within academia in 1974, a career that would last forty-five years (until 2019).

Here I worked in an interdisciplinary project with anthropologists, sociologists and historians. Each member of the group had their own task and their own subject. By then, I was finishing my bachelor degree in history, so I decided to turn my investigation there into my dissertation about José Vasconcelos and the creation of the SEP (Severetariat of Public Education) in 1921. Theoretically and methodologically, I was guided by positivism, since that had been the predominant perspective during my major. Even when I was part of an institution whose focus was anthropology, I always stood my ground as historian, and that is why that remained my standpoint.

When each of the grantees finished their investigation, the seminar was supposed to end too, but fortunately, Guillermo Bonfil (now general director) gave his authorization to keep that space opened for future investigations on the subject of education: “space that slowly grew with the addition of Mireya Lamonedá Huerta, Ma. Eugenia Vargas, Susan Street and María Bertely Busquets” (Calvo, 2019, s/p). It has to be mentioned that, by 1980, the CIS-INAH was restructured and became the Centre for Investigations and High Studies in Social Anthropology (CIESAS); Galván would also be part of this new institution.

Even when she was determined to maintain her point of view according to her historical formation, Luz Elena Galván was not indifferent to new theories and methodologies. As she came into contact with innovative perspectives, she incorporated these in her own reflections upon education. Working with their colleagues every day, having academic (interdisciplinary) debates as well as advances in methodologies, were all elements that made Galván question her given view of the past, framing it instead in new structures. In addition, the historiographical variations that were happening globally are worthy of mention, because these forms of investigation that were surging in the seventies came to be “as a result of the influence of social sciences and a renovated historiography” (Menéndez, 2009, p. 152). In places like France, England, and later Italy and Spain, there was a new possibility rising that allowed researchers to undertake historical reconstructions that did not follow the traditional ways to write history. In this way, History passed from considering only the victorious, those above the common folk, to focus on those groups without history: the general population, especially minorities like women, children, teachers, schools, among others.

These historiographical proposals arrived in Mexico in the eighties, holding up in the nineties up to these days. Researchers of that time were ready to use these to get new approaches, reading and revising traditional bibliography. Luz Elena Galván was part of this effort to revise the old methodologies. She studied and analysed several authors like March Bloch, Lucien Febvre, Fernand Braudel, Jaques Le Goff and Marc Ferró, all of them French investigators that were part of the Annales School of historiography and that had been “her first encounter with the study of common people and everyday life” (Galván, 2014, p. 46).

Social history was a new field for her, and as she was permeating it, each project of which she was part also served to complement her. An example of this is her incursion in the study of indigenous education, in which she collaborated with Beatriz Calvo Pontón, Teresa Carbó, Víctor Franco and José Antonio Flores. This exploration would lead her to regional history.

Another account worth relaying is her decision to go beyond the bachelor’s degree on history and take a further step in her academic training by getting a master’s degree in her alma mater (Iberoamerican University). She presented her professional examination on October 22nd, 1982, receiving her degree (qualification) in next January. She finished her credits, presented a dissertation and defended it; her dissertation was directly related to her investigation in the CIESAS, and was about the education in indigenous groups of Mazahua people in Atlacomulco (in the State of Mexico).

She kept her academic improvement by entering a doctoral program in history in the same university (her alma mater). In her doctoral research, she focused even more in the social history of education, investigating the standpoint of the magisterium during the Porfiriato (Porfirio Díaz’s rule). This dissertation represents a major contribution, not only because of the importance of the topic, but by her use of the primary sources she located in the Historical Archive (archivo histórico) “Francisco Xavier Clavigero”. With this investigation, she was able to reconstruct the history of teachers, and to display to what extent they are in vulnerable situations.

Luce got her PhD in 1988 and, throughout her career, history would be the axis of her analyses. Her interest in this discipline was to recall part of history of people who had been vanished from it; her academic resolution was to bring them back and make them visible. With every new investigation, she had a new approach; any object she undertook (magisterium, indigenous people’s education, informal instruction –related to ordinary life–, the study of childhood, women education, and so forth) had a new way to address it. Her sources also grew as she saw other possibilities beyond the usual documents, taking images, photographs, newspapers, school books and oral history as valid sources of information. This last is significant given that she not only embarked on the analysis of objects of study (or rather subjects) that had been basically overlooked, but she also stated the need for historians to look beyond our usual (and comfortable) methodologies/paradigms, to use all sources of information to look with a critical view and re-enact, through narrative, the most accurate representation of our past (as humans).

In the next section we relate some contributions made by Luz Elena Galván y Lafarga. As her work is extensive, we will only refer to the most emblematic pieces. The works we are talking about are those that –like her– have left an indelible mark in the history of education in Mexico.

### 3.11 Luz Elena Galván, education historian

Undoubtedly, Luz Elena Galván has explored original topics. Her affinity with social history, the interdisciplinary subject she took up with her colleagues in the CIESAS, and the subsequent development of the regional and cultural history of education, made of her a figure that in Mexican academia is now recognized as eminence in this branch of history. She became known internationally too. She was able to create, lead and consolidate diverse team works, creating a network of academics in both national and international contexts. She trailblazed many topics for research that today are still taken up by a new generation of historians; many of the historiographical improvements that are published today in specialized magazines, that appear in book chapters and that are presented in conferences, reference her work.

The Professional career of Luz Elena Galván is broad. She has published more than a hundred peer reviewed articles and has authored over fifty books. In all of those publications, Dr. Galván was committed to her role as historian. Her keen interest in understanding the educational past of our country led her to wander, incessantly, over the progress of history; as she continued her research, she started pioneering on new topics and study objects that had been merely mentioned in other works.

It is important to question why Luz Elena Galván chose history of education as her preferred field of study, as well as to learn what motivated her decision to first take up education as her focal theme, and to know on what aspects, elements, and historical development of this theme she focused. In this respect, we can quote from Luce herself to speak for her own reasons:

On the question of why and for whom I write as a historian, I would like to say that, given the fact that I have worked for over 39 years around the history of education, my main interest is to make known to the faculty of today, the educational practice of yesterday. I wanted to show them how teachers were formed, how well they were trained, and how they became so qualified that they were able to author the same books that were being used in classrooms. I would like to transmit to this new generation how committed this guild was, how engaged in their teaching practices, and to the children they were educating, not only giving them knowledge, but providing ethical values that would someday be an inherent part of citizens [...] I write to the faculty of today, so they awaken (because they have been sleeping for decades). I write to tell them that they should not be part of the bureaucratic machine, just another gear turning, but they should be more than that on account of the duty they have to the education of children, for children are the most precious thing our country possesses. (Galván, 2014, pp. 50-51)

In this quote, we can see yearning, hope and desire to help the community of teachers, since she considers they should be the axis in which education pivots toward something better. For her, it is important to acknowledge the work of teachers, but they should also be made aware of the responsibility they carry in their practice. Taking into account the reason that led Galván to the history of education, we would like to refer two of her historiographical works that have become compulsory for education historians: the Dictionary of History of Education in Mexico (*Diccionario de Historia de la Educación en México*) and “Historiography of Education (“Historiografía de la Educación”). The first one can be found digitally in a CD published in 2000, while the second one is the volume ten of “The educational investigation in Mexico 1992-2002” (*La investigación educativa en México*), published by the COMIE (Mexican council for the investigation on education), in 2003.

The dynamic offered by the seminar, as a place to discuss freely, was favoured by Luz Elena Galván and their colleagues at the CIESAS. For them, the academic spaces used in this way made possible the sharing and commentary of their own investigations. In 1998 Galván, along with Beatriz Calvo, founded the Seminar of Educational Investigation, a space for reflection and analysis that included academics from several institutions who were interested in the subject of education. Hard work, constant debate, and the use of –then– new historiographical trends fostered new initiatives that brought novel investigations on the educational past.

It is in this context that the *Diccionario de la Historia de la Educación* (*Dictionary of History of Education*), coordinated by Luz Elena Galván, emerges. She mentions that this work “has an antecedent in 1993, during the Second National Congress for Investigation on Education, when she was asked to create a state of knowledge on our country’s [Mexico] historiography of education” (Galván, 2000, s/p). She accepted and the community of historians of education created the *Comité para el Fomento y Desarrollo de la Historia de la Educación* (Committee for the Development and Promotion of the History of Education) for that purpose and started operating the year after. Through this committee she proposed to make a historical project to give continuity to the investigative work that historians specialized in education were making: “we chose to present the project for the dictionary to the CONACYT, and it was wholly developed in two years (1999-2000)” (Galván, 2000, s/p).

We can see in the dictionary’s introduction that the project was indeed interinstitutional. It gathered the collaboration of academics from twelve different institutions of higher education. The CD is conformed by sections: introduction, articles (thirty-two of them), glossary, biographies, annotated bibliography and photographs. Dr. Galván mentioned that the dictionary was structured as a reference book that could be used in a teacher training college:

... it will be easier than a book, that is usually expensive and too often is not accessible to teachers. Today, most colleges for teachers have computers, where the teachers in training can easily access this. (Galván, 2000, s/p)

With this quote we can reaffirm what we mentioned in previous paragraphs: the importance that Galván placed on teachers and their labour. For her, it was essential that teachers became aware of the variables in education (its history), so they could tackle not only pedagogical matters, but also elements from their context, in order to be able to analyse them and sort them out/act accordingly.

In this respect, we would like to mention that the articles mentioned here, that are part of a dictionary, are grouped in traditionally arranged historical periods: colonial, XIX and XX centuries. Each section includes several of our contributions, which reconstruct the history of a variety of objects of study, all of them resorting to different sources and reference books.

In sum, there are three elements that make of this dictionary an innovative piece: first, the themes, sources and archives that the authors consulted and used to write these articles, using photographs as another historical source that is able to safeguard the historical and educational memory; second, the digitality of the whole endeavour. The time in which it was published, showed that history of education in Mexico is a fertile field, that offers the possibility of a wide variety of studies; the objects are broad and each one of the contributions made by researchers are part of the immense structure of education.

The other work mentioned, “*Historiografía de la Educación*”, also coordinated by Luz Elena Galván, along with Susana Quintanilla and Clara Inés González, is part of an editorial collection called *La investigación educativa en México 1992-2002* (*Educational Research in Mexico 1992-2002*), and it was funded by the COMIE with a view to boost this type of investigation in the country. This council has organized (up to date) fifteen congresses (the first one in 1981) in which a diverse set of specialists in education (including in its history) have gathered. It was in the second congress that they came up with the idea of assessing the state of knowledge in this area.

In this work, the coordinators gathered a group of specialists that, together, gave an account of the state in which educational historiography was in the nineties and the beginning of the new millennium (2000s): “The objective of this state of knowledge was, precisely, to investigate the way in which the past has been written/recorded by education historians (Galván, 2003, p. 21).

The state of knowledge covers the viceregal period (nineteenth and twentieth century). In this chronological fragment we can emphasize three main aspects: first, a thematical organization; second, the reach of the events that create “structures and processes, synchronicity and diachronicity, from very different natures. In fact, we are talking about a plural and multiform past” (Galván, 2003, p. 21). Finally, to acknowledge the interdisciplinary link that history of education has with pedagogy, anthropology, sociology and literature. This interdisciplinarity has risen new questions, what in turn has endorsed the diversification of referential sources. It is with these sources that we can recreate histories about “the knowledge, memories, practices, norms, forms of socialization and the material symbolic elements” (Galván, 2003, p. 22).

We would like to close this section by mentioning that Luz Elena Galván was part of the development, professionalization and consolidation of the history of education in Mexico. As a trailblazer in many research topics, she worked hard to reconstruct and understand different aspects of education, always keeping in mind the present in which history is anchored, even though she recognized that what we are today is the by-product of past events. What happens today must be explained from a historical perspective; learning the development of educational processes is a feature that we cannot elude, because only in this way can we achieve a betterment of teaching systems.

### 3.12 Conclusion

This work has been created by the conjoint effort of women researchers whose interest is to describe, from a polysemic and transdisciplinary view, the intellectual biographies of Latin-American women. This is done with a view to discover, visibilize and find meaning in the struggles, strategies, accomplishments and unresolved issues that conformed and sculpted their life projects, whose completion was centred around academic development.

We have chosen to approach our object of study from a theoretical and methodological point of view that uses social-cultural history, gender perspective and intellectual biography. From that point on, and thanks to the contribution of academics such as Luz Elena Galván, Marcela Santillán and Belinda Arteaga, as well as Peruvian Lucrecia Janqui, we were able to create a space in which these stories could be known. Thanks to these dream weavers, who built threads capable of resisting the constant probing of a patriarchal world (that tried to negate their involvement and even existence, making them invisible by placing them away from the public eye) is that we can embark on this project.

From gender relations that are marked by exclusion, inequality and violence towards women by the patriarchy, to the supposedly neutral context given by academia, these women fought, found allies and became stronger through their own silenced cooperation. This collusion allowed them to overcome obstacles in order to advance their projects. They managed to sign and edit their own work, to obtain funding to keep on working –even in expensive projects–, to produce and create cultural value that provided society with a new and critical vision on education and its history, and basically to trailblaze and shape a new generation of researchers.

One of the outcomes of this project, as we can already perceive, is the progress in the biographical writing of Luz Elena Galván y Lafarga’s life. She is no longer with us, but remains close and dear to the project. We started writing her life story using diverse sources, such as recorded interviews, in which she explains when and why she opted (“was seduced”) by History. She talks about details involving her family and early schooling that brought her into contact, and brewed a fascination, with this discipline. She also describes the many tears she shed when her father expressed –and thus decreed– a prohibition for his daughters to study; she likewise mentions the determination of her mother, that assisted this fascination and ended up opening the world for her.

