

ISSN 2444-4979

# Journal of Human Resources Training

Volume 7, Issue 19 — January — June - 2021

**ECORFAN®**

## **ECORFAN-Spain**

### **Chief Editor**

GUZMÁN - HURTADO, Juan Luis. PhD

### **Executive Director**

RAMOS-ESCAMILLA, María. PhD

### **Editorial Director**

PERALTA-CASTRO, Enrique. MsC

### **Web Designer**

ESCAMILLA-BOUCHAN, Imelda. PhD

### **Web Diagrammer**

LUNA-SOTO, Vladimir. PhD

### **Editorial Assistant**

REYES-VILLO, Angélica. BsC

### **Translator**

DÍAZ-OCAMPO, Javier. BsC

### **Philologist**

RAMOS-ARANCIBIA, Alejandra. BsC

**Journal of Human Resources Training**, Volume 7, Issue 19, January – June 2021, is a journal edited sixmonthly by ECORFAN. 38 Matacerquillas street, Postcode: 28411. Moralarzal –Madrid  
WEB: [www.ecorfan.org/spain](http://www.ecorfan.org/spain), [journal@ecorfan.org](mailto:journal@ecorfan.org). Editor in Chief: GUZMÁN - HURTADO, Juan Luis. PhD, ISSN On line: 2444-4979. Responsible for the latest update of this number ECORFAN Computer Unit. ESCAMILLA-BOUCHÁN, Imelda. PhD, LUNA-SOTO, Vladimir. PhD, 38 Matacerquillas street, Postcode: 28411. Moralarzal – Madrid, last updated June 30, 2021.

The opinions expressed by the authors do not necessarily reflect the views of the editor of the publication.

It is strictly forbidden to reproduce any part of the contents and images of the publication without permission of the National Institute of Copyrigh

## **Definition of Journal**

### **Scientific Objectives**

Support the international scientific community in its written production Science, Technology and Innovation in the Field of Humanities and Behavioral Sciences, in Subdisciplines of human talent, organizational commitment, work welfare, work performance, human resources management, human capital, productivity, organizational culture, leadership and sustainability.

ECORFAN-Mexico SC is a Scientific and Technological Company in contribution to the Human Resource training focused on the continuity in the critical analysis of International Research and is attached to CONACYT-RENIICYT number 1702902, its commitment is to disseminate research and contributions of the International Scientific Community, academic institutions, agencies and entities of the public and private sectors and contribute to the linking of researchers who carry out scientific activities, technological developments and training of specialized human resources with governments, companies and social organizations.

Encourage the interlocution of the International Scientific Community with other Study Centers in Mexico and abroad and promote a wide incorporation of academics, specialists and researchers to the publication in Science Structures of Autonomous Universities - State Public Universities - Federal IES - Polytechnic Universities - Technological Universities - Federal Technological Institutes - Normal Schools - Decentralized Technological Institutes - Intercultural Universities - S & T Councils - CONACYT Research Centers.

### **Scope, Coverage and Audience**

Journal of Human Resources Training is a Journal edited by ECORFAN-Mexico S.C in its Holding with repository in Spain, is a scientific publication arbitrated and indexed with semester periods. It supports a wide range of contents that are evaluated by academic peers by the Double-Blind method, around subjects related to the theory and practice of human talent, organizational commitment, work welfare, work performance, human resources management, human capital, productivity, organizational culture, leadership and sustainability with diverse approaches and perspectives, that contribute to the diffusion of the development of Science Technology and Innovation that allow the arguments related to the decision making and influence in the formulation of international policies in the Field of Humanities and Behavioral Sciences. The editorial horizon of ECORFAN-Mexico® extends beyond the academy and integrates other segments of research and analysis outside the scope, as long as they meet the requirements of rigorous argumentative and scientific, as well as addressing issues of general and current interest of the International Scientific Society.

## **Editorial Board**

HERNANDEZ-PADILLA, Juan Alberto. PhD  
Universidad de Oviedo

GARCIA, Silvia. PhD  
Universidad Agraria del Ecuador

MARTINEZ - LICONA, José Francisco. PhD  
University of Lehman College

MONTERO - PANTOJA, Carlos. PhD  
Universidad de Valladolid

BOJÓRQUEZ - MORALES, Gonzalo. PhD  
Universidad de Colima

SANTOYO, Carlos. PhD  
Universidad Nacional Autónoma de México

ARELLANEZ - HERNÁNDEZ, Jorge Luis. PhD  
Universidad Nacional Autónoma de México

MERCADO - IBARRA, Santa Magdalena. PhD  
Universidad de Barcelona

AZOR - HERNÁNDEZ, Ileana. PhD  
Instituto Superior de Arte

OROZCO - RAMIREZ, Luz Adriana. PhD  
Universidad de Sevilla

## **Arbitration Committee**

ROMÁN - KALISCH, Manuel Arturo. PhD  
Universidad Nacional Autónoma de México

DE LA MORA - ESPINOSA, Rosa Imelda. PhD  
Universidad Autónoma de Querétaro

GARCÍA - VILLANUEVA, Jorge. PhD  
Universidad Nacional Autónoma de México

CHAVEZ - GONZALEZ, Guadalupe. PhD  
Universidad Autónoma de Nuevo León

CORTÉS - DILLANES, Yolanda Emperatriz. PhD  
Centro Eleia

FIGUEROA - DÍAZ, María Elena. PhD  
Universidad Nacional Autónoma de México

DELGADO - CAMPOS, Genaro Javier. PhD  
Universidad Nacional Autónoma de México

BAZÁN, Rodrigo. PhD  
Universidad Autónoma del Estado de Morelos

LINDOR, Moïse. PhD  
El Colegio de Tlaxcala

PADILLA - CASTRO, Laura. PhD  
Universidad Autónoma del Estado de Morelos

CORTÉS, María de Lourdes Andrea. PhD  
Instituto Tecnológico Superior de Juan Rodríguez

## **Assignment of Rights**

The sending of an Article to Journal of Human Resources Training emanates the commitment of the author not to submit it simultaneously to the consideration of other series publications for it must complement the Originality Format for its Article.

The authors sign the Authorization Format for their Article to be disseminated by means that ECORFAN-Mexico, S.C. In its Holding Spain considers pertinent for disclosure and diffusion of its Article its Rights of Work.

## **Declaration of Authorship**

Indicate the Name of Author and Coauthors at most in the participation of the Article and indicate in extensive the Institutional Affiliation indicating the Department.

Identify the Name of Author and Coauthors at most with the CVU Scholarship Number-PNPC or SNI-CONACYT- Indicating the Researcher Level and their Google Scholar Profile to verify their Citation Level and H index.

Identify the Name of Author and Coauthors at most in the Science and Technology Profiles widely accepted by the International Scientific Community ORC ID - Researcher ID Thomson - arXiv Author ID - PubMed Author ID - Open ID respectively.

Indicate the contact for correspondence to the Author (Mail and Telephone) and indicate the Researcher who contributes as the first Author of the Article.

## **Plagiarism Detection**

All Articles will be tested by plagiarism software PLAGSCAN if a plagiarism level is detected Positive will not be sent to arbitration and will be rescinded of the reception of the Article notifying the Authors responsible, claiming that academic plagiarism is criminalized in the Penal Code.

## **Arbitration Process**

All Articles will be evaluated by academic peers by the Double Blind method, the Arbitration Approval is a requirement for the Editorial Board to make a final decision that will be final in all cases. MARVID® is a derivative brand of ECORFAN® specialized in providing the expert evaluators all of them with Doctorate degree and distinction of International Researchers in the respective Councils of Science and Technology the counterpart of CONACYT for the chapters of America-Europe-Asia- Africa and Oceania. The identification of the authorship should only appear on a first removable page, in order to ensure that the Arbitration process is anonymous and covers the following stages: Identification of the Journal with its author occupation rate - Identification of Authors and Coauthors - Detection of plagiarism PLAGSCAN - Review of Formats of Authorization and Originality-Allocation to the Editorial Board- Allocation of the pair of Expert Arbitrators-Notification of Arbitration -Declaration of observations to the Author-Verification of Article Modified for Editing-Publication.

## **Instructions for Scientific, Technological and Innovation Publication**

### **Knowledge Area**

The works must be unpublished and refer to topics of human talent, organizational commitment, work welfare, work performance, human resources management, human capital, productivity, organizational culture, leadership and sustainability and other topics related to Humanities and Behavioral Sciences.

## **Presentation of Content**

In the first article we present, *Good practices, in educational inclusion experiences in a Higher Education Dependence*, by PALOMARES-RUIZ, María Blanca, SORDIA-SALINAS, Cesar, BAEZ-VILLARREAL, Esteban, and TORRES-BUGDUD, Arturo, with adscription in the Universidad Autónoma de Nuevo León, as the following article we present, *Psychosocial factors, work stress and its relationship with labor alienation in organizations*, by RUÍZ-VALDÉS, Susana, RUÍZ-TAPIA, Juan Alberto, ALCÁNTARA-CRUZ, Felix Héctor and HERNÁNDEZ-MARTÍNEZ, Maria Luisa, with adscription in the Universidad Autónoma del Estado de México, as the following article we present, *Measurement of Burnout in university professors during COVID-19*, by MAY-GUILLERMO, Erika Guadalupe, VELASCO-CASTELLANOS, Jorge, ARIAS- GALICIA, Luis Fernando and DE LA CRUZ-MAY, Samuel, with adscription in the Instituto Tecnológico Superior de la Región Sierra, Universidad Autónoma del Estado de Morelos and the Universidad Intercultural del Estado de Tabasco, as the last article we present, *Training of competences in Entrepreneurship and collaboration between students of different disciplines and degrees of the University of Guadalajara*, based on their school projects. Rapporteurship of experience, by HERNÁNDEZ-TINOCO, Araceli, GUZMÁN-DÍAZ, José Cruz, CERVANTES-GUZMAN, Jovanna Nathalie and REYES- RODRÍGUEZ, Mónica Araceli, by with adscription in the Universidad de Guadalajara.

## Content

Article	Page
<b>Good practices, in educational inclusion experiences in a Higher Education Dependence</b> PALOMARES-RUIZ, María Blanca, SORDIA-SALINAS, Cesar, BAEZ-VILLARREAL, Esteban, and TORRES-BUGDUD, Arturo <i>Universidad Autónoma de Nuevo León</i>	1-5
<b>Psychosocial factors, work stress and its relationship with labor alienation in organizations</b> RUÍZ-VALDÉS, Susana, RUÍZ-TAPIA, Juan Alberto, ALCÁNTARA-CRUZ, Felix Héctor and HERNÁNDEZ-MARTÍNEZ, Maria Luisa <i>Universidad Autónoma del Estado de México</i>	6-12
<b>Measurement of Burnout in university professors during COVID-19</b> MAY-GUILLERMO, Erika Guadalupe, VELASCO-CASTELLANOS, Jorge, ARIAS-GALICIA, Luis Fernando and DE LA CRUZ-MAY, Samuel <i>Instituto Tecnológico Superior de la Región Sierra</i> <i>Universidad Autónoma del Estado de Morelos</i> <i>Universidad Intercultural del Estado de Tabasco</i>	13-20
<b>Training of competences in Entrepreneurship and collaboration between students of different disciplines and degrees of the University of Guadalajara, based on their school projects. Rapporteurship of experience</b> HERNÁNDEZ-TINOCO, Araceli, GUZMÁN-DÍAZ, José Cruz, CERVANTES-GUZMAN, Jovanna Nathalie and REYES- RODRÍGUEZ, Mónica Araceli <i>Universidad de Guadalajara</i>	21-28

## Good practices, in educational inclusion experiences in a Higher Education Dependence

### Buenas prácticas, en experiencias de inclusión educativa en una Dependencia de Educación Superior

PALOMARES-RUIZ, María Blanca\*†, SORDIA-SALINAS, Cesar, BAEZ-VILLARREAL, Esteban, and TORRES-BUGDUD, Arturo

*Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica*

ID 1<sup>st</sup> Author: *María Blanca, Palomares-Ruiz* / ORC ID: 0000-0002-4079-6969, Researcher ID Thomson: S-4843-2018, CVU CONACYT ID: 339594

ID 1<sup>st</sup> Co-author: *Cesar, Sordia-Salinas* / ORC ID: 0000-0003-2186-1080, Researcher ID Thomson: S-5666-2018, CVU CONACYT ID: 339888

ID 2<sup>nd</sup> Co-author: *Esteban, Báez-Villarreal* / ORC ID: 0000-0003-0112-6660, Researcher ID Thomson: S-5893-2018

ID 3<sup>rd</sup> Co-author: *Arturo, Torres-Bugdud* / ORC ID: 0000-0003-2214-9394, Researcher ID Thomson: ABE-2852-2020, arXiv Author ID: Arturo-Torres-Bugdud, CVU CONACYT ID: 216332

DOI: 10.35429/JHRT.2021.19.7.1.5

Received: January 30, 2021; Accepted: June 30, 2021

#### Abstract

The Academic Body of Academic-Administrative Management of an Engineering Higher Education Unit studied school trajectories to contribute to school success in a group of students who a specialized institution warned that their prognosis of permanence in training as engineers was reserved. This study is oriented towards the inclusion of quality members of the Collegiate Corps who undertook the task of preventing their desertion, analyzing each case with the support of academic advice and tutorials. They were presented with various factors that influenced their career transition during this period, from school procedures, special programs, study habits, teaching methods, pandemics, etc. The satisfactory results are shown through a descriptive, historical-logical, documentary method, highlighting that 40% were favorable when they managed to conclude their higher education studies within their academic training.

**School Paths, Inclusion, Education**

#### Resumen

El Cuerpo Académico de Gestión Académico-administrativa de una Dependencia de Educación Superior de Ingeniería, emprendió un estudio de trayectorias escolares como una forma de contribuir al éxito escolar en un grupo de estudiantes que fueron advertidos por una institución especializada que su pronóstico de permanencia en la formación como ingenieros era reservado, por este estudio que se orienta en pro de la inclusión de calidad, los integrantes del Cuerpo Colegiado se dio a la tarea de prevenir su desertión, analizando cada caso con apoyo de asesorías y tutorías académicas, durante este periodo se presentaron diversos factores que influyeron en su tránsito a lo largo de su carrera, desde trámites escolares, programas especiales, hábitos de estudio, métodos de enseñanza, pandemia, etc. mediante un método descriptivo, histórico-lógico, documental, se muestran los resultados satisfactorios al destacar que un 40% fue favorable al lograr concluir sus estudios de educación superior dentro de su formación académica.

**Trayectorias Escolares, Inclusion, Educación**

**Citation:** PALOMARES-RUIZ, María Blanca, SORDIA-SALINAS, Cesar, BAEZ-VILLARREAL, Esteban, and TORRES-BUGDUD, Arturo. Good practices, in educational inclusion experiences in a Higher Education Dependence. Journal of Human Resources Training, 2021, 7-19: 1-5

\*Correspondence to Author (mbpalomares@yahoo.com.mx)

†Researcher contributing first Author

## Introduction

To achieve a successful education of its students, the academic body academic - administrative management of higher education institutions has conducted several studies. One of them is in favor of a quality inclusive education, through the analysis of school trajectories, looking for positive practices that contribute to obtaining the permanence of students with the support of mentoring and advice. Considering the interactions between actors that intend to have the same purpose, to prevent school dropout, actions have been developed. In this case, they were applied to work with students detected with unique characteristics by a specialized health group that warned of their dropout prognosis at the beginning of their training.

