STUDENT ACHIEVEMENT REPORT 2020

UNIVERSIDAD PERUANA DE CIENCIAS APLICADAS (UPC)

INSTITUTIONAL OVERVIEW

Created in 1993, Universidad Peruana de Ciencias Aplicadas (UPC) is an innovative, private and research comprehensive educational institution, which provides higher education at the undergraduate and graduate level, promotes scientific and technological research as well as cultural, intellectual, and artistic knowledge. UPC is recognized for its academic quality, international competitiveness, research impact and results, and permanent innovation in the development of new programs and solutions that enhance institutional effectiveness. UPC has been considered the most international university in Peru for seven consecutive years (from 2014 to 2020) by *América Economía's* National Ranking ([Ranking link](#)).

UPC offers 59 bachelor's degree programs at the undergraduate level and 29 master's degree programs at the graduate level[1]. Table 1 and Table 2 show the number, modality, and longevity of UPC's undergraduate and graduate programs.

Table 1. UPC's Bachelor's Degree Programs (Undergraduate)

SCHOOL	PROGRAM	LEVEL	MODALITY	YEAR IMPLEMENTED
Architecture	1. Architecture	Traditional Undergraduate	On-site	1994
Business	2. Accounting and Administration	Traditional Undergraduate	On-site	1996
	3. Administration and Agribusiness	Traditional Undergraduate	On-site	2008
	4. Administration and Finance	Traditional Undergraduate	On-site	1996
	5. Administration and Human Resources	Traditional Undergraduate	On-site	2005
	6. Administration and International Business	Traditional Undergraduate	On-site	2003
	7. Administration and Marketing	Traditional Undergraduate	On-site	1996
	8. Sports Administration and Business	Traditional Undergraduate	On-site	2011
Communications	9. Audiovisual Communication and Interactive Media	Traditional Undergraduate	On-site	2009
	10. Communication and Corporate Image	Traditional Undergraduate	On-site	2008
	11. Communication and Photography	Traditional Undergraduate	On-site	2018

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[1] Updated to December 2020.

SCHOOL	PROGRAM	LEVEL	MODALITY	YEAR IMPLEMENTED
	12. Communication and Journalism	Traditional Undergraduate	On-site	1994
	13. Communication and Marketing	Traditional Undergraduate	On-site	2008
	14. Communication and Publicity	Traditional Undergraduate	On-site	1994
Contemporary Arts	15. Music	Traditional Undergraduate	On-site	2010
	16. Performing Arts	Traditional Undergraduate	On-site	2017
Design	17. Fashion Design and Management	Traditional Undergraduate	On-site	2012
	18. Professional Graphic Design	Traditional Undergraduate	On-site	2011
	19. Professional Interior Design	Traditional Undergraduate	On-site	2011
Economics	20. Economics and Finance	Traditional Undergraduate	On-site	2003
	21. Economics and International Business	Traditional Undergraduate	On-site	2005
	22. Managerial Economics	Traditional Undergraduate	On-site	2012
	23. Economics and Public Policy	Traditional Undergraduate	On-site	2005
	24. Economics and Development	Traditional Undergraduate	On-site	2009
	25. Political Science	Traditional Undergraduate	On-site	2020
Education	26. Educational and Pedagogical Management	Traditional Undergraduate	On-site	2012
Engineering	27. Business Management Engineering	Traditional Undergraduate	On-site	2011
	28. Civil Engineering	Traditional Undergraduate	On-site	1994
	29. Computer Science	Traditional Undergraduate	On-site	2012
	30. Electronic Engineering	Traditional Undergraduate	On-site	1994
	31. Environmental Engineering and Management	Traditional Undergraduate	On-site	2017
	32. Industrial Engineering	Traditional Undergraduate	On-site	1994
	33. Information Systems Engineering	Traditional Undergraduate	On-site	1994

SCHOOL	PROGRAM	LEVEL	MODALITY	YEAR IMPLEMENTED
	34. Mechatronics Engineering	Traditional Undergraduate	On-site	2012
	35. Telecommunications and Network Engineering	Traditional Undergraduate	On-site	2006
	36. Mining Management Engineering	Traditional Undergraduate	On-site	2012
	37. Software Engineering	Traditional Undergraduate	On-site	2004
Health Sciences	38. Dentistry	Traditional Undergraduate	On-site	2008
	39. Medicine	Traditional Undergraduate	On-site	2007
	40. Veterinary Medicine	Traditional Undergraduate	On-site	2018
	41. Nutrition and Dietetics	Traditional Undergraduate	On-site	2006
	42. Physical Therapy	Traditional Undergraduate	On-site	2009
Hospitality and Tourism Administration	43. Hospitality and Business Administration	Traditional Undergraduate	On-site	2006
	44. Gastronomy and Culinary Management	Traditional Undergraduate	On-site	2015
	45. Tourism and Business Administration	Traditional Undergraduate	On-site	2009
Human Sciences	46. Professional Translation & Interpretation	Traditional Undergraduate	On-site	2011
Psychology	47. Psychology	Traditional Undergraduate	On-site	2006
Law	48. Law	Traditional Undergraduate	On-site	1998
	49. International Relations	Traditional Undergraduate	On-site	2020
Business	50. Accounting	Working Adult	On-site	2013
	51. Banking and Financial Administration	Working Adult	On-site	2009
	52. Business Administration	Working Adult	On-site	2005
	53. Entrepreneurial Administration and Management	Working Adult	On-site	2012
	54. Human Resources Administration	Working Adult	On-site	2017

SCHOOL	PROGRAM	LEVEL	MODALITY	YEAR IMPLEMENTED
	55. Marketing	Working Adult	On-site	2005
	56. International Business	Working Adult	On-site	2005
Hospitality and Tourism Administration	57. Hospitality and Tourism Administration	Working Adult	On-site	2009
Engineering	Civil Engineering	Working Adult	On-site	2012
	Industrial Engineering	Working Adult	On-site	2008
	58. Network and Communications Engineering	Working Adult	On-site	2011
	59. Systems Engineering	Working Adult	On-site	1996

Table 2. UPC's Master's Degree Programs (Graduate School)

No.	PROGRAM	MODALITY	YEAR IMPLEMENTED
1	Senior Management MBA	On-Site	1997
2	Strategic Management of Human Capital	On-Site	2013
	Strategic Management of Human Capital	Distance Education	2019
3	Executive MBA	On-Site	2008
4	MBA	On-Site	2010
5	International MBA	Distance Education	2011
6	Health MBA	On-Site	2009
7	MBA for Masters	On-Site	2007
8	E-MBA	Distance Education	2008
9	Administration and Project Management	On-Site	2009
	Administration and Project Management	Distance Education	2011
10	Senior Management and Leadership	On-Site	2012
11	Corporate Communications	Distance Education	2012
12	Public Administration	On-Site	2011
13	Public Administration	Distance Education	2019
14	Corporate Finance	On-Site	2011
15	Corporate Law	On-Site	2001

No.	PROGRAM	MODALITY	YEAR IMPLEMENTED
16	Marketing and Sales Management	On-Site	2012
17	Dietetics and Nutrition Management and Pedagogy	On-Site	2011
18	Systems and Information Technology Management	On-Site	2011
19	Operations Management and Logistics	On-Site	2003
	Operations Management and Logistics	Distance Education	2011
20	Construction Management	On-Site	2006
	Construction Management	Distance Education	2013
21	Mining Management	On-Site	2012
22	Data Science	On-Site	2020
23	Communication and Digital Marketing	On-Site	2020
24	Digital Business Transformation	On-Site	2020
25	Education	On-Site	2020
26	Cybersecurity and Information Management	On-Site	2020
27	Environmental Management	On-Site	2020
28	Health Psychology and Lifestyles	On-Site	2020
29	Translation	On-Site	2020

UPC STUDENT ACHIEVEMENT REPORT INDEX
2020

UPC's Student Achievement Report presents the main results for 2020 regarding the following areas:

I.   Students' Achievements
II.   Student Learning Results
III.   Academic Excellence Group Results
IV.   Student Life Results
V.   Internationality Results
VI.   Employability Results
VII.   Alumni Results
VIII.   Retention, Graduation and Enrollment Results
IX.   Completion Results within 100% and 150%
X.   Faculty Qualifications and Distribution by Dedication
XI.   Research Results
XII.   Social Responsibility Impact

1. **Students' Achievements**

In 2020, UPC's students stood out in different areas and were awarded high distinctions. These achievements are presented below:

School of Communications

a) **Graduates of the Audiovisual Communication and Interactive Media Program Organized the "*Festival de Cine en Cuarentena: Historias Hechas en Casa*"**

The "*Festival de Cine en Cuarentena: Historias Hechas en Casa"* (Lockdown Film Festival: Homemade Stories) was held from March 22, 2020 to April 30, 2020 to promote the creative freedom of filmmakers in a global context full of great challenges due to the COVID-19 public health emergency.

This festival sought to create a new online exhibition space for films from all over the world, encouraging filmmakers to explore and innovate the multiple possibilities of filmmaking within the #YoMeQuedoEnCasa (#IStayAtHome) framework, as well as to use lockdown as a creative tool (Source: link).

Graduates of UPC's Audiovisual Communication and Interactive Media Program, Jazmin Mateo, Juan Miguel Maldonado and Donna del Castillo, took part in this festival's organizing team. Over 400 audiovisual pieces were received to be evaluated by the festival's jury, made up of professionals from the national and international film and cultural sectors.

Additional information about this festival is available at: (link).