The lines that are incomplete in this text serve both as a foreshadowing and a commitment on our part, since that is the reason for *Aquelarre* to exist: to reunite, during enjoyable evenings, and celebrate life and all the stories that surge from it.

### 3.13 Acknowledgments

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## Chapter 4 Flipped classroom a model for autonomous learning

### Capítulo 4 Flipped classroom un modelo para el aprendizaje autónomo

RAMÍREZ-HERNÁNDEZ, Moramay\*, DÍAZ-ALVA, Angelina and FIGUEROA-MORENO, Gabriela

*Universidad Tecnológica de Tecámac, Information and Communication Technologies Division, Mexico.*

ID 1<sup>st</sup> Author: *Moramay, Ramírez-Hernández* / **ORC ID:** 0000-0003-3813-5149, **CVU CONACYT ID:** 44090

ID 1<sup>st</sup> Co-author: *Angelina, Díaz-Alva* / **ORC ID:** 0000-0002-2514-4989, **CVU CONACYT ID:** 509840

ID 2<sup>nd</sup> Co-author: *Gabriela, Figueroa-Moreno* / **ORC ID:** 0000-0002-8509-1305, **CVU CONACYT ID:** 1023978

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M. Ramírez, A. Díaz and G. Figueroa

\* [mramirezh@uttecamac.edu.mx](mailto:mramirezh@uttecamac.edu.mx)

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## **Abstract**

At the higher education level, autonomous learning is one of the most important challenges facing education today, especially with the current situation caused by the pandemic, where students must acquire good academic habits, work in a self-regulated manner and with their own criteria to support decision making. This paper describes the research conducted in a Technological University where the inverted classroom model was implemented in a subject to analyze the impact of the implementation of this model in the autonomous learning of students. The methodology used was based on a mixed type study, initially with an exploratory scope for the qualitative part and an experimental design for the quantitative part. The main contribution of this research is the Flipped Classroom Framework for its implementation for both teachers and students.

As far as the specific objectives are concerned, the first is to define the framework to facilitate the teaching-learning process using the flipped classroom model in the context of the Technological Universities model, the second is to know the advantages and disadvantages that the flipped classroom offers to the students and the third to propitiate the autonomous learning of the students of the subject of Multiplatform Mobile Development.

## **Flipped classroom, Autonomous learning, Educational technology, ICT**

### **Resumen**

A nivel superior, el aprendizaje autónomo es uno de los desafíos más importantes que se tiene la educación hoy en día, especialmente con la situación actual que se vive a raíz de la pandemia, donde los estudiantes deben adquirir buenos hábitos académicos, trabajar de manera autorregulada y con criterios propios para apoyar la toma de decisiones. El presente trabajo describe la investigación realizada en una Universidad Tecnológica donde se implementó el modelo de aula invertida en una asignatura para analizar el impacto de la implementación de dicho modelo en el aprendizaje autónomo de los estudiantes. La metodología utilizada se basó en un estudio de tipo mixto, inicialmente con un alcance exploratorio para la parte cualitativa y un diseño experimental para la parte cuantitativa. La principal contribución de esta investigación es el Flipped Classroom Framework para su implementación tanto para profesores como para estudiantes.

En cuanto a los objetivos específicos se refiere, el primero consiste en definir el marco de trabajo para facilitar el proceso de enseñanza-aprendizaje utilizando el modelo de flipped classroom en el contexto del modelo de las Universidades Tecnológicas, el segundo es conocer las ventajas y desventajas que el flipped classroom ofrece a los estudiantes y el tercero propiciar el aprendizaje autónomo de los estudiantes de la asignatura de Desarrollo Móvil Multiplataforma.

## **Aula invertida, Aprendizaje autónomo, Tecnología educativa, TIC**

### **4.1 Introduction**

Currently, as a result of the sudden changes that the pandemic has brought, particularly in the educational field, it is essential to update learning models and focus them on processes that allow students to better acquire knowledge.

It is for the above that Information and Communication Technologies (ICT) are very useful tools that are being used in conjunction with educational technology to enhance the autonomous work of students who today carry their teaching-learning process mainly in home.

For Del Arco, Flores and Silva 2019, "learning has ceased to be an internal and individual activity to become a collective and network activity", given the circumstances the role of the teacher has changed to be a mediator of learning that facilitates and enhances the process of acquiring knowledge to students.

Virtual education has been a tool that has undoubtedly been used under the circumstances to have a closer relationship with students and face-to-face classes have been migrated to this format practically overnight. However, the use of technological tools that are used in virtual education does not guarantee the achievement of the expected learning, it is important that there is significant learning, centered on the student, which is individual and multidimensional.

As mentioned by Adriazola, Durán and Flores, 2020 "one of the potentialities that allows the implementation of ICT in education is that it favors the change of role between the teacher and the student", the teacher is now a facilitator that promotes autonomous work.

It should be noted that, although the flipped classroom has been used mainly in school-based courses, it can also be adapted to the virtual modality, mainly in b-learning with synchronous classes instead of face-to-face ones, since it is a flexible learning model with the support of ICT (Kardas & Yesilyaprak, 2015).

In the flipped classroom model according to Erol 2020, the student plays an active role, knows the topic before starting the class, the teacher during class solves doubts and carries out activities focused on achieving the expected learning and focuses on the practice, after class learning activities and collaborative works are assigned mainly, all this with the support of ICT. Therefore, the flipped classroom is a more effective type of b-learning with greater advantages for students (Sánchez-Cruzado and Sánchez-Compañía, 2020).

An important aspect that should be mentioned about this model is that it is closely related to the educational objectives of Bloom's taxonomy, where the first categories of lower order would be worked out of the classroom and the last categories of higher order in the synchronous class (Zainuddin and Halili, 2016).

On the other hand, autonomous learning is important at all educational levels, however, within the Technological Universities model it is considered one of the main objectives to be achieved by students. The educational model seeks the development of capacities and the achievement of meaningful learning, where the student controls their own learning, achieving self-directed learning.

Considering that the evaluation by competencies in Technological Universities is qualitative, students in the subjects are assigned an evaluation considering the criteria of: Not Accredited, Satisfactory, Outstanding and Autonomous, where the latter is only given to students who have demonstrated their competencies through independence or autonomy.

However, taking students to the autonomous level is not an easy task, it is a collective process that requires a lot of effort and time on the part of teachers, but above all a lot of commitment on the part of the students.

One of the causes that hinder autonomous learning in institutions is that students are little involved in their teaching-learning process, so with the flipped classroom model it is intended that they play a more active role with the realization of activities that promote that autonomy (Balçikanli, 2010).

Derived from the above, the proposal for the implementation of the flipped classroom is made as a strategy to strengthen the autonomous learning of students of Technological Universities. This model was chosen because it is flexible, it can be adapted to various learning models, it promotes collaborative work and uses ICT as support tools for interactive experiences, something very favorable in these times of the pandemic.

The hypothesis proposed for this work is that: With the implementation of the flipped classroom, the autonomous learning of the students at the Technological Universities can be improved.

This chapter consists of 8 sections such as; introduction, where a general explanation of the subject is given, state of the art in which a compilation of the most representative and current information regarding the topics of flipped classroom, autonomous learning, and evaluation of learning in Technological Universities is presented, then in The methodology section to be developed describes the process based on the scientific method of how the work was carried out, then there is the section of the framework of the flipped classroom for the implementation in which it is described for both teachers and students, also The results section is included from both the qualitative and quantitative point of view, additionally the conclusions section where the most outstanding contributions of the work are highlighted, and finally the references section where the consulted sources that support the research are included.

## **4.2 State of the art**

### **4.2.1 Flipped classroom**

The flipped classroom model is an innovative methodology, it was proposed by (Bergmann and Sams, 2012), this model applies constructivism and considers the student as the center of the teaching-learning process, in addition to which it can be applied in flexible and open environments (Artero and Domeque, 2018).

The flipped classroom is considered a blended learning modality that includes a comprehensive approach, which places special emphasis on the individual needs of students, with learning that takes place outside the classroom, in addition to promoting interest and motivation, giving it a twist to traditional education with the active participation of the student (Aguilera-Ruiz et al 2017). There are several definitions around this concept, the most representative ones are shown below:

The inverted classroom or flipped classroom is a teaching method whose main objective is that the student to assume a much more active role in their learning process than the one they have traditionally been occupying” (Berenguer, 2016).

According to García-Gil and Cremades-Andreu 2019, the flipped classroom model is “in which the usual practice of reserving class time for instruction or the narrative implementation of theoretical knowledge is altered, while these are complemented with practical activities carried out outside of school hours (the usual tasks, exercises or work)”.

For Sánchez, Ruiz and Sánchez 2017, “it is a pedagogical approach that consists of using the time outside the classroom to carry out certain learning processes that are traditionally done within the classroom and, for its part, within the classroom, with the presence, teacher's guide and experience, time is used to enhance and facilitate other processes of knowledge acquisition and practice, in applying concepts and participating creatively in the contents.”

As Artero and Domeque 2018 mention, the flipped classroom has changed the way of teaching in a traditional way to a disruptive way, where the student has a more active role prior to the face-to-face or synchronous class and the time in the classroom is optimized for the core part of the class, doing practices, solving doubts, discussing or reflecting, in addition to making a more personalized teaching-learning process for students who require it.

Additionally, according to Flores, Del Arco and Silva 2016, evaluation is an important part of the flipped classroom model, and it should be:

- Integral.
- Reflective.
- Responsible.
- Shared.
- Competent.

However, as mentioned by Díaz, Carraga and Serra, 2020, it is important to consider that each student has their own rhythm for assimilating content and building knowledge.

#### **4.2.2 Autonomous learning**

According to Sarramona 2011, the term "autonomy means to govern oneself", this term has become very common in the educational field.

As mentioned by Paladines-Ugalde 2016, educational autonomy is not an individual process but rather a generic competence that must be given collectively to achieve true learning in the classroom. At the higher level, students are expected to achieve this competence upon graduation since it is one of the best tools for permanent and continuous learning for life.

Autonomous learning is defined as “the student's orientation to take responsibility for their own learning, which leads them to use cognitive and metacognitive processes to learn strategically and flexibly according to the learning objective” (Reyes, 2017). But it also implies increased motivation, creativity, maturity and construction of one's own knowledge.

Autonomous learning is also known as self-regulated learning, self-learning or self-managed learning, where the student must learn by himself in a critical way and the main objective is to learn to learn.

In addition to the above, autonomous learning has many benefits for students, among which are; it encourages human development, encourages metacognitive development, organization of the learning process itself, increases self-esteem, improves confidence, as well as strengthening integral development.

However, there is a very close relationship between ICT and autonomous learning, for Espinoza and Velázquez 2017, ICT is only a mean for students to achieve autonomous learning, since it is necessary that they develop true learning in the classroom by means of practice and responsibility. It is worth mentioning that ICTs are tools that support constructivist learning, autonomous learning and contribute to the teaching-learning process to achieve the objectives of the educational programs of Technological Universities.

#### **4.2.3 Assessment of learning in Technological Universities**

Since they were created, the Technological Universities have had six attributes which are: quality, relevance, intensity, continuity, versatility and flexibility. It should be noted that the quality attribute refers to the culture of both internal and external evaluation (CGUT, 2008).

Technological Universities are currently working under a model based on competencies, which are made up of various components such as; knowledge (knowing), abilities and skills (knowing how to do) as well as attitudes and values (knowing how to be and live together).

With reference to the evaluation of the subjects that are not integrative, the learning result of each competence unit is expressed in an alphabetical and qualitative scale, where the levels are: Satisfactory (SA), Outstanding (DE), Autonomous (AU), Not accredited (NA) or Without evaluation (SE). A student obtains SA as long as he achieves the learning results, obtains DE when the learning results have been achieved and exceeds the established requirements, obtains AU when he exceeds the learning result in different contexts, obtains NA if he has not met the results of learning and SE in case of not complying with the learning result or with the minimum attendance established in the regulation.

In particular, the student who obtains an Autonomous assessment is expected to be a student with high responsibility and initiative, demonstrating both in knowledge and in cognitive, metacognitive and learning skills, as well as in their attitudes and values.

### 4.3 Methodology to be developed

For the development of this project a mixed type study was carried out, initially with an exploratory scope using a mainly qualitative approach where a documentary research was carried out, later to measure the results the quantitative approach was used. Regarding the design of the research for the quantitative part, it was experimental with two groups, one experimental and the other control.

#### 4.3.1 Participants

This work was developed in the semester September-December 2020 at a Technological University in Mexico, in the Information and Communication Technologies division. Regarding the population, a selection was made of the 28 students of the 5th semester of the Higher University Technician in Information and Communication Technologies career: Multiplatform Software Development Area, the experiment was applied in the Development Multiplatform Mobile subject.

As recommended by Hernández-Sampieri et al. (2003), the students were divided into 2 groups of the same size to guarantee internal validity and completely at random, G1 was considered as the experimental group and G2 as the control group, both with 14 students each.

For the present work, the following variables were defined:

- Dependent variable: autonomous learning.
- Independent variable: flipped classroom.

