

SUSTAINABLE DEVELOPMENT GOALS



K.Culture Fest



The Audiovisual Communication and Interactive Media program at UPC participated in the K. Culture Fest, a fair featuring products and activities aimed at young people interested in Korean culture.

This festival took place at the court of the Association of Teachers of Amauta, located in the district of San Juan de Miraflores, with the goal of promoting knowledge of other cultures and appreciating diversity.







Partnership for the productive development of afroentrepreneurial youth



Between January and April 2023, the Business Administration and Entrepreneurship program at UPC, in partnership with the House of Culture of Chorrillos, conducted workshops aimed at strengthening the skills of young people aged 15 to 29 from Afro-descendant communities in Lima and Callao. The goal was to empower them to defend and promote their rights and motivate them to participate in intercultural politics.

Various techniques and dynamics were employed during the workshops, contributing to the exposure of the plurality of entrepreneurial initiatives.





UPC Joins Alicorp, Mi Banco, Cargill, and Juguete Pendiente to Promote Communal Kitchens Initiatives



In a collaborative effort to foster entrepreneurial spirit and contribute to the sustainability of communal kitchens initiatives, the Universidad Peruana de Ciencias Aplicadas (UPC), Alicorp, Mi Banco, Cargill, and Juguete Pendiente teamed up for the "Ollas que Desarrollan" program. The aim of this initiative was to provide training and support to the leaders of communal kitchens, helping them establish complementary enterprises that generate additional income and strengthen the autonomy of their communities.

During this phase, 110 leaders representing 55 communal kitchens were trained and mentored in various key areas such as sales, value proposition, customer knowledge, finance, and accounting.

The Universidad Peruana de Ciencias Aplicadas (UPC) played a fundamental role in the "Ollas que Desarrollan" program, leading the modules on sales, value pro-



position, and customer knowledge through its Business School. Additionally, Mi Banco provided specialized training in finance and accounting, while Cargill offered seed capital to the enterprises with the highest development potential. The selection of the most promising projects was managed by Juguete Pendiente, based on criteria such as consistency, participation, viability, and the performance of the communal kitchens leaders.

Educational Intranet with virtual classroom in rural schools



Students and faculty from the Electronic Engineering and Networks and Communications Engineering programs (EPE) at UPC conducted the project "Educational Intranet with virtual classroom," an initiative that originated during the pandemic. This project was originally designed to be implemented at the school in the Human Settlement Brisas de California, located in Chosica, and then at the early childhood education center CEI José María Escrivá, located in the rural annex San Juan de Roldan, Cañete, due to the poor conditions in which students received their virtual classes. WiFi equipment was recycled and configured to optimally transmit the internet to the students' homes.

The objective of the initiative was to install an Intranet with a virtual classroom in a school without Internet connection to improve the conditions of the teaching and learning process for children. To achieve this, an alliance with the company IPT (Internet for Everyone) was established in 2022, and in 2023 the technical design for the Cañete school was carried out. The site was visited in November, and the UPC Social Responsibility Office provided funds to acquire the radio link equipment necessary for the connection with IPT. The installation and details of the Virtual Classroom were planned with the school administration.



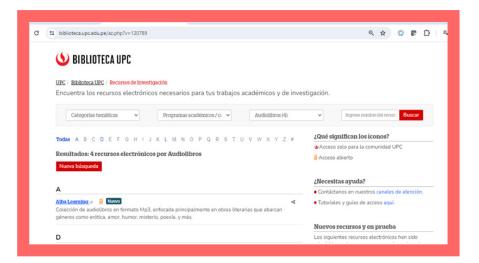


Research Resources Portal



The Knowledge Management Directorate of UPC managed the "Research Resources Portal" platform, aimed at providing access to information resources (ebooks, journals, theses, multimedia resources, websites, among others) organized alphabetically, thematically, and by academic program. The platform offered resources subscribed to by the university and others that were open access for the general public.

In this period, 2 open access resources with relevant content were incorporated: Zotero and F1000Research. This initiative provided students with organized information resources for the elaboration of academic and research work.