Figure 1. Poster of the "*Festival de cine en cuarentena: Historias hechas en casa*".

b) Audiovisual Communication and Interactive Media Graduate Won the Award for Best Screenplay at the 13th Edition of the Festival "*Cortos de Vista*"

The 13th edition of the University Short Film Festival "Cortos de Vista" (Short-sighted) was held from October 8 to October 10, 2020 in the city of Chiclayo, Peru. The festival aims to continue promoting film production and encouraging the professionalization and dissemination of national productions made by young students. In this edition, the short fiction and documentary film categories were opened. (Source: link).

The Audiovisual Communication and Interactive Media graduate Valentín Falconi won the award for Best Screenplay in the 13th edition of the "Cortos de Vista" festival for his short film 198451. (Source: link).

The short film is available at (link).

Figure 2. Poster of the short film 198451, winner of the festival "*Cortos de Vista*", 13th edition.

c) Audiovisual Communication and Interactive Media Graduate Won the Award for Best Short Film in the Peruvian Competition of Ajayu International Animation Festival

The 5th Ajayu International Animation Festival was held for the anniversary celebrations of the city of Puno, Peru. This festival aims to be a showcase for the artistic expression of animation through cultural exchange, embodied in animated productions and cultural manifestations of the Andean world. Ajayu is acknowledged and awarded by the Peruvian Ministry of Culture. It is organized by SAPA INTI Studios and the Ajayu Film Association. This competition took place from November 11 to November 14, 2020; it was broadcasted from the shores of the Sacred Lake of the Incas (Lake Titicaca). (Source: link).

Audiovisual Communication and Interactive Media graduate Elva Arrieta Tabuzo won the award for Best Short Film in the Peruvian Competition of the Ajayu International Animation Festival with her project: Alba.

"Alba" tells the story of a creative girl who is eager to play, but problems arise in her family due to gender stereotypes.

The short film is available at ([link](#)).

Figure 3. Poster of "Alba", winner of the Best Animated Short Film in the Peruvian Competition of the Ajayu International Animation Festival.

d) A Project of the Students of the Audiovisual Communication and Interactive Media Program was Nominated for the Ajayu International Animation Festival in the "Animated Series" Category

The project "*Las apariencias engañan*" (Appearances can be deceiving) was nominated in the category "Animated Series" at the Ajayu International Animation Festival. The members of the team in charge are students of the Audiovisual Communication and Interactive Media program, these are presented below:

- Stefany Guevara (Direction)
- Daniel Guerra (Direction, lighting, and post-production)
- Adrián Peñafiel (Production)
- Kelly Villanueva (Texturing)

The short film is available at ([link](#)).

Figure 4. Stefany Guevara, Kelly Villanueva, Adrián Peñafiel and Daniel Guerra.

Figure 5. Poster of the short film "*Las apariencias engañan*".

e) **Audiovisual Communication and Interactive Media Graduates participated at the International Discussion Group at the 8th University Festival "*Embrión*," organized by Colombia's National Unified Corporation (CUN) of Higher Education.**

The 8th University Audiovisual Festival "*Embrión*" (Embryo), organized by Colombia's National Unified Corporation of Higher Education (Corporación Unificada Nacional de Educación Superior, CUN), is a university competition that showcases the best audiovisual works of the CUN and the best students from international universities. The objective is to encourage creativity and academic development in the audiovisual industry.

Discussion groups and film screenings are held as part of the festival to share new findings and topics of interest with the academic community. Within this framework, the Audiovisual Communication and Interactive Media graduates Andrea Coombes and Jazmin Mateo Cielo participated in the discussion "*Experiencias de Creación en la Academia*," with Colombian graduates from the CUN.

This festival was held in Colombia from October 6 to October 9, 2020 in a virtual format due to the COVID-19 global health emergency.

Additional information about this program is available at: ([link](#)).

f) Projects by Audiovisual Communication and Interactive Media Graduates were selected to be screened at the 8ᵗʰ University Audiovisual Festival "*Embrión*"

Seven (07) projects, developed by graduates of the Audiovisual Communication and Interactive Media program participated in the screening of university short films at the 8ᵗʰ University Audiovisual Festival "*Embrión*," which took place from October 6 to October 9, 2020 in Colombia.

Table 3. List of short films made by graduates of the Audiovisual Communication and Interactive Media program who participated in the 8ᵗʰ University Audiovisual Festival "Embrión"

Short film name:	Members of the team in charge
Fin de Campaña (End of Campaign) 	Darío Muñoz - Director Adrián Huamán Araujo - Assistant Director Adrián Huamán Araujo, Darío Muñoz - Screenwriters Regina Raygada - General Producer Ingrid Contreras Castillo - Executive Producer Bryant Wong Zegarra - Director of Photography Jesús Cumpa - Camera Operator Jorge Enrique Landerer - Gaffer José Manuel Rodríguez - Art Director Dánary Yupanqui La Torre - Art Producer Antonella Olavarria - Sound Director Karen Gonzales - Promotion Edward Calderon - Script Diego Davila - Sound Assistant Luisiana Palomino - Production Assistant Fiorella Paz - Data Manager Miguel Méndez - Colorist Rodrigo Barrientos - Music Producer

Short film name:	Members of the team in charge
Saudable	Sandra Concha Campos (Director and Screenwriter) Josephine Poirier (Assistant Director) Gonzalo Castañeda (Executive Producer) Ana Lucia Galindo (Field Producer) Carmen Salazar Ormeño (Production Assistant) Sophia Magallanes Morales (Director of Photography) Aldo Rosales Chavez (Chief of Lighting) Angel Ramírez (Camera Operator) Sebastián Gordillo (Art Director) Annette Hernández (Costume Designer) Javier Jugo (Makeup and Hairstyling) Martin Ramirez (Sound Director)
PAPO (GRANDPA)	Screenwriter and Director - Andrea Coombes Assistant Director - Paola Barrón Reyes Producer - Roxana Alva Campodónico Production and Editing Assistant - Fico Gallese Meneses Director of Photography - Christian Pinche Camera Operator - Mia Nauca Art Director - Melissa Vergara Art Producer - Gisela Chacaltana Sound Directors - Carlos Vizconde and David Cisneros Galarreta

Short film name:	Members of the team in charge
TRES (THREE)	Director: Jazmin Mateo Cielo Producers: Andrew Acuña Polar and Vanessa Ciotola Figueroa Executive Producers: Diana Peláez Assistant Director: Donna del Castillo Script: Paulo Abanto Screenplay: Haderling Callán, Grecia Yucra and Jazmin Mateo Cielo Director of Photography: Maria Clara Valença Camera Operator: Haderling Callán (Ader Callan) Gaffer: Edson Ku Lighting Technician: Álvaro Rojas Direct Sound: Bruno Gutiérrez Sound Assistant: Eduardo Pimentel Sound Mixing: José Luis Membrillo Martínez and Luis Valentín Original Score: Palosanto Records Art Director: Camila Castro Yong Still Photographer: Luis Milla Data Manager: Gianfranco Molteni Poster: Alexandro Valcarcel Making of: Susanne Pachas Teaser: Cristina Ubillus
Toda una vida (A Lifetime)	Director and Screenwriter - Sol Eyzaguirre (EF Sol) General Producer - Lorena Vidal Falcón Assistant Director - Michelle Velásquez (Michelle VM) Director of Photography - Jeffry Carrera Art Director - Brona Tatiana Falcón Sound Director - Fabricio R. Oliart Promotion Producer - Samantha Muñoz Field Producer - Erick Josué Hualpa Cotitoa Art Producer - Chiara Hartley Photography Assistant - Luis Milla Chief Lighting Technician - Bratzo Barycki Photography Art Assistant - Aurely Narazas Ramirez Editing - Lorena Vidal Falcón and Sol Eyzaguirre (EF Sol) Post-Production - Jeffry Carrera Make-up - Holy Makeup Original Song - Hugo Huanqui and Palosanto Records

Short film name:	Members of the team in charge
Atix 	Director – Liliana Vilchez Assistant Director – Pilar Lopez Field Producer – Mariana Nicolini Executive Producer – Gabriela Bellido Animator – Percy A. Flores Art Director – Marcelo Saavedra Art Assistant – Verónica Su Art Producer – Andrea Rivera Sound Director – Luis F. Ramirez Gaffer – Gabriel Muñoz Director of Photography – Raúl López
Semilla del talento (Seed of Talent) 	Maricielo Ledesma Kaiser - Director Tiara Nuñez Roman - Executive Producer Allison Cajo Chaparro - Field Producer Jimena Ugarte Forno - Dissemination Coordinator Carolina Bernedo Linares - Director of Photography Andrés Chirinos - Sound Director Juan Carlos Guevara Gonzales - Audio Post-Producer Diego Burga Urresti - Editor

g) Project by Audiovisual Communication and Interactive Media Graduates chosen in the Official Short Film Selection - FECIT 2020

The Trujillo Film Festival (*Festival de Cine de Trujillo*, FECIT 2020) was held from October 12 to October 18, 2020. FECIT is a non-profit event, the only one of its kind in the country, dedicated entirely to promoting Peruvian filmmaking. (Source: link).

The project "*Incondicional*" (Unconditional) was chosen to be part of the Official Short Film Selection in the documentary category of the Peruvian Productions Competition to be screened at Fecit 2020.