### 4.4 Flipped classroom framework for implementation

Once the documentary research was carried out, the framework was generated to implement it in the course, taking into account the model of Technological Universities and that classes are currently being given remotely and synchronously through videoconferencing platforms. It is important to mention that the work of the flipped classroom as described by Santiago 2016, not only occurs during class but also before and after it, on the other hand, it is an activity in which the role of the teacher and the student are vital importance, for this reason the activities to be carried out by each are described below.

#### 4.4.1 Teacher activities

First, the activities that the teacher must carry out were defined considering the three important moments for this model, Table 4.1 shows the identified activities.

**Table 4.1** Teacher activities within the framework of the flipped classroom

Before the Class	During the Class	After the Class
<ul style="list-style-type: none"> <li>- Carry out the planning of activities.</li> <li>- Create materials according to the learning objectives that introduce the student to the subject and promote meaningful learning.</li> <li>- Share attractive materials such as; videos, learning objects, interactive multimedia, etc.</li> <li>- Promote educational autonomy considering knowing, doing and being.</li> <li>- Define work prior to class.</li> <li>- Generate the sequence and structure of the synchronous session.</li> </ul>	<ul style="list-style-type: none"> <li>- Act as a guide and motivate students.</li> <li>- Clarify and provide feedback on group and personalized doubts.</li> <li>- Apply the constructivist method and reinforce knowledge.</li> <li>- Facilitate and enhance learning in an environment of trust.</li> <li>- Encourage student participation.</li> <li>- Generate learning activities, mainly oriented to the practical part.</li> <li>- Give feedback in an agile way.</li> <li>- Make formative evaluation considering knowing, doing and being.</li> </ul>	<ul style="list-style-type: none"> <li>- Review activities and tasks promptly.</li> <li>- Personalize learning at the student's pace.</li> <li>- Leave learning activities that are understandable and consistent with the curricular objectives and learning outcomes, so that the student can do them independently.</li> <li>- Encourage collaborative work.</li> <li>- Stay in constant communication with students.</li> <li>- Carry out summative evaluation considering knowing, doing and being.</li> </ul>

*Source: Own elaboration*

#### 4.4.2 Student activities

The activities to be carried out by the student were also defined. Table 4.2 shows the details.

**Table 4.2** Student activities within the framework of the flipped classroom

Before the Class	During the Class	After the Class
<ul style="list-style-type: none"> <li>- Review previously assigned topics and materials.</li> <li>- Carry out the activities prior to the synchronous session.</li> <li>- Investigate more about the topic that will be covered in the synchronous class.</li> <li>- Prepare a guide with the list of doubts or questions on the subject.</li> <li>- Develop study habits.</li> <li>- Have their own study criteria and methods.</li> </ul>	<ul style="list-style-type: none"> <li>- Have prior knowledge.</li> <li>- Ask the teacher questions or doubts.</li> <li>- Actively participate in class.</li> <li>- Carry out the learning activities requested by the teacher.</li> <li>- Follow the teacher's instructions.</li> <li>- Use the tools that the teacher indicates.</li> <li>- Show responsibility, self-organization, independence and initiative.</li> </ul>	<ul style="list-style-type: none"> <li>- Review the tasks that the teacher assigned.</li> <li>- Work collaboratively with colleagues.</li> <li>- Stay in constant communication with the teacher.</li> <li>- Put into practice the knowledge acquired during the class.</li> <li>- Hand in the activities that were left unfinished during class.</li> <li>- Carry out a learning self-assessment (Sánchez and Casal, 2016).</li> </ul>

*Source: Own elaboration*

It should be noted that this information from the framework was made known to both, the teacher and the students, belonging to G1 (experimental group) so that it was carried out during the 105 hours of the course, while G2 (group control) was working as normal, both with the same teacher.

#### 4.4.3 Evaluation of activities

To evaluate the implementation of the activities, a teacher was appointed as a monitor of the experimental group sessions so that with the help of a checklist he was verifying compliance with them before, during and after classes. The monitor was constantly providing feedback, both to teachers and students, so that during the course they could carry out the activities defined within the framework of the flipped classroom.

### 4.5 Results

#### 4.5.1 Qualitative

Undoubtedly, the implementation of the course through the flipped classroom model was a creative challenge for those involved, at the beginning mainly for the teacher who had to follow the proposed framework to promote the autonomous work of the students, it was continuously monitored the performance of the teacher before, during and after the sessions, as well as the students were monitored, taking in addition to the mentioned checklist, an observation log, and based on the annotations made and the experience obtained, it was possible to corroborate various advantages for students and teachers as mentioned (Gilboy, Heinerichs & Pazzaglia, 2015; Pienta, 2016), which are shown in Table 4.3.

**Table 4.3** Advantages of the flipped classroom

Advantages for the student	Advantages for the teacher
<ul style="list-style-type: none"> <li>- It is a model that motivates and generates interest</li> <li>- Promotes collaborative work and exchange of ideas</li> <li>- Keeps you active all the time in your learning</li> <li>- Improves interactivity with your classmates and teachers.</li> <li>- Encourages autonomous learning.</li> <li>- Develop your responsibility.</li> </ul>	<ul style="list-style-type: none"> <li>- There is better use of the time of the face-to-face or synchronous session</li> <li>- It is applicable for different learning styles and modalities</li> <li>- It can be applied face-to-face, virtual or mixed</li> <li>- Feedback is more agile</li> <li>- Greater participation in class</li> <li>- Its main role is as a mediator of learning</li> </ul>

*Source: Own elaboration*

At the beginning, it was quite a challenge for the teacher to implement the flipped classroom model in the Multiplatform Mobile Design subject in such a way that it was meaningful and student-centered. But the importance of the active role of the student should also be highlighted, since it was totally different from what he was used to. However, it was also detected that this model also has some disadvantages which are shown in Table 4.4.

**Table 4.4** Disadvantages of the flipped classroom

Disadvantages for the student	Disadvantages for the teacher
<ul style="list-style-type: none"> <li>- At the beginning it is complicated and there is resistance to the implementation of the model due to the role change it implies.</li> <li>- It is high cost since it is necessary to use electronic devices constantly.</li> <li>- Internet access is required.</li> <li>- If the teacher does not lead the 3 moments correctly, it is difficult to give continuity.</li> <li>- Usually outside of the synchronous class the student works individually.</li> </ul>	<ul style="list-style-type: none"> <li>- You have to make a great effort to drive the model correctly by updating its programming.</li> <li>- It takes a long time to create the various educational resources.</li> <li>- A constant guide is required for the development of activities.</li> <li>- It is necessary to have a greater reflection of the learning models implemented in technological platforms.</li> <li>- It is difficult to change the role at the beginning and leave aside the traditional model.</li> </ul>

*Source: Own elaboration*

At the beginning it was difficult to get used to the change of model, mainly for the students the change towards a disruptive model such as the flipped classroom was slow, but despite this, over time they adapted and their performance improved, something important that was detected is that precise instructions are very important to strengthen autonomous learning. As for the teachers, at the beginning it was also a bit difficult, especially because of the time they had to invest to prepare the resources prior to the synchronous sessions and that their function was mainly as a mediator or facilitator.

In this regard, despite the disadvantages detected in this implementation, the flipped classroom model is considered a positive perception for students, since the impact it produces on them is very pragmatic and adapts very well to different learning styles, generating good habits by giving them greater responsibility both in thinking and in action, allowing them to define their own criteria, learning methods, as well as promoting collaborative work.

#### 4.5.2 Quantitative

As far as the quantitative part is concerned, to measure autonomous learning, the groups were evaluated under the same criteria of the competency model of the Technological University and the Multiplatform Mobile Development subject where the criteria to achieve the results of learning are clearly defined, with the only difference that in the experimental group during the quarter the flipped classroom model was applied and in the control group a traditional class was carried out.

Both groups were evaluated during the 3 partial periods established by the Technological Universities model and attached to the evaluation scheme of the subject, as far as time is concerned, the first partial is evaluated in week 5, the second partial is evaluated in the week 10, the third partial in week 14 and the final evaluation is carried out in week 15.

As mentioned above, the evaluation scale is qualitative and the levels are: Satisfactory (SA), Outstanding (DE), Autonomous (AU), Not accredited (NA) and Without evaluation (SE), Table 4.5 shows the results obtained during the quarter for the experimental group while Table 1.6 shows the results of the control group.



**Table 4.5** Results of G1 (experimental group)

	Gender		1 <sup>st</sup> Partial Assessment	2 <sup>nd</sup> Partial Assessment	3 <sup>rd</sup> Partial Assessment	Final Evaluation
	F	M				
Student 1		X	AU	NA	DE	SA
Student 2		X	AU	NA	AU	DE
Student 3		X	AU	AU	AU	AU
Student 4		X	DE	NA	AU	DE
Student 5	X		AU	SA	AU	AU
Student 6	X		AU	DE	AU	AU
Student 7		X	AU	SA	AU	AU
Student 8		X	SA	NA	SA	SA
Student 9		X	AU	DE	AU	AU
Student 10		X	AU	SA	DE	DE
Student 11		X	DE	NA	AU	SA
Student 12		X	AU	AU	AU	AU
Student 13	X		SA	NA	SA	SA
Student 14	X		AU	NA	DE	SA
Total autonomous students			10	2	9	6
% of autonomous students			71.4%	14.2%	64.2%	42.8%

Source: Own elaboration

**Table 4.6** Results of G2 (control group)

	Gender		1 <sup>st</sup> Partial Assessment	2 <sup>nd</sup> Partial Assessment	3 <sup>rd</sup> Partial Assessment	Final Evaluation
	F	M				
Student 1		X	DE	AU	AU	AU
Student 2		X	SA	NA	DE	SA
Student 3	X		NA	NA	NA	NA
Student 4		X	DE	SA	AU	DE
Student 5		X	NA	NA	AU	SA
Student 6		X	SA	NA	DE	SA
Student 7		X	AU	AU	AU	AU
Student 8		X	AU	NA	NA	NA
Student 9		X	AU	NA	AU	DE
Student 10		X	DE	NA	AU	DE
Student 11	X		DE	SA	AU	DE
Student 12		X	NA	SA	DE	SA
Student 13		X	NA	NA	SA	SA
Student 14		X	DE	NA	AU	DE
Total autonomous students			3	2	8	2
% of autonomous students			21.4%	14.2%	57.1%	14.2%

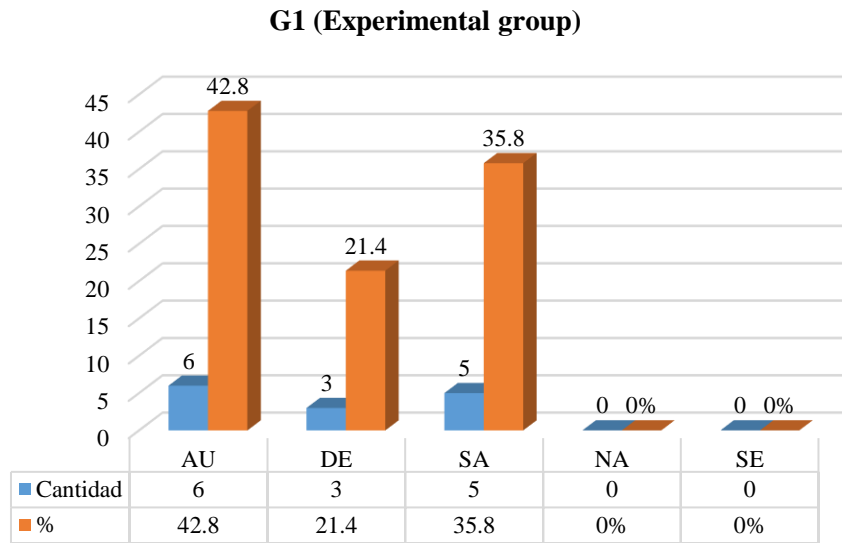
Source: Own elaboration

As can be seen by comparing the tables, in the 1<sup>st</sup> partial the students of the experimental group obtained better results than the students of the control group, this is mainly due to the fact that the course was carried out centered on the student where it is reflected that the group experimental acquired better knowledge.

In the 2<sup>nd</sup> partial assessment the results of both groups were practically the same, in the 3<sup>rd</sup> partial the experimental group also obtained a greater number of autonomous students and in the final evaluation the experimental group obtained better results with which it can be seen that the application of flipped classroom promotes the autonomous work of students.

Graphic 4.1 shows the concentration of the evaluations of the experimental group, indicating the number and percentage of students who obtained each of the scale values.

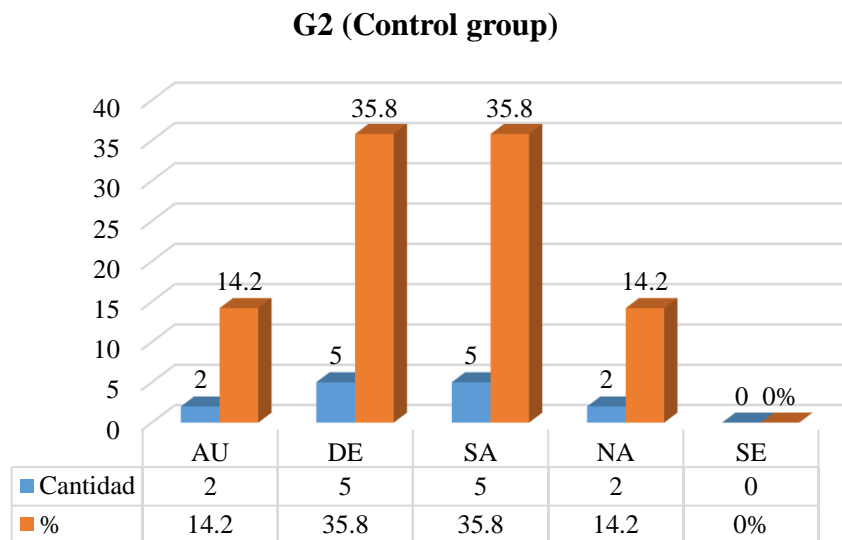
**Graphic 4.1 G1 Scale Assessment Concentrate**



*Source: Own elaboration*

Graphic 4.2 shows the concentration of the evaluations of the control group, indicating the number and percentage of students who obtained each of the scale values.