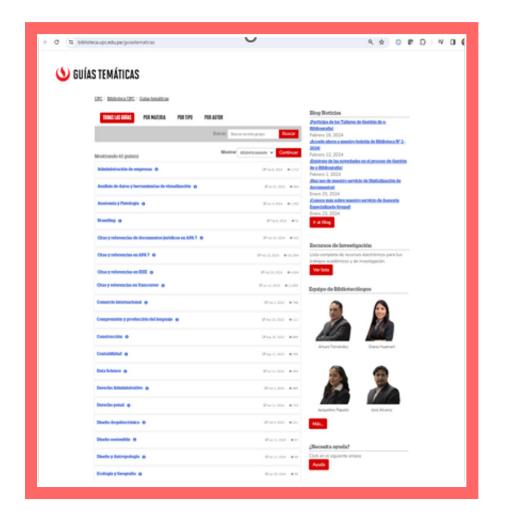


UPC Subject Guides



The Knowledge Management Directorate of UPC managed the "UPC Subject Guides" platform with the aim of providing access to scientific and academic research through a selection of information resources (ebooks, journals, theses, multimedia resources, websites, among others) organized by topics of interest and research lines to contribute to the creation of academic knowledge. The platform offered resources subscribed to by the university and others that were open access for the general public.

Two new transversal subject guides were created in the 2023-1 semester. Additionally, the 51 guides created in 2021 and 2022 were updated monthly.

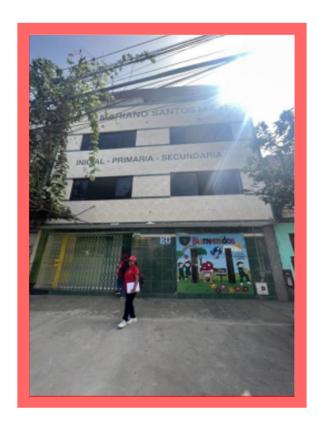


Informative and awareness campaign on violence, gender equality, and prevention for students in Chorrillos district



Between June and July 2023, students from the Medicine program at UPC conducted an informative and awareness campaign on violence, gender equality, and prevention. This was aimed at teenage students of the Mariano Santos Educational Institution, located in the district of Chorrillos.

The goal of the campaign was to inform students about how to stay alert to any situation of sexual violence they might face in their family, school, and social environments.





Workshop on healthy sexuality



Between May and June 2023, UPC Medicine students conducted a participatory workshop on healthy sexuality at the Ollantay Educational Center, located in San Juan de Miraflores.

The workshop aimed to reduce sexual violence against girls aged 10 to 13, improve school coexistence, and address inappropriate behaviors inside and outside the educational institution.



Lima Art Fest



In November 2023, the Audiovisual Communication and Interactive Media program at UPC participated in organizing the Lima Art Fest. This cultural event provided a platform to showcase the talent of musical artists in genres such as K-pop, Pop, Punk, and Alternative Rock. Additionally, the event offered opportunities for entrepreneurs in fashion, jewelry, and makeup to commercialize their ventures.

The goal of the event was to enhance access to spaces for cultural expressions.





Program "Capacitación y Entrenamiento a Camareros Junior" [Junior Waiters Training and Coaching]









In November 2023, the School of Hospitality and Tourism Administration at UPC successfully concluded the third edition of the volunteer program "Capacitación y Entrenamiento Camarero Junior" [Junior Waiters Training and Development]. This program, which began in 2021, aimed to train vulnerable youth and adults to access job opportunities in the restaurant sector. In this special edition, UPC worked closely with the National Council for the

Integration of Persons with Disabilities (CONADIS), reaffirming its commitment to inclusion and comprehensive community education. Students played the valuable role of mentors during the 10-week program, providing guidance and support to participants.

This event not only represented an individual achievement for the participants but also the success of an initiative that

promoted inclusion and community engagement in social responsibility projects. The event was attended by the Minister of Women.

Through this initiative, UPC reaffirmed its commitment to forming professionals with a socially conscious perspective, promoting student participation in initiatives that enhance their education and positively contribute to society.

We the gamers fest



The UPC's Audiovisual Communication and Interactive Media program participated in organizing the cultural event "We The Gamers Fest", held at Las Naciones Park, located in the district of San Miguel. The event featured entrepreneurial projects, activities, and gaming stations designed especially for young women passionate about video games.

The event aimed to create a cultural festival suitable for all audiences but specifically directed at female gamers in Peru, promoting equity, tolerance, and empathy.





Librotón







Students from the UPC Law program organized an event called "Librotón," which involved requesting book donations for the libraries of the different wards of the Lurigancho prison. The collection took place across the four

university campuses from October 16 to 21, 2023.

This activity aimed to provide the prison population with the necessary resources to develop their education and training.

Pinhole International Festival



In April 2023, the Communication and Photography program at UPC organized the Pinhole International Festival with the objective of promoting pinhole photography as a means to showcase and raise awareness of different community perspectives The impact of this workshop highlighted the various ways a camera can be constructed. During the festival, cameras were built using various economic resources, such as a cardboard box, a shoe polish tin, or masking tape. This way, the program showcased pinhole cameras and utilized the photolab for photographic development.