The members of the team behind the documentary "*Incondicional*" are graduates of the Audiovisual Communication and Interactive Media program, these are presented below:

- Sheyla Tafur – Director
- Luisiana Palomino – Producer
- Luis Chavez – Director of Photography, Camera Operator

- Christian Cáceres – Sound
- Diego Zuñiga – Art and Promotion Director
- Gerardo Arias – Editing, Camera Operator

Figure 6. Poster of "Incondicional".

h) Short Film Made by an Audiovisual Communication and Interactive Media Graduate selected as one of the Audiovisual Creations that represented Peru in the "*Cine Hecho o Protagonizado por Mujeres de Chile, Colombia, México y Perú* (2020)"

With the objective of providing free access to feature and short films from the Pacific Alliance countries and in order to highlight the role of women in the film industry, as well as to acknowledge the talent and work of women in the audiovisual creation area, the Technical Group of Culture of the Pacific Alliance screened a representative sample of films made by or starring women from Chile, Colombia, Mexico and Peru on Tuesday, May 12, 2020. (Source: link)

"*Toda una vida*" (A Lifetime) was one of the three audiovisual works representing Peru to be part of "*Retina Latina*" special season with the member countries of the Pacific Alliance. The subject was "*Mujeres Realizadoras*" (Women Filmmakers), supported by the Directorate of Audiovisual, Phonography and New Media (DAFO). This short film was directed by Sol Eyzaguirre, a graduate of the Audiovisual Communication and Interactive Media program. (Source: link).

This short film tells the story of Victoria, a 72-year-old seamstress, and Guillermo, a 75-year-old fisherman. They have been together for 30 years. When Guillermo falls ill, Victoria will do anything

to keep him in good health. This will lead her to experience her biggest fear: losing the only person left in her life.

Figure 7. Poster of "Toda una vida".

i) Audiovisual Communication and Interactive Media Program Graduate Participates in the International Event #Filmapolooza

Filmapalooza provides the opportunity for filmmakers to meet and network. This annual award festival features the award winning film called "The 48 Hour Best Film Projection," presenting films from around 70 cities. The screenings include winners of the 48×2 Animation Project, the Four Points Film Project and the Global Film Challenge. (Source: link).

Jazmin Mateo Cielo, Team Leader of La Diablada Films, winner of the Lima 48 Hour Film Project (2019 edition), attended #Filmapalooza 2020, which took place from March 3 to March 7, 2020 in Rotterdam (Netherlands). Jazmin is a graduate of UPC's Audiovisual Communication and Interactive Media program.

Figure 8. Jazmin Mateo Cielo in #Filmapalooza 2020.

j) Communication and Photography Program Students Participate in the National Geographic Photo Camp 2020

At the National Geographic Photo Camp 2020, students learned how to use photography to communicate high-impact stories, based on a deep exploration of the world that surrounds them. The event is focused on bringing young people closer to photography as a means to tell their own stories. The topics of the photographs revolved around the connection between identity and culture.

The 2020 edition was held from October 1 to October 9, 2020 with the participation of Communication and Photography students María Fe Marreros, Kevin Palacios and Sharon Gonzales. They also had the support of Carolina Cardich (UPC professor of the Visual Project 2 course) and Erika Larsen (American photographer).

Additional information about this program is available at: ([link](#)).

Figure 9. Photographs by María Fe Marreros and Sharon Gonzales, respectively, in National Geographic Photo Camp 2020.

k) Communication and Corporate Image Program Students and Faculty organized the V and VI Edition of "Imagen Wiiik"

Throughout 2020, students and faculty of the Communication and Corporate Image program developed two editions of the event "*Imagen Wiik: inspira, innova, imagina*" (Image Wiiik: Inspire, Innovate, Imagine). The main objective of this event is to showcase the experience and knowledge of communication sector specialists. Access is free and open to the general public, after signing up for the talks to access them. Both the V and VI editions of the event were held 100% online due to the global health emergency situation.

The V edition of the event took place from May 22 to June 12, 2020, and the VI edition, from October 13 to October 23, 2020.

Figure 10. Banner of #ImagenWiiik 2020 (Call for Participants)

Below, Table 4 and Table 5, provide the talks program during in the V and VI editions, respectively.

Table 4. Talks Program during the #ImagenWiiik 2020 - V Edition

No.	Webinar	Speaker
1	Youth Discussion Group: Empowerment behind Change	Alicia Marcos (Spain), Augusto Leiva (Spain) and Gonzalo García Calderón
2	Analysis of Peruvian Government Communication during Lockdown	David Hochstadter (Efecto Estrategia) Rubén Cano (MIDIS) and Miguel Ugaz (La Vaca MU)
3	Reinvented by the Pandemic	Rubén Sanchez – CEO/General Manager of San Antonio Bakery
4	Reputation Management of Essential Companies in the Face of COVID-19	Gustavo Yabar - Director of Public and Corporate Affairs at BCW Peru

5	Sustainability Communication as a Transversal Organizational Axis: The Tetra Pak® case	Margiolina Maraniello – Sustainability Communications Corporate Manager at Tetra Pak®
6	Communicational Disruption: How to Strategically Think Outside the Box	Miguel Angel López – Country Manager at Atrevia Peru
7	Backus: How to Maintain the Purpose of a Company Today	María Julia Sáenz – Backus Legal & Corporate Affairs Director
8	Change Management: How to Build a Culture that Embraces Change? The Case of Farmacias Peruanas	Cynthia Alaluna – Culture, Environment and Internal Communications Manager
9	Classical PR is Resuscitated by Inbound PR	Mathieu Janin – Founder/CEO Smartketing Switzerland
10	The Role of CSR and its Commitment to Create Value in the Future: the Case of Peru Champs	Alberto de Cárdenas – Executive Director at Perú Champs
11	Reputation in Times of Crisis	Sebastián Cebrián. Villafañe & Asociados (Spain)
12	Emotions and Resilience	Andrés Aljure (Colombia)
13	La casa de todos	Miguel Ríos, Director of Innovation and Development of the Society of Public Charity of Lima

Recordings of this talks series are available at the following (link).

Table 5. Talks Program during the #ImagenWiiik 2020 - VI Edition

No.	Webinar	Speaker
1	Repsol and La Pampilla Refinery's Challenges in Adapting to New Environmental Requirements	José Luis Ibarra (Peru)
2	Entel: Internal Communication in a Transformation Process	Mariana Torres (Peru)
3	Discover the Power of Your Digital Personal Brand	Mauricio Solís (Peru)
4	Peru, Mining, Social License – What Does it Take for Sustainable Development	Jenik Radon (USA)
5	The Role of UX Design in the Era of Digital Transformation	Vinicius Pineschi (Brazil)
6	How to Connect with Oneself to Understand One's Purpose	Lorena Salmón (Peru)
7	Life-saving Design: The B-side of the "Me Alejo porque Te Quiero" (I Stay Away because I Love You) Campaign	Xabier Díaz de Cerio (Brazil)
8	Anguish and Heartbreak of Academic Research on Communication	Rebeca Illiana Arévalo Martínez (México) André Quiroga Sandi (Brazil)

l) **School of Communications and the Business Management Engineering Program Graduates won the Rockefeller Foundation-Acumen Student Social Innovation Challenge 2020**

Acumen is a global non-profit organization dedicated to investing in social entrepreneurs and sharing knowledge and insights to empower change agents and reduce poverty around the world through Acumen Academy. (Source: link).

Acumen, with the support of the Rockefeller foundation, organized the Student Social Innovation Challenge aimed at university students interested in developing innovative solutions to a problem associated with the following areas: workforce development, financial inclusion, health, food & agriculture and energy. Through a virtual platform, student teams from around the world explore areas of opportunity, present their ideas and pitch for a chance to win up to $ 20,000 plus an invite to a community of entrepreneurs and investors who will help turn their ideas into a successful venture.

Graduates of the Communication and Publicity program, José Pilares and Carlos Pilares, along with the Business Management Engineering graduate Michell Anyosa, were one of the eight winning teams of the second virtual edition of this contest.

The UPC graduates project is called Qhatu. It consists of a platform, in web page and application format, which allows farmers to contact and sell directly to minimarkets, restaurants and hotels. The objective of this business idea is to reduce the price gap along the lengthy food supply chain of the Peruvian market. A 260-270% price gap between fields and markets was identified, which is detrimental to the development of growers.

Having identified this problem, the graduates created Qhatu, so that growers can bypass intermediaries and sell their products more directly, thus obtaining a higher income, improving their quality of life and increasing their opportunities for development in various ways: productively, socially, financially and educationally.

Additional information about this competition is available at: (link).

Figure 11. UPC Pride - Carlos Pilares, José Pilares and Michel Anyosa, winners of the Student Social Innovation Challenge.

m) Communication and Corporate Image Graduate wins Fundación Telefónica Peru's "*Gente Brillante*" Contest (2020)

The "*Gente Brillante*" (Bright People) contest is a competitive fund for Telefónica Group collaborators that contributes to significantly impact the lives of those most in need across the country. Telefónica collaborators who accepted the challenge, designed a team project and competed for funds to make it happen. Three prizes of 10,000 PEN were awarded to each winning team. The winning teams implemented creative solutions prioritizing the use of digital tools to address the multiple problems that occur in Peru on a daily basis. The contest was held from July to November, 2020. (Source: link).

Alexandra Vasallo Bedoya, a Communication and Corporate Image graduate, teamed up with Telefónica volunteers Alejandra Segura, Jimena Alemán, Alejandra Guevara and Micaela Lizarzaburu to develop the "Crecemos con Amor" (Growing with Love) project. This initiative aimed at strengthening socioemotional ties between parents and children in Nuevo Progreso, Chavín de Huántar, located in Ancash, Peru. The project was one of the winners of Fundación Telefónica Peru's "Gente Brillante" contest, in 2020. The prize awarded to the "Crecemos con amor" project succeeded in benefiting 15 families, accounting for 30% of the community's population, and focused on strengthening five competencies: self-knowledge, self-confidence, self-efficacy, bonding and affinity, and management of healthy environments. (Source: link).

In addition, the customized accompaniment allowed parents to develop competencies while gradually becoming familiar with the use of technology, as the project included the loan of one smartphone per family. The project concluded with a graduation ceremony in which the stories compiling positive parenting experiences, created by each family, were handed over. In the future, "Crecemos con Amor" plans to sell these stories to make the project self-sustainable and assist another group of families.

Additional information about the "*Crecemos con Amor*" project is available at: link.