**Graphic 4.2 G2 Scale Assessment Concentrate**



*Source: Own elaboration*

From the results obtained, it can be seen that the experimental group to which the flipped classroom model was applied obtained 28.6% more students who obtained Autonomous (AU) which makes it a very significant result with advantages for this model by having a more comprehensive approach. As for the students who obtained Outstanding (SD), the control group was superior with 14.4%, while the percentage of students with Satisfactory (SA) was exactly the same in both groups.

However, it should be noted that in the experimental group there were no Non-Accredited students (NA) while in the control group there were, similarly in no group registered students Without Assessment (SE).

**4.6 Conclusions**

The present work examined the results obtained with the implementation of the flipped classroom model in a Technological University in the career of Higher University Technician in Information and Communication Technologies: Multiplatform Development Area and in the Multiplatform Mobile Development course, after implemented for a quarter.

Based on the results, the analysis components obtained conform very well to the revised state of the art on the applied model. The advantages and disadvantages detected coincide with the flipped classroom construct, in addition to contributing to the transversal skills of the use of ICT, especially considering the moment we live today due to the pandemic in education with distance classes. On the other hand, this model allows the teacher to accompany the students to promote their autonomous work, coinciding with the results of Erol (2020).

Additionally, the experience and results obtained with the experimental group where the flipped classroom was applied were satisfactory since the strategy was functional and the students obtained good academic results in both, the formative and summative evaluations, so that It is considered to be highly recommended at the higher level and particularly in the Technological Universities subsystem.

Regarding the quantitative learning results, they were very acceptable given that in the experimental group there were no failed students, while in the control group 2 students did not accredit the subject, also obtaining a greater number of students with an Autonomous result in the experimental group.

However, it should be noted that it is very important for this model that the teacher designs activities that are meaningful with clear instructions for the students, as well as effective intervention during synchronous classes, where learning is socialized, knowledge is evaluated prior, the student is motivated, collaborative work is promoted and feedback is given in a timely manner. Additionally, it is recommended to implement techno-pedagogical mediation strategies to assist in the teaching-learning process (Ramírez-Hernández, Cortés & Díaz, 2020).

Regarding the hypothesis raised at the beginning of the research project, it is accepted since according to the quantitative data obtained, it was indeed possible to corroborate that with the implementation of the flipped classroom, the autonomous learning of the students of the Technological Universities can be improved.

However, despite the tests carried out, there is still a way to go, it is considered important as future work to apply an instrument to measure the degree of satisfaction of the participants, both students and teachers, that serves as feedback for the continuous improvement of the framework of work, as well as applying it in more subjects to make a comparison in greater detail.

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## Chapter 5 Resistant personality and burnout in judo athletes from national teams

### Capítulo 5 Personalidad resistente y burnout en deportistas de judo seleccionados nacionales

PONCE-CARBAJAL, Nancy†\*´, LÓPEZ-WALLE, Jeanette M.´ and MÉNDEZ-SÁNCHEZ, María del Pilar´´

´Universidad Autónoma de Nuevo León, School of Sports Organization, Mexico.

´´Universidad Nacional Autónoma de México, Facultad de Estudios Superiores Zaragoza, Mexico.

ID 1<sup>st</sup> Author: *Nancy, Ponce-Carbajal* / **ORC ID:** 0000-0002-8370-9378, **CVU CONACYT ID:** 556867

ID 1<sup>st</sup> Co-author: *Jeanette M., López-Walle* / **ORC ID:** 0000-0003-1552-7756, **CVU CONACYT ID:** 121353

ID 2<sup>nd</sup> Co-author: *María del Pilar, Méndez-Sánchez* / **ORC ID:** 0000-0003-0066-5582, **CVU CONACYT ID:** 263502

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N. Ponce, J. López and M. Méndez

\* NANCY.PONCECRB@uanl.edu.mx

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## **Abstract**

The objective of this book chapter is to identify the correlations between Hardy Personality (HP) and Burnout (MT), in high performance athletes. The participants were 162 Athletes from their national teams from 21 countries in Judo Sport, who participated in Mundial de Veteranos de Judo and Grand Prix in 2019 in Cancun Quintana Roo, Mexico, the age ranged from 18 to 70 years with an Average of 32.56 and a Standard Deviation of 11.48. The athletes answered two instruments, one that measures the RP that evaluates their resistance to stress, and the other that measures the Burnout. The methodology used is cross-sectional, associative empirical, and simple correlation. Descriptive analyzes, reliability, validity, and Spearman's correlations were performed, with SPSS software. The results found negative and significant relationships in the resistant trifactorial and unifactorial personality. Judokas are perceived as resistant to stress and capable of overcoming any obstacle, there is no depletion or devaluation of their sports practice.

## **Hardy personality, Control, Resistance personality, Commitment, Athletes**

### **Resumen**

El objetivo de este capítulo de libro es identificar las correlaciones entre la Personalidad Hardy (HP) y el Burnout (MT), en deportistas de alto rendimiento. Los participantes fueron 162 atletas de sus equipos nacionales de 21 países en el deporte de Judo, que participaron en el Mundial de Veteranos de Judo y Grand Prix en 2019 en Cancún Quintana Roo, México, la edad osciló entre 18 y 70 años con un Promedio de 32,56 y una Desviación Estándar de 11,48. Los deportistas contestaron dos instrumentos, uno que mide la RP que evalúa su resistencia al estrés y otro que mide el Burnout. La metodología utilizada es transversal, empírica asociativa y de correlación simple. Se realizaron análisis descriptivos, de fiabilidad, validez y correlaciones de Spearman, con el software SPSS. Los resultados encontraron relaciones negativas y significativas en la personalidad resistente trifactorial y unifactorial. Los judokas se perciben como resistentes al estrés y capaces de superar cualquier obstáculo, no hay agotamiento ni desvalorización de su práctica deportiva.

## **Personalidad resistente, Control, Personalidad resistente, Compromiso, Deportistas**

### **5.1 Introduction**

Sport has been a tool used for the protection of health for decades as shown by Kobasa (1979) and at present it is an activity that is sustained and that has been followed by the benefits it offers to society in general, has become a core activity to support the improvement of the health of the masses, that is why international sporting events such as the Olympic Games impact young people who, seeing the example of elite athletes, begin in training and development of systematic practice of the sport of their choice and this is documented by Bauman, Bellew, and Craig (2014), where they describe how there is a positive impact on society. And not only do they encourage them to practice sports, it also increases their motivation and self-confidence (De la Cruz, 2020).

Hence, the importance of this type of study, since this specific sample is athletes of international stature with many years of practice, which allows us to show the perception they have of themselves in the face of sport and the benefits that they have represented. in the course of his sports career, and allows us more accurately to identify his resistance to stress and the limits in turn caused by Burnout. The added value is that with the results and our conclusions, it becomes known what has kept them training for so many years, such as their ability to control, commitment and challenge their sports practice and that transform it into information that serves the new generations providing conclusions that allow us to identify the needs that helped these sports heroes, and this reduces the time of trial and error in the new generations and at the same time prevents athletes in training from reaching the state of burnout that is an extreme of emotional fatigue that We do not want it to happen, so that would avoid defections to the objectives that athletes set in their sports careers and with this, they can formulate a multi-collaborative strategy between parents, coach, authorities and the athlete himself so that he can achieve the sports success. As a conclusion to this work, offer a strategy that helps to keep athletes focused on their goals and resistant to possible setbacks that are part of training and not necessarily fall into abandonment of the activity.

It is worth mentioning that high performance athletes participate in a participation in two different contexts such as sports and social, which represents a greater number of activities, as well as the sports part with all that it implies in the social context. It is also necessary to participate and respond in the family and school environment, which represents a certain increase in stress for athletes (Bronfenbrenner 1987; Avilés *et al.*, 2018).

The instruments with their characteristics that were used are two, the first is the resistant personality, a concept referred to the resistance to stress of the participants, and the capacity they demonstrate in surprising, difficult situations or that represent a great commitment, where the Individuals transform all these difficulties into processes of development and growth, however not all subjects have this capacity and even some have reduced their emotional and even physical health. This concept is composed of three variables, which are: Commitment (CO), Control (C) and Challenge (CH), each variable of 6 items and composed of 18 questions that measures the resistant personality as a single set, or in a trifactorial way. (Ponce, 2017). The second is Burnout It is a syndrome that appears when the subjects do not achieve expected results, regardless of their efforts and dedication in their activity, gradually causing mental and physical fatigue that is manifested by a lack of energy, interest and leading to a lack of motivation. This concept is composed of three variables identified as Physical Emotional Exhaustion (PEE), Reduced Sense of Achievement (RSA) and Devaluation of Sports Practice (DSP), this questionnaire is made up of 15 questions, each variable made up of 5 items (Balaguer, Castillo, Duda, Quested, and Morales, 2011). Some studies have been carried out in diverse samples such as psychologists and nutritionists (González, 2021) and also in Mexican athletes (Salazar-González, D., Cantú-Berrueto, López-Walle, Berengüí, 2020) and another study has been specifically carried out in footballers by Figueroa and Patiño 2021).

The problem statement is that the sports population has the challenge of controlling various emotional situations to avoid abandoning training due to lack of control, commitment or that the challenges of sports practice are leading to burnout syndrome such as burnout. Since if the coach is too demanding or the parents put too much pressure on the athlete by not achieving the expected success, they may feel unmotivated to carry out the training sessions and make it more attractive not to continue practicing anymore and to abandon their sport.

The working hypothesis is the following: Which PR factors correlate with the Burnout variables?

The chapter of the book is organized as follows, in the first part the introduction is presented, which describes in a general way the beneficial effects of sport on society in general and the theoretical framework on which the study variables are discussed as They are the resistant personality and burnout, in turn the variables that make up said questionnaires are presented and the general concepts of said instruments are mentioned, later the issue of the importance of sport and the benefits it provides is addressed. later the statement of the problem and the central hypothesis of this research is carried out. In the second part, the methodological framework is presented where the topics of the research design, the sample, the evaluation instruments used, the components and the number of items of each of them are discussed, after this the procedure that It was carried out for the sampling and the statistical analyzes described as descriptive analyzes, frequency analysis, the mean, the standard deviation, reliability and correlations are reflected. The third part presents the results where the values found in said statistical analyzes are described. In the fourth part the thanks to the institutions that have provided support are reflected and in the fifth part the conclusions are arranged with concise strategies of what is stated in this research and as the last section the references where all those consulted sources have been arranged.

## 5.2 Description of the Method

The design of this research is empirical associative, simple correlation and cross-sectional (Ato, López-García, & Benavente, 2013), the sample is composed of 169 national selected Judo athletes from 21 countries, participants in the Veterans World Cup and the International Grand Prix, held in Cancun Quintana Roo in 2018, the age of the participants ranges between 18 and 70 years ( $M = 32.56$ ,  $SD = 11.48$ ), of which 92 are men (59%) and 64 women and 13 subjects who preferred not to put their gender, representing 7.7%.



The first of the instruments used to measure resistant personality was the Resistant Personality questionnaire in Athletes from Central America and the Caribbean (RPAAC; Ponce et al., 2015) this questionnaire consists of 18 items: 6 commitment, 6 items that measure the control dimension, and 6 challenge. The Likert-type scale is 4 points where 0 totally disagree to 3 totally agree. The reliability of Cronbach's alpha of the RPAAC variables ranges between .71 and .72 (Ponce, 2017).

The second of the instruments used to measure burnout syndrome is the Sports Burnout Questionnaire (Athlete Burnout Questionnaire; ABQ; Raedeke & Smith, 2001). The questionnaire is composed of 15 items and three variables that are: Reduced Sense of Achievement (RSA), Physical and Emotional Exhaustion (PEE) and Devaluation of Sports Practice (DSP), each of 5 items. The items are evaluated in such a way that, the higher number is a higher degree of burnout, with two exceptions in items 1 and 14 of the RSA subscale, which are presented inversely, that is, the lower the numerical response, the degree of burnout is higher. The response scale is Likert type and ranges from (1) Almost never to (5) Almost always. The reliability of Cronbach's alpha of the Burnout variables ranged between .75 and .83 (Salazar-González, Cantú-Berrueto, López-Walle, Berengüí, 2020).

The **Procedure** began by requesting permission to the Mexican Judo Federation, requesting support to carry out the investigation, subsequently contact was made with the organizing committee to request the accreditation of said event with the consent of the Mexican Judo Federation this credential allowed the intervention and approach to the various training and competition venues with coaches from different countries, where the objectives of the investigation were explained to them through a brief briefing meeting, which allowed the coaches to they informed their athletes about our study and facilitated their participation. A space was prepared in the various hotels and training facilities, so that the athlete had enough privacy to answer the instruments in a calm and conscious way, the athlete was accompanied in this process explaining prior informed consent and the dynamics of answering the questionnaires, clarifying that their participation was completely anonymous and voluntary, therefore at the moment in which they wanted to leave the study they could do so, this dynamic helped the process of answering the questionnaires to be given in a fluid and light way for the athletes.