Gil (2021), quotes (United Nations Food and Agriculture Organization, 2015) and expresses that a good practice is about a successful experience, which has been tested and validated, in a broad sense, that has been repeated and deserves to be shared in order to be adopted by as many people as possible.

As Abarca (2015) considers it, citing Pérez *et al.*, (2000) view, school performance is the sum of different and complex factors of the learner. It is measured by the grades obtained with a quantitative assessment, which shows subjects gained or lost, dropout, and degree of academic success.

As mentioned in Palomares (2020), a form of educational management to analyze school trajectories is through academic advice that is part of the integrated management system that operates in the faculty of mechanical and electrical engineering (FIME) of the autonomous university of Nuevo Leon (UANL).

This work added actions such as accompanying tutors with students at risk of dropping out, associated with studies that use tools that provide prognosis regarding their future performance.

The positive result has made it possible to show that in a concert of wills between actors: students, parents, teachers, counselors, tutors, managers, good practices, and success stories can be derived.

## Theoretical framework

Ibarra (2021), mentions that education is a right for everyone, there are no limitations due to disabilities; the same for higher education, explaining that to promote learning in vulnerable conditions it is necessary to make "reasonable adjustments" to school content.

According to Roa (2019), educational inclusion should be a possibility for everyone, which refers to diversity, there would be all minorities, if didactics are made possible that allow education for all, it is the educators and the family, the first to accept Diversity, to understand it, educators must participate in training processes, to generate new didactics that enable creativity to address the differences in the classroom.

He in turn calls it functional diversity considering that if they are accepted and have the opportunity to try they will be very creative, so the traditional school must change for creativity to emerge in education. The study of the school trajectory has shown us its close relationship with terminal efficiency, so it is essential to consider the factors of dropout and backwardness since together, they represent a problem that interferes with their school success.

According to Perez (2017), the studies of school trajectories are a tool that can contribute to the improvement of educational programs. This type of research is essential because it allows us to know different dimensions of time, performance, and school efficiency that can influence policies for planning and evaluation of higher education. Palomares (2020) cites Garcia (2011), considers that school trajectories and the academic behavior of an individual, including school performance, approval, failure, average achieved, etc., as the most critical indicators in institutional assessments throughout school cycles.

On the other hand, this issue has acquired relevance through the accreditations of educational programs evaluated by the accreditation council of engineering education, A.C. (CACEI, 2018). The trajectories allow detecting areas of opportunity that influence the establishment of improvement strategies in their study plan and statistics and trends following the regulations of the Educational Program, considering indices such as failure.

This type of study will facilitate the implementation of preventive and remedial programs or measures that contribute to the successful completion of their studies.

## Methodology

This study was carried out with the analysis of the documents related to the academic and administrative management, regulations, regulations, and frames of reference linked to the educational context at a higher level in the area of engineering to take into account the considerations that have concerning the issue of academic advice.

A synthetic, analytical method is a form of technical research, a set of intellectual operations that seek to describe and represent documents in a unified and systematic way to facilitate their retrieval. It includes analytical - synthetic processing, which consists of the bibliographical and general description of the source, classification, indexation, annotation, extraction, translation, and the preparation of notices (Dulzaides & Molina, 2004).

The data were organized through descriptive statistics, which facilitated processing the information related to the results obtained from the different study groups that participated in the analysis of the research topic, allowing visualization based on critical characteristic features.

Guevara et al. (2020) cites Martinez (2018) and defines descriptive research in the work "the research process" of Carlos Sabino as "the type of research that aims to describe some fundamental characteristics of homogeneous sets of phenomena, uses systemic criteria that allow establishing the structure or behavior of the phenomena under study, providing systematic and comparable information with that of other sources." As there are no variables, the researcher has no control over the studied phenomenon. It is limited to collecting the information provided by the data collection instruments.

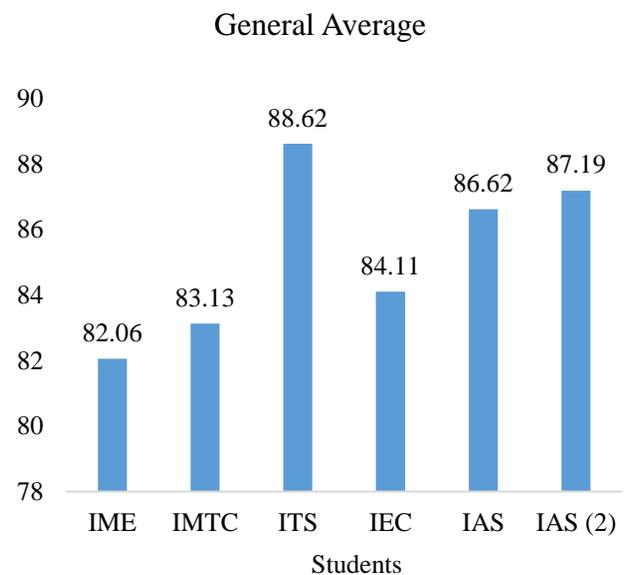
## Results

As for the dropout forecast, it is necessary to mention that four students out of the initial fifteen dropped out in the second and third semesters. Six of them showed perseverance with favorable results.

With the collaboration of all actors, five of them are still enrolled in another stage of their training, confident that they will succeed. It may be the subject of another study.

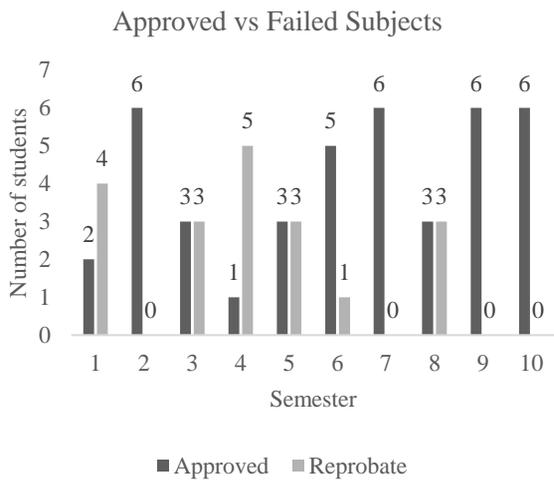
The relevant aspects, such as the learning units that represented the most significant difficulty, are described below employing graphs. It should be mentioned that the qualification to accredit a learning unit is 70.

Graph 1 presents the group of students, object of this study and their general average of the entire career, of the educational programs of Mechanical Electrical Engineer (IME), Mechatronic Engineer (IMTC), Software Technology Engineer (ITS), Engineer in Electronics and Communications (IEC) and Engineer System Administrator (IAS).



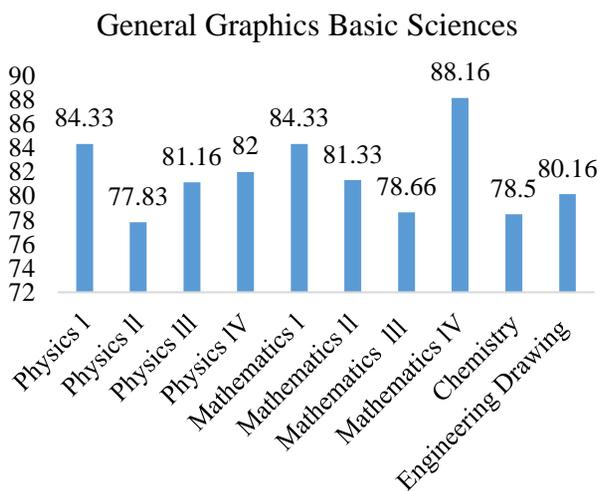
**Graphic 1** General Average  
Source: Own Elaboration

Shows the semesters in which the total number of students passed without leaving any subject (left column) and in the right column the semesters in which they failed any subject.



**Graphic 2** Subjects passed vs. failed  
Source: Own Elaboration

This graph shows the ten semesters that comprise the educational programs of this study, and the number of students who passed in the first opportunity is highlighted semesters: 2°, 7°, 9°, y 10°. Figure 3 shows the general averages of the basic sciences subjects taken by the students already described. It is worth mentioning that the global was obtained from some passed in the second or third opportunity.

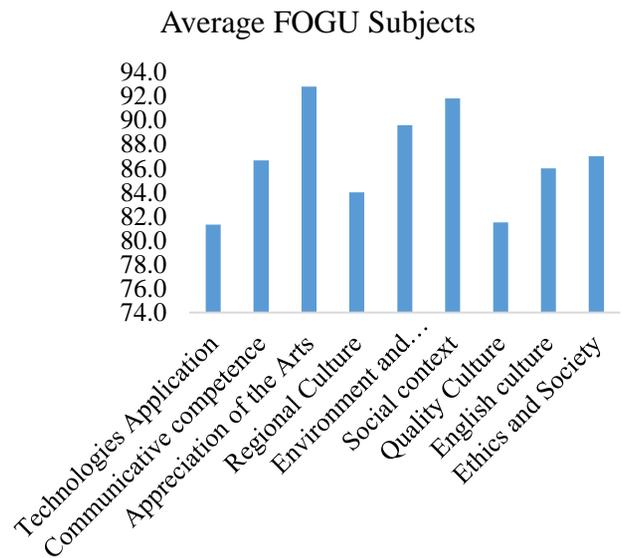


**Graph 3** General Graphics Basic Sciences  
Source: Own Elaboration

In this graph, we can see that the most challenging learning units for this group were physics II (77.8), followed by general chemistry (78.5), and mathematics II (78.6).

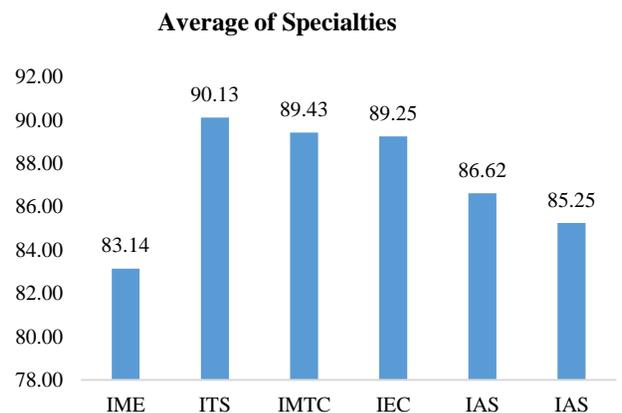
Delgado (2019) mentions in his article "tutoring strategy to decrease the failure rate in chemical engineering of the academic unit of basic sciences and engineering.

“That research in mathematics teaching reflects students face difficulties in understanding, assimilation, interpretation, and application to concrete situations, knowledge related to different topics of this subject. It is a fundamental discipline for university engineering courses. A relevant aspect is shown in figure 4, which describes the overall average in the block of learning units called General University Education (FOGU); of the six students who attended this block, 100% passed in the first opportunity.



**Graph 4** Average Subjects FOGU  
Source: Own Elaboration

In this graph, learning units of the university general education (fogu) were accredited on the first occasion with an average of 85 to 90. In the Graph 5 shows the general averages of the specialty subjects of each educational program, highlighting that in the various engineering specialties of the study group, grades above 80 averages of the students with unique characteristics predominate.



**Graph 5** Average of Specialties  
Source: Own Elaboration

In this graph, we can see that in the engineering specialty learning units, the average predominates from 82 to 90.

### Conclusions

A conclusion of satisfactory results shown in this study is the motivation for the researcher and actors in this process. It is to recognize the work done by teachers, advisers, and students. Since the beginning of the training, their prognosis was not favorable due to the warning signal of the specialized unit of the UANL that applied the selection tests when detecting special characteristics. In addition to a potential school dropout or lag, now with their complete Kardex and school success, they give us the best evidence that the objective was achieved, without a doubt. Parents who were warned promptly, the graduates themselves, teachers and advisors, have been the determining factor for this result.

### References

- Abarca , M. S., Gómez Pérez, M. T., & Covarrubias Venegas, M. L. (2015). Análisis de los factores que contribuyen al éxito académico en estudiantes universitarios: estudio de cuatro casos de la Universidad de Colima. *Revista Internacional de Educacion y Aprendizaje*.
- CACEI. (2018). *Marco de Referencia 2018 para la acreditación de programas de ingeniería* . Obtenido de [http://cacei.org.mx/docs/marco\\_ing\\_2018.pdf](http://cacei.org.mx/docs/marco_ing_2018.pdf)
- Delgado Parada, D. (2019). Estrategia de tutoría para disminuir el índice de reprobación en Ingeniería Química de la Unidad Académica de Ciencias Básicas e Ingenierías. *Revista MICA*, 73-83.
- Dulzaides Iglesias, M. E., & Molina Gómez, A. M. (22 de Marzo de 2004). *Scielo*. Obtenido de Análisis documental y de información: dos componentes de un mismo proceso: [http://scielo.sld.cu/scielo.php?script=sci\\_arttext&pid=S1024-94352004000200011](http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1024-94352004000200011)
- Gil Zapata, A. M., & Gómez Ardila, L. J. (2021). Buenas prácticas para la gestión de proyectos de permanencia y éxito estudiantil: una propuesta para la Universidad EAFIT (Doctoral dissertation, Universidad EAFIT).
- Guevara Alban, G. P. (01 de 07 de 2020). *Revista Científica Mundo de Investigación y el Conocimiento*. Obtenido de Metodologías de investigación educativa (descriptivas, experimentales, participativas, y de investigación-acción): <file:///C:/Users/MF-03/Downloads/Dialnet-MetodologiasDeInvestigacionEducativaDescriptivasEx-7591592.pdf>
- Manrique, L. J. I., Villa, E. O. D. L. S., Ramos, A. D. R., Conejo, L. G. M., Rocha, L. A. B., Godinez, L. M. P., ... & Sandoval, S. M. (2021). Inclusión educativa de estudiantes con discapacidad en la Universidad de Guanajuato: experiencias de estudiantes y profesores en tiempos de confinamiento. *JÓVENES EN LA CIENCIA*, 10
- Palomares Ruíz, M. B. (2020). Análisis De Trayectorias Escolares En Pro De Una Educación Inclusiva. *Red de Investigación Educativa*.
- Pérez Alcántara, B. D. (2017). Análisis de trayectorias escolares de estudiantes de la UAEMEX. *Revista Iberoamericana para la Investigación y el Desarrollo Educativo*.
- Roa Osorio, U. A. (2021). Cuidado de si y cuidado del otro en la inclusión educativa de la diversidad funcional.