Figure 12. Alexandra Vasallo Bedoya, creator of the "Crecemos con amor" program.

n) School of Communications Graduate Participates as Speaker at the TEDxUPC "Reset" Event

TEDxUPC "Reset" was an initiative developed by UPC students, supported by the university itself through the Business Initiative and Institutional Events Department. This is one of the TED formats that comprises the whole project, led by Oscar Fernando, an Administration and International Business student at UPC. The other two formats are TED Circles UPC, conversation and reflection circles on great ideas that are held monthly, and TEDxUPCWomen, a TEDx event focused on female empowerment. (Source: link).

To participate in this activity, people were nominated who have demonstrated great skills and ability to perform in the context of a pandemic, and who through their talks seek to spread more than an idea, a turning point to generate a positive change in society. UPC speakers include Macarena Arribas, UPC Communication and Publicity graduate, and Iván Delgado, UPC School of Business professor. On the other hand, there are great personalities such as Paul Pilco, Wendy Wunder and Claudia Ruiz.

This event was held on December 13, 2020.

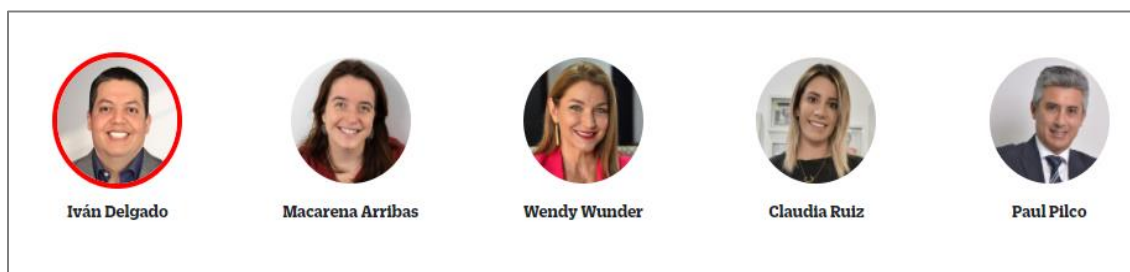Additional information about this program is available at: (link).

Figure 13. TEDxUPC "Reset" speakers.

o) Communication and Corporate Image Graduate defends her Research in English and obtains the "*Summa Cum Laude*" Distinction, Awarded for the First Time in the Program

On November 6, 2020, amidst the challenges of the pandemic and the new digital normal, Ariana Melchor Bazalar, a graduate of the Communication and Corporate Image program, earned her professional title with honors and achieved the highest distinction of *Summa Cum Laude* with her academic paper entitled A Short-Term Intercultural Immersion Program in the US: Contextualizing Intercultural Adjustment Journeys. This research analyzes the challenges of international and intercultural education in short study-abroad programs.

The paper explores the impact of globalization and the increasingly interconnected world on higher education and the internationalization efforts of universities. It focuses on the challenge of the new short-term study-abroad programs trend because, despite their prominent growth and expanding

reach, challenges arise as research on student learning and the effectiveness of these programs is still in its early stages. (Source: link)

Figure 14. Ariana Melchor, graduate of the Communication and Corporate Image program, who obtained her professional title with honors.

p) Communication and Publicity Graduates Publish Eight Research Papers in International Journals and Conferences

In 2020, graduates of the Communication and Publicity program published eight research articles. Information on the articles published during 2020 is provided in table 6.

Table 6. List of publications by Communication and Publicity graduates in 2020

No.	Article Title	Authors	Means of Publication	Repository
1	Femvertising, igualdad de género y el efecto de la tercera persona en las mujeres trabajadoras de Gamarra (Femvertising, Gender Equality and the Effect of the Third Person on Female Workers in Gamarra)	Katherine Ruiz Sánchez (graduate), Eliana Gallardo Echenique (UPC lecturer and researcher)	Pensar la Publicidad. Revista Internacional de Investigaciones Publicitarias	Link
2	El rol de la experiencia del cliente en la estrategia omnicanal durante el proceso de compra (The role of customer experience in the	Andrea Castillo Jiménez (graduate), Eliana Gallardo Echenique (UPC	International Conference on Marketing and Technologies (ICMarktech 2020)	Link

No.	Article Title	Authors	Means of Publication	Repository
	omnichannel strategy during the purchasing process)	lecturer and researcher)		
3	Understanding a Lovemark Brand through the Sponsorship of the Peru National Football Team	Xiomara Cruz Donayre (graduate), Eliana Gallardo Echenique (UPC lecturer and researcher)	International Conference on Marketing and Technologies (ICMarktech 2020)	Link
4	Odotipo, la identidad olfativa de una marca (Odotype, the Olfactory Identity of a Brand)	María Alejandra Rodríguez Díaz (graduate), Eliana Gallardo Echenique (UPC lecturer and researcher)	International Conference on Marketing and Technologies (ICMarktech 2020)	Link
5	La marca personal en Perú y su relación con la psicología de masas: el caso de Paolo Guerrero (Personal Branding in Peru and its Relationship with Mass Psychology: the Case of Paolo Guerrero)	Stephanie Barreda (graduate), Melina Mezarina (graduate)	IV Workshop "Medios, Tecnologías Aplicadas y Comunicación" (Media, Applied Technologies and Communication)	Link
6	Players Attitudes towards In-Game Advertising	Luis Rios Pino (graduate), José Mejía Perea (graduate), Eliana Gallardo Echenique (UPC lecturer and researcher)	The 2021 International Conference on Information Technology & Systems (ICITS'21)	Link
7	El uso de la identidad cultural en los anuncios publicitarios para afianzar la relación consumidor-marca. Campaña "Tenemos Barrio, Tenemos Mundial" de cerveza Cristal (The Use of Cultural Identity in Advertisements to Strengthen the Consumer-Brand Relationship. Campaign "Tenemos Barrio, Tenemos Mundial" of Cristal beer)	María José Sheen Moreno (graduate), Francisco Arbaiza Rodriguez (lecturer)	Universidad de Piura's Revista de Comunicación (Communications Journal), indexed in Scopus	Link

No.	Article Title	Authors	Means of Publication	Repository
8	Instagram como plataforma de ciberactivismo de influencers no-políticas a favor de movimientos feministas en Perú (Instagram as a Platform for Cyberactivism of Non-political Influencers in Favor of Feminist Movements in Peru)	Valeria Dall'Orso Swayne (graduate), Francisco Arbaiza Rodriguez (lecturer)	The 2021 International Conference on Information Technology & Systems (ICITS'21)	Link

q) Communication and Corporate Image Program Graduate published a Paper in FONSECA, Journal of the University of Salamanca (Spain)

Andrea Pezo, graduate and professional title holder of the UPC Communication and Corporate Image, wrote a paper that has been published in FONSECA, communication journal of the prestigious University of Salamanca in Spain, after undergoing an arduous process of review and evaluation.

The paper is entitled *Comunicación Interna, Cultura Organizacional y Promoción de Salud: La visión de los promotores peruanos de Salud* (Internal Communication, Organizational Culture and Health Promotion: the Vision of Peruvian Health Promoters). This research analyzes how internal communication management in a Peruvian private health center contributes to implementing an organizational culture based on health promotion among its employees (medical and administrative staff). To identify internal communication management and address a culture of health promotion, the model used is based on Bustamante's *seis íes* ("six Is").

This paper is available at the following link (link).

r) "*Casa de Todos*" (House of All): The School of Communications gives a face to the most vulnerable during the COVID-19 pandemic.

Under the direction of Ursula Freundt-Thurne, dean of the School of Communications, and a team made up of faculty members such as photographers Franz Krajnik and José Vidal and journalists Carlos Fuller and Luis Cáceres, almost thirty people have been portrayed and twelve testimonies have been captured, revealing the harsh reality of the streets and how hope can be brought in times of crisis.

"*Casa de Todos*" is a journalistic research project that has been materialized in different formats. The first is a short documentary in English and Spanish, which will also be shown as a photographic exhibition in the streets of Lima; and finally, as a podcast in Spanish and English, which will be broadcast in the UK thanks to the agreement between UPC and the University of Hertfordshire. (Source: link).

Figure 15. Image of the "Casa de Todos" project.

s) 10 UPC Students ranked among the First in the 28-hour Challenge, "*Desafía tu mente*" (Challenge your Mind) organized by UPC

For the fourth consecutive year, the Universidad Peruana de Ciencias Aplicadas (UPC) organized the 28h educational innovation marathon, "*Desafia tu mente*," on October 17 and October 18, 2020. The objective of the 28h Challenge is to seek the development of a creative solution to a social or academic problem proposed.

In the 2020 edition, the challenge focused on access to quality online education, and was aimed at participants from all universities in any country (students and faculty). This challenge was an open, online and decentralized marathon, where the various teams signed-up competed globally to develop their solution for 28 continuous hours.

In addition, six workshops were offered during the week of September 23 to 28, 2020, in order to enable participants to propose a sound solution to the challenge. These were carried out through the UPC Virtual Classroom platform.