The statistical analyzes carried out were descriptive, mean frequencies, standard deviation and normality of data by means of kolmogórov-smirnov, reliability of Cronbach's alpha ( $\alpha$ ) and bivariate correlations with Spearman's correlation coefficients, with the statistical package Statistical Package for the Social Sciences (SPSS) version 25.

### 5.3 Results

The sample does not meet the criteria of normality of the data, so non-parametric statistical analyzes were used for the correlations, when the variables to be contrasted do not comply with the normal distribution criterion, we will use the calculation of the Spearman correlation coefficient, from so that with this analysis the degree of association between the variables is determined, the reliability of the resistant personality was between .75 and .81, eliminating item 12 (.40 if eliminating item 12), and in the total resistant personality With item 12 eliminated, it resulted in .90 (.50 without eliminating item 12), this was done through the correlation of the corrected total item Carmona-Halty, Garrosa, & Moreno-Jiménez (2017) found reliability values of Alpha of Cronbach between .78 to .86. And the reliability of the Burnout variables ranged between .40 and .82 (eliminating item 1) by means of the corrected total item correlation. Another group of researchers found the reliability of the factors between .75 to .83 (Salazar-González, Cantú-Berrueto, López-Walle, Berengüí, 2020) a study also done in athletes.

In the correlations (Tabla 1), negative and significant results were presented in the total resistant personality in the variable of physical and emotional exhaustion (PEE) with a value of  $r = -.209 *$  and Devaluation of Sports Practice (DSP) with a value of  $r = -.265 **$ . In this sense, the result shows that the higher the resistant personality, the lower the PEE and the lower DSP, which presumably strengthens staying in sport voluntarily despite the fatigue that continuing to train and compete may represent.

And the correlations of the resistant personality variables with burnout were presented in the control variable with a value  $r = -.177^*$  and the commitment with a value of  $r = -.281^{**}$  with the devaluation of sports practice. In this case, the result shows that the greater control and commitment, the greater the value the athlete perceives of the importance of his sport practice because he considers it part of his development as an athlete, and in the challenge with a value of  $r = -.188^*$  with the Physical and Emotional Exhaustion (PEE) and in this same challenge variable it was correlated with the Devaluation of Sports Practice (DSP) with a value of  $r = -.258^{**}$ , with this result it is presumed that the taste for Changes, and due to new challenges, athletes consider it part of their training, so it is not relevant how physically and emotionally tired they are, it is worth continuing their preparation and this adds value to their systematic practice of training.

It is worth mentioning that there were no existing correlations with respect to the variables of resistant personality and the Reduced Sense of Achievement (RSA).

**Table 5.1** Spearman's bivariate correlations of resistant personality factors and burnout

	1	2	3	4	5	6
1 PR Total						
2 C	.869**					
3 CO	.564**	.467**				
4 CH	.850**	.621**	.470**			
5 RSA	-0.049	-0.078	-0.053	-0.040		
6 PEE	-.209*	-0.161	-0.118	-.188*	.696**	
7 DSP	-.265**	-.177*	-.281**	-.258**	.677**	.732**

Note: C (Control); CO (Commitment); CH (Challenge); RSA (Reduced Sense of Achievement); PEE (Physical and Emotional Exhaustion); DSP (Devaluation of Sports Practice); \*  $p < .05$ ; \*\*  $p < .01$

#### 5.4 Acknowledgements

Our gratitude to the Facultad de Organización Deportiva, Universidad Autónoma de Nuevo León, CONACYT, and REDDECA, which continues to support this type of research to the best of its ability. Also, our thanks to the athletes, coaches and organizing committee.

#### 5.5 Conclusions

The PR factors that correlate with the Burnout variables are commitment, control and challenge (trifactorial), therefore, it was tested whether there is also a unifactorial relationship of the total resistant personality and the existing relationship is effectively confirmed. in the variable of physical emotional exhaustion and the devaluation of sports practice. Confirming the answer to the hypothesis raised.

Therefore, the conclusions of the present investigation are the following:

A resistant personality implies a high resistance to stress, which predisposes athletes to perceive problems with greater lightness and ability to solve difficulties and at the same time feel capable of solving whatever it is during competitions, and in this research athletes show a low burnout and a high resistant personality, they do not feel exhausted, physically or mentally, and they value their sports practice. Their love of their sport has kept them motivated over the years.

Emotional control in various situations ensures sporting success, since it maintains the balance and order of the athletes' mental processes and being involved in an activity that they enjoy does not allow negative feelings or loss of interest in their sport.

High performance athletes are highly committed people, they go about specific objectives, focused on a task, in search of achievable goals in the short to medium and long term, these characteristics have led them to achieve the highest objectives that have been set, they are athletes who prefer to make an effort every day in training in order to perceive themselves as successful, aware that this takes a process that can take years.

Challenges are part of the growth and development processes of high-performance athletes, they learn to achieve goals and establish new and greater new challenges each season, they are excited by the permanent idea of improving and involving themselves in body and spirit during their training, the challenges are opportunities to achieve new records, new brands, new experiences that they consider positive for their training. therefore, the practice of judo for these athletes has become a very incredible way of life, learning and experiences that make them feel successful.

The judokas in this sample are perceived to be successful, warriors, successful, able to resist any degree of stress, they love their sport and want to stay in it for many years, which is a mental, emotional and physical benefit.

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## **Chapter 6 Educational innovation through techno-pedagogical tools in virtual education**

### **Capítulo 6 Innovación educativa a través de herramientas tecno-pedagógicas en educación virtual**

OTERO-ESCOBAR, Alma Delia†\*

*Universidad Veracruzana, School of Accounting and Administration, Mexico.*

ID 1<sup>st</sup> Author: *Alma Delia, Otero-Escobar* / **ORC ID:** 0000-0001-9266-6587, **Researcher ID Thomson:** P-8871-2016, **CVU CONACYT ID:** 203484

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A. Otero

\* aotero@uv.mx

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## Abstract

Virtual education is present more than ever at all educational levels, as a result it is essential that institutions incorporate technological advances in the way they teach their courses. In order to identify the influence of techno-pedagogical tools to facilitate and improve student learning, a longitudinal-quasi-experimental and applied research was carried out. A sample of 35 individuals chosen at the investigator's convenience, 19 from the treatment group and 16 from the control group, was considered. Adjustments were made in the treatment group courses and later, using the survey as a data collection instrument, the impact of the use of techno-pedagogical tools was evaluated, in addition a comparison of the results of the final grades of both was made. groups. The results show that the techno-pedagogical tools that include small capsules facilitate learning in students, therefore presenting improvements in their learning.

## Educational innovation, Techno-pedagogical tools, Instructional design

### Resumen

La educación virtual está más presente que nunca en todos los niveles educativos, por lo que es fundamental que las instituciones incorporen los avances tecnológicos en la forma en que imparten sus cursos. Con el fin de identificar la influencia de las herramientas tecnopedagógicas para facilitar y mejorar el aprendizaje de los estudiantes, se realizó una investigación longitudinal-cuasi-experimental y aplicada. Se consideró una muestra de 35 individuos elegidos a conveniencia de la investigación, 19 del grupo de tratamiento y 16 del grupo de control. Se realizaron ajustes pertinentes incluyendo diversass herramientas tecnopedagógicas en los cursos del grupo de tratamiento y posteriormente, utilizando la encuesta como instrumento de recolección de datos, se evaluó el impacto del uso de herramientas tecnopedagógicas, además se realizó una comparación de los resultados de las calificaciones finales de ambos grupos. Los resultados muestran que las herramientas tecnopedagógicas que incluyen pequeñas cápsulas informativas facilitan el aprendizaje en los estudiantes, presentando así mejoras en su aprendizaje.

## Innovación educativa, Herramientas tecno pedagógicas, Diseño instruccional

### 6.1 Introduction

This research was conducted at the Universidad Veracruzana with the purpose of determining whether the implementation of techno-pedagogical tools facilitates learning in virtual education.

We start from the theoretical-conceptual framework that supports the study, giving rise to the study context in which it is developed and that establishes the bases of the methodological design of the research.

It is a quasi-experimental design, with the participation of 35 students of the Bachelor's Degree in Administrative Computer Systems who were taking the educational experience of programming in the period September 2020-January 2021, thus integrating a treatment group with 19 participants and a control group with 16 participants. Several techno-pedagogical tools were applied in the treatment group to later apply a survey as a data collection instrument, and compare the responses of the participants of the control and treatment groups; on the other hand, the results of the final grades of both groups were analyzed. The results confirm the acceptance of the incorporation of techno-pedagogical tools to the virtual course and, according to the students, these tools have facilitated learning in the virtual course.

### 6.2 Theoretical framework

Educational innovation is increasingly present in learning environments, in March 2020, the World Health Organization, WHO (2020), declared the pandemic by the coronavirus COVID-19 which caused an exponential increase in the use and application of such virtual environments, since then there have been effects in various areas of life, this research refers to the radical changes that the education sector has undergone and the impact on the way of learning.

This is how the use of techno-pedagogical tools went from being an option to a necessity, this has become clear with the worldwide confinement where each of the homes became a virtual classroom, which is why it is important to identify whether in reality the educational resources applied in virtual education are suitable and especially if they have facilitated learning at different educational levels. In addition to this, the application of virtuality in educational institutions took most of them by surprise, so they started improvised and empirical work to reach students with learning content, so it was considered important to identify the relevance of the appropriation of these tools to virtual courses.

On the other hand, it is complex to keep up with technological advances and apply them to the educational sector. According to Cabero (2006), it is of great importance to mobilize diverse strategies, including of course the inclusion of information and communication technologies, to respond to the question of how to learn and what mechanisms will be used to motivate and awaken the interest of students in their training, from the individual use of subjects with study materials to teaching for group use by putting collaborative learning into action.

Currently there are many technological tools to complement learning and to design classrooms that favor higher quality learning; many of these tools are used online, others require downloading and installation, most of them allow information sharing and collaborative work, and others can be embedded in educational spaces. Valverde (2002) also emphasizes that "materials should be created that encourage the student to move through the information and the meaningful construction through their own paths using text, sounds, images, animations, videos and others"; hence, the importance of analyzing the use and impact given to them in order to favor learning in students in virtual courses.

### **6.2.1 Techno-pedagogical tools within virtual learning environments.**

Technological tools are identified as those devices or programs that facilitate work, allowing the application of resources effectively, exchanging information and knowledge (Mejía, Nieto, Rodríguez, M., 2014).

Technological tools can be effective for learning only to the extent that they can be properly used to facilitate the construction of knowledge and that "technology should not direct the teaching-learning process, but the educational objectives and the needs of the students" (Tancredi, 2004).

To achieve the above, it is essential that there is a correspondence between the training needs, the contents and the activities that students must perform; such content must be of quality and in adequate quantities, organized, structured, flexible and presented in a variety of formats, allowing learning according to the diversity of styles. The interaction that is propitiated in the environment must generate an active environment of exchange between the content and the students.

According to Tancredi (2004), through specialized tools, educational platforms allow the following functions:

- Student management. Administrative management of students in terms of monitoring their activity in the environment.
- Communication management. Management of synchronous and asynchronous interactions carried out for instructional or socializing purposes, using various Internet services integrated to the virtual platform, such as chat, forum, etc.
- Content management. Management of texts, images, sounds, animations, documents, SCORM content packages, etc., that have the purpose of communicating an instructional message.

In this sense, and from a purely technical point of view, they are virtual environments, but there is a need for an educational design that considers the interactive triangle of learning (student, teacher, content) and that allows these tools to function as true learning tools, Latorre (2010).

In the case of this research, the virtual educational platform where the programming course with the inclusion of the techno-pedagogical tools was hosted was *eminus*.

*Eminus* is a Flexible Learning Environments Management System that allows the presentation and distribution of educational content, providing the possibility of having a digital campus for communication and collaboration without time and distance limits. One of its main characteristics is that it is a proprietary system of the Universidad Veracruzana, given the facilities it was considered suitable to contain all the techno-pedagogical resources of the course (Eminus, 2021).

The techno-pedagogical tools within an instructional design, besides facilitating access to information in a meaningful way to students, allow to keep them interested and not bored, enjoying the trends that are regularly demanded in these media by the knowledge society.

### **6.2.2 Use of techno-pedagogical tools in virtual courses**

The success of learning situations in virtual learning environments depends on the adequate use of techno-pedagogical tools to mediate the constructive activity, so that they enable the creation of spaces for personal interaction and act as cognitive tools.

To guide the process of interaction and educational communication, it is necessary to have an instructional design that contemplates both the possibilities of technology for the learning process and the way in which the interactions supported by these tools should be carried out, in order to promote the constructive activity of the participants.

In all instructional design models, before planning any program, an analysis of the target population is made, allowing to identify the elements that can be used to facilitate the information in an adequate and meaningful way to the students. Based on this, the appropriate tools must be visualized to achieve the objectives, because if a student does not have the skills to use certain software, instead of increasing learning, it will be frustrated by the complexity that its use may represent.

Technological tools are ideal for fostering cooperative and collaborative learning, which allows the knowledge acquired to be enriched through knowledge networks and contributions from the experiences of each of the participants.

The effectiveness of this learning depends on learning strategies, which also use different resources or technological tools that impact students in their process, promoting significance. Another important factor is motivation; implementing innovative or cutting-edge resources is motivating for the student, because knowing that their interests are taken into account, feeling considered, allows them to consider themselves special and important.