## Psychosocial factors, work stress and its relationship with labor alienation in organizations

### Los factores psicosociales, el estrés laboral y su relación con la alienación laboral en las organizaciones

RUÍZ-VALDÉS, Susana†\*, RUÍZ-TAPIA, Juan Alberto, ALCÁNTARA-CRUZ, Felix Héctor and HERNÁNDEZ-MARTÍNEZ, Maria Luisa

*Universidad Autónoma del Estado de México*

ID 1<sup>st</sup> Author: *Susana, Ruíz-Valdés* / ORC ID: 0000-0001-6318-3009, arXiv Author ID: Susanaruíz, CVU CONACYT ID: 402668

ID 1<sup>st</sup> Co-author: *Juan Alberto, Ruíz-Tapia* / ORC ID: 0000-0003-1436-5214, arXiv Author ID: Juanalbertoruíz, CVU CONACYT ID: 69481

ID 2<sup>nd</sup> Co-author: *Felix Héctor, Alcántara-Cruz*

ID 3<sup>rd</sup> Co-author: *Maria Luisa, Hernández-Martínez*

DOI: 10.35429/JHRT.2021.19.7.6.12

Received: March 30, 2021; Accepted: July 21, 2021

#### Abstract

Changes in work rhythms in these times have led to the emergence of different behaviors in the collaborators of organizations, severely affecting their social, physical, mental and emotional health. The purpose of this research has to characterize work alienation in organizations as highly interrelated psychosocial risk factors and work stress as a consequence of the dynamism of the environment in which current organizations find themselves. Its main objective is to determine the relationship between work alienation, Psychosocial Factors at Work and Work Stress in employees of a business integration company. The methodology is the construction of the research is descriptive in the research process, observing the behavior of these variables in their natural context; by selecting and reviewing different documentary sources. The results obtained are summarized in observations made on the theoretical and practical interrelation that is deduced between these constructs. Main aspects of work alienation are presented, psychosocial factors and work stress issues are addressed, what it is and how they originate, and how to reduce them. Finally, a proposal is presented as a means for counteracting these effects among the collaborators of an organization.

**Psychosocial factors, Stress, Job alienation**

#### Resumen

Los cambios en los ritmos de trabajo en estos tiempos han hecho que surjan diferentes comportamientos en los colaboradores de las organizaciones afectando severamente su salud social, física, mental y emocional. Esta investigación tiene como finalidad caracterizar la alienación laboral en las organizaciones como factores de riesgo psicosocial y el estrés laboral fuertemente interrelacionados como consecuencia del dinamismo del entorno en el que se encuentran las organizaciones actuales. Su objetivo principal es determinar la relación entre la alienación laboral, los Factores Psicosociales en el Trabajo y Estrés Laboral en los colaboradores de una empresa integradora de negocio. La metodología es la construcción de la investigación es de tipo descriptivo en el proceso de investigación, observándose el comportamiento de estas variables en su contexto natural; mediante la selección y revisión de distintas fuentes documentales. Los resultados obtenidos se resumen en observaciones hechas sobre la interrelación teórica y práctica que se deduce entre estos constructos. Se presentan aspectos principales de la alienación laboral, se abordan temas de factores psicosociales y estrés laboral, qué es y cómo se originan, y como poder disminuirlos. Finalmente, se presenta una propuesta como medio para contrarrestar estos efectos entre los colaboradores de una organización.

**Factores psicosociales, estrés, Alienación laboral**

**Citation:** RUÍZ-VALDÉS, Susana, RUÍZ-TAPIA, Juan Alberto, ALCÁNTARA-CRUZ, Felix Héctor and HERNÁNDEZ-MARTÍNEZ, Maria Luisa. Psychosocial factors, work stress and its relationship with labor alienation in organizations. *Journal of Human Resources Training*. 2021, 7-19: 6-12

\*Correspondence to Author (email: srv\_cm@hotmail.com)

†Researcher contributing first Author

## Introduction

Currently, organizations are in constant movement marked by the dynamism of the environment in which we find ourselves, so research and under the interest of literature on organizational psychology and human resources management, the causes of work alienation and the effects are sought. that can cause in employees such as psychosocial risks and job stress. The changes in the work rhythms in which we develop in these times of pandemic have caused deviant behaviors to emerge in the collaborators of the organizations, severely affecting their social, physical, mental and emotional health.

## Theoretical framework

The way to analyze the alienated behavior of workers and the transformations underway with the current socio-economic crisis force us to reread the psychosocial factors that impact an organization; in order to understand them and adopt preventive and corrective actions that prevent the current degradation of working conditions (Jara, 1999). The postulates about job alienation imply the onset of psychosocial risks and job stress with serious consequences for workers; therefore, its study must be taken into account by the companies towards their workers.

Alonso (1973) suggests that alienation implies a disconnection or uprooting of the individual from things, people, and ideas of the world around him. The work environment is one of the contexts in which individuals can experience alienation going unnoticed or unnoticed; since people themselves do not realize this condition; For example, a worker who feels jaded, disenchanted, bored, annoyed, tired in his work or frustrated by the functions or activities of his position, does not realize his job alienation and the psychosocial risk factors that arise in them. Labor alienation (AL, hereinafter) has its origin in the writings of the German philosopher Karl Marx (1844), understood as the result of a contradiction between the work of an employee and his own human nature.

As a result it represents the loss of its own identity; In other words, the worker does not find meaning in his work tasks and may present symptoms of disorientation, incapacity or impotence, as well as insignificance and isolation (Gurmendez, 1989).

Thus, given the lack of identity of the individual with the organization, a series of effects or behaviors are generated in the employee that affect their performance (Pando, Román & Acosta, 2008). If we want to analyze the work environment and psychosocial risk factors, we must take into account the different dimensions from which these behaviors can be understood:

- The individual dimension, aimed at knowing the profile of the company's workers to identify which people, due to their personality traits, may present greater psychosocial risks.
- The organizational dimension, designed to review aspects related to the operation of a company, such as the distribution of work, working hours, production method, type of work that is carried out that can generate work stress.
- The macrosocial dimension, which would be dedicated to understanding the functioning of individuals within an organization and their behavior outside it, attending to all those spheres that directly or indirectly affect interpersonal relationships.

Starting from the expansion of the work alienation construct exposed in research by (Alonso, 1973), three features are also presented within LA to consider: powerlessness, meaninglessness, normlessness, isolation and self-strangement.

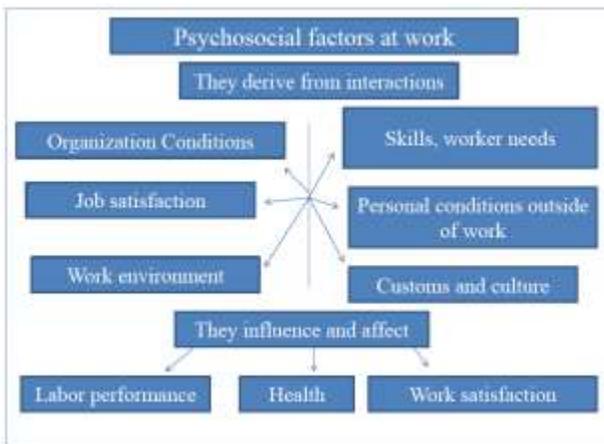
- Powerlessness refers to the feeling of lack of control or powerlessness over the performance of their daily work that an employee experiences.
- Meaninglessness as the feeling on the part of the employee that his work is not relevant in the productive process of the organization.
- Normlessness or the absence of norms in which workers feel that the norms are scarce, confusing or that they have lost their value.
- Isolation as the feeling of isolation or lack of identification of the worker with his organization

- Self-strangement that would be present when the worker does not feel fulfilled with the work he performs.

According to this approach, LA are conditions that can give off psychosocial risk factors in the health of the worker.

For the ILO (1986) the psychosocial factors at work are: "... Interactions between work, its environment, job satisfaction and the conditions of its organization, on the one hand, and the worker's capabilities on the other. , their needs, their culture and their personal situation outside of work, all of which, through perceptions and experiences, can influence health and job performance and satisfaction. " (p. 12).

Likewise, psychosocial factors at work represent a set of perceptions and experiences of the worker and include: individual or personal factors of the worker, working conditions and environment, and external factors that include economic and social conditions outside the workplace and that have an impact on it (ILO, 1986). Figure 1.



**Figure 1** Psychosocial factors at work

Source: (ILO, 1986)

These factors provoke responses of maladjustment, tension and stress affecting the health and well-being of the worker (Benavides, Gimeno, Benach, Martínez, Jarque, Berra, 2002). Therefore, it is necessary to understand that LA is a phenomenon in which human beings manifest different situations, behaviors or feelings of people;

However, the curious fact is how organizations control and cancel their free will, to make the person dependent on their daily work activities, making them alienated, therefore alienation is a problem that can affect the different social contexts of the human being as It is at the family level, in interpersonal relationships and in the workplace, that is, psychosocial risk factors, so studies on this phenomenon must be deepened to know the effects it generates on human beings.

It should be noted that LA worsens when work has less meaning for the worker (Isolation), when the reward system is more linked to factors external to the productivity of the individual (Normlessness) and when the organization offers the worker less means to perform their own goals (Meaninglessness). Specifically, LA is translated by a feeling of powerlessness, lack of power and strangeness with respect to work and others (Powerlessness), a loss of confidence in the "I" (Self-strangement), a dissatisfaction with regard to work and an inability to integrate the values disseminated by the organization "(Duro, 2005).

Based on the different sources consulted, the problems that can be addressed using the methodological approaches to LA are the psychosocial risk factors (work contexts that usually damage the health of the worker in a significant way), whose effects on each worker can be differential, among which are: work stress, work violence, workplace harassment, sexual harassment, contractual insecurity, burnout, work-family conflict, infidelity, among others. All these contexts must have an evident possibility of damaging the physical, social or mental health of the worker so that they are proposed as occupational psychosocial risk factors (Juárez and Camacho, 2011).

As already mentioned, psychosocial risk factors are not only con-formed by variables of the work environment, but also by personal variables of the collaborator such as attitude, perceptions, experiences, motivation, training, capacities, resources personal and professional; This means that the environment and the personality of the collaborator influence the perception of reality in response to different work situations.

Acevedo, Sánchez, Farías and Fernández (2013) mention that psychosocial risks concentrate on average one third of work-related accidents and illnesses; 17% sick leave and 30% work stress. This reflects that the reciprocal action between the collaborator and their environment can affect their health when they are subjected to stress or that they exceed their tolerance level, and can cause diseases or aggravate previous ailments (Jiménez and León 2010).

To develop adequate preventive activity in the field of psychosocial risk factors, it is important to differentiate the meaning of some concepts. Working conditions is the fusion of variables that determine the performance of a task in an environment; that is, those circumstances that determine the state of our work environment, ranging from the tasks we perform to the type of relationship we maintain inside and outside the company (ILO, 1986).

When we talk about psychosocial factors, we refer to the work conditions of a psychological and / or social nature, which characterize our work environment (interpersonal relationships, workload, organizational climate, leadership, communication, identification, autonomy, psychological contract) (ILO, 1986). These conditions become risk factors that can cause damage or trigger some negative alteration in the worker's level of health.

Thus, a psychosocial factor is any aspect related to the conception and management of work, with its labor and social context that has the potential to cause a negative effect on the health of the organization's workers (ILO, 1986).

It should be taken into account that work stress is one of the main psychosocial risk factors present in organizations, induced by the increase in workload, greater demands, new work rates at home where mental work has exceeded physical work and that negatively affect their health (Noriega et al, 2000). Thus evidencing the leading role that LA has and its consequences.

From all the aforementioned, it allows us to support the following research question: How do psychosocial factors at work impact on job alienation and job stress in employees?

The problem of this research topic responds to the need to know the effects of LA, psychosocial factors and work stress on the health of employees of a Business Integrating company, its turn is focused on carrying out consulting and supervision services located in Toluca, State of Mexico. This business was chosen because it is considered to suffer from AL in its collaborators.

Knowing the dynamics of these variables will allow to identify points of improvement, being necessary to involve all collaborators in the feedback process, in order to achieve a change in the prevention of unfavorable consequences in physical and mental health.

The main objective of this research is: to determine the relationship between LA, Psychosocial Factors at Work and Work Stress in collaborators of an integrating business company.

The information presented is descriptive in the research process, observing the behavior of these variables in their natural context; the design of the research is non-experimental, transversal because it investigates the present state of the functioning of a behavior.

The study population is the headquarters of the organization, which has a total of 83 collaborators after discarding all absent personnel who were not present during the evaluation process for various reasons.

Data collection was carried out in a Census form, since all the organization's collaborators participate, therefore, there was no sample or sampling strategy to determine the eligible population.

As a research assumption, it is necessary to: if the psychosocial factors can be identified, it will reduce the effects of work alienation in the collaborators of this business integrating company.

### **Measurement tools**

#### **Draft NOM-035-STPS2018 Risk Factors**

- Questionnaire 1: Reference Guide I. Questionnaire to identify workers who were subjected to severe traumatic events.

- Questionnaire: Reference Guide II. Identification of psychosocial risk.
- Questionnaire: Reference Guide III. Identification of psychosocial risk factors and evaluation of the organizational environment in the work centers.

The evaluation of the questionnaires was coordinated with the Human Resources area of the company in order to identify harmful aspects that are present and that could affect the quality of life of the collaborators.

A diagnosis was made using the following points (Table 1):

- Identification: It consists of the identification and description of the presence of psychosocial risk factors or psychosocial risks (and their effects) according to a theoretical and methodological foundation.
- Evaluation: Measure the characteristics or variables to assess the degree of risk or stress present in workers and the consequences or effects on health.
- Measurement: Assignment of numbers to the characteristics or variables of the units of analysis according to certain rules to make the presence of these variables evident.

### Analysis of data

After collecting and coding the data for each questionnaire, a descriptive analysis of the variables was carried out. These results were tabulated and analyzed (Table 2).

Category	Domain	Dimension	Item
Work environment	Conditions in the work environment	Hazardous and unsafe conditions	1, 3
		Deficient and insaluble conditions	2, 4
		Hazardous jobs	5

Category	Domain	Dimension	Item
Factors specific to the activity	Workload	Quantitative loads	6, 12
		Accelerated working rhythms	7, 8
		Mental load	9, 10, 11
		Emotional psychological burdens	65, 66, 67, 68
		High responsibility loads	13, 14
		Contradictory or inconsistent charges	15, 16
	Lack of control over work	Lack of control and autonomy over the job	25, 26, 27, 28
		Limited or no possibility of development	23, 24
		Insufficient participation and change management	29, 30
		Limited or no training	35, 36

Category	Domain	Dimension	Item
Organization of working time	Workday	long working hours	17, 18
		Influence of work outside the workplace	19, 20
		Influence of family responsibilities	21, 22

Category	Domain	Dimension	Item	
Leadership and relationships at work	Leadership	arity of functions	31, 32, 33, 34	
		Leadership characteristics	37, 38, 39, 40, 41	
	Relationships at work	Social relations at work	42, 43, 44, 45, 46	
		Poor relationship with supervised employees	69, 70, 71, 72	
	Violence	Workplace violence		57, 58, 59, 60, 61, 62, 63, 64

Category	Domain	Dimension	Item
Organizational environment	Performance recognition	Insufficient sense of belonging and instability	53, 54
		Little or no performance feedback	47, 48
		Little or no recognition and compensation	49, 50, 51, 52
		Limited sense of belonging	55, 56

**Table 1** Identification: Conditions in the work environment

Source: Self Made

Nom 035	Group
Final grade of the questionnaire Cfinal	High
Category rating	
Work environment	Under
Factors specific to the activity	High
Organization of working time	Very high
Leadership and relationships at work	Under
Organizational environment	Under
Domain qualification	
Conditions in the work environment	Under
Workload	Muy alto
Lack of control over work	Under
Workday	High
Interference in the work-family relationship	High
Leadership	Null
Relationships at work	Null
Violence	Medium
Performance recognition	Under
Insufficient sense of belonging and instability.	Under

**Table 2** Research results

Source: Self Made

Category	Domain	Organizational actions
Work environment	Conditions in the work environment	Revision of the health and safety protocol. Ergonomics and environmental design (improve equipment used at work and physical working conditions).
Factors specific to the activity	Workloads	Review and supervision that the distribution and workloads are carried out equitably and considering the number of workers, activities to be developed, scope of the activity and their training; processes and procedures that clearly define tasks and responsibilities.
		Activities to plan the work, considering the production process in order to have the necessary breaks or rest periods, rotation of tasks and other necessary measures to avoid accelerated work rhythms.
Ensuring that employees have or can acquire the knowledge and skills necessary to perform their duties effectively		
	Lack of control over work	Increase in the quality and quantity of support received by the employee for the development of his/her activities.
Organization of time at work	Workday	Actions to involve employees in defining work schedules, when work conditions allow it.
	Interference in the work-family relationship	Guidelines to establish measures and limits to avoid working hours in excess of those established in the LFT.
Leadership and relationships at work	Leadership	Work time distribution and priority setting
		Actions for conflict management at work
	Relationships at work	Mechanisms to promote communication between coordinators, managers and workers, as well as among all collaborators.
		Establish and disseminate clear instructions to employees for dealing with problems that prevent or limit the development of their work when they arise.
		Training and sensitization of directors, managers, chiefs and coordinators for the prevention of psychosocial risk factors and the promotion of favorable organizational environments.
Violence	Guidelines to prohibit discrimination and to promote equity and respect	
	Disseminate information to raise awareness about workplace violence, both to workers and to directors, managers, supervisors and coordinators.	
	Establish follow-up plans to address issues related to workplace violence, and train the person responsible for their implementation and inform on how to report acts of workplace violence.	