The project was led by Professor Pilar Pedraza, who conducted this workshop for children and adults in Villa María del Triunfo. The event also featured an international guest, Argentine photographer Guillermo Alvarez. This activity contributed to students' relationships with vulnerable areas, as they participated alongside the external audience (children and adults) in building the cameras.

This action was a starting point for the objectives of sustainability, ending poverty, and quality education since through these actions, students educated and shared their knowledge to generate change by representing images in vulnerable areas.





Marea Fest



Students from the Audiovisual Communication and Interactive Media program at UPC organized the Marea Fest, produced by EFA Productions, at the Juan Parra del Riego Cultural Center in Barranco. This event provided a platform to recognize and highlight the work of female artists in Lima's alternative scene through the exhibition of their art.

The festival aimed to establish itself as a platform for gathering and promoting new female talents in alternative music within Peru's growing music industry. The proposals presented were interesting and enriching. Additionally, the talented creators had a space to showcase their art.



Neurodevelopmental evaluation in patients with down syndrome



The University Health Center (CUS), in collaboration with the Physical Therapy program at UPC, conducted an evaluation aimed at children aged 0 to 10 years, assessing areas such as gross motor skills, fine motor skills, visual tracking, and auditory tracking. This, according to the parameters established by the academic part, and subsequently a patient report was provided to the families.

The objective of the activity was to identify the development of motor skills, social development parameters, language skills, coordination, among others. The beneficiary institution was the Sociedad Peruana de Síndrome de Down (Peruvian Down Syndrome Society).

This activity allowed students from the pro-



gram to enjoy a learning space with direct patient contact and to evaluate specific cases, such as patients with neurodevelopmental issues.

#ImagenWiiik Vol. 11 - 2023



The Communication and Corporate Image Program organized the "ImagenWiiik: Inspire, Innovate, Imagine" Vol. 11. This event, positioned as a benchmark in academic events related to corporate communication, brought together leading experts in Business Communication, both national and international, through keynote lectures, workshops, panel discussions, and field visits. The event took place from September 20 to 22 at the Monterrico and San Isidro campuses of UPC. The lectures featured Peruvian Sign Language Interpretation (ILSP) by ASSORELI (Association of the Deaf Region Lima).

The objective of the event was to strengthen the knowledge of the students from the program and the School of Communications. Furthermore, professionals from the communications field, both national and international, students, and graduates of the program and School were invited, enhancing their knowledge and education in



image and reputation management, strategic communication, intangible management, communication risk, sustainability, innovation, and other related topics.

UPC Audiobooks



The purpose was to provide students and faculty access to audiobooks published by Editorial UPC through the online catalog, allowing them to consume the content without having to purchase it. This format expands accessibility to our content and offers a solution for users with particular needs.

This activity offers students an additional way to access books useful for their courses. Moreover, it provides a better experience, as students can choose the book format that best suits their needs or routines. It is also an alternative for students with visual impairments.

Inequalities in infant vaccination coverage during the COVID-19 pandemic: A population-based study in Peru



Authors: Objective: To identify the associated factors and assess the inequalities of full vaccination coverage (FVC) among Peruvian infants aged 12-23 months during the COVID-19 pandemic in a nationally representative sample.

Methods: We carried out a population-based cross-sectional study based on a secondary data analysis using the 2021 Peruvian Demographic Health Survey (DHS) in infants aged 12 to 23 months. The sampling design was probabilistic, multistage, stratified, and independent at both departmental and area of residence levels. FVC was defined according to the WHO definition. We performed generalized linear models (GLM) Poisson family log link function to estimate crude (aPR) and adjusted prevalence ratios (aPR). Also, for inequality assessment, we calculated the concentration curve (CC), concentration index (CI), and Erreygers normalized concentration index (ECI). Results: We included 4,189 infants in our analysis. Nationwide, the prevalence of FVC was 66.19% (95% CI: 64.33-68). Being younger, having a mother with no education or primary education, belonging to a large family, having no access to mass media, having had six or fewer ANC visits, and having a mother whose age was under 20 at first delivery were inversely associated with FVC. Meanwhile, living in the Highlands or on the rest of the coast, and living in rural areas were directly associated with FVC. We found a pro-rich inequality in FVC based on wealth-ranked households (CI: 0.0066; ECI: 0.0175).

Conclusion: FVC has dropped among Peruvian infants aged between 12 and 23 months. There were several factors associated with FVC. It was more concentrated among the better-off infants, although in low magnitude.

Keywords: COVID-19; Healthcare disparities; Low- and middle-income countries; Peru; Vaccination coverage.