Thus, it is considered of great importance the use of techno-pedagogical tools, which also cater to the diversity of learning styles; relying on them allows finding an appropriate tool to meet each of these.

Therefore, the appropriate tool must be selected to design activities and contents that favor the acquisition of knowledge by the student, promoting the practice and development of specific professional competencies.

The implementation of techno-pedagogical tools guarantees access to large amounts of updated information for lifelong learning in a flexible manner at home, work or recreation centers by means of a computer and access to the *internet*.

In addition to being tools that enable communication and the transmission of information, technological tools have become tools of the mind, (Jonassen, 2021). Technological literacy is a requirement derived from globalization and the emergence of the information society. Knowing how to use them is a competitive advantage that comes to mark economic and cultural differences between people.



Nowadays, knowing how to use technological tools effectively is a basic skill, just as knowing how to read and write was once a basic skill. In today's world of work, being able to handle computers and surf the Internet is a basic skill *internet*. However, it is not enough to master the technical aspects of technological tools; people must also make a strategic use of information, which is achieved through the acquisition of search skills, analysis and understanding of information, develop attitudes and values aimed at a rational use of technology, a position in which it is understood that its use does not occur outside a social and political context.

Given this panorama, it is clear that educational institutions must not only introduce technology in the classroom, but also instruct students and teachers to take advantage of its possibilities for learning and teaching.

The knowledge society is changing, in which greater importance is given to the development of creative and flexible thinking, capable of adapting to the continuous change of the global world, so innovative people are required with professional skills aimed at the constant updating of knowledge and the effective management of both information and its transmission mechanisms.

### 6.3 Contextual framework

This research was carried out at the Universidad Veracruzana, in the Administrative Computer Systems program. (LSCA), the Educational Experience (EE) where the virtual programming course was implemented, using the platform called *Eminus*. For this purpose, the elements described above were considered as a result of the analysis of various authors and our own experience. Subsequently, the course was validated according to certain categories of analysis described below.

### 6.4 Methodology

The research paradigm applied was socio-critical and propositional, since it promotes social transformations, responding to specific problems; likewise, it presents a self-reflective and critical collaboration in action. In the field of educational innovation, the aim is to design tools for its application in the students' professional practice.

When talking about the constant updates of the techno-pedagogical tools that support education, it unquestionably encompasses changes at a social level, since it must keep pace with the pace that society itself does and what it demands; it is also collaborative and critical, by requesting the opinions of the students.

The type of research assumed is applied, since it seeks or perfects resources for the application of knowledge already obtained through pure research, and, therefore, it does not seek truth, as pure research does, but utility.

It is an instrumental type of case study, since according to Hernández, Fernández and Baptista (2014), it is examined to provide knowledge inputs to some research topic or problem, as well as to refine a theory.

It is proposed as longitudinal-quasi-experimental, considering that "an experiment is known as a situation in which the researcher introduces a stimulus or independent variable that modifies any of the components of a situation and then observes what reaction is provoked" (Hernández, et al., 2014).

The incorporation of various techno-pedagogical tools in the educational experience of programming was carried out to contribute to self-learning and facilitate the use of the virtual environment.

A mixed approach was considered, because according to (Hernández, et al, 2014), it can be applied to the analysis of complex problems and allows analyzing the variables in depth, so the instrument was built with closed and open questions to help define, describe, interpret and share results.

### 6.4.1 Sample population and study context

The study was carried out at the Universidad Veracruzana in the educational experience of programming that due to the COVID-19 crisis has been implemented in virtual modality. The population is composed of students of the Bachelor's Degree in Administrative Computer Systems and the sample was non-probabilistic, as it was convenient for the research; therefore, it was directed and intentional.

This sample is made up of 35 students from the educational programming experience. Two groups were formed, one of 19 students, which, for research purposes, was considered the treatment group; and the control group, which is made up of 16 students; the first group was made up of 8 males and 11 females, while the second was made up of 4 males and 12 females. In both groups, the age range of the participants was 18 to 22 years.

### 6.4.2 Research design

The type of research was longitudinal-quasi-experimental, applied and correlational in scope, since it sought to identify the relationship or degree of association between state-of-the-art techno-pedagogical tools and the improvement of virtual learning environments.

The inclusion of these innovative tools was carried out in the September 2020-January 2021 academic year. Therefore, and considering that the study was quasi-experimental, a comparison was made between the treatment group, in which the tools were implemented, and the control group, in which they were carried out in the traditional way. The results were then verified.

The main objective was to implement learning activities, as well as cutting-edge techno-pedagogical tools in the instructional design of the educational experience of programming that is carried out virtually, seeking to promote student learning.

The following hypothesis was assumed: The implementation of state-of-the-art techno-pedagogical tools in the instructional design of the educational experience of programming will improve the learning environment of students, and therefore their academic performance.

As can be seen, this is a causal relationship and the research design is quasi-experimental.

Taking into account the above, the following questions arise to guide the research: What are the techno-pedagogical tools that should be considered in the instructional design of the educational experience of programming, to facilitate student learning?

### 6.4.3 Design of data collection instruments

In a broad sense, mixed research is visualized as a continuum where quantitative and qualitative approaches are mixed, Hernández, et al (2014), focusing more on one of them or giving them equal weight. In this research, the instruments have more quantitative and less qualitative weight, with the purpose of knowing the students' perception.

The instrument consisted of 16 questions of this nature and a qualitative one that allows knowing the students' opinions and suggestions.

Category I: Appearance of the platform.

Category II: Organization of resources.

Category III: Quality of technological tools.

Category IV: Relevance and usefulness of the content presented in the tools.

Category V: Relevance of self-assessment questionnaires to measure learning.

The survey was applied to a total of 35 students once they completed the virtual course; the data analysis was performed with the SPSS program. The intention of the research was to apply the instructional design elements resulting from the analysis, with the inclusion of innovative technological tools applied to the previously described ES. Therefore, the Programming course was automated, making the pertinent adjustments in order to analyze the results obtained at the end of the course.

## 6.5 Results

To carry out the application of the instrument to the sample selected for the purposes of the research, made up of 19 subjects from the treatment group and 16 from the control group, adjustments were made that were considered after the expert judgment review.

Subsequently, the questionnaire was designed using the google form tool, followed by a basic descriptive and inferential statistical analysis.

The participants were taking the educational experience through *eminus* where the changes were implemented through the selected techno-pedagogical tools such as modifications in the learning activities and the insertion of informative capsules.

Subsequently, it was sent to the entire selected sample group through an e-mail sent to them through the platform. *eminus*, attaching the link to the resource.

The students showed willingness to collaborate and express their opinions regarding the techno-pedagogical tools used in the platform.

Twenty-eight responses were obtained from the students and were analyzed and interpreted using SPSS software. *Statistics*. The results according to the categories are presented in Table 6.1:

**Table 6.1** Results of applied categories

Analysis category	Control group	Treatment group
Category I: Appearance of the platform.	the majority of students find the platform to have a pleasant general appearance, with 58% of them being very pleased with this aspect, while 42% are pleased with it, although it could be even better.	In this case, the home page of the courses was modified, and various technological resources were inserted to present the information, there was a notable increase in the acceptance and liking of the image of the platform; 85% of the students consider it to be very good or better.
Category II: Organization of resources	51% of the respondents in the control group identified the teaching resources as very good or excellent, while 49% considered them to be good.	The above shows that in general, the order within the platform is adequate; however, there are still aspects that could be improved.
Categoría III: Calidad de las herramientas tecnológicas	<ul style="list-style-type: none"> <li>- 76% of the first group consider the quality of presentations, diagrams, graphics and presentations to be of very good or excellent quality; only 24% of them consider it to be good.</li> <li>- 57% of the participants in the control group identified the quality of the videos as very good or better.</li> <li>- the acceptance of traditionally designed presentations showed a decrease in their acceptance.</li> </ul>	<ul style="list-style-type: none"> <li>- In the treatment group, there is a growing satisfaction with the integration of different interactive and multimedia contents; there is still room for improvement, but most of the students are comfortable with them.</li> <li>- As for the quality of the videos, the results are also favorable in the treatment group, with 75% of the respondents showing greater satisfaction.</li> <li>- a notable difference is observed in terms of liking and acceptance of the presentations used in the courses by the treatment group, since the tool was changed for one that allows 3D movements; for another that favors interaction with the student. The results in this group were 75% of those surveyed considered these resources to be very good or excellent.</li> </ul>

<p>Category IV: Relevance and usefulness of the content presented in the tools</p>	<ul style="list-style-type: none"> <li>- Regarding the relevance and usefulness of the contents presented in the tools, it was found that 71% of the control group considered that the videos were very useful to promote their learning and 29% thought that they were moderately useful.</li> <li>- as for the interactive materials, the control group rated them as very good or better by 54%.</li> <li>- Regarding the incorporation of multimedia content in the platform, 43% of the respondents of the control group consider that the technological tools used are very good or better, to favor their learning; however, most of the participants consider them only good, which shows that it is still necessary to work on this aspect.</li> </ul>	<ul style="list-style-type: none"> <li>- Regarding the relevance and usefulness of the contents presented in the tools, in this group where they were replaced by more current videos, 86% considered them to be very good or better, which reflects the importance of having updated materials.</li> <li>- As for the interactive materials, which were presented to them with greater recurrence and variety of resources, the majority (92%) consider them to be very pertinent.</li> <li>- the incorporation of multimedia content in the platform, 88% of the participants consider the use and application of technological tools, as well as the presentation of information in small capsules, to be very good or better, in order to favor their learning.</li> </ul>
<p>Category V: Relevance of the self-assessment questionnaires for measuring learning</p>		<p>In this category, the responses are only from the treatment group, since the control group did not have self-assessment questionnaires. 53% of the participants consider their relevance for assessing learning to be good or less, while 47% think that they are very good to excellent.</p>

*Source: Own elaboration*

Regarding the students' perception of which activities are more enjoyable for them, it was found that most of them prefer activities such as participation in a forum, as well as carrying out integrative activities and application to real cases, problem solving and delivery of source codes in the programming language adopted.

### 6.5.1 Results of the final evaluations of the control and treatment groups

The results of the evaluations of the control group and the treatment group and their analysis through the SPSS *Statistics* tool are presented below.

The result of the statistical comparison of evaluations identifies a considerable difference in the mean of the results, since the overall average of the treatment group was 92 points in contrast to the overall average of the control group, which was 83 points.

Likewise, it is identified that the range between the lowest and the highest score is much wider in the case of the control group, which could be a sign that the learning obtained in the students of the treatment group is more homogeneous than in the control group; however, in the latter the mode is greater than in the treatment group.

It can be affirmed that the implementation of state-of-the-art techno-pedagogical tools in the instructional design of the educational experience of programming improved the learning environment of the students, and therefore their academic performance, based on the results already presented and pointed out: the students of the treatment group have stated, within the survey, that the state-of-the-art techno-pedagogical tools implemented did improve the environment and facilitate their learning; derived from the results of the grades of the treatment group, compared to the control group, it is identified that the questionnaires programmed as a means of self-evaluation of the theoretical subjects, improves the academic performance of the students; However, analyzing the survey sent to the students, despite the fact that a small majority considers the self-evaluation questionnaires pertinent and to their liking, the great majority prefers the traditional learning activities instead of them.

## 6.6 Conclusions and future work

Several techno-pedagogical tools were used in the implementation of the virtual course of the educational experience of programming, seeking the collaborative participation of students.

Multimedia content was used in small capsules and self-assessment questionnaires to encourage self-reflection on learning, in addition to having a mechanism to provide the student with those elements that, in their opinion, needed to be reinforced.

It is clearly identified that students prefer that the contents within the course were provided in informative capsules or pills, considering only the indispensable topics linked to their professional profile. The incorporation of techno-pedagogical resources such as: more videos of short duration and explanatory (not conceptual); interactive diagrams and graphics, such as prezi or mindomo, in order to support the relationship of knowledge with its application in the work environment; multimedia content that motivates students, mainly those whose learning is kinesthetic, this could be done with tools such as genial.ly, emaze, playbuzz, among others; use the information in small capsules, without going deeper into the contents and present indispensable information for problem solving.

Regarding the use of self-assessment questionnaires as a learning activity, the idea should be discarded, since the students showed little interest, mentioning that they can generate greater stress, contrary to what was expected.

Finally, the implementation of state-of-the-art techno-pedagogical tools and programmed questionnaires as a means of self-assessment, in the instructional design of the Programming course of the Bachelor's Degree in Administrative Computer Systems in virtual modality, improved the students' learning environment.

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## **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

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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 "*internationalitics*" (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 "*internationalitics*" (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).

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<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.

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<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.

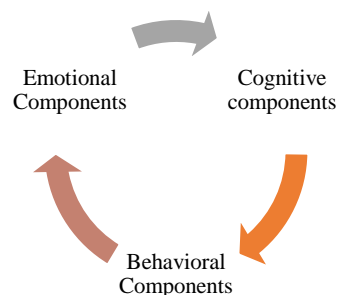
Finally, once the effects and actions of COVID-19 decreased, at least in part, the establishment of plans for the continuity of institutional activities were proceeded and are still in progress, addressing the lack of infrastructure or authorization, the shortage of qualified personnel, in virtual education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

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<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.

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<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.