**Table 3** Specific strategies by risk factor.

Source: *Self Made*

## Conclusions

The data produced by the applied instruments show the psychosocial risk factors (Table 3) and the implications that they bring with them, allowing the human resources area of the company under study to develop a series of recommendations to minimize their impact on it.

From the perspective of LA it can be reflected at first instance that these factors can cause deviant behaviors affecting organizational performance, Powerlessness (Impotence), Meaninglessness (lack of meaning), Normlessness (absence of norms), Isolation (isolation) and Self-strangement. It should be noted that these are first approximations to LA results in the company, since as such it would be necessary to develop a specific instrument to determine the degree of alienation and to be able to correlate this with psychosocial factors.

Without attempting to resolve the debate on the way in which these can coexist and considering the data with which we have available, the appearance of psychosocial risks is presented, negatively affecting the quality of life of the collaborator, thus evidencing the relationship between psychosocial factors and stress labor and above all that the employee can point to the organization as responsible for his state developing in the feeling of helplessness or deviant behaviors.

The causes depend on the existence of socio-emotional, organizational and psychological aspects, which influence the employees; therefore, knowledge and understanding of job alignment and psychosocial risk factors can help select better tools and actions in the organization.

## Future recommendations.

Work circumstances are activities that have been evolving (which presents a new line of research, due to the scarcity of these, or the perspective of analyzing them) for which Human Resources management professionals must reduce work methods little effective. The results of this study will allow to guide the development of strategies aimed at reducing AL and psychosocial risk factors, thus favoring the subject's alignment with their needs, desires, abilities, feelings, interpersonal relationships and activities themselves. organization with satisfaction.

**References**

- Acevedo, G., Sánchez, J., Farías, M. and Fernández A. (2013). Psychosocial risks in the health team of public hospitals in the province of Córdoba, Argentina. *Cienc Trab*, 15, 140- 147.
- Alonso Olea, Manuel (1973), Alienation. One word story. Polytechnic Study Institute, Madrid, 1974.
- Benavides, F., Gimeno, D., Benach. J., Martinez, J. M., Jarque, S., & Berra, A. Description of psychosocial risk factors in four companies. *Gac Sanit*, 2002, 16.3, 222-229.
- Buitrago Mejia, L. D. P., Lopez Lopez, M. P., Cervántez Ordóñez, D. M., & Lloreda Gómez, E. (2021). Bienestar laboral general en docentes del sector público de Manizales.
- Córdoba Reina, K. S. (2021). Diseño de un programa de intervención para el incremento del Bienestar Laboral en un grupo de colaboradores de sector transporte.
- Duro, A. (2005a). Quality of Work Life and Social Psychology of Work Health: towards a model of common components to explain psychological work well-being and work mental health of psychosocial origin. Theoretical fundament. Magazine of the Ministry of Labor and Social Affairs. Series Econom-ía y Sociología, 56, 15-56.
- García Inga, F. M., & Cuba Matos, R. M. (2021). Rotación de personal y el estrés laboral en una empresa retail de San Juan de Miraflores 2021.
- Granda, S., & Jadeline, J. (2021). Síndrome de desgaste profesional burnout en médicos posgradistas de la especialidad de terapia intensiva en la ciudad de Quito en el año 2020.
- Gurmendez, Carlos (1989). The secret of human alienation and de-alienation. Editorial Anthropos, Barcelona.
- Hospital Bertha Calderón Roque. Managua II semestre 2020 (Doctoral dissertation, Universidad Nacional Autónoma de Nicaragua, Managua).
- ILO Psychosocial factors at work: recognition and control. Geneva: ILO; 1986.
- Jara Diaz, Sergio (1999). Alienation and value of time. Universidad de Chile, sixth series no.9 August 1999.
- Jiménez, B. M., & León, C. B. (2010). Psychosocial factors and risks, forms, consequences, measures and good practices. Autonomous University of Madrid.
- Juárez, A., and Camacho, A. (2011a). Theoretical, conceptual reviews of the psychosocial at work. Editorial Juan Pablos / UAEM. First edition. Mexico
- Laudon, K. C., and Laudon, J. P. (2000). Management information systems: Organization and technology in the networked enterprise (6th ed.). New York: Prentice-Hall Inc.
- Noriega M., Laurell C., Martínez, S. Méndez I., Villegas J (2000). Interaction of work demands in the generation of mental suffering. *Cad. Public Health* 2000; 16 (4).
- Official Mexican Standard NOM-035-STPS-2018, Psychosocial risk factors at work- Identification, analysis and prevention, DOF: 10/23/2018.
- Pando M; Roman J; Acosta M (2008). Psychosocial risk factors at work in the company. Mexico: CyTED RIPSOL.
- Rodríguez Chavarría, K. L., & Sánchez Rugama, B. L. (2021). Factores relacionados al estrés laboral del personal de enfermería que se desempeña en la sala de alto riesgo obstétrico.

## Measurement of Burnout in university professors during COVID-19

### Medición del Síndrome de Quemarse por el Trabajo en profesores universitarios durante el COVID-19

MAY-GUILLERMO, Erika Guadalupe†, VELASCO-CASTELLANOS, Jorge, ARIAS- GALICIA, Luis Fernando and DE LA CRUZ-MAY, Samuel\*

*Instituto Tecnológico Superior de la Región Sierra, México  
Universidad Autónoma del Estado de Morelos  
Universidad Intercultural del Estado de Tabasco*

ID 1<sup>st</sup> Author: *Erika Guadalupe May-Guillermo* / ORC ID: 0000-0001-5403-9849, Researcher ID Thomson: W-4393-2019, CVU CONACYT ID: 366439

ID 1<sup>st</sup> Co-Author: *Jorge Velasco- Castellanos*/ ORC ID: 00-0002-6034-6199, CVU CONACYT ID: 865655

ID 2<sup>nd</sup> Co-author: *Luis Fernando Arias- Galicia* / ORC ID: 0000-0001-5371-3555, CVU CONACYT ID: 201

ID 3<sup>rd</sup> Co-Author: *Samuel de la Cruz-May* / ORC ID: 0000-0001-9180-6349, Researcher ID Thomson: ABD-3123-2020, CVU CONACYT ID: 862273

DOI: 10.35429/JHRT.2021.19.7.13.20

Received: March 30, 2021; Accepted June 30, 2021

#### Abstract

The COVID-19 pandemic has led university professors to use new work modalities as demands exceed the response capacity, putting their occupational health at risk. This work provides the preliminary results of an ongoing investigation whose purpose is to determine the presence of Burnout that may be experienced by university professors in the State of Tabasco, Mexico, as a consequence of the adaptations they have made to continue working during the health contingency caused by the SARS-CoV-2 virus. In relation to the methodology, it is a descriptive, cross-sectional and quantitative research, which uses the survey as a data collection technique through an online form. The main contribution of this work is to provide indicators on occupational health that facilitate decision-making by educational authorities regarding the management of teaching staff working in Higher Education Institutions.

#### Burnout, Teachers, Occupational Health

#### Resumen

La pandemia por COVID-19 ha propiciado que los profesores universitarios utilicen nuevas modalidades de trabajo cuyas exigencias superan la capacidad de respuesta, poniendo en riesgo su salud ocupacional. El presente trabajo proporciona los resultados preliminares de una investigación en proceso cuya finalidad es determinar la presencia del Síndrome de quemarse por el Trabajo que pudieran estar experimentando los profesores universitarios en el Estado de Tabasco, México, como consecuencia de las adaptaciones que han realizado para continuar laborando durante la contingencia sanitaria provocada por el virus SARS-CoV-2. En relación con la metodología, se trata de una investigación descriptiva, transversal y cuantitativa, que emplea como técnica de recopilación de datos a la encuesta mediante un formulario en línea. La principal contribución de este trabajo es proporcionar indicadores en materia de salud ocupacional que faciliten la toma de decisiones a las autoridades educativas respecto a la gestión del personal docente que labora en las Instituciones de Educación Superior.

#### Salud ocupacional, Síndrome de Quemarse por el Trabajo, Docentes

**Citation:** MAY-GUILLERMO, Erika Guadalupe, VELASCO-CASTELLANOS, Jorge, ARIAS- GALICIA, Luis Fernando and DE LA CRUZ-MAY, Samuel. Measurement of Burnout in university professors during COVID-19. Journal of Human Resources Training. 2021, 7-19: 13-20

\*Correspondence to Author: (email: [chinosix@hotmail.com](mailto:chinosix@hotmail.com))

†Researcher contributing first Author

## Introduction

The COVID 19 pandemic has been an unprecedented phenomenon in the current age of knowledge with negative effects on different sectors of society (Economic Commission for Latin America and the Caribbean [ECLAC] & the United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). These effects have been the subject of interest in different research (Alvarez & Harris, 2020; Bueno Ferrán & Barrientos-Trigo, 2020; Bueno & Barrientos, 2020; Kim & Asbury, 2020).

In economic terms, international organizations have applied measures and strategies in order to mitigate the effects of COVID-19; However, in the educational field, protection strategies have not received the same attention (Miguel, 2020).

On a regular basis, teaching activity is characterized by facing different challenges that generate an environment of uncertainty and fear, which produces the feeling of lack of control in the face of such eventualities and possible emotional imbalances, influenced by the environment in which they have lived. (Molina-Mendoza & Amador-Velázquez, 2015).

In Mexico, because of the arrival of the pandemic caused by the SARS-CoV-2 virus, many of these challenges have intensified, especially in light of the provisions of the health and educational authorities, who through the agreement number 02/03/20 published in the DOF dated March 16, 2020 they established that from March 23 to April 17, 2020 classes would be suspended in schools of all levels in Mexico as a preventive measure to reduce the impact of the spread of COVID-19 in the national territory (Agreement Number 02/03/20, 2020).

Subsequently, on March 30, 2020, the agreement number 03/06/20 is issued by which the Secretary of Public Education (SEP) extends the time of suspension of classes, considering as a new period from March 23 to April 30, 2020 (Agreement Number 06/03/20, 2020). To conclude the 2019-2020 school year and continue with 2020-2021, the implementation of emergency education was used remotely, so that the student population had access to education from their homes (INEGI, 2021).

This new format forced a change in the teaching-learning environments, therefore, the houses had to be reconfigured so that the members of the student community could carry out their activities.

In this way, educational institutions and their actors were forced to change the paradigm of considering face-to-face education as the main source of training and knowledge transfer and opening up new formats to enable emergency solutions to the crisis caused by the COVID-19 in education (Garcia, 2021).

However, working under these new schemes revealed the limitations presented by the Mexican educational sector. Among these are: weak connectivity, lack of electronic devices and insufficient knowledge about the use of technology exhibited by a large part of the student community (Magallanes & De Ávila, 2020). At the higher level, teachers had to reinvent their educational practices by resorting to technological means such as virtual platforms, email, landline, cell phone, Facebook, Instagram, Twitter, WhatsApp, institutional web pages, among others (ECLAC & UNESCO, 2020). Unfortunately, not all teachers had the competencies to work in virtual environments, therefore, it was necessary to train either through institutional channels or independently to achieve the transition from face-to-face to virtual classes.

The adjustments made by the teachers working at home generated that in some cases, the responsibilities and demands exceeded the response capacity; Meanwhile, other teachers did manage to be resilient to the challenges of the virtual modality of education (Garcia, 2021). Teachers overwhelmed by the challenges caused by COVID-19 are more susceptible to experiencing psychosocial problems such as emotional exhaustion, overwhelm and stress (ECLAC & UNESCO, 2020).

In this regard, the International Labor Organization (ILO) (2020) sustains the existence of various psychosocial factors with consequences affecting people working from their homes, as in the case of university teachers, these factors being listed below:

- Isolation
- Excessive working hours

- Blurring of the lines between work and family life
- Multiple burdens (job responsibilities (preparing classes, ensuring proper connections, and following up with students in various formats), household chores, caring for family members and teachers for their children, etc.
- Domestic violence
- Frustration generated by not being a digital native and having to adapt to new contexts.
- Boredom and frustration.

The need to adjust to the conditions of distance education has generated responsibilities and demands on the teaching staff, which significantly increased the time to prepare classes, ensure adequate connections and follow up with their students in different formats. (Human Capital Factor, 2020).

Faced with this situation, an investigation with a quantitative approach was proposed in order to identify whether, in the context described, education personnel in the State of Tabasco are being affected by the harmful effects of these changes. The objective of this work is to present the preliminary results of this research in order to determine the presence of the Syndrome of being burned by Work which university professors in the State of Tabasco, Mexico could be experiencing, as a consequence of the adaptations made to continue working during the health contingency caused by the SARS-CoV-2 virus.

## 1. Theoretical framework

In this section the theoretical aspects of the variable under study will be located, for a better understanding of it.

### 1.1 Burnout Syndrome

The term Burnout is the translation and expansion into Spanish of the term Burnout, carried out by Gil-Monte (2005), being a phenomenon whose research began in the United States in the early 70s, to explain the process of deterioration in care and professional attention to users of health organizations, who are the most likely to suffer this deterioration (Soto et al., 2017).

According to Maslach (2009) cited by Millán and D'Aubeterre, the burnout "It is a psychological syndrome that involves a prolonged response to chronic interpersonal stressors at work" (Millán & D'Aubeterre, 2012). This syndrome arises as a response to chronic stress related to occupational psychosocial risks, and should not be confused with stress as it is part of daily life (Muñoz & Velásquez, 2016).