Table 7. List of workshops held for the 28h Challenge, 2020 edition

Workshop	Date	Speaker	Recording
Playful strategies, Minecraft case study	Wednesday, September 23 – 16:00 to 17:00	Michael Zhou, Diego Paredes, Yazmin Armas, Valeria Párraga and Sergio S. Rodrigues. Greka Producciones Partners, UPC alumni.	Link
Access to quality online education	Thursday, September 24 – 17:00 to 18:00	Nancy Olmos, Client Experience Manager at Blackboard Latam, Mexico.	Link

Storytelling	Friday, September 25 – 16:00 to 17:00	Omar Vite, professor of the Audiovisual Communication and Interactive Media program of UPC.	Link
Playful Strategies	Saturday, September 26 – 11:00 to 12:00	Gisela Loya, Training and Institutional Development Leader at Tecnológico de Monterrey, Mexico.	Link
Design Thinking	Saturday, September 26 – 3:00 PM to 6:00 PM	Silvana Balarezo, Ubaldo Lescano, Manuel Bazalar, Jorge Ramírez and Roberto Bustamante. Facilitators Team of the UPC Apptitud Club.	Link
Future Thinking	Monday, September 28 – 16:00 to 17:00	Jorge Bossio, Director of the UPC Digital and On-line Learning Department.	Link

A total of 540 students participated, from UPC, Universidad de Lima, USIL, UFV, UPN, UTEC, UNMSM, among others, and were accompanied by mentors, mainly faculty from UPC, UTEC, Walden University and EMERITUS Institute of Management, among other prominent professionals. At the end of the first stage, 65 solution proposals were submitted for the challenge; the mentors chose 42 proposals and only 36 of them made it to the final stage.

The international jury had the arduous task of evaluating 36 solution proposals to the assigned challenge. Ten UPC students, in their respective teams, took the first three places in this 28-hour innovation marathon.

At the end of the 28 hours, all teams uploaded their solution to the UPC Virtual Classroom, along with a 3-minute video that described the solution in an "elevator pitch" or "shark tank" style. The top three teams were awarded a prize, online Amazon give cards. In addition to the monetary prize, these teams were offered the opportunity to participate in the DigiEduHack global event, to use their projects in a worldwide competition.

Additional information about this competition is available at: (link).

The list of winning teams is detailed below, specifying the study program of each student.

Table 8. List of the 28h Challenge winning teams, 2020 edition

Winning Teams: 28h Challenge 2020	
Participants	Programs
First place	
Carla Chunga Rodriguez	Mechatronics Engineering
Patrick Coronado Canales	Mechatronics Engineering
Jorge Roldán Itokazu	UNMSM
Mentor: Astharte Cabanillas	Systems Engineering - Working Adult
Second place	
Yesenia Ayvar Espinoza	Communication and Journalism
Luis De la Puente Torres	Mining Management Engineering

Nataly Hernandez Villanueva	Administration and Marketing
Keith Moreano Duendes	Business Management Engineering
Mentor: Miguel Saravia	Knowledge Management Director
Third place	
Carla Rojas Arana	Professional Interior Design
Sergio Farfán Mendoza	Communication and Marketing
Nidia Quintana Zaconetta	Communication and Publicity
Lucia Corilla Grados	Communication and Publicity
Mentor: Carlos Rojas Terán	Industrial Engineering

t) UPC Student Team that Took Third Place in "*Desafía tu mente*" 28h Won the European DigiEduHack Competition

"DigiEduHack is a series of online and offline idea-hackatons happening all around the world during two days, focusing on co-creating the future of education in the digital age. The expected outcome is to produce ideas and concepts with a high impact on society as well as ready-to-be developed solutions" (Source: link).

DigiEduHack is a multilevel series of hackatons, with 50 challeges open to participants. At the end of each hackaton, each challenge owner selects a winning solution. All the winning solutions are assessed by the DigiEduHack steering group, who chooses 10 to 12 finalist solutions; these are then put up for a public vote on the website "Unite Ideas", which is a United Nations voting platform. The three solutions that get the most public votes are declared Global Winners, and each team is awarded with a prize money of 5000 euros for further development of their solution.

At the closing ceremony of the 28h Challenge event, all finalist teams were invited to sign up to participate in the DigiEduHack event, an international event organized by the Alto University of Finland, in collaboration with other European institutions. The condition to participate was for teams to have previously participated in "Desafía tu mente" 28h.

Seven 28h teams signed up for this event, which took place in November 2020. Of those teams, the local UPC jury chose EduSex team as the winner, which had been awarded third place in 28h. EduSex, the finalist project, is a game based on everyday stories adapted to the age and location of the player. The goal is to help both children and teenagers learn about Comprehensive Sex Education (CSE) in a playful manner. The participating students realized that the subject is rarely talked about, even considered taboo in our society. (Source: link).

This team, made up of four UPC students, continued to advance and passed the next two stages of the European DigiEduHack event:

- Stage 1: The winners of the local hackathons were selected in each participating educational institution. Two hundred and fifty-three teams from around the world participated. The 54 winning teams were announced.
- Stage 2: The European jury evaluated 54 projects and chose 12 finalists. The EduSex team was among the finalists. (Source: link).

- Stage 3: Three weeks of open voting began in a public voting site of the United Nations, Unite Ideas. The three teams with the highest number of voters were chosen as first place winners. (Source: link).

Table 9. Members of the EduSex team

EduSex Team	
Carla Rojas Arana	Professional Interior Design
Sergio Farfán Mendoza	Communication and Marketing
Nidia Quintana Zaconetta	Communication and Publicity
Lucia Corilla Grados	Communication and Publicity
Mentor: Carlos Rojas Terán	Industrial Engineering

At the end of all the stages, the UPC EduSex team was selected as one of the overall winners of DigiEduHack, reaching the first place along with two European universities, from Italy and Portugal. In addition to the monetary award they will receive to make their project a reality, they have been declared 2021 global ambassadors of DigiEduHack, an event sponsored by the European Community and the United Nations. (Source: link).

Figure 16. Global Winning Projects at DigiEduHack 2020.

Sergio Farfán	Lucía Corilla	Carla Rojas	Nidia Quintana	Carlos Rojas
Egresado de la Carrera de Comunicación y Marketing	Egresada de la Carrera de Comunicación y Publicidad	Egresada de la Carrera de Diseño Profesional de Interiores	Egresada de la Carrera de Comunicación y Publicidad	Docente de la Carrera de Ingeniería Industrial

Figure 17. UPC Team - EduSex Project DigiEduHack 2020 global winner.

School of Architecture

a) **Architecture Program Students win the Popularity Award Category at the TEAM20 Architecture and Urban Planning Competition**

The TEAM20 Architecture and Urban Planning competition has been the benchmark event in the architecture field, since 2013. Led by the Cross-Strait Urban and Industrial Planning Federation, launched by the Taiwan Institute of Urban Planning, All-China Federation Industry and Commerce, cross-strait real estate research centers and Ensemble Urbain, this competition is the first to have all the distinguished architecture schools from Taiwan, China and Hong Kong and since 2019, the organizers have invited more than 100 schools around the world to recommend its best talents and professionals as participants or jury members. (Source: link). The competition comprises two areas: Architecture Design and Urban Planning as well as a topic symposium. This design allows students from different fields and different parts of the world to share their experiences and ignite ideas to advance students' career and improve their learning trajectory. In the long run, it creates endless possibilities for the partnerships between academics and the industry. (Source: link).

Participants must be a 2020 undergraduate student of architecture and planning related fields and also the submitted work must be a graduation project of 2020.

Representing the UPC Architecture program, students Diego Medina Rodríguez and Daniela García Castillo participated in the Popularity Award category and Josué Arias Abanto and Daniela García Castillo in the Architecture Design category. All projects were developed in the Thesis Workshop course, and later evaluated by an international jury made up of 10 architects from South Asia, Europe, and South America.

Daniela García Castillo and Josué Arias Abanto were the winners in the Popularity Award category with the projects "Quebrada Verde Community Educational Institute" and "Music in the City," respectively.

In the Architecture Design category, Diego Medina Rodriguez and Daniela García Castillo were among the 30 finalists with the projects "National Music School in the Historic Center of Lima" and "Quebrada Verde Community Educational Institute - Pachacamac," respectively.

Additional information about the Quebrada Verde Community Educational Institute project is available at: (link).

Additional information about the Music in the City project is available at: (link).

Figure 18. Contest results publication showing the winners of the Popularity Award category: Daniela García and Josué Arias.

Figure 19. Photo of the Popularity Award category winning project: «*Quebrada Verde Community Educational Institute – Pachacamac*» by the student Daniela García, and «Music City» by the student Josué Arias, respectively.

b) Architecture and Civil Engineering Graduates win the 8th National Social Housing Contest - "Construye para Crecer" 2020 (Build to Grow)

This contest was organized by the Ministry of Housing, Construction and Sanitation and Mi Vivienda Fund. The purpose was to promote formal social housing with the development of two housing models: multi-family and single-family. All according to the thematic areas economic accessibility, modular growth, sustainability and technology.

The competition was aimed at students, professionals and companies in the field of architecture and engineering nationwide. The best projects have easy access to the country's municipal, district and provincial project banks. This way, they can be replicated in similar geographical and environmental settings and contexts. (Source: link).

In the 2020 edition, the Architecture graduates Mariana Majima and Esteban Zupan, alongside Civil Engineering graduate Paul Rodríguez, teaming with Víctor Salinas and Rafael Guzmán, where the winners of the 8th National Social Housing Contest - "Construye para Crecer" 2020.

Additional information about this competition is available at: (link).

Figure 20. UPC graduates, winners of the 8th National Social Housing Contest – "Construye para Crecer" 2020.

c) Architecture program graduate developed a project for coral conservation in Australia

Rafael Contreras, Architecture graduate, and his firm, Contreras Earl Architecture started in 2020 the development of The Living Coral Biobank project. This work, carried out together with leading engineering and sustainability consultants Arup and Werner Sobek, will be the first facility in the world dedicated to coral conservation, with a unique typology, focused on guaranteeing the survival of 800 species of endangered corals. (Source: link)

This "living ark" will be located at the gateway to the Great Barrier Reef in Port Douglas, North Queensland, Australia. The Australian organization of the same name, Great Barrier Reef Legacy (dedicated for more than 35 years to preserving and protecting the corals of the Great Barrier Reef) collaborated in the development of this 'lighthouse' project, with some of the best scientists and educators.