Vaccine, Volume 41, Pages 564-572 https://doi.org/10.1016/j.vaccine.2022.11.067

Inequalities in COVID-19 vaccination coverage in Peru: An ecological study



Authors: Al-kassab-Córdova, A.; Mendez-Guerra, C.; Silva-Perez, C.; Herrera-Añazco, P.; Benites-Zapata, V.A.

Abstract: CurrentlyObjective: To assess the correlation between COVID-19 vaccination coverage and the Human Development Index (HDI) at the provincial level in Peru.

Study design: Ecological study.

Methods: We conducted a cross-sectional ecological study based on secondary data analysis. Coverages of the first, second, and third doses of the vaccine against COVID-19 and the HDI were evaluated. The magnitude of the correlations was assessed using Spearman's rank correlation coefficients with their corresponding bootstrapped 95% confidence intervals (95% CI). Scatter plots were also constructed.

Results: A total of 196 provinces were included. There was a moderate correlation between the first dose of the COVID-19 vaccine and the HDI (r = 0.3807 [95% CI 0.2585-0.5030], p < 0.0001). The same direction was found for the second (r = 0.4064 [95% CI 0.2853-0.5276], p < 0.0001) and third dose (r = 0.4435 [95% CI 0.3201-0.5669], p < 0.0001).

Conclusions: A positive correlation was found between COVID-19 vaccination coverage and the HDI, suggesting the presence of inequalities in access to vaccines. Individualised strategies are needed in lower HDI regions to tackle inequalities.

Keywords: COVID-19; Peru; Socioeconomic inequalities; Vaccination.

Public Health in Practice, Volume 5

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Transport Service Optimization Model using Integrated Tools under the Lean Approach - A Peruvian Case Study



Authors: Ariana Morales Peralta, Diego Toullier Aguilar, Pedro Chavez Soriano

Abstract: In Peru, transportation companies have been affected by different factors that are detrimental to the efficiency of their operations and their economy. Among these factors, delays in the delivery of goods are considered to be one of the most influential. In spite of this, at present, the transportation sub-sector has shown a recovery of 15.8% with respect to the national production index, due to the fact that it is considered a fundamental activity for the country's trade and foreign trade. Previous studies found in the literature review to solve the problem, expose the use of mathematical models and engineering tools to optimize delivery times in a context of cold chain transportation. However, they are applied independently; therefore, the contribution of the present proposal is based on an integrated improvement model of Lean tools, such as TPM, Heijunka and Andon. The proposal not only contributes to the reduction of the percentage of delivery delays, but also to other factors, such as the occurrence of stoppages due to breakdowns and the increase of operational performance. This study performs a validation through the implementation of a pilot test in a small company dedicated to the transportation of cargo by land. Based on this, the percentage of delays in the delivery of goods is reduced from 10.53% to 5.36%. Thus, it is possible to conclude that the implementation of the present improvement model will generate an economic benefit, in relation to the reduction of the cost associated with penalties for delays and the improvement of the quality of the service provided by the company.

Keywords: Lean, Operational Planning, Optimization, TPM, Transport Service

ICIBE '23: Proceedings of the 2023 9th International Conference on Industrial and Business EngineeringSeptember 2023Pages 212–219 https://doi.org/10.1145/3629378.3629465

Identification of Peruvian timber species based on image processing and convolutional neural networks



Authors: Alejandro Blanco, José Sánchez, Christian del Carpio, Erwin Dianderas, Guillermo Kemper

Abstract: The identification of timber species is highly important worldwide due to their global trade and the arising requirement of controlling, regulating and monitoring illegal logging. Peru has an important timber trade due to extensive forest resources in the Peruvian Amazon. This context makes it necessary to have technological tools for timber species identification using tree leaves, in an attempt to control deforestation in the Amazon forests. Current identification methods require manual labor, are subjective and inefficient regarding time, cost and precision. Moreover, the scientific literature does not include electronic devices nor algorithms which exclusively identify Peruvian timber species. With this in mind, this work proposes a portable electronic equipment that detects 11 timber species from the Peruvian jungle, based on image processing techniques and convolutional neural networks (CNN). The device consists of a carbon fiber structure, a keyboard, a 7-inch display, internal lighting and a tray for the leaf sample. The algorithm uses color filters, thresholding and other operations to segment the leaf and then input it to a neural network. After comparing the AlexNet, VGG-16 and MobileNet architectures, the last one shows the best performance, with an average precision of 98.64% when identifying the 11 timber species.

Keywords: Portable device, Timber species, Image processing, Convolutional neural networks (CNN), Species identification.