Burnout is more conducive to those professionals who provide services such as education, health and social service, whose object of work is people (Ortega et al., 2004). In this sense, Camacho et al. (2021) found that in Ecuador 95% of university professors manifest emotional fatigue and 54% depersonalization, thus corroborating the existence of Burnout.

### 1.2 Models of burnout syndrome

The most important references in the study of this syndrome refer to Freudenberg, Maslach, Pines and Gil-Monte; being the first the pioneer and almost an obligatory reference for the other studies (Díaz & Gómez, 2016).

#### a) Maslach and Jackson Multidimensional Model (MBI-HSS)

It is the most approached and developed within the clinical-hospital setting, through the MBI-HSS (Human Services Survey) inventory and from there other models have emerged, as well as the incorporation of the measure of psychological well-being as a divergent criterion of the Latin American validation of the MBI-GS (Millán & D'Aubeterre, 2012).

According to this model, SQT can be described in the following phases: emotional exhaustion, depersonalization and cynicism. In the first, excessive ambition is present, making the person work harder, ending in fatigue until abandoning their own needs, giving entry to the second phase, depersonalization that protects the worker from disappointment and exhaustion, involving cynical attitudes and feelings, and the last phase that is cynicism related to changes in behavior, anxiety, addiction, despair, little meaning to life which puts it at risk (Aguirre & Quijano, 2015).

### b) Gil-Monte's Burnout Model (CESQT)

The Spanish author Gil-Monte (2005) proposes this model as burnout syndrome (CSQT). In this model, Burnout is made up of four factors: Enthusiasm about work, Exhaustion, Indolence and Guilt (Arquero & Donoso, 2013).

### c) Existential Causal Model of Burnout

The Existential Causal Model of Burnout also stands out, which has a motivational character, starting from the basic assumption that only highly motivated individuals can burn out. That is, people look for an existential meaning and when they do not find it at work, the feeling of failure appears (Díaz & Gómez, 2016).

### 1.3 Characteristics of people with burnout

Burnout is more conducive to those professionals who provide services such as education, health and social service, whose object of work is people (Ortega et al., 2004).

Paine(1982) recognizes that there are five categories that exhibit the characteristics of people with TQS, which are described below.

- Physical symptoms: excessive fatigue, physical exhaustion, muscular ailments, and functional alterations in various parts of the body.
- Excessive behaviors: abundant consumption of substances that trigger other risk behaviors.
- Problems of emotional adjustment: emotional exhaustion, paranoia, depression and various fears.
- Alteration of interpersonal relationships: inability to maintain good communication with coworkers, increased conflicts and apathy to serve users both internal and external to the organization.
- Attitudinal symptoms and changes in the values and beliefs of the individual: emergence of feelings of frustration and failure.

For his part, Gil-monte (2005) found in a study with nursing professionals some outstanding symptoms that characterized burnout, which are a consequence of cognitive, affective, attitudinal, behavioral and physical factors, which are presented in table 1.

### 2.1 Method

This work provides the preliminary results of an applied, descriptive, cross-sectional and quantitative research, the objective of which is to determine the presence of the burnout syndrome at work, which university professors in the State of Tabasco, Mexico, may be experiencing. as a result of the adaptations they have made to continue working during the health contingency caused by the SARS-CoV-2 virus.

Cognitive	Affective-Emotional	Attitudinal	Other Symptoms
Underestimate work Inability to perform tasks. Thinking that you can't cover everything.	Nervousness Irritability Bad mood Disgust Anger Frustration Aggression Disenchantment Overwhelmed Sadness Depression Emotional exhaustion Anguish	Discouragement to work Apathy Irresponsibility Intolerance Impatience Complain about everything Negatively evaluating colleagues	Behavioral isolation Not cooperating Answering badly Confrontations Tiredness

**Table 1** Symptoms of TQS. Adapted from Gil-monte(2005)

### 2.2 Data collection technique and participants

The data collection technique was a survey using an online form. Initially, the authorization of the institutional authorities was requested and later the professors were invited to participate voluntarily. The demographic characteristics of the participants are shown in Table 2.

Variable	Category:	%
Gender	Female	53%
	Male	47%
Marital estatus	Lived with a partner	71%
	Without a partner	29%
Level of education	Technician	1%
	Bachelor's Degree	33%
	Master's Degree	52%
	PhD	14%
Length of service	<1 year	3%
	From 1 to 5 years	22%
	From 6 to 10 years	19%
	From 11 to 15 years	22%
	From 16 to 20 years	19%
	21 to 25 years More than 25 years	11% 4%
Sector	Public	31%
	Private	14%

**Table 2** Participants profile

Source: Self Made

### 2.3 Instrument

The instrument applied was the CESQT used by Gil-Monte to measure burnout (2009) because this instrument improves the psychometric properties of others that have been used for this purpose, since it emerges from a theoretical model. It also adds the variable guilt, promoting a better understanding of the burnout construct and provides a more appropriate cultural approach to the Latin American context (Olivares-Faúndez et al., 2019).

Regarding the reliability of the instrument, adequate values were reached in the Cronbach's alpha statistic according to Landero and González (2016), only the indolence dimension was slightly low (see Table 3).

Dimension	Cronbach's alpha
Enthusiasm about work	0.86
Exhaustion	0.88
Indolence	0.68
Guilt	0.86

**Table 3** Instrument reliability

Source: Self Made

### 2.4 Operationalization of variables

In the research, the study variables were considered to be the Burnout Syndrome (SQT) and the four dimensions proposed by Gil-Monte (2005), 1) enthusiasm about work, 2) exhaustion, 3) indolence and 4) guilt, which were operationalized according to table 4.

### 2.5 Statistical procedure

The arithmetic means were calculated, as well as the alpha reliability of each of the dimensions considered in the study.

Likewise, the frequency histograms were obtained. Initially, the instrument was codified considering the 4 dimensions mentioned in table 3. Likewise, the data obtained were transferred to the statistical software SPSS version 22.0.

Variable	Operational definition
Enthusiasm about work	It is understood as a cognitive aspect (considering work as a challenge, as a personal fulfillment).
Exhaustion	It is explained as an affective deterioration (emotional and physical exhaustion).
Insólense	Characterized by the appearance of negative attitudes and behaviors towards clients and towards the organization, in the form of indifferent, cold, distant, and sometimes harmful behaviors.
Guilt	Negative feeling, of remorse resulting from the belief that a social norm or belief has been violated or is capable of being violated and for having committed negative attitudes and behaviors at work.

**Table 4** Variables operationalization

Source: Made based on Gil-Monte (2005)

### Results

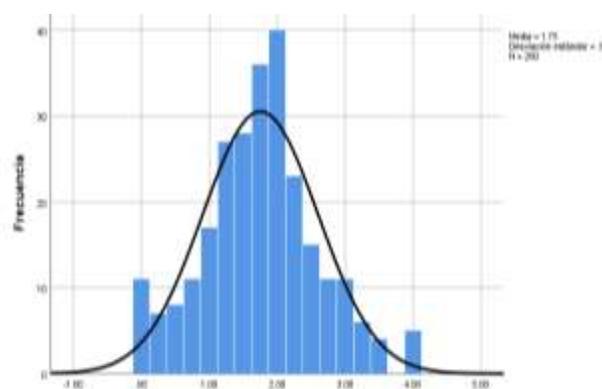
Next, the results of the first advance of the investigation are presented, starting with the descriptive variables of the studied variables that are presented in Table 5.

Variable	Half	Standard deviation
1) Enthusiasm about work	3.31	0.58
2) Exhaustion	1.75	0.85
3) Indolence	0.40	0.42
4) Guilt	0.71	0.71

**Table 5** Descriptive of the study variables

Source: Self Made

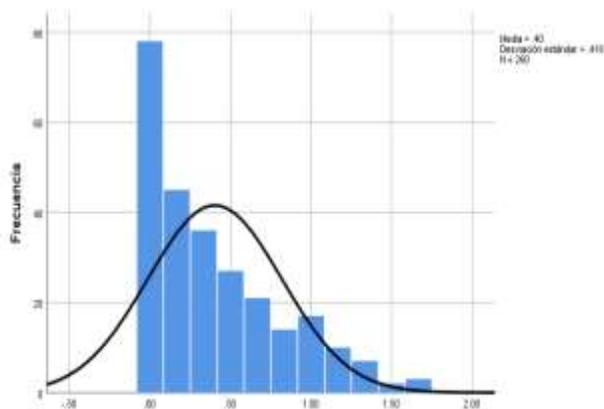
For enthusiasm about work dimension, a mean of 3.31 and a standard deviation of 0.58 were obtained (see table 4). Likewise, figure 1 shows the bias of the data to the right: the most repeated answer option is 4 = Very frequently.



**Figure 1** histogram of the dimensión enthusiasm about work

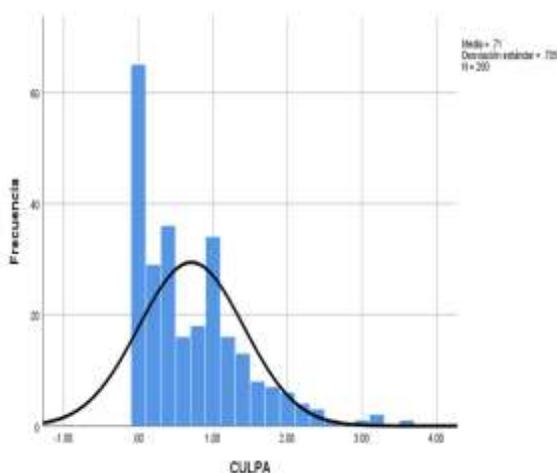
Regarding the dimension exhaustion, a mean of 1.75 and a standard deviation of 0.85 were obtained (see table 4). This was the dimension that registered the greatest variability in the data, the answer option being 2 = Sometimes the most repeated.

MAY-GUILLERMO, Erika Guadalupe, VELASCO-CASTELLANOS, Jorge, ARIAS- GALICIA, Luis Fernando and DE LA CRUZ-MAY, Samuel. Measurement of Burnout in university professors during COVID-19. Journal of Human Resources Training, 2021



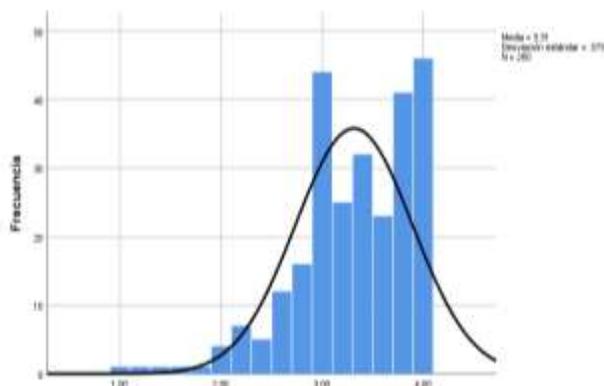
**Figure 2** histogram of the exhaustion dimension

The indolence dimension reported a mean of 0.40 and a standard deviation of 0.42 (see table 4). This was the dimension that registered the smallest of the means, but the greatest variability in the data, as can be seen in Figure 3, with the answer option being .00 = never, it is the most repeated.



**Figure 3** histogram of the Indolence dimensión.

In the guilt dimension, a value of 0.71 was obtained for both the mean and the standard deviation (see table 4), while the answer option .00 = never is the most repeated as shown in figure 4.



**Figure 4** histogram of the Guilt dimensión

## Acknowledgments

We thank the Council of Science and Technology of the State of Tabasco (CCYTET) for the financial support granted for the development of this project, through the Program for the Development of Science, Technology and Innovation of the State.

## Conclusions

The teachers participating in the study show a favorable level of enthusiasm for work. However, it is desirable to stimulate this factor in educational institutions to achieve greater involvement by employees.

Likewise, a low record of the level of Psychic wear, which is a favorable indicator up to the moment in which the study is carried out. However, it is necessary to continue monitoring this factor in order to identify possible cases in a timely manner and attend to them in a timely manner. Similarly, a low manifestation of the level of Indolence was found, as well as Guilt, which denotes the responsibility and ethics with which teachers consider carrying out their academic activities.

It is concluded: despite the adverse conditions faced by teachers during the COVID-19 pandemic, they have relied on the protective factor enthusiasm for work, to counteract deteriorating aspects such as mental exhaustion, indolence and guilt, which according to the comments they share teachers in the surveys carried out have achieved by developing new skills and attitudes. In addition, the results indicate the use of resilience to overcome the difficulties imposed by the pandemic. The psychological strength of the members of the sample under analysis is then denoted.

As of the date this document is written, the situation of university teachers regarding their return to the classroom is uncertain. However, the online modality has allowed greater flexibility and use of digital resources to complement face-to-face education, therefore it is suggested to evaluate the relevance of a hybrid model according to the resources in possession of the student community and the existing sanitary conditions (Garcia, 2021).

The main contribution of this work is to provide indicators on occupational health to facilitate decision-making by educational authorities regarding the management of teaching staff working in Higher Education Institutions. However, it is necessary to expand the population of analysis and evaluate the relationships that the current results could have with some demographic variables of interest.

## References

- Agreement number 06/03/20, DOF - Official Gazette of the Federation 8 (2020). [https://www.dof.gob.mx/nota\\_detalle.php?codigo=5590981&fecha=01/04/2020](https://www.dof.gob.mx/nota_detalle.php?codigo=5590981&fecha=01/04/2020)
- Agreement number 02/03/20, Pub. L. No. 02/03/20, Official Gazette of the Federation 2 (2020). [https://www.dof.gob.mx/nota\\_detalle.php?codigo=5589479&fecha=16/03/2020](https://www.dof.gob.mx/nota_detalle.php?codigo=5589479&fecha=16/03/2020)
- Aguirre, AM, & Quijano, AM (2015). Syndrome due to burns at work and family and work variables of general practitioners in Bogotá. A labor quality strategy. *Colombian Journal of Psychiatry*, 44 (4), 198–205. <https://doi.org/10.1016/j.rcp.2015.05.017>
- Aguirre Roldán, AM, & Quijano Barriga, AM (2015). Syndrome due to burns at work and family and work variables of general practitioners in Bogotá. A labor quality strategy. *Colombian Journal of Psychiatry*, 44 (4), 198–205. <https://doi.org/10.1016/j.rcp.2015.05.017>
- Alvarez, R., & Harris, P. (2020). Covid-19 in Latin America: Challenges and opportunities. *Revista Chilena de Pediatría*, 91 (2), 179–182. <https://doi.org/10.32641/rchped.vi91i2.2157>
- Arquero, JL, & Donoso, JA (2013). Teaching, research and burnout: The burnout syndrome in accounting university professors. *Revista de Contabilidad-Spanish Accounting Review*, 16 (2), 94–105. <https://doi.org/10.1016/j.rcsar.2013.04.001>
- Bueno Ferrán, M., & Barrientos-Trigo, S. (2020). Caring for the caregiver: The emotional impact of the coronavirus epidemic on nurses and other health professionals. *Clinical Nursing*. <https://doi.org/10.1016/j.enfcli.2020.05.006>
- Bueno, M., & Barrientos, S. (2020). Caring for the Caregiver: The Emotional Impact of the Coronavirus Epidemic on Nurses and Other Health Professionals. *Clinical Nursing*, 1–8. <https://doi.org/10.1016/j.enfcli.2020.05.006>
- Camacho, R., Gaspar, M., & Rivas, C. (2021). Burnout syndrome and work stress by covid-19 in Ecuadorian university teachers stress by covid-19 in ecuadorian Burnout syndrome and work university teachers Abstract. *Journal of the Community and Health Research Group*, 6 (4), 166–177. <http://erevistas.saber.ula.ve/index.php/órgicos/article/view/17425>
- ECLAC, & UNESCO. (2020). Education in times of the COVID-19 pandemic. In Report. <https://doi.org/10.5209/GEOP.69137>
- Díaz, F., & Gómez, C. (2016). Research on the Burnout Syndrome in Latin America between 2000 and 2010. *Psychology From The Caribbean*, 33 (1), 113–131.
- Human Capital Factor. (2020). Teachers in the pandemic: The challenge of relearning, reorganizing, teaching, caring ... Human Capital Factor. World Of Work. <https://factorcapitalhumano.com/mundo-del-trabajo/docentes-en-la-pandemia-el-desafio-de-reaprender-reorganizar-ensenar-cuidar/2020/08/>
- García, L. (2021). COVID-19 and digital distance education: pre-confinement, confinement and post-confinement. *Ibero-American Journal of Distance Education*, 24 (1), 9–25. <https://doi.org/10.5944/ried.24.1.28080>
- Gil-monte, PR (2005). The syndrome of Burnout from Work (BURNOUT) An occupational disease in the welfare society (Psychology). Pyramid Editions. [https://www.researchgate.net/publication/263276105\\_Burnout\\_syndrome\\_by\\_work\\_burnout\\_A\\_work-related\\_sickness\\_in\\_the\\_society\\_of\\_well-being](https://www.researchgate.net/publication/263276105_Burnout_syndrome_by_work_burnout_A_work-related_sickness_in_the_society_of_well-being)
- Gil-Monte, PR, Unda, S., & Sandoval, JI (2009). Factorial validity of the Questionnaire for the Evaluation of the Syndrome of Burning at Work (CESQT) in a sample of Mexican teachers. *Mental Health*, 32 (3), 205–214.