Living Coral Biobank will be a world leader in next-generation renewable energy design, since its innovative design and engineering will create optimal conditions for coral storage while minimizing energy consumption and taking advantage of solar energy.

"Our ambition is also to create a beacon for environmental awareness. A center of hope, learning and wonder," said Rafael Contreras, UPC alumni. (Source: link).

Figure 21. Rafael Contreras together with his project for coral conservation in Australia: Living Coral Biobank.

School of Design

a) **Professional Graphic Design Program Student participated in the Call for Graphic Works in Madrid Gráfica**

Madrid Gráfica is an annual exhibition of posters organized by the Foro de Empresas por Madrid (Madrid Business Forum), the Madrid City Council and the Madrid Designers Association (DIMAD). This exhibition aims to show the value of graphics for visual communication, culture and economy in society. (Source: link).

The 2020 slogan was "Covid Exit" and, through the use of posters, sought to highlight the importance of graphic design in society, as well as the responsibility that falls on designers to inform and encourage compliance with the measures imposed in this "new normal." (Source: link).

A student of the Professional Graphic Design program participated in this international call for graphic works exhibited in the city of Madrid, Spain. More than 600 posters were received from around the world, but only 100 were chosen for exhibition at Plaza Juan Goytisolo from October 13 to November 1, 2020. Later, they were exhibited at the Central de Diseño Matadero Madrid and published on the Madrid Gráfica website.

They sought posters that "reach deep, that replace long arguments with simple and strong messages that make people think, through feeling, sense of humor or graphic strength." One of these was that of student Mariana Montalvo, who, inspired by the classic "Exit" sign, created a minimalist design sending a clear, direct and easy-to-understand message to people all over the world: Entering is the exit.

The designs presented at the Madrid Gráfica 20 event, entitled "Covid Exit", are available at the following link (link).

Figure 22. Minimalist design developed by Mariana V. Montalvo (UPC) for the Madrid Gráfica 20 exhibit.

Figure 23. Mariana Montalvo, student of the Professional Graphic Design Program.

b) Professional Graphic Design Graduate wins "Latin American Design Awards" Contest

The Latin American Design Awards (LADAWARDS) honor the best design ideas and pieces based on their innovation, impact and creativity, seeking to promote the creative industry and visual communication in Latin America. (Source: link).

In early 2020, Martín André Escalante Robles, graduate of the Professional Graphic Design program, participated in the 4th edition of the Latin American Design Awards, a recognition of the best ideas and graphic pieces of the creative industry and visual communication in Latin America. Martin was the winner of the editorial design category, student subcategory, for his project Caudal, semanario cotidiano. (Source: link)

This is a weekly cultural publication project with the purpose of providing information on current events, literature, entertainment and humor to young Peruvians. The proximity to the Bicentennial of the Republic of Peru was taken as a starting point to think about Peruvian identity and the environment. He also worked on a modular typography based on the "Damero de Pizarro" (Pizarro's Checkerboard). The color palette was a synthesis of the visual culture reflected in the city's "chicha" posters and the layout system reinterprets the way the ads are arranged in space. By integrating all these elements, the editorial system for the newspaper was generated, allowing versatility.

Figure 24. Martin Escalante with his Caudal project.

School of Music

a) **School of Music Students participated in the Festival "*La Magia de Cusco en Casa*" (The Magic of Cusco at Home) the First Concert Performed via Streaming in Peru**

On June 24, 2020 the concert "*La Magia de Cusco en Casa*," first digital festival, was held in Peru aiming to promote Peruvian music, art and culture as part of the festivities celebrated in Cusco, as well as to disseminate the main tourist attractions of this city. Mauricio Mesones, an internationally renowned musician and professor of the UPC Music program, who promotes Peruvian music through fusion that incorporates elements of diverse musical styles of the country, selected a group of students, between the third and eighth semester, of the UPC Music program, as well as a group of graduates and professors of this program, with experience in the areas of live performance and music production.

The following is a list of students, graduates and professors of the Music program who participated in this concert: Cristian del Águila (student), Gian Marco Solari (student), Carlos Perrigo (graduate),

Camila Naranjo (graduate), Diego Rodríguez (graduate), Mauricio Mesones (professor), Miguel Ginocchio (professor) and Rafael Miranda (professor).

The development and production of this concert allowed students and graduates of the Music program to develop the ability to adapt to a new reality in the music industry by implementing an online recording process, result of the required adjustments to stop the spread of Covid-19.

This concert was nominated by the newspaper El Comercio for the Luces 2020 Award for the Best Streaming Concert in the country.

The full-concert is available at: (link).

Additional Information about Premios Luces 2020 "Best Streaming Concert Category" is available at: (link).
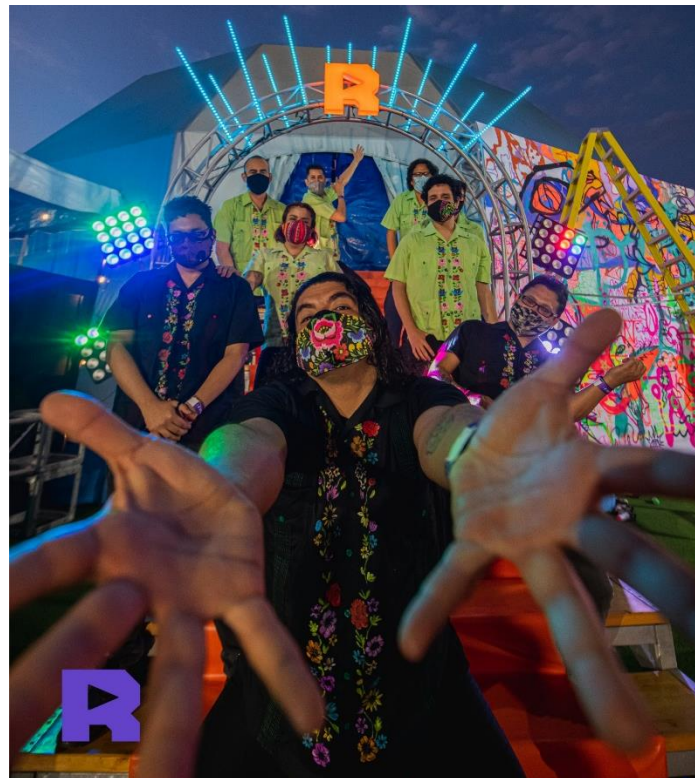
Figure 25. Students, graduates and professors of the UPC Music program who participated in Peru's first streaming concert: La Magia de Cusco en Casa, with Mauricio Mesones (professor) as the leader of the group, followed by Carlos Perrigo (graduate), Camila Naranjo (graduate), Cristian del Aguila (student), Miguel Ginocchio (professor), Rafael Miranda (professor), Gian Marco Solari (student) and Diego Rodriguez (graduate).

b) UPC Music Program Students recorded Michael Jackson's "Heal the World" Cover at Home.

From their homes, Music students recorded the performance of various instruments in order to cover the well-known song "Heal the World" by Michael Jackson, renaming it "Heal the Covid." The goal was to send people a message of unity, solidarity and awareness in these challenging times through music.

The production of this video was carried out by UPC TV, responsible for the editing and selection of supporting shots for the video. This project brought together members of different schools of the university such as the School of Communications, the School of Health Sciences and the School of Contemporary Arts.

The students of the School of Music that participated in this project were: Axell Cervera, Nicolás Tapia, Sayuri Espinoza, Ricardo Rabanal, Isaí Álvarez, Nicole Olavarria, Jandy Torres and Sara Cueva.

The video production of "Heal the Covid" is available at UPC TV: (link).

Figure 26. Jandy Torres, Ricardo Rabanal, Isaí Álvarez, Nicolas Tapia, and Sayuri Espinoza, students of the UPC Music Program, in the production of the video: "Heal the Covid".

c) Music Program Graduate led Project that Showcases Peru's Musical Richness

Peru is globally recognized for being a diverse country that brings together different cultures and — with them— a wide musical background that is manifested in the existence of different musical instruments that accompany the dances and compositions from each corner of Peru. As a way of celebrating this diversity, the students of the Music program of the Universidad Peruana de Ciencias Aplicadas (UPC), accompanied by fellow musicians, participated in the project "Locura Peruana" (Peruvian Madness) led by the program graduate, Elías Huerta.

Nearly 30 musicians, both professional and in training, contributed with a musical arrangement that has the National Anthem at its rhythmic core, showcasing the different musical genres that exist in Peru, part of its identity.

The video production was developed remotely, lasting two and a half weeks. Furthermore, we can listen to different musical instruments such as drums, guitar, *cajita rítmica, cajón, timbales, quijada*, keyboards, *charango*, among others, showing different styles of Peruvian music that are part of various regions and attempt, through this version, to establish a journey through certain parts of Peru. (Source: link).

The video of the project "Locura Peruana" is available at the following (link).

d) "Alerta Rocket", a band led by a UPC faculty member, was nominated for the Latin Grammy 2020

UPC talent is part of the list of nominees for the 21st edition of the Latin Grammy 2020, which brings together the best talent in the Latin American music industry. The Peruvian rock band "Alerta Rocket," led by Edgar Guerra, professor of the Humanities department at UPC, received a nomination.

Edgar Guerra is the vocalist and lead guitarist of "Alerta Rocket," a Peruvian rock band that mixes classic and modern rock influences. The band has received its first Latin Grammy nomination in the category "Best Packaging Design" for its album "Lado A" (link), released in March 2020.

Additional information on the achievement available at: (link).

School of Law

a) School of Law Students Participated in the MOOT Madrid 2020 Obtaining the Third Place for Best Statement of Claims and the Second Place for Best Speaker of the Competition

MOOT Madrid is an international competition on Arbitration and Commercial Law, which aims to contribute to the training of law students on issues related to the uniform law for international trade and its resolution through International Commercial Arbitration. (Source: link).