Blanco et al., International Journal of Applied Science and Engineering, 21(1), 2023274 https://doi.org/10.6703/IJASE.202403_21(1).001

Psychological Impacts of Teaching Models on Ibero-American Educators during COVID-19



Authors: Simone Nomie Sato, Emilia Condes Moreno, Adriana Rico Villanueva, Paulo Orquera Miranda, Pascual Chiarella, Gloria Bermudez, Jose Francisco Tornero Aguilera and Vicente Javier Clemente-Suárez

Abstract: Educational systems globally, and notably in the Ibero-American context, underwent significant adaptations in response to the myriad challenges imposed by the COVID-19 pandemic. The pedagogical evolution unfolded through three discernible phases: predominantly online, hybrid, and ultimately, a return to face-to-face instruction. While these phases were universally apparent, cultural, socio-economic, and health disparities across regions subtly influenced the quality and experiential aspects of teaching and learning within these models. This study seeks to illuminate the psychological profiles and evaluative perspectives regarding teaching and learning quality among university educators during COVID-19's tri-phase educational transformation. Engaging 601 university instructors from various Ibero-American countries, a comprehensive questionnaire mapped demographic, academic, and psychological landscapes across the pandemic's distinctive epochs. The pivot to online educational methodologies, supplanting traditional modalities, permeated numerous facets of the educational endeavor, particularly impacting faculty life and wellbeing. Data underscored a prevalent sentiment of loneliness, indicative of broader mental health challenges, especially pronounced among edu-

Psychological Impacts of Teaching Models on Ibero-American Educators during COVID-19



cators in Latin American nations. Notwithstanding these hurdles, Latin American educators demonstrated a predilection towards online instruction, in stark contrast to their European peers, who exhibited a preference for in-person pedagogy. This study unveils the divergent pedagogical preferences and mental health challenges among university educators in the Ibero-American realm during COVID-19's educational shifts, underlining the need for adaptable educational frameworks and robust mental health support, attuned to the region's distinct socio-cultural and economic contexts.

Keywords: COVID-19; online teaching; Ibero-American; psychological impacts; hybrid teaching; mental health; professor

Behavioral Sciences 13, no. 12: 957 https://doi.org/10.3390/bs13120957

The power of House + Home: exploring a capabilities approach to housing and prosperity in Kenya



Authors: Layseca, M.

Abstract: This paper explores the role of housing in the achievement of prosperity from a capabilities perspective. Prosperity, according to Jackson (Prosperity without growth: economics for a finite planet, Earthscan, Oxford, 2009), is built on Amartya Sen's notion of capabilities for flourishing. Then, in the pursuit of understanding the role of housing as an enabler of capabilities for the achievement of prosperity, this paper investigates the gaps in the views/concepts of housing through comparisons of the ten central capabilities, the right to adequate housing, and meanings of home. Data from a recent qualitative study in rural and urban Kenya is used for empirical analysis as a way to develop a localised application of the discussion. Looking through the lens of the Capabilities Approach brought a useful framework that made it possible to capture human and social housing values that are many times neglected. In that sense, the paper explores housing both as the physical conditions of the house and as the social and psychological dynamics that construct the meanings of home. The research demonstrated that the extent to which housing enables the enjoyment of capabilities for flourishing increases or diminishes insofar housing acknowledges and incorporates both material and non-material functions. Hopefully, this exercise can serve to inform and enrich future localised housing design, research and policy, where a more comprehensive understanding and conceptualisation of housing seems imperative: Housing, as House+Home.

Keywords: Capabilities approach, Housing, Prosperity, Quality of life, Well-being, Social development.

Hous and the Built Environ (2023)

https://doi.org/10.1007/s10901-023-10097-z

Model based on the Lean Manufacturing methodology to increase the OTIF of a MYPE company in the textile sector



Authors: Bryan, Anzualdo; Christian, Malpartida; Iliana, Macassi

Abstract: Textile companies in Peru are currently facing problems of low productivity and exports, caused by the COVID-19 pandemic, generating a deficit in the trade balance and forcing producers to be more competitive. Reason why the national industry seeks to raise the standards of delivering products on time and fully delivering orders, increasing the level of service offered. For this reason, an improvement model is proposed for its application in the printing area of a Peruvian MYPE textile company, which will seek to improve production times and reduce reprocessing in order to increase the company's OTIF. Finally, the validation will be carried out through simulation to rein in the viability of the improvement model in the textile company and to validate the effectiveness of the proposed tools to solve the existing problems in the printing area.

Keywords: Lean Manufacturing, OTIF, Method Study, Preventive Maintenance, SMED.

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