INEGI. (2021). Survey to Measure the Impact of COVID-19 on Education (ECOVIED-ED) 2020. Technical Note. Second Edition (pp. 1–30). [https://www.inegi.org.mx/contenidos/investigacion/ecovied/2020/doc/ecovid\\_ed\\_2020\\_nota\\_tecnica.pdf](https://www.inegi.org.mx/contenidos/investigacion/ecovied/2020/doc/ecovid_ed_2020_nota_tecnica.pdf)

Kim, LE, & Asbury, K. (2020). 'Like a rug had been pulled from under you': The impact of COVID-19 on teachers in England during the first six weeks of the UK lockdown. In *British Journal of Educational Psychology* (Vol. 90, Issue 4, pp. 1062–1083). <https://doi.org/10.1111/bjep.12381>

Landero, R., & González, M. (2016). *Statistics with SPSS and Research Methodology* (1st ed).

Magallanes, E., & De Ávila, J. (2020). Initial response by a group of Mexican teachers to the closure of schools due to Covid-19. *Journal of the La Salle University Research Center*, 14 (53), 11–44. <https://doi.org/10.26457/recein.v14i53.2663>

Miguel, J. (2020). Higher education in times of pandemic: a view from within the training process. *Latin American Journal of Educational Studies*, 50, 13–40. <https://rlee.iberomex.mx/index.php/rlee/issue/view/177/RLEE.LI.3>

Millán de Lange, AC, & D'Aubeterre López, ME (2012). Psychometric properties of the Maslach Burnout Inventory-GS in a Venezuelan multi-occupational sample. *Journal of Psychology*, 30 (1), 103–128. <https://doi.org/10.18800/psico.201201.005>

Molina-Mendoza, Amador-Velázquez, R.-G. (2015). Burnout syndrome: comparative study between teachers and nurses. *Electronic Journal Medicine, Health and Society*, 5 (2), 109–120.

Muñoz, AI, & Velásquez, MS (2016). Work-burn syndrome in nursing professionals, Bogotá, Colombia. *Journal of the National School of Public Health*, 34 (2). <https://doi.org/10.17533/udea.rfnsp.v34n2a09>

ILO. (2020). Facing the pandemic: guaranteeing health and safety at work (p. 33).

Olivares-Faúndez, V., Arias, F., Peralta, J., Jélvez-Wilke, C., Morales-Gutiérrez, J., & Riquelme, G. (2019). The role of guilt in the relationship between burnout and absenteeism work in administration and industrial services workers. *Interciencia*, 44 (3), 147–153. [https://www.researchgate.net/publication/332448826\\_The\\_role\\_of\\_guilt\\_in\\_the\\_relationship\\_between\\_burnout\\_and\\_absenteeism\\_work\\_in\\_administration\\_and\\_industrial\\_services\\_workers](https://www.researchgate.net/publication/332448826_The_role_of_guilt_in_the_relationship_between_burnout_and_absenteeism_work_in_administration_and_industrial_services_workers)

Ortega, C., López, F., & Universidad, R. (2004). Burnout or syndrome of being burned in health professionals: review and perspectives1. *International Journal of Clinical and Health Psychology*, 4 (1), 137–160.

Paine, WS (1982). Overview: Burnout stress syndromes and the 1980s. In *Job stress and burnout: research theory and intervention perspectives* (pp. 11–29). Beverly Hills, CA: Sage.

Soto Fuentes, PE, Barrios Araya, S., & Molina Muñoz, Y. (2017). Burnout from Work Syndrome and Job Satisfaction as predictors of quality of hospital nursing care. *Science and Nursing*, 23 (3), 99–111. <https://doi.org/10.4067/s0717-95532017000300099>

## Training of competences in Entrepreneurship and collaboration between students of different disciplines and degrees of the University of Guadalajara, based on their school projects. Rapporteurship of experience

## Formación de competencias en Emprendimiento y de colaboración entre alumnos de diferentes disciplinas y grados de la Universidad de Guadalajara, teniendo como base sus proyectos escolares. Relatoría de experiencia

HERNÁNDEZ-TINOCO, Araceli†\*, GUZMÁN-DÍAZ, José Cruz, CERVANTES-GUZMAN, Jovanna Nathalie and REYES- RODRÍGUEZ, Mónica Araceli

*Centro Universitario de Ciencias Biológicas y Agropecuarias, CUCBA de la Universidad de Guadalajara. Camino Ramón Padilla Sánchez 2100, Nextipac, 45200 Zapopan, Jal. México*

ID 1<sup>st</sup> Author: Araceli, Hernández-Tinoco / ORC ID: 0000-0002-8420-0350-95748

ID 1<sup>st</sup> Co-author: José Cruz Guzmán-Díaz / ORC ID: 0000-0001-6465-2735

ID 2<sup>nd</sup> Co-author: Mónica Araceli, Reyes-Rodríguez / ORC ID: 0000-0002-0676-2730

ID 3<sup>rd</sup> Co-author: Jovanna Nathalie, Cervantes-Guzmán / ORC ID: 0000-0002-0520-3822

DOI: 10.35429/JHRT.2021.19.7.21.28

Received: July 30, 2020; Accepted: December 20, 2020

### Abstract

The results of experiences of the link in order to motivate entrepreneurship between students of two different careers are reported. Food science develops, characterizes and validates a food and marketing makes its business plan. And the Master of Law supports the working relationship with confidentiality letters, advice for product protection and collaboration contract, in case both students decide to continue together in incubation towards a company. The information used for this work was obtained from the anecdotal experiences documented during the work with the students during the 2019B, 2020A and 2020B school cycles. Students' comments were retrieved from the comments they left on their teacher evaluations at the end of the semester. The participating students valued the experience very much and learned new things that in their career they do not normally receive. Relating to other disciplines enriches and fosters new ideas, new relationships and the best results of any project. It lets them see how, their project, seen with different eyes can offer greater and better advantages. From the legal part, they live it, not only study it. And new forms of interaction-experience are proposed that add for their professional training.

**Entrepreneurship, Collaboration, Multidisciplinary**

### Resumen

Se relatan los resultados de experiencias de la vinculación con fines de motivar emprendimiento entre alumnos de dos carreras diferentes. Ciencia de los alimentos desarrollan, caracterizan y validan un alimento y mercadotecnia hace su plan de negocios. Y la maestría de Derecho apoya en la relación de trabajo con cartas de confidencialidad, asesoría para protección de producto y contrato de colaboración, en caso de que ambos alumnos decidan continuar juntos en incubación hacia una empresa. La información utilizada para este trabajo fue obtenida de las experiencias anecdóticas documentados durante los trabajos con los alumnos durante los ciclos escolares 2019B, 2020A y 2020B. Los comentarios de los alumnos fueron recuperados de los comentarios que dejaron en sus evaluaciones docentes al final del semestre. Los alumnos participantes valoraron mucho la experiencia y aprendieron cosas nuevas que en su carrera no reciben normalmente. Relacionarse con otras disciplinas enriquece y propicia las nuevas ideas, las nuevas relaciones y los mejores resultados de cualquier proyecto. Los deja ver cómo, su proyecto, visto con otros ojos puede ofrecer mayores y mejores ventajas. De la parte legal, la viven, no solo la estudian. Y se proponen nuevas formas de interacción-experiencia que le abonan a su formación profesional.

**Emprendimiento, Colaboración, Multidisciplinario**

**Citation:** HERNÁNDEZ-TINOCO, Araceli, GUZMÁN-DÍAZ, José Cruz, CERVANTES-GUZMAN, Jovanna Nathalie and REYES-RODRÍGUEZ, Mónica Araceli. Training of competences in Entrepreneurship and collaboration between students of different disciplines and degrees of the University of Guadalajara, based on their school projects. Rapporteurship of experience. Journal of Human Resources Training. 2021, 7-19: 21-28

\*Correspondence to Author (araceli.hernandez@academicos.udg.mx)

†Researcher contributing first Author

## Introduction

The University of Guadalajara, UdG as a public institution of higher education, with presence throughout the state of Jalisco, Mexico, develops teaching, research and liaison activities with the public, private and social sectors of impact; currently one of the institutional policies is the strengthening of the competencies and skills that students develop during their training, same that allow them to assume the responsibilities that as a professional acquires when joining the labor field. Teachers now have three substantive functions: teaching, research and extension (Arechavala et al, 2017).

Hence, one of the guiding axes for several educational programs is the inclusion of training in business entrepreneurship, which contributes to the disciplinary and personal training of professional students; While it is true that the approach to the professional field has been an ordinary exercise for the institution, in recent years the need for training in entrepreneurship has increased to meet the needs of employers to offer graduates with initiative, inventiveness and problem-solving skills.

The teaching of entrepreneurship today is based on the creation and application of theoretical models to explain the reasons why certain decisions are made and to promote entrepreneurship as a way of thinking and acting (Castillo, 1999). (Castillo, 1999) Added to all of the above is the fact that every semester new groups of students finish their studies and are included in the labor force for which they will have to offer more than ever before or be very necessary in the country's economy of priority interest in order to be able to access a work space.

It seeks to encourage students to contribute to the economic growth of the country, it is necessary that students have as part of their goals the development of entrepreneurial activity, which translates into the creation of companies, and that has a positive impact on the generation of new jobs and economic growth. (Camacho and Yagual, 2013) In this sense, Duarte and Ruiz (2009) mention that the development of an entrepreneurial culture is a justification to enhance creative and innovative processes, which are capable of generating productivity and development from the creation of new economic entities at local, regional and national levels.

The current economic models limit the inclusion in paid work of professionals, professionals should already be able to create their own livelihoods. In addition to the above and taking into consideration the current circumstances experienced worldwide as a result of the recent health crisis caused by the COVID-19 pandemic that occurred in 2019 has marked a new paradigm in the way economic models operate and perform, the economy suffered a hard blow when jobs fell and there were many people unemployed due to company closures in the country and the world, however this crisis presents an opportunity for improvement and strength in relation to entrepreneurship.

Professionals must be ready for changes, provide solutions and seek their place in new environments, with new challenges and applying the knowledge acquired in their respective areas of performance careers. Entrepreneurship is a good option to propitiate doing and applying knowledge in activities different from those commonly done in classes with school projects that do not offer them any experience. Public universities already involve entrepreneurship in their activities; there are few that do so, but they are becoming more and more. (Valdivia-Velazco, et al., 2019)

Since 2019 in the Network of the University of Guadalajara, actions have been strengthened for the joint work of educational programs and in a multidisciplinary way with students of the careers of Food Science Career, CALI, of the University Center of Biological and Agricultural Sciences, CUCBA and the Marketing Career, M, of the University Center of Economic and Administrative Sciences, CUCEA, has been a process of internal linkage that allows interaction, analysis and search for solutions to problems from different professional approaches, in order to later develop and participate in external linkage projects; For example. CALI students develop and characterize a food product during their career and marketing students make a business plan for them, which includes price-product-place analysis and e-commerce, as part of their 7th semester school project. Both careers are related for work and what is intended with that is:

- To link students from different careers of two university centers to promote entrepreneurship, motivating the marketing and business start-up from the linkage and work with an existing product developed by one of the parties.
- That the school work of marketing students has a formative support, when they use a real product for their study and do not go inventing products just to pass the subject and get their grade.
- That the food product developed by CALI has a business plan study of value and with real potential carried out by marketing students.
- Motivate multidisciplinary and thus encourage possible collaborative work for the start of a business in the short term. (Hernández-Tinoco, et al., 2021).

Up to this stage, the activities carried out are intended to derive in the relationship and collaborative work, but up to this point it only contemplates the creation of the product and its validation in the market, but it also needs another important element of multidisciplinary.

From the processes promoted, great strengths and some opportunities for improvement have been identified and one of the most tangible has been the need to make visible and protect the results from the legal point of view, especially for the strengthening of the actions and creations that result, it has been identified that the actors of creation and commercialization need legal support to give value to the results of their linkage, especially in relation to the handling of confidentiality, the protection of sensitive data, the organization and structure of contracts, which clearly establish the rights and obligations that the parties assume in a given process, the criteria and agreements for the distribution of benefits, profits or usufruct that are generated, among others.

A recurring situation that arose during the first two semesters when the collaborative work with the two careers was proposed, was that when CALI students were invited, they refused to share their product, alleging that M students could "steal" their idea and make use of it.

There was also the issue of the protection and patent process offered by the university, in which the university carries out the process, pays for it and promotes it in the networks for transfer and exploitation permits, which the students also refused because there was a lot of false or unclear information about what the process implied and they understood that the university would keep their product, their profits, and they would be robbed. Hence, derived from these needs, the working group determined as a strengthening strategy to seek support with an educational program of the network, which would strengthen the legal part in the activities and projects that are developed, so that in October 2020, taking advantage of the strengths that the University of Guadalajara has, it was decided to make an internal collaboration agreement between the (CUCEA), (CUCBA) and (CUSUR), which in a sense formalized and strengthened the activities that the work team was already carrying out previously.

And here, in support of the already existing CALI-M linkage, the students of the Master's Degree in Law of the, CUSUR, participate in the incorporation of the Master's Degree in Law, which, as a professionalizing postgraduate program incorporated into the National System of Quality Postgraduate Programs, formerly PNPC, adds to the collaboration by strengthening the legal and juridical accompaniment in the projects that are developed, through the assignment of advising lawyers who are currently studying their postgraduate studies in said program.