MOOT Madrid is directed at national and international professionals with an interest in commercial law and international arbitration who can participate as arbitrators in this forum, which also serves as a platform for talent recruitment. (Source: link).

The Law School of the Universidad Peruana de Ciencias Aplicadas (UPC) participated in the MOOT Madrid 2020 organized by the Universidad Carlos III de Madrid and the United Nations Commission on International Trade Law (UNCITRAL), with the sponsorship of the Spanish Arbitration Club.

Since November 2019, the UPC team made up by the law students: Eduardo Barrenechea, Paulo Castañeda, Carolina Espiche, Lorena Gamarra, Josemaría Salazar and Julio Yépez prepared for the competition under the guidance of professor Elvira Martinez Coco, a recognized national and international arbitrator and ICSID arbitrator appointed for six years by the Peruvian Government. She was accompanied by co-coach Mr. Oscar Ponce de León Martínez, who has been a coach of the UPC Team for five years. In 2020, Dr. Briana Canorio, former Secretary General of the OSCE

Arbitration Center and Latin-America Representative (2017-2019) in the Young Arbitrators Forum (YAF) of the International Chamber of Commerce based in Paris, joined as a coach.

After four days of demanding hearings, the UPC team made it to the semifinals, placing among the top four teams in the competition. The team was awarded third place for the Best Statement of Claims and the second place for the Best Speaker of the Competition was obtained by student Paulo Castañeda. (Source: Link).

b) **Law Student Launched a Social Project creating "*Jóvenes por un Nuevo Perú*" (Youths for a New Peru)**

Angela Calderon, a student of the School of Law, started a social project called "Jóvenes por un Nuevo Perú." The purpose of this project is to support the education of children from first to sixth grade in elementary school by providing free virtual counseling, helping them to develop both their academic and soft skills.

The project began with volunteers, 5th grade high school students and professionals, who assisted children with their academic tasks via online, most of them located in the Junín region. However, this initiative was able to extend to several Peruvian regions.

The courses taught were: Communication, Mathematics, Civics & History and English. In addition, motivational programs were implemented to support the development of children and young people, such as dance, singing, painting, storytelling, and handicrafts workshops. Moreover, a workshop called "Homo Sapiens" was conducted, which targeted the development of young people from the age of 15, thus helping their personal growth. (Source: link).

The project lasted 9 weeks, from mid-October to the end of December 2020. There were 227 volunteers who participated and around 100 children were benefited, most of them from public schools. As part of the staff of collaborators, 4 students from the School of Law also participated helping with the organization of the volunteers, these are presented below:

- Natalia Farid Milla Solis - Talent Management area
- Valeria Xibelly Minchan Oré – Workshops coordinator
- Emily Nicolle Tuesta Barcenes – English coordinator
- Ariana Daniela Salazar Evangelista – Comunication Coordinator

Figure 27. Angela Calderón, founder of "Jóvenes por un nuevo Perú".

c) Law program student obtained an international internship at the Permanent Court of Arbitration in The Hague - The Netherlands.

The PCA offers internships to law students and recent graduates who wish to gain experience in an international arbitration institution. Internships offer a balance between legal and administrative assignments, allowing interns to gain insight into the legal and practical aspects of international arbitration.

 The PCA is very selective with admissions. There are a limited number of offers each year, which means that not all qualified applicants may be offered an internship. These internships are awarded to individuals with exceptional academic and/or professional backgrounds (Source: link).

On January 2, 2020, Hernán Castro Tovar, a UPC Law student, began his internship for a period of three months at the Permanent Court of Arbitration in The Hague - The Netherlands. He obtained the internship after winning first place in the XI Edition of the International Arbitration Competition of the UBA (University of Buenos Aires).

The Law student was the only Peruvian intern at the PCA (Permanent Court of Arbitration), who participated along with other paralegals from different nationalities and universities, such as (Universidad Carlos III de Madrid, Yale University in the USA and McGill University in Canada).

d) Law Students participated in the First Virtual Model OAS

The First Virtual Model of the Permanent Council of the OAS seeks to adapt to the current circumstances that the world is going through due to the pandemic. In addition, it aims to provide an opportunity to integrate university students from 31 different countries, where they can generate ideas and innovative solutions to the COVID-19 situation. (Source: link).

UPC Law School students participated in the First Virtual Model OAS whose central theme revolved around "The role of youth in facing the challenges of COVID-19 in the Americas." This event was held from August 12 to 14, 2020.

Figure 28. Law students in the First Virtual Model OAS.

School of Health Sciences

a) **Dentistry Program Students participated in the "I Contest of Research, Intervention Projects and Entrepreneurship" held in December 2020.**

Last December 16, 2020, the virtual event "I Research, Intervention Projects and Entrepreneurship Contest" was developed by UPC's Dentistry program for its entire community. This was a free access event for all students of the program and in general for the scientific community.

Students of the Dentistry program presented their research leading to their professional title, as well as their community intervention work, before a jury. This activity is intended to be replicated year after year. Table 10 shows the list of works presented in the different categories.

Table 10. List of works presented in the I Research, Intervention Projects and Entrepreneurship Contest by category

Category Research Protocol		
Students	**Title**	**Repository**
Becerra Miguras Maite; Vargas Claudio Fernando	Asociación entre el impacto en la salud oral y la autopercepción de la salud periodontal con el consumo de cigarrillos electrónicos en los jóvenes de Lima Metropolitana durante el 2021 (Association between the impact on oral health and self-perceived periodontal health with the consumption of electronic cigarettes among young people in Metropolitan Lima during 2021)	[Link]
Callalli Gambarini Luis Alfredo; Navarro Tillit Diego	Asociación entre el nivel de indiferencia al tratamiento dental y los hábitos de higiene bucal en adultos en edades comprendidas entre los 18 a 45 años de la urbanización Buenos Aires de Villa del distrito Chorrillos en el año 2020 (Association between the level of indifference to dental treatment and oral hygiene habits in adults aged 18 to 45 years in the Buenos Aires de Villa urbanization of the Chorrillos district in 2020)	[Link]
Herrera Brutton Jackeline Solange	Nivel de conocimiento y prácticas en salud oral de pacientes con Diabetes Mellitus: Revisión sistemática y Meta análisis (Level of knowledge and practices in oral health of patients with Diabetes Mellitus: Systematic review and meta-analysis)	[Link]
Israel Balvin Solangue	Asociación entre el bruxismo y el tipo de instrumento musical de violinistas y violistas (Association between bruxism and type of musical instrument in violinists and violists)	[Link]
Moreno Mikaela Mancilla Flora	Comparación in vitro del efecto antibacteriano y citotóxico del extracto metanólico de Phyllanthus niruri (Chanca Piedra) y Caesalpinia spinosa (Tara) con la fusión de ambos frente a cepas de Enterococcus faecalis (ATCC 29212) (In vitro comparison of the antibacterial and cytotoxic effect of the methanolic extract of Phyllanthus niruri (Chanca Piedra) and Caesalpinia spinosa (Tara) with the fusion of both against strains of Enterococcus faecalis (ATCC 29212))	[Link]

Students	Title	
Sayán Gabriel	Nivel de conocimiento y actitudes sobre el uso de células madre en odontólogos de Lima Metropolitana durante el 2021 (Level of knowledge and attitudes on the use of stem cells in dentists in Metropolitan Lima during 2021)	
Torres Athina Cruz Claudia	Asociación del uso del servicio dental y la necesidad de tratamiento de pacientes de lima, Perú durante el aislamiento social obligatorio por la pandemia del covid-19 en el año 2020 (Association of dental service use and the need for treatment of patients in Lima, Peru during mandatory social isolation due to the Covid-19 pandemic in the year 2020)	
Category Thesis		
Students	**Title**	
Alayo Zamudio, Mayra Alejandra; Linares Carranza, Cristhian Pavel	Evaluación de la resistencia adhesiva a dentina de sistemas adhesivos universales con y sin cinta celuloide como neutralizador de la capa inhibida de oxígeno (Evaluation of the adhesive strength to dentin of universal adhesive systems with and without celluloid tape as a neutralizer of the inhibited oxygen layer)	
Aranda Rischmoller Jackeline Eliana	Nivel de conocimiento sobre salud periodontal de estudiantes de ciencias de la salud de una universidad privada de Lima- Perú (Level of knowledge about periodontal health among health science students at a private university in Lima, Peru)	
Carbajal Pimentel, Claudia Fernanda; Rodríguez Robles, Tiffany Talib	Asociación entre el impacto psicosocial de la estética dental con la discriminación auto percibida en pacientes ambulatorios de un hospital público en Lima (Association between the psychosocial impact of dental esthetics and self-perceived discrimination in outpatients of a public hospital in Lima)	
Chipana Salazar Katherine Yesenia	Comparación *in vitro* de la microdureza y rugosidad de la dentina radicular al ser expuesta al extracto metanólico de *Matricaria chamomilla* (manzanilla) con otras soluciones irrigantes (In vitro comparison of the microhardness and roughness of root dentin when exposed to methanolic extract of Matricaria chamomilla (chamomile) with other irrigant solutions)	