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## **Chapter 8 Comparison of adaptation and family cohesion among adolescents with and without suicide risk in Tlaxcala**

### **Capítulo 8 Comparación de la adaptación y cohesión familiar entre adolescentes con y sin riesgo de suicidio en Tlaxcala**

QUITL-MELÉNDEZ, María Mónica Anastacia†\*, NAVA-ERNULT, Alejandra and JIMÉNEZ-CANSECO, Sacnité

*Universidad Autónoma de Tlaxcala, Mexico.*

ID 1<sup>st</sup> Author: *María Mónica Anastacia, Quitl-Meléndez* / **ORC ID:** 0000-0002-1060-6896

ID 1<sup>st</sup> Co-author: *Alejandra, Nava-Ernult* / **ORC ID:** 0000-0002-0656-3256

ID 2<sup>nd</sup> Co-author: *Sacnité, Jiménez-Canseco* / **ORC ID:** 0000-0002-6082-4533

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M. Quitl, A. Nava and S. Jiménez

\* maquitl4@hotmail.com

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## Abstract

Differences in adaptation and family cohesion among high school adolescents with and without suicide risk in Tlaxcala were analyzed. The participants were 50 adolescents between 12 and 14 years old; 28 women and 22 men, who applied the Suicide Risk Inventory for Adolescents (IRISA) by Hernández and Lucio (2011), which consists of 50 items and three subscales, whose validity is .95; and the Family Cohesion and Adaptability Assessment Scale (FACES III), trusted and validated in Mexico by Ponce, Gómez, Terán, Irigoyen and Landgrave (1999-2002), with a Cronbach's Alpha of .70. The results showed that there were no statistically significant differences in Adaptation, however, significant differences were observed in Family cohesion and with suicide risk factors among adolescents with and without suicide risk (\*\*  $p < .01$ ). Significant differences were also found in sex, school grade and place in the family (\*  $p < .05$ ) with some suicide risk factors. It is concluded that the family is an essential emotional support for the adolescent that helps to avoid the presence of suicidal behaviors.

## Suicide risk, Adaptation, Cohesion, Adolescent.

### Resumen

Se analizaron las diferencias de adaptación y cohesión familiar entre adolescentes de secundaria con y sin riesgo de suicidio en Tlaxcala. Participaron 50 adolescentes de entre 12 y 14 años; 28 mujeres y 22 hombres, a quienes se les aplicó el Inventario de Riesgo Suicida para Adolescentes (IRISA) de Hernández y Lucio (2011), que consta de 50 ítems y tres subescalas, cuya validez es .95; y la Escala de Evaluación de Cohesión y Adaptabilidad Familiar (FACES III), de confianza y validada en México por Ponce, Gómez, Terán, Irigoyen y Landgrave (1999-2002), con un Alfa de Cronbach de .70. Los resultados mostraron que no hubo diferencias estadísticamente significativas en Adaptación, sin embargo, se observaron diferencias significativas en Cohesión familiar y con factores de riesgo de suicidio entre adolescentes con y sin riesgo de suicidio (\*\*  $p < .01$ ). También se encontraron diferencias significativas en sexo, grado escolar y lugar en la familia (\*  $p < .05$ ) con algunos factores de riesgo de suicidio. Se concluye que la familia es un apoyo emocional esencial para el adolescente que ayuda a evitar la presencia de conductas suicidas.

## Riesgo de suicidio, Adaptación, Cohesión, Adolescente.

### 8.1 Introduction

Suicide in adolescents is a worrying and relevant issue due to the impact it generates not only at the individual level, but also at the family and social level. Given its high incidence in recent decades, it constitutes a serious health problem that requires special attention. Only in Mexico, in 2018 there were 641 deaths due to self-inflicted injuries in the group of girls, boys and adolescents aged 10 to 17 years (INEGI, 2020). This represents a rate of 3.6 deaths per 100,000 girls, boys and adolescents, which has remained practically unchanged since 2014 where it was at 3.7. By gender, the rate for men in this age range is 4.2 per 100,000, while for women of these ages it was 2.9 per 100,000.

Suicidal behavior can be defined as a set of complex events, which begins, in many cases, with thoughts and ideas, followed by suicidal plans and attempts without reaching death, until the consummate suicide. In such a way, it can affect people of any age or condition and is occasionally triggered by various biological, psychological or sociocultural factors (Cañón Buitrago, cited in Minsalud, 2017). According to the International Classification of Diseases - ICD - of the World Health Organization (WHO), the Diagnostic and Statistical Manual (DSM-5) and the American Psychiatric Association (APA) (cited in Minsalud, 2017), the suicidal behavior is considered a symptom of an emotional or mental discomfort or disorder and does not represent a diagnosis in itself, so the presence of other emotional or behavioral symptoms that together are part of its diagnosis should be checked. Therefore, talking about suicide is not taking into account a single cause, but various events that can trigger it (INEGI, 2020). Thus, the Mexican Psychiatric Association (APM) (cited in Valadez and López, 2020) mentions that the current generations of 12 to 17 years have more mental health problems such as anxiety and affect problems; in addition, some of them abuse substances such as alcohol and drugs; have disruptive or antisocial behaviors; and eating disorders. This is mainly associated with rape, sexual abuse, followed by beatings, armed robbery, harassment, which contribute to having ideas, planning and attempting to commit suicide (Chávez, 2020).

This is how, as in the rest of the suicides, for adolescents this behavior does not mean a simple wish to die but is given as a final resource to escape from great discomfort. Mainly due to the fact that they become vulnerable to the changes that occur at the body, psychic, affective, family and social level, derived from hormonal changes, increased responsibilities, family crises, which can lead to an imbalance and a state of conflict, generating anguish, and leading to suicide as a solution to an existential problem, being the only possible way out. In this way, suicide has a great impact in adolescence, because most of the time it is the expression of a desire for change, a reaction to the powerlessness to solve an unbearable situation (Barón, 2000).

Given these data, Cárdenas-Rodríguez, Santillana-Saucedo and Rodríguez-Verdugo (2019), recorded explanations from different perspectives of the multiple factors of suicidal processes in adolescents in Argentina, through the registration and analysis of the bibliographical compilation, where real suicide cases and statistics were recognized, as a sign of risk within the suicidal process, showing the influence of certain factors that provoke in adolescents feelings of stress, confusion, pressure, fear, leading them to a distressing situation and without resources or alternatives of coping, where they can go through a suicidal process.

In the same way, Vázquez et al (2021) analyzed the differences between adolescents with and without suicidal risk related to stressful life events; as well as, identified which of these events most predict suicide risk. Significant differences were observed between adolescents at risk and without suicidal risk in the perception of stressful life events, and higher averages in the areas of family, health, personal and behavior problems, showed higher averages in adolescents at risk. In turn, Riverón, Velázquez, Borrero and Fonseca (2016) identified, through a bibliographic review, risk factors, symptoms and behavior in adolescents with suicide attempts, finding that suicidal behavior is related to multiple biopsychosocial and cultural factors, such as : the resolution of tasks that allow them to successfully complete the step towards the stage of youth, the confrontation with significant people such as parents, family problems and as a couple, social pressure due to gender issues, conflicts in the school environment, abuse, loneliness and misunderstanding; which may be associated with the influence of alcohol, family structure and self-esteem; in addition to depression, dysthymia, hopelessness and others, as symptoms that are associated with adolescents before accessing the suicidal act.

This is how suicide in adolescents has been studied from the point of view of recent social, cultural, economic and technological changes. Therefore, Chávez (cited in Valadez and López, 2020) said that there is a link between minors and social networks that incite them, through games, to carry out self-harm. In addition, he pointed out that these cybernetic encounters impact their self-esteem, by offering unrealistic standards, they also become the prey of harassment that could affect their mental health. What can be said that suicide is sometimes pushed by social networks.

On their side, García and Mosquera (2020), through the documentary method, reviewed studies that have recovered information on the perceptions of suicide in adolescents, which showed that adolescents give meaning to the different risk and protective factors based on their construction and social context. Faced with protective environments, it is found that the family becomes a pillar of protection through the values that have been used in the accompaniment at this age, influencing prevention and adequate development of the adolescent; concluding that suicide is a problem that increasingly affects adolescents in their immediate surroundings.

In the presence of such situations, Machado (2017) detected adolescents with significant suicidal risk between 12 and 15 years old, whom he compared with the rest of the adolescent population, regarding their family functioning and level of psychological well-being; finding that adolescents with significant suicidal risk present a profile with fewer goals and projects, as well as difficulties to find a clear meaning in their lives and to deal appropriately with everyday situations, in addition to a level of mild family dysfunction with specific difficulties to adapt and resolve conflicts at the family level. Also, for their part, Loyola-Cabrera, et al. (2020) found in adolescents between 10 and 18 years old through a descriptive and cross-sectional study, that depression and dysfunctional family were the most frequent risk factors.

From this perspective, the family plays an essential role in the development and well-being of adolescents to the changes they face by providing the necessary support in understanding and adapting to their emotional needs, otherwise, it could affect their mood, generating negative ideas and triggering mental health problems. Therefore, the family can itself be an element of health or origin and cause of problems, this will depend on whether or not it fulfills its functions adequately, which will reflect a healthy family system, or become a sick system (Araujo, 2016).

In this sense, Medellín, Rivera, López, Kanan and Rodríguez, (2012) found a relationship between family functioning and social support networks, with family and friend support networks being the ones that provided the most social support to most types of family proposed by Olson; type of family functioning connected-chaotic (close-knit families with a disorganized and confused change management style), clustered-chaotic (extremely close-knit families with a disorganized and confused change-management style) and flexible-connected (close-knit families with a moderate to highly adaptable shift management style). In turn, Estrada (as cited in Araujo, 2016) mentions that the perception of family functioning in the variables of family cohesion and adaptability, integrates the communication one, and proposes that the greater the adaptation and cohesion that exists in a family the better the communication and the better the performance.

Family functioning has been defined as a set of attributes that characterize the family as a system and that explain the way in which the family system operates, evaluates or behaves (McCubbin and Thompson, in family functioning, File Akurion, 2018). Therefore, family functioning facilitates and promotes the adaptation of the family in a situation of change, by constantly transforming their interactions and family rules that allow maintaining, on the one hand, the continuity of the family and, on the other, the growth of its members.

For this reason, Olson's Circuit Complex Model (1991) studies family functioning by establishing a typology that classifies and manages different integrated profiles in two dimensions: adaptation and cohesion; meanwhile, family adaptation focuses on the degree flexibility and aptitude for the change of the family system, which implies the ability of the system to change its power structure, the dynamics between roles and the rules of family relationships in response to evolutionary (developmental) and situational stressors. Family cohesion refers to the degree of separation or connection that an individual has with respect to his family system and includes the emotional bond that family members have with each other. So, the Circumplex Model allows to adequately predict the problems that may arise in the different stages of family development.

In this way, the family plays an essential role in the physical, emotional and social well-being, becoming a risk or protective factor for the appearance of suicidal behavior, thus, studying family functioning from the Olson Circumplex Model through its dimensions of cohesion and adaptation in adolescents with and without suicidal risk, will allow the creation of timely intervention programs that support adolescents and their family members to find and implement new and better ways of relating and supporting themselves in adverse circumstances and reducing risk that the adolescent thinks or plans some form of suicide. Faced with such a situation, the present research aims to analyze the differences in adaptation and family cohesion between high school adolescents with and without suicide risk in Tlaxcala.

## **8.2 Methodology**

### **8.2.1 Participants**

The design carried out for the research was quantitative of a comparative type. The sample consisted of 50 high school adolescents intentionally chosen and detected by the school with behavior problems, low school achievement, self-injurious behaviors and bullying; being 58% women and 42% men; who were in 50% first graders and 50% second graders; with ages of 13 (48%), of 12 (34%) and 14 years (18%). And whose sociodemographic characteristics were: adolescents who live with both parents (48%), only with the mother (26%), with the mother and other relatives (10%), with the father (6%), with both parents and other relatives (6%), with other relatives (2%) and with a rebuilt family (2%). Regarding the number of siblings, 50% had one sibling, 18% with two siblings, 14% with three, 11% no siblings, and 7% with four or more siblings.



In relation to the place they occupy in the family, 46% the first place, 21% the last place, 18% the second place, 11% is an only child and 4% the third place. Also, 54% live with both parents, 43% only with the mother, and 4% only with the father. According to the mother's age: 57% were between 30 and 39 years old, 25% between 40 and 49 years old, 11% between 20 and 29 years old, 4% between 50 and 59 years old and 4% 60 years or more. About the father's age, 39% were between 40 and 49 years old, 32% between 30 and 39 years old, 18% do not know, 7% between 20 and 29 years old and 4% between 50 and 59 years old. The mother's schooling was 43% undergraduate, 25% high school, 14% junior high school, 7% postgraduate, 7% other, and 4% elementary. Respecting the father's education, 36% attended high school, 25% undergraduate, 25% other studies, 11% junior high school and 4% postgraduate. As regards the mother's occupation, 32% professionals, 21% had another occupation, 21% housewives, 11% employees, 11% merchants, 4% workers; while the father, 54% had another profession, 18% professionals, 14% employees, 7% merchants, 4% workers and 4% bricklayers.