This paper presents the experience of the working relationship between two different undergraduate careers that share their school projects with the intention of fostering a relationship towards business entrepreneurship for both and the inclusion of the Master of Laws of CUSUR to support the working relationship and begin to have material to support the information related to business relationships, glossary of terms, definitions of procedures, concepts and meanings of protecting, plagiarism, rights, protection conditions and that elements of three different disciplines know each other, present their strengths and share and coexist during their training.

## Materials and methods

### Detection of opportunity situations

From the experience of working for two school cycles with CALI and M students, situations arose that needed to be resolved. All of them came from the experiences of working with the groups. (anecdotal data)

#### CALI students

- They are wary of sharing their work with students from M, as they fear plagiarism.
- They have no information on what it means to protect their product.
- Those who have been proposed to protect, patent their product with support from the university are distrustful, as they think that: the product is theirs, that the university wants to steal it, or that the university wants to take advantage of them.
- They are ill-advised by other academics who also have no information about what patenting at U de G means.

#### Students of M

- They feel that they are working for "free" on a business plan that has nothing in it and that no one is taking advantage of it. Or they feel that they are working and that "someone might take advantage of it" later.
- They want to know if they can take advantage of this and how to do it in case the CALI students decide not to continue with their product to the business. How to make agreement, contract, etc.
- They are wary of their work being used without their consent or permission for someone else's benefit. (collaboration teachers, CALI students, etc.).

As a group it was detected that there was a lack of informative materials regarding:

- Explanation of the collaboration, objectives, expectations and offer for continuation of the work at the end of the semester.
- Intellectual property.
- Industrial property.
- Protection implications, convenience, costs, rights, etc.

- Patents.
- Collaboration.
- Plagiarism of ideas.
- Collaboration through contracts without the need for legal associations.
- Usufruct agreements between the parties.
- Agreement of the teachers not to misuse the delivered works (school projects).

### Linkage needs for master's degree students

CUSUR's master's degree in law belongs to the CONACyT standard of excellence, which means that they are students with financial scholarships, that they are committed to being full-time students, that the work they develop as a thesis must have an impact and that during their preparation they will also offer community service in correspondence (PNCP, CONACyT).

For the part of their service to the community, we saw the convenience of associating them to the CUCEA-CUCBA link so that they could contribute to the development of the work synergy between students and the results of the work.

Every semester since 2021B at least one student has been assigned to the linkage by the Master of Law coordination to provide service and support in the needs of the work.

### Results

As a result of the inclusion of the master's degree in the CUCEA-CUCBA synergy, the first thing that came up was the proposal to legalize the collaboration before the attorney general and the document "CUCEA-CUCBA-CUSUR Collaboration Agreement" was generated, the first agreement of this type in the university network.

This collaboration is very important since the university has been working in a network for 25 years and something like this did not exist. Collaborative and multidisciplinary work linked to school projects is indispensable during their formation in order to face the new challenges of the country and the world in the future.

### From the concerns of CALI students.

"We are afraid that our product idea will be plagiarized". It is made clear to them that an idea cannot be plagiarized. CALI students provide only a name and a brief description of the product including type of packaging, content such as net weight, and the added value written briefly. No preparation methodology or formulation. Therefore, the mere name of, for example, "nopal jelly with amaranth and cocoa" is not subject to plagiarism. Only that now it is explained and supported to the students. Everything is explained in a video conference presentation presented to the students by the leader of the synergy, who is not their teacher. All of this is supported by the regulations.

After explaining the above, we proceed to deliver letters of confidentiality, which were sent to us by the Coordination of Technology and Knowledge Transfer of the university, signed by both parties. The first intention is to make them aware of its existence, content and use. On the other hand, it serves so that there is no doubt about the collaborative work and what may arise along the way, leaving them free to collaborate freely. So much so that the CALI student knows that the M student will not commercialize his product without his permission and that the M student knows that the CALI student will not use his information to take advantage without taking them into account. In fact, CALI students never have access to the final business plan of the M students. They only know the final "Pitch" which is a kind of executive summary of 4 minutes.

"I don't patent with the university because it keeps most of the usufruct and the benefit is for the university". For this part we invited the Coordinator of Technology and Knowledge Transfer of the General Coordination of Research, Graduate and Liaison, of the University of Guadalajara, to give them an informative talk on what is patenting at the university, at the beginning of the semester. Since 2015, the University of Guadalajara has had the Invention Strengthening Program, which supports the costs of patentability analysis, drafting of invention applications, entry and maintenance costs of invention applications and costs of granting invention titles, as well as incentives for professors and students for entering invention applications (Strengthening-inventions, 2020-2021).

### Objectives of the synergy

It is explained to them at the beginning of their semester for both groups the Synergy project and its objectives, and these are:

- Collaboration between two careers to promote entrepreneurship while working in a multidisciplinary way. One creates the product, characterizes and validates it and the other makes the business plan study that includes price-place-cost and e-commerce.
- That students work on real school projects and not on fictitious or invented products that do not offer the learning that the project intends.
- That they work in collaboration with legal rules in between (confidentiality letters, consulting with lawyers, etc).
- That both parties are introduced and linked to coincide in a project of entrepreneurship towards the production and commercialization of the food object of the linkage. Contracts are agreed upon and they continue in incubation at CUCEA, at the end of their semester.
- To live with students from other disciplines, learn about their strengths and that they can offer added value to their activities, in synergy, when they go out into the real world.

### Dynamics to get the two students to relate and decide to continue with the project until the business in the CUCEA incubator

At the end of the semester, the best business plan projects of M are selected, those that meet all that the established rubric requires and they prepare a 4-minute "Pitch" to present to CALI students.

This reinforces them in the part of preparing to present to an audience that are not colleagues or peers their work. It would be the equivalent of having the experience of presenting to a potential client.

CALI students have the experience of witnessing a presentation from another discipline different from their own, supporting their product, another vision and that although they also make a business plan, they can compare it with a business plan of students trained in marketing, more robust and more professional.

At the end of the presentation, the CALI student, owner and creator of the food, and the M student who created the business plan and has just presented it to the group are introduced. They are given a few minutes to introduce themselves, ask questions and agree if they wish to continue with the collaboration on their own with the support of the entrepreneurship part of the university incubation.

If they choose to continue, they are referred to the support law student of the semester to begin drafting the agreement document based on their interests, what they decide to contribute to the project, scopes, etc. All of this is accompanied by the project leader teacher who follows up and verifies that the next steps are carried out. In this student to student interview, the M student can also express, if it is the case, the interest to go ahead with the project, in case the CALI student does not want to do so and CALI grants the permissions and conditions that apply to the case.

### **The work of the students of Social Service of the Master of Law in the linkage.**

Every semester from the beginning of the collaboration, May 2020, at least one social service student, SS, was assigned to assist the CALI-M collaboration work of the CUCEA-CUCBA Collaboration Project, now CUCEA-CUCBA-CUSUR.

### **First semester of linkage. Calendar 2020B**

A student was assigned to the project and she worked during the semester on a manual, which is a guide for the registration of projects before the IMPI (Mexican Institute of Intellectual Property) according to the LPI, Federal Law for the Protection of Industrial Property recently modified and expanded in July 2020, a 94-page document, to generate a synthetic informative document based on this law, illustrative to encourage university students to protect what they develop at the university. (Federal Law of Intellectual Protection, 2021).

The manual shows in a general way the procedures step by step to obtain a registration, showing the most important requirements established by the legislation at the time of filing the application, it also offers an overview of what to do in case of violation of any right of which they are entitled, the expiration and invalidity of the records, in addition to the above, it is worth mentioning that it is extremely important to always resort to the applicable legislation to be updated and for specific cases.

The final document is called: Industrial Property: ABC of registration before IMPI. It is an illustrated manual of 29 pages, based on the Mexican IPL, updated. It is already reference material for the students and professors of the project.

### **Second semester of bonding. Calendar 2021 A**

Another Master of Law student was assigned to review the confidentiality letters and was ready to generate the contracts derived from the work for students who wish to continue with the collaborative work at the end of the semester to refer them to the entrepreneurship unit, to the university's incubator for support and follow-up.

As part of the education in intellectual property that is so lacking in the teaching staff to support the work in entrepreneurship of the university, a basic course-workshop on Intellectual Property was developed in collaboration with the Universidad Cooperativa de Colombia, experts in Industrial Property and who have the International Diploma in Intellectual Property, with the Universidad Libre and the Corporación Universitaria del Caribe, CECAR, both also from Colombia. The course-workshop was 40 hours long, virtual, with curricular value, with the support of CUCEA-CUCBA-CUSUR (Collaboration Project) for its achievement and execution. In addition, students of the Master's Degree in Law and graduates of the aforementioned diploma course also participated as speakers in the course-workshop.

It was held from May 4 to June 2, 2021. Composed of 9 modules. The invitation link can be accessed at: <https://m.facebook.com/ciadeys.cucea/posts/4559045424112809>

90 people participated and concluded with a Diploma.

### **Dynamics and development of the collaborative work.**

In the first semester of the CALI-M collaboration, it was imposed that all CALI students would share the names of their products with M students so that they could make their business plan. There was annoyance on the part of the CALI students, who believed that the idea was being stolen from them and given to M. We did not realize this until the end of the semester, when the students commented on all of this during the teacher evaluations.

The following semesters we explained to the students the objectives of the collaboration, the convenience of partnering with M for those who intended to later commercialize and do business with their product. It was clarified that the mere naming of a product does not imply plagiarism. And finally, CALI students were invited to participate voluntarily, with the use of confidentiality letters for sharing. And from this CALI students participate voluntarily and their comments in the evaluations are that they are happy with the work and what stands out the most is that there are no complaints and the comments are of gratitude.

In the case of the M students, who thought they were being abused when they believed that they were working for free for the CALI students, it was also clarified that their work is not shared with anyone. Their teacher reads them, evaluates them, and keeps them safe without sharing them with anyone else, and the confidentiality letters also gave them certainty and confidence. This is reflected in the students' comments in the teacher evaluations.

To date, it has not been possible to establish the final interview between CALI and M students to present the final Pitches. This is due to setbacks due to changes in the institution's calendar that move dates without prior notice, cut school periods and do not reach the closing meeting, presentation, integration and continuation. The intention is to set the dates before the closing dates of the semester to ensure that students are still in class and that the interview is part of the program of the subject. This has happened as a result of the adjustments due to the pandemic that the university has to make each time.

From the last school year we have three CALI-M binsas interested in continuing together in incubation. The products of these binsas cannot be patented due to the nature of the products, so they will be advised on the best way to maintain the industrial secret and contracts are being worked on for the continuation of extracurricular activities at the university.

In the next school year, the law students will review the potential of registering and patenting each of the foods that the CALI students of the corresponding semester, in order to, if it is the case, the patentable products, invite them to do it through the university and accompany the student in the process.

It was also advisable to have each of the professors involved in the project sign, by school year, to give certainty and security of the good use of the work delivered by the students as their semester school projects.

With all these actions, students are taught the potential of relationships and collaborative work with other disciplines. They know the advantages and disadvantages of working alone and in teams with someone who makes them strong in another discipline different from their own. Students in collaborative work know the legal part and live the experience of signing agreements, they know the scope and implications of working relationships in a legal way. The law students offer social service with impact and teach with practice during the work relationship and CALI-M students learn by doing.

### **Conclusions**

The involvement of the master's students in the collaboration strengthens the existing CALI-M collaboration from a product-commercialization one to one with legalized working relationships on paper, commitments, penalties and trust.

The inclusion of law in the collaboration makes working in a more pleasant and trusting way and CALI-M students learn about legal formalities during the process.

The confidentiality letters give CALI students confidence that they will not lose their products and M students confidence that no one will use their information without their permission.

Concepts related to industrial property, patent, protection, rights, obligations, contracts and confidentiality or other related concepts are reaffirmed and clarified for all those involved in the project, especially for CALI and M students who do not have this training.

It is clarified that "a nominative idea", the name of a product, is not subject to plagiarism as a product.

Materials are generated that teachers can use in the future to support collaboration and resolve doubts.

Students interact with peers from other careers, from other universities and learn the potential of the relationship for potential entrepreneurship.

CALI and M students learn legal processes while collaborating on the semester project.

The protection of products generated at the university is encouraged and promoted among students through the university's Invention Strengthening Program.

## References

Arechavala Vargas, Ricardo, & Sánchez Cervantes, Claudia Fabiola. (2017). Las universidades públicas mexicanas: los retos de las transformaciones institucionales hacia la investigación y la transferencia de conocimiento. *Revista de la educación superior*, 46(184), 21-37. <https://doi.org/10.1016/j.resu.2017.09.001>

Camacho Cuji, A. M., & Yagual Cedeño, G. L. (2013). El emprendimiento como estrategia para la gestión empresarial mediante talleres de capacitación dirigidas a los alumnos de bachillerato. Tesis. (10 de septiembre de 2021) en <http://repositorio.ug.edu.ec/handle/redug/12426>

Cámara de Diputados del H. Congreso de la Unión. (2020, 01 de Julio). Ley federal de protección a la propiedad industrial. Diario Oficial de la Federación. [http://www.diputados.gob.mx/LeyesBiblio/pdf/LFPPI\\_010720.pdf](http://www.diputados.gob.mx/LeyesBiblio/pdf/LFPPI_010720.pdf)

Castillo, A. (1999) Estado del arte en la enseñanza del emprendimiento. En: *Emprendedores como creadores de riqueza y desarrollo regional*. Santiago, Chile: Intec Chile. <http://recursos.ccb.org.co/bogotaemprende/portalninos/contenido/doc2estadodelarteenlaensenanzadelemprendimiento.pdf>

CONACyT, Condiciones Padrón del Programa Nacional de Posgrados de Calidad, (2 de septiembre de 2021) PNCP, CONACyT, <http://svrtmp.main.conacyt.mx/ConsultasPNPC/inicio.php>

Duarte, Tito, & Ruiz Tibana, Myriam (2009). *Emprendimiento, una opción para el desarrollo*. Scientia Et Technica, XV(43),326-331.[fecha de Consulta 27 de Octubre de 2021]. ISSN: 0122-1701. Disponible en: <https://www.redalyc.org/articulo.oa?id=84917310058>

Fortalecimiento-invenciones 2020-2021. Universidad de Guadalajara. (2 de septiembre de 2021). En <http://cgipv.udg.mx/fortalecimiento-invenciones>

Hernandez Tinoco, Araceli, Cervantes Guzman, Jovanna Nathalie y Reyes Rodríguez, Mónica Araceli. 2021. Sistema de acciones para la implementación del Emprendimiento aprovechando los trabajos académicos y trabajando en asociación entre diferentes carreras para además propiciar la multidisciplinaridad desde la formación profesional desde el aula. Consultado en: [https://www.ecorfan.org/republicofperu/research\\_journals/Revista\\_de\\_Ciencias\\_de\\_la\\_Educacion/vol4num11/Revista\\_Ciencias\\_de\\_la\\_Educacion\\_V4\\_N11\\_2.pdf](https://www.ecorfan.org/republicofperu/research_journals/Revista_de_Ciencias_de_la_Educacion/vol4num11/Revista_Ciencias_de_la_Educacion_V4_N11_2.pdf)

Valdivia-Velasco, Magali; Coronado-Guzmán, Graciela; Aguilera-Dávila, Aída *Emprendimiento en las universidades públicas mexicanas: Estudio bibliométrico* Revista Venezolana de Gerencia, vol. 2, 2019. Universidad del Zulia, Venezuela. Disponible en: <https://www.redalyc.org/articulo.oa?id=29063446024>

# Instructions for Scientific, Technological and Innovation Publication

---

## [Title in Times New Roman and Bold No. 14 in English and Spanish]

Surname (IN UPPERCASE), Name 1<sup>st</sup> Author†\*, Surname (IN UPPERCASE), Name 1<sup>st</sup> Coauthor, Surname (IN UPPERCASE), Name 2<sup>nd</sup> Coauthor and Surname (IN UPPERCASE), Name 3<sup>rd</sup> Coauthor

*Institutional Affiliation of Author including Dependency (No.10 Times New Roman and Italic)*

*International Identification of Science - Technology and Innovation*

ID 1<sup>st</sup> Author: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 1<sup>st</sup> author: (Scholar-PNPC or SNI-CONACYT) (No.10 Times New Roman)

ID 1<sup>st</sup> Coauthor: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 1<sup>st</sup> coauthor: (Scholar or SNI) (No.10 Times New Roman)

ID 2<sup>nd</sup> Coauthor: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 2<sup>nd</sup> coauthor: (Scholar or SNI) (No.10 Times New Roman)

ID 3<sup>rd</sup> Coauthor: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 3<sup>rd</sup> coauthor: (Scholar or SNI) (No.10 Times New Roman)

(Report Submission Date: Month, Day, and Year); Accepted (Insert date of Acceptance: Use Only ECORFAN)

---

### **Abstract (In English, 150-200 words)**

Objectives  
Methodology  
Contribution

### **Keywords (In English)**

Indicate 3 keywords in Times New Roman and Bold No. 10

### **Abstract (In Spanish, 150-200 words)**

Objectives  
Methodology  
Contribution

### **Keywords (In Spanish)**

Indicate 3 keywords in Times New Roman and Bold No. 10

---

**Citation:** Surname (IN UPPERCASE), Name 1st Author, Surname (IN UPPERCASE), Name 1st Coauthor, Surname (IN UPPERCASE), Name 2nd Coauthor and Surname (IN UPPERCASE), Name 3rd Coauthor. Paper Title. Journal of Human Resources Training. Year 1-1: 1-11 [Times New Roman No.10]

---

---

\* Correspondence to Author (example@example.org)

† Researcher contributing as first author.

# Instructions for Scientific, Technological and Innovation Publication

## Introduction

Text in Times New Roman No.12, single space.

General explanation of the subject and explain why it is important.

What is your added value with respect to other techniques?

Clearly focus each of its features

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

Explanation of sections Article.

## Development of headings and subheadings of the article with subsequent numbers

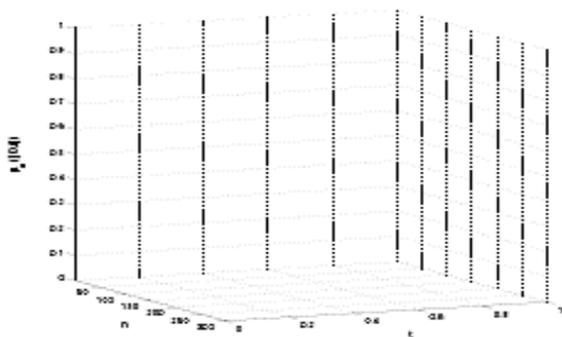
[Title No.12 in Times New Roman, single spaced and bold]

Products in development No.12 Times New Roman, single spaced.

## Including graphs, figures and tables-Editable

In the article content any graphic, table and figure should be editable formats that can change size, type and number of letter, for the purposes of edition, these must be high quality, not pixelated and should be noticeable even reducing image scale.

[Indicating the title at the bottom with No.10 and Times New Roman Bold]



**Graphic 1** Title and *Source* (in italics)

Should not be images-everything must be editable.



**Figure 1** Title and *Source* (in italics)

Should not be images-everything must be editable.


**Table 1** Title and *Source* (in italics)

Should not be images-everything must be editable.

Each article shall present separately in **3 folders**:  
a) Figures, b) Charts and c) Tables in .JPG format, indicating the number and sequential Bold Title.

## For the use of equations, noted as follows:

$$Y_{ij} = \alpha + \sum_{h=1}^r \beta_h X_{hij} + u_j + e_{ij} \quad (1)$$

Must be editable and number aligned on the right side.

## Methodology

Develop give the meaning of the variables in linear writing and important is the comparison of the used criteria.

## Results

The results shall be by section of the article.

## Annexes

Tables and adequate sources

## Thanks

Indicate if they were financed by any institution, University or company.

# Instructions for Scientific, Technological and Innovation Publication

---

## Conclusions

Explain clearly the results and possibilities of improvement.

## References

Use APA system. Should not be numbered, nor with bullets, however if necessary numbering will be because reference or mention is made somewhere in the Article.

Use Roman Alphabet, all references you have used must be in the Roman Alphabet, even if you have quoted an Article, book in any of the official languages of the United Nations (English, French, German, Chinese, Russian, Portuguese, Italian, Spanish, Arabic), you must write the reference in Roman script and not in any of the official languages.

## Technical Specifications

Each article must submit your dates into a Word document (.docx):

Journal Name

Article title

Abstract

Keywords

Article sections, for example:

1. *Introduction*
2. *Description of the method*
3. *Analysis from the regression demand curve*
4. *Results*
5. *Thanks*
6. *Conclusions*
7. *References*

Author Name (s)

Email Correspondence to Author

References

## Intellectual Property Requirements for editing:

-Authentic Signature in Color of Originality Format Author and Coauthors

-Authentic Signature in Color of the Acceptance Format of Author and Coauthors

## **Reservation to Editorial Policy**

Journal of Human Resources Training reserves the right to make editorial changes required to adapt the Articles to the Editorial Policy of the Journal. Once the Article is accepted in its final version, the Journal will send the author the proofs for review. ECORFAN® will only accept the correction of errata and errors or omissions arising from the editing process of the Journal, reserving in full the copyrights and content dissemination. No deletions, substitutions or additions that alter the formation of the Article will be accepted.

## **Code of Ethics - Good Practices and Declaration of Solution to Editorial Conflicts**

Declaration of Originality and unpublished character of the Article, of Authors, on the obtaining of data and interpretation of results, Acknowledgments, Conflict of interests, Assignment of rights and Distribution

The ECORFAN-Mexico, S.C Management claims to Authors of Articles that its content must be original, unpublished and of Scientific, Technological and Innovation content to be submitted for evaluation.

The Authors signing the Article must be the same that have contributed to its conception, realization and development, as well as obtaining the data, interpreting the results, drafting and reviewing it. The Corresponding Author of the proposed Article will request the form that follows.

Article title:

- The sending of an Article to Journal of Human Resources Training emanates the commitment of the author not to submit it simultaneously to the consideration of other series publications for it must complement the Format of Originality for its Article, unless it is rejected by the Arbitration Committee, it may be withdrawn.
- None of the data presented in this article has been plagiarized or invented. The original data are clearly distinguished from those already published. And it is known of the test in PLAGSCAN if a level of plagiarism is detected Positive will not proceed to arbitrate.
- References are cited on which the information contained in the Article is based, as well as theories and data from other previously published Articles.
- The authors sign the Format of Authorization for their Article to be disseminated by means that ECORFAN-Mexico, S.C. In its Holding Spain considers pertinent for disclosure and diffusion of its Article its Rights of Work.
- Consent has been obtained from those who have contributed unpublished data obtained through verbal or written communication, and such communication and Authorship are adequately identified.
- The Author and Co-Authors who sign this work have participated in its planning, design and execution, as well as in the interpretation of the results. They also critically reviewed the paper, approved its final version and agreed with its publication.
- No signature responsible for the work has been omitted and the criteria of Scientific Authorization are satisfied.
- The results of this Article have been interpreted objectively. Any results contrary to the point of view of those who sign are exposed and discussed in the Article.

## Copyright and Access

The publication of this Article supposes the transfer of the copyright to ECORFAN-Mexico, SC in its Holding Spain for its Journal of Human Resources Training, which reserves the right to distribute on the Web the published version of the Article and the making available of the Article in This format supposes for its Authors the fulfilment of what is established in the Law of Science and Technology of the United Mexican States, regarding the obligation to allow access to the results of Scientific Research.

Article Title:

Name and Surnames of the Contact Author and the Coauthors	Signature
1.	
2.	
3.	
4.	

## Principles of Ethics and Declaration of Solution to Editorial Conflicts

### Editor Responsibilities

The Publisher undertakes to guarantee the confidentiality of the evaluation process, it may not disclose to the Arbitrators the identity of the Authors, nor may it reveal the identity of the Arbitrators at any time.

The Editor assumes the responsibility to properly inform the Author of the stage of the editorial process in which the text is sent, as well as the resolutions of Double-Blind Review.

The Editor should evaluate manuscripts and their intellectual content without distinction of race, gender, sexual orientation, religious beliefs, ethnicity, nationality, or the political philosophy of the Authors.

The Editor and his editing team of ECORFAN® Holdings will not disclose any information about Articles submitted to anyone other than the corresponding Author.

The Editor should make fair and impartial decisions and ensure a fair Double-Blind Review.

### Responsibilities of the Editorial Board

The description of the peer review processes is made known by the Editorial Board in order that the Authors know what the evaluation criteria are and will always be willing to justify any controversy in the evaluation process. In case of Plagiarism Detection to the Article the Committee notifies the Authors for Violation to the Right of Scientific, Technological and Innovation Authorization.

### Responsibilities of the Arbitration Committee

The Arbitrators undertake to notify about any unethical conduct by the Authors and to indicate all the information that may be reason to reject the publication of the Articles. In addition, they must undertake to keep confidential information related to the Articles they evaluate.

Any manuscript received for your arbitration must be treated as confidential, should not be displayed or discussed with other experts, except with the permission of the Editor.

The Arbitrators must be conducted objectively, any personal criticism of the Author is inappropriate.

The Arbitrators must express their points of view with clarity and with valid arguments that contribute to the Scientific, Technological and Innovation of the Author.

The Arbitrators should not evaluate manuscripts in which they have conflicts of interest and have been notified to the Editor before submitting the Article for Double-Blind Review.

## **Responsibilities of the Authors**

Authors must guarantee that their articles are the product of their original work and that the data has been obtained ethically.

Authors must ensure that they have not been previously published or that they are not considered in another serial publication.

Authors must strictly follow the rules for the publication of Defined Articles by the Editorial Board.

The authors have requested that the text in all its forms be an unethical editorial behavior and is unacceptable, consequently, any manuscript that incurs in plagiarism is eliminated and not considered for publication.

Authors should cite publications that have been influential in the nature of the Article submitted to arbitration.

## **Information services**

### **Indexation - Bases and Repositories**

LATINDEX (Scientific Journals of Latin America, Spain and Portugal)

RESEARCH GATE (Germany)

GOOGLE SCHOLAR (Citation indices-Google)

REDIB (Ibero-American Network of Innovation and Scientific Knowledge- CSIC)

MENDELEY (Bibliographic References Manager)

### **Publishing Services**

Citation and Index Identification H

Management of Originality Format and Authorization

Testing Article with PLAGSCAN

Article Evaluation

Certificate of Double-Blind Review

Article Edition

Web layout

Indexing and Repository

Article Translation

Article Publication

Certificate of Article

Service Billing

### **Editorial Policy and Management**

38 Matacerquillas, CP-28411. Moralarzal –Madrid-España. Phones: +52 1 55 6159 2296, +52 1 55 1260 0355, +52 1 55 6034 9181; Email: [contact@ecorfan.org](mailto:contact@ecorfan.org) [www.ecorfan.org](http://www.ecorfan.org)

**ECORFAN®**

**Chief Editor**

GUZMÁN - HURTADO, Juan Luis. PhD

**Executive Director**

RAMOS-ESCAMILLA, María. PhD

**Editorial Director**

PERALTA-CASTRO, Enrique. MSc

**Web Designer**

ESCAMILLA-BOUCHAN, Imelda. PhD

**Web Diagrammer**

LUNA-SOTO, Vladimir. PhD

**Editorial Assistant**

REYES-VILLO, Angélica. BsC

**Translator**

DÍAZ-OCAMPO, Javier. BsC

**Philologist**

RAMOS-ARANCIBIA, Alejandra. BsC

**Advertising & Sponsorship**

(ECORFAN® Spain), [sponsorships@ecorfan.org](mailto:sponsorships@ecorfan.org)

**Site Licences**

03-2010-032610094200-01-For printed material ,03-2010-031613323600-01-For Electronic material,03-2010-032610105200-01-For Photographic material,03-2010-032610115700-14-For the facts Compilation,04-2010-031613323600-01-For its Web page,19502-For the Iberoamerican and Caribbean Indexation,20-281 HB9-For its indexation in Latin-American in Social Sciences and Humanities,671-For its indexing in Electronic Scientific Journals Spanish and Latin-America,7045008-For its divulgation and edition in the Ministry of Education and Culture-Spain,25409-For its repository in the Biblioteca Universitaria-Madrid,16258-For its indexing in the Dialnet,20589-For its indexing in the edited Journals in the countries of Iberian-America and the Caribbean, 15048-For the international registration of Congress and Colloquiums. [financingprograms@ecorfan.org](mailto:financingprograms@ecorfan.org)

**Management Offices**

38 Matacerquillas, CP-28411. Moralarzal –Madrid-España.

# Journal of Human Resources Training

“Good practices, in educational inclusion experiences in a Higher Education Dependence”

**PALOMARES-RUIZ, María Blanca, SORDIA-SALINAS, Cesar, BAEZ-VILLARREAL, Esteban, and TORRES-BUGDUD, Arturo**

*Universidad Autónoma de Nuevo León*

“Psychosocial factors, work stress and its relationship with labor alienation in organizations”

**RUÍZ-VALDÉS, Susana, RUÍZ-TAPIA, Juan Alberto, ALCÁNTARA-CRUZ, Felix Héctor and HERNÁNDEZ-MARTÍNEZ, Maria Luisa**

*Universidad Autónoma del Estado de México*

“Measurement of Burnout in university professors during COVID-19”

**MAY-GUILLERMO, Erika Guadalupe, VELASCO-CASTELLANOS, Jorge, ARIAS- GALICIA, Luis Fernando and DE LA CRUZ-MAY, Samuel**

*Instituto Tecnológico Superior de la Región Sierra*

*Universidad Autónoma del Estado de Morelos*

*Universidad Intercultural del Estado de Tabasco*

“Training of competences in Entrepreneurship and collaboration between students of different disciplines and degrees of the University of Guadalajara, based on their school projects. Rapporteurship of experience”

**HERNÁNDEZ-TINOCO, Araceli, GUZMÁN-DÍAZ, José Cruz, CERVANTES-GUZMAN, Jovanna Nathalie and REYES- RODRÍGUEZ, Mónica Araceli**

*Universidad de Guadalajara*