### **8.2.2 Materials and procedure**

For data collection, a sociodemographic interview was conducted in which age, sex, education, number of siblings, place in the family, if they lived with both parents, as well as the age, education and occupation of the parents were asked. The online Teen Suicide Risk Inventory (IRISA) was also used (Hernández and Lucio, 2011), with a Cronbach's alpha of .95. It consists of a Likert-type frequency scale with 50 items with three subscales and an index: a) suicidal ideation and intentionality, b) depression and hopelessness, c) absence of protective circumstances, and index of psychological distress associated with suicidal risk. In addition, it contains three critical or significant items: 1) suicidal ideation, 2) suicidal plan (s) and 3) previous suicide attempt (s). The score shows levels of high risk, tentative, ideation, alert and no risk, and the student's open responses.

As well as the Family Cohesion and Adaptability Assessment Scale (FACES III), whose reliability and validity were carried out in Mexico by Ponce, Gómez, Terán, Irigoyen and Landgrave in 1999 and 2002, obtaining a Cronbach's Alpha of .70. This scale is of the Likert type that contains 20 questions, 10 to assess family cohesion and 10 to assess family adaptability, alternated numerically as odd and even; and whose score is from 1 to 5: "never" 1; almost never 2; sometimes 3; almost always 4; always 5.

### **8.2.3 Procedure**

The research was carried out with the consent and voluntary participation of the school authorities and the adolescents involved in the study, to whom the importance of participating in the research and the confidentiality of the information provided was explained. The interview and the scales were applied collectively in groups of 25 according to their school grade. The detection of suicide risk in junior high school adolescents was done in a previously published study (Quitl, Nava and Jiménez, 2019). The Suicide Risk Inventory for Adolescents was scored on the IRISA website database and the Family Cohesion and Adaptability Assessment Scale (FACES) manually. For data processing, the statistical program SPSS version 25 was used.

## **8.3 Results**

To carry out the analysis of the results, frequencies were performed to obtain descriptive measures of mean and standard deviation, Student's *t* was also used for independent samples in order to determine the differences between cohesion and family adaptation, family functioning and the factors of Suicidal Risk Among Junior High School Adolescents with and Without Suicidal Risk. One-way analysis of variance (ANOVA) was also used to determine the difference in cohesion, adaptation, family functioning, and suicide risk factors with sociodemographic data.

The results of the data analysis are shown below:

**Table 8.1** Differences between adolescents with and without suicide risk in cohesion, adaptation and family functioning

Variable	With suicide risk <i>n</i> = 28			Without suicide risk <i>n</i> = 22			<i>F</i>
	<i>M</i>	<i>DE</i>	<i>p</i>	<i>M</i>	<i>DE</i>	<i>p</i>	
Adaptation	25.68	7.538	.104	29.59	8.770	.096	.013
Cohesion	31.54	9.252	.000	40.95	6.114	.000	2.063
Familiar functioning	1.71	.743	.054	2.14	.774	.051	.021
** <i>p</i> < .01							

Source: (Self elaboration)

As can be seen in Table 8.1, the groups of adolescents with and without suicide risk did not show statistically significant differences with Family Adaptation and Functioning, but they did show statistically significant differences (\*\*  $p < .01$ ) with Cohesion. These data indicate that, according to adaptation and family functioning, both groups showed similarities in the capacity for flexibility in the face of family changes in each adolescent, as well as the facilitation and promotion of the family's adaptation in a situation of change.

However, regarding Cohesion, the results indicate greater cohesion in adolescents without suicidal risk, compared to adolescents with suicidal risk, as can be seen in the means and standard deviations, which indicates a higher degree of connection in the family of adolescents without suicidal risk and lower in adolescents with suicidal risk.

**Table 8.2** Differences between adolescents with and without suicide risk with suicide risk factors

Variable	With suicide risk <i>n</i> = 28			Without suicide risk <i>n</i> = 22			<i>F</i>
	<i>M</i>	<i>DE</i>	<i>p</i>	<i>M</i>	<i>DE</i>	<i>p</i>	
Ideation and Intentionality	58.07	9.447	.000	45.32	9.447	.000	4.820
Depression and hopelessness	61.29	7.226	.000	46.05	6.268	.000	.559
Absence of protective circumstances	56.07	8.927	.002	49.27	5.531	.003	3.096
Psychological distress associated with suicidal risk	65.61	7.983	.000	48.41	7.353	.000	.146
Suicide risk	3.25	1.076	.000	1.000	.000	.000	71.744
** <i>p</i> < .01							

Source: (Self elaboration)

In Table 8.2 it can be seen that in adolescents with and without suicide risk statistically significant differences were found in Ideation and Intentionality, Depression and Hopelessness, Absence of protective circumstances, Psychological discomfort associated with suicide risk and Suicide risk (\*\*  $p < .01$ ) as shown in the means and standard deviations respectively. These results indicate that adolescents with suicide risk present greater psychological distress associated with suicide risk, depression and hopelessness, ideation and intentionality, and the absence of protective circumstances compared to adolescents without suicide risk.

It could also be observed that there is a higher prevalence of psychological distress and depression and hopelessness in the sample of adolescents with suicide risk.

To determine the differences between cohesion, adaptation, family functioning and suicide risk factors with the sociodemographic data, the one-way analysis (ANOVA) was used, the results of which are shown below:

For the gender variable, statistically significant differences were found (\*  $p < .05$ ) with Emotional distress ( $F(6.300) p = .015$ ), Adaptation  $F(8.345) p = .006$  and Suicide risk ( $F(6.248) p = .016$ ). Taking into account the previous data and the means in both groups, it could be observed that women presented greater emotional distress ( $M = 61.34$ ) and greater suicide risk ( $M = 2.66$ ) compared to men ( $M = 53.48$ ) ( $M = 1.71$ ), while men resulted with greater adaptation ( $M = 31.10$ ) than women ( $M = 24.72$ ).

Concerning school grade, the data showed statistically significant differences (\*  $p < .05$ ) with adaptation ( $F(4.053) p = .050$ ), which indicates that adolescents from the first grade of junior high school showed greater family adaptation ( $M = 29.68$ ) compared to second grade students ( $M = 25.12$ ).

In the same way, it was observed that the place occupied in the family showed statistically significant differences (\*  $p < .05$ ) with Family Functioning ( $F(2.919) p = .031$ ), which can be realized that the adolescents who ranked third ( $M = 3.00$ ) presented higher functioning, followed by those who ranked first ( $M = 1.72$ ), then those who were in second place ( $M = 1.62$ ) and those who presented less family functioning ranked fourth or less ( $M = 1.50$ ).

## 8.4 Conclusions

Suicidal behavior is a sequence of events that appear in many cases progressively with ideas or thoughts, followed by suicidal plans, until reaching the consummate suicide, and that can be triggered by various biological and psychological risk factors or sociocultural. The WHO (2019) has defined suicide as a serious public health problem, and to which a specific cause cannot be attributed, but rather to various factors that can affect the emotional stability of the adolescent, understanding this, as psychological, social and personal well-being (Cárdenas-Rodríguez, et. al, 2019).

Suicide in adolescence can be preventable if it is detected early and associated risk factors are identified, which can be addressed by promoting mental health and interest in mental problems and disorders. However, many of the causes are defined by poverty, unemployment, humiliation, loss of loved ones, breakdown of love relationships, abuse during childhood, in addition to certain mental disorders such as depression and schizophrenia. Given these effects, it is shown that the early identification of suicide behavior and adequate treatment for people with mental disorders constitutes an important preventive strategy (Hernández and Villareal, 2015; Cárdenas-Rodríguez, et. al, 2019).

Thus, the results showed that among the adolescents with and without suicide risk, there were no significant differences with adaptation, which would indicate that in both groups of the sample the flexibility capacity is presented in a similar way to the changes that are manifested in the family. On the contrary, it was possible to observe significant differences with cohesion, being greater for adolescents without suicide risk compared to those who presented suicide risk, taking into account that cohesion implies the degree of separation or emotional connection of the individual towards their families. Hence, Muñoz, Pinto, Callata, Napa and Perales (2006) showed that low levels of family cohesion are associated with a greater risk of suicidal ideation, although they did not indicate that belonging to a family with high levels of cohesion implies less risk of intent, they did emphasize that family problems are more precipitating for suicidal behavior. As well as, Santillán and Pereyra (2020) analyzed the effect of risk and protective factors in students between 13 and 15 years, finding that exposure to protective factors reduces the risk of experiencing a suicide attempt, while risk factors decrease it.

It was also observed that there were no significant differences with family functioning between adolescents with and without suicide risk, which would indicate that in both groups the adaptation of the family is facilitated and promoted in a similar way in a situation of change. Regarding this, Marco-Sánchez, Mayoral-Aragón, Valencia-Agudo, Roldán-Díaz, EspliegoFelipe, Delgado-Lacosta & Hervás-Torres (2020) mention that the family environment is a variable involved in the suicide risk of adolescents, acting as both a risk factor and a protector. Therefore, they demonstrate the importance of modifying the family environment to influence the suicide risk of adolescents.

Respecting the differences between the adolescents with and without suicide risk with the suicide risk factors, it could be observed that there are significant differences between both groups with Ideation and Attempt, Depression and Hopelessness, Absence of protective circumstances and psychological distress associated with risk suicide; showing that adolescents with suicide risk present greater psychological distress associated with suicide risk, Depression and Hopelessness, Ideation and Intentionality and Absence of protective circumstances compared to adolescents without suicide risk. It was also observed that there is a higher prevalence of psychological distress associated with suicide risk and depression and hopelessness in the sample of adolescents with suicide risk. This is how Alvarino (2019) found that adolescents who have carried out previous suicidal behaviors score higher in the dimensions of suicide risk of depression-hopelessness, family dysfunction or lack of family support, self-harm-suicidal ideation and social isolation, than those with no suicidal history.

Concerning the differences between cohesion, adaptation, family functioning and suicide risk factors with the sociodemographic data, it was observed that gender differed significantly with Emotional discomfort, Adaptation and Suicidal risk; and in which, it could be observed that women presented greater emotional distress and greater suicide risk compared to men, while men resulted with greater family adaptation than women.

Regarding school grade, significant differences were found with family adaptation, indicating with this, that first-grade junior high school adolescents showed greater family adaptation than second-grade adolescents. About the place they occupy in their family, significant differences were shown with Family Functioning, with adolescents who ranked third being those who presented the highest functioning, followed by those who ranked first, then those who were in second place and finally those who were in fourth place or more presented less family functioning. Regarding this, Cabra, Infante and Sossa (2010) showed that suicide in adolescents is one of the problems that societies increasingly face and it is a multifactorial phenomenon, which includes biological, psychological and social factors, which must be addressed immediately from different levels such as the family, school and public health authorities to emphasize the risk factors that may lead minors to make this decision.

Given the above, the WHO (2019) points out that, to prevent suicide, it is necessary to monitor and follow up the number of cases, and improve the integrity, quality and timeliness of the data. As long as suicide is one of the main causes of death among the adolescent population, it will be necessary to know not only how it occurs, but also the related factors, which allow adequate responses to be offered to the population groups at higher risk. Through knowledge and understanding of the phenomenon, appropriate prevention and care strategies will be designed. It is a fact that suicidal behavior in adolescents has increased in recent decades, which causes great concern in health professionals, teachers, parents and other social groups. Recognizing the risk factors associated with this problem and their prevalence can serve as the basis for the design of timely and effective interventions.

For this, it is necessary not only to attend to cases of depression or suicide attempts, but also to implement strategies for the early detection of possible suicide risks (WHO, 2019).

For the prevention of these factors, adolescents have tools that strengthen their problem-solving capacities, this group of tools are known as protective factors, where the family plays an important role as support that promotes their emotional well-being. Therefore, it is concluded that the timely detection of risk factors could greatly contribute to the design and implementation of more comprehensive and efficient prevention programs against adolescent suicide.

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Explanation of the topic in general and explain why it is important.

What is its added value with respect to other techniques?

Focus clearly on each of its characteristics.

Clearly explain the problem to be solved and the central hypothesis.

Explanation of the sections of the Chapter.

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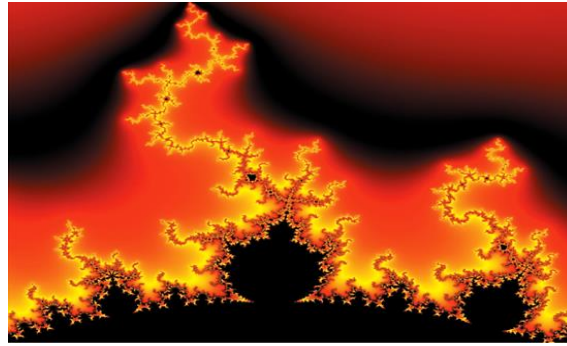
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P <sub>3</sub>	Partition 3	484.00
P <sub>4</sub>	Partition 4	483.50
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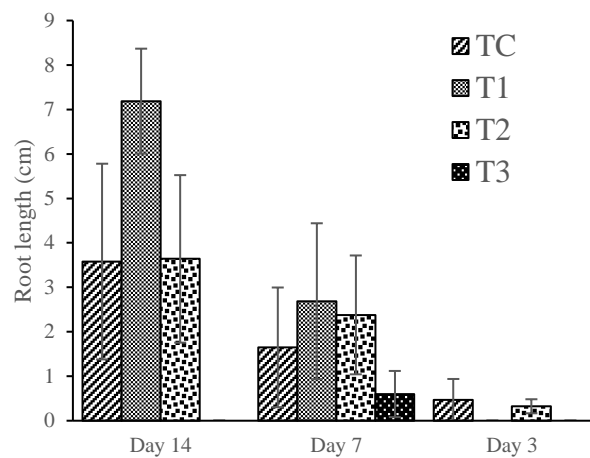
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