Diaz Cribillero Katia, Torres Restan Claudia	Asociación entre la satisfacción del paciente y la motivación académica de los estudiantes de odontología de pregrado en un centro de salud de una universidad privada de Lima, Perú (Association between patient satisfaction and academic motivation of undergraduate dental students at a private university health center in Lima, Peru)	Link
Guerra Robles, Madai Nicole; Meneses Fuertes, Evelin Brenda	Evaluación *in vitro* de la rugosidad superficial de una pasta experimental de pulido para acrílico a base de conchas de moluscos (In vitro evaluation of the surface roughness of an experimental polishing paste for acrylics based on mollusk shells)	Link
Ayma León Valery, Huañec Huañec Paucar Cynthia	Asociación entre el bruxismo autorreportado y el rendimiento académico de los estudiantes de una universidad privada de Lima- Perú (Association between self-reported bruxism and academic performance of students at a private university in Lima, Peru)	Link
Jara Gimena Angélica	Asociación entre el uso de hilo dental y enfermedad periodontal en adultos de los Estados Unidos de América entre el 2013 al 2014 (Association between flossing and periodontal disease in adults in the United States of America between 2013 to 2014)	Link
Melgarejo Salazar Luis Fernando, Salas Quispe Luisa Fernanda	Conocimiento, percepción y actitudes de las medidas de prevención relacionadas al covid-19 entre los odontólogos de distintos distritos de Lima, Perú de mayor y menor número de contagiados (Knowledge, perception and attitudes of prevention measures related to Covid-19 among dentists in different districts of Lima, Peru with the highest and lowest number of infected patients)	Link
Díaz Vilela, Elizabeth Alexandra; Salazar Reyna, Claudia Estela	Evaluación de la percepción de los alumnos respecto a la primera práctica preclínica odontológica en una universidad privada de la ciudad de Lima (Evaluation of the students' perception of the first pre-clinical dental practice in a private university in the city of Lima)	Link
Velarde Medina Raquel	Adaptación y validación del instrumento CPQ 11-14 en pacientes invidentes peruanos que asisten a la institución educativa Luis Braille: un estudio piloto (Adaptation and validation of the CPQ 11-14 instrument in Peruvian blind patients attending the Luis Braille educational institution: a pilot study)	Link

Students	Title	
Wiess Laurencio Fabrizzio Alfredo	Eficacia disolvente de una sustancia experimental a base de aceite esencial de *Myrciaria dubia* en la desobturación de conductos radiculares (Solvent efficacy of an experimental substance based on essential oil of Myrciaria dubia in the deobturation of root canals)	Link
Zarzoza Silva, Viviana Alessandra; Yong López, Carlomagno Arturo Conqueror	Percepción sobre las dificultades en el tratamiento endodóntico entre los odontólogos generales y estudiantes de odontología (Perception of endodontic treatment difficulties among general dentists and dental students)	Link
Category Intervention Project during Covid-19		
Students	**Title**	
Meza Pucuhuayla Adamary Iriana	Prácticas estratégicas preventivas frente al covid-19 en la familia Meza Pucuhuayla en el periodo de agosto a octubre del 2020 en el distrito de El Agustino (Strategic preventive practices against Covid-19 in the Meza Pucuhuayla family in the period from August to October 2020 in the district of El Agustino)	Link
Diaz Merino Soledad del Carmen	Informe de proyecto de intervención para mejorar las prácticas en salud oral y la organización del tiempo dentro de un hogar en Cajamarca, Perú 2020 (Intervention project report to improve oral health practices and time management in a household in Cajamarca, Peru 2020)	Link
Julca Chavez Stefany Christel	Informe de proyecto de intervención para la promoción de adecuadas prácticas saludables en un hogar del distrito de Jesús María, Lima - Perú 2020 (Intervention project report for the promotion of adequate healthy practices in a home in the district of Jesús María, Lima - Peru 2020)	Link
Pietrapiana León and León Francesco	Proyecto de intervención para la promoción de las actividades saludables de un entorno familiar durante el contexto del covid-19, La Molina, Lima-Perú 2020 (Intervention project for the promotion of healthy activities in a family environment in the context of Covid-19, La Molina, Lima-Peru 2020)	Link
Portocarrero Contreras Katia	Proyecto de intervención en un entorno familiar del distrito de San Martín de Porres en el período 2020-1 (Intervention project in a family environment in the district of San Martin de Porres in the period 2020-1)	Link
Salazar Reyna Claudia Estela	Intervention project report	Link

Soto Barrera Milagros de Anghela	Proyecto de intervención para la promoción de un estilo de vida saludable en un entorno familiar en el distrito de Independencia, Lima-Perú en el periodo 2020-1 (Intervention project for the promotion of a healthy lifestyle in a family environment in the district of Independencia, Lima-Peru in the period 2020-1)	
Estrada Tejada Valeria Jalisse	Proyecto de intervención para mejorar los cuidados de la salud dentro del hogar en el distrito de Surquillo, Lima Perú 2020 (Intervention project to improve home health care in the district of Surquillo, Lima Peru 2020)	

Table 11 presents the first place winners.

Table 11. List of students who won first place in each category

Category Research Protocol	
Student	**Title**
Sayán Gabriel	Nivel de conocimiento y actitudes sobre el uso de células madre en odontólogos de Lima Metropolitana durante el 2021 (Level of knowledge and attitudes on the use of stem cells in dentists in Metropolitan Lima during 2021)
Category Thesis	
Student	**Title**
Velarde Medina Raquel	Adaptación y validación del instrumento CPQ 11-14 en pacientes invidentes peruanos que asisten a la institución educativa Luis Braille: un estudio piloto (Adaptation and validation of the CPQ 11-14 instrument in Peruvian blind patients attending the Luis Braille educational institution: a pilot study)
Category Intervention Project during Covid-19	
Student	**Title**
Portocarrero Contreras Katia	Proyecto de intervención en un entorno familiar del distrito de San Martín de Porres en el período 2020-1 (Intervention project in a family environment in the district of San Martin de Porres in the period 2020-1)

This contest allows students and graduates to start in the field of research, disseminating their experiences in this area, preparing them for future situations they will have to address in their professional life. The call for the competition was published at the UPC Educational Innovation portal (link) and the works, in poster format, are available in the UPC Academic Repository

b) Medicine and Law Students qualify for the Pan American Taekwondo Championship

The University Sports Federation of Peru (FEDUP), with the sponsorship of the Peruvian Sports Institute (IPD), organized the II National Online University Taekwondo Championship - Poomsae 2020-II. The university championship gathered 330 athletes from 29 institutions from all over the country. The competition modality was Poomsae, from white belts (novice) to black belts (advanced). UPC obtained 1550 points with 11 gold medals, 6 silver medals and 12 bronze medals. (Source: link).

In this edition, the National Online University Taekwondo Championship 2020-II, was developed under video delivery using the virtual platform YouTube for the transmission.

Additionally, the live evaluation system was used for the black belts that competed in the "Ranking Danes" category. This category also served to qualify for the Pan American University Championship, organized by FISU in December 2020 (International University Sports Federation). In this sense, UPC classified two athletes, out of the four that will represent Perú in this event. (Source: link).

The students classified were:

- Classified: Hugo Del Castillo student from the Medicine program
- Classified: Celeste Argomedo student from the Law program
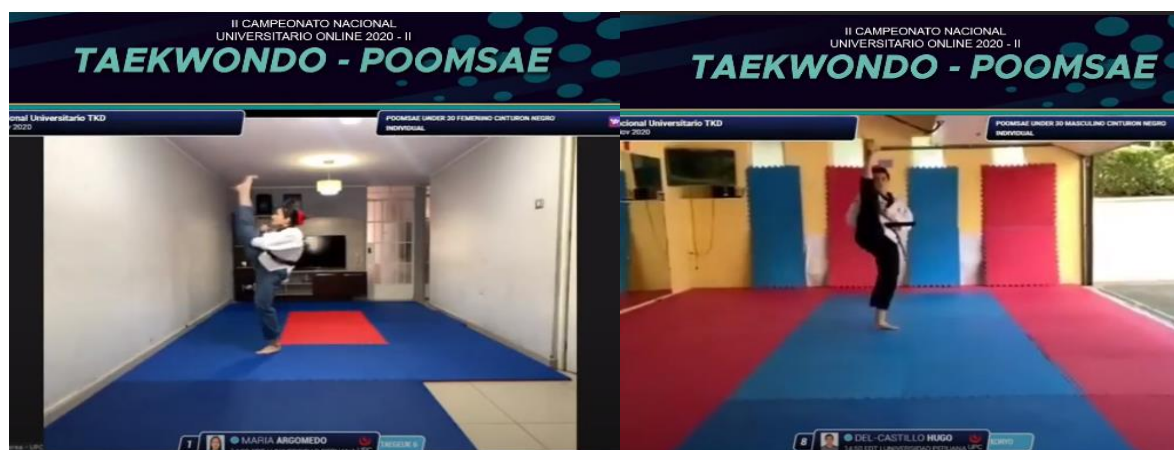
Figure 29. Celeste Argomedo (Law student) next to Hugo Del Castillo (Medicine student).

c) Medicine Program Students and Graduates Published their Research Papers in Several International Indexed Journals.

In 2020, students and graduates of the Medicine program published their research papers in international indexed journals. Table 12 presents the list of published works.

Table 12. List of publications made by students and graduates of the Medicine program at UPC

Title of the publication	Authors	Journal	Link
An emerging public health threat: Mayaro virus increases its distribution in Peru	Aguilar-Luis M.A., del Valle-Mendoza J., Silva-Caso W., Gil-Ramirez T., Levy-Blitchtein S. (student), Bazán-Mayra J., Zavaleta-Gavidia V., Cornejo-Pacherres D., Palomares-Reyes C., del Valle L.J.	International Journal of Infectious Diseases	Link
Association between Maternal Depressive Symptoms with Overweight/Obesity among Children Aged 0-5 Years According to the 2016 Demographic and Family Health Survey	Echevarria-Castro, Nataly(graduate); Matayoshi-Perez, Andrea (graduate); Alvarado, German F.	Childhood Obesity	Link
Association between serum transaminase levels and insulin resistance in euthyroid and non-diabetic adults: Serum transaminase levels and insulin resistance in healthy adults	Yamamoto J.M. (graduate), Padro-Nuñez S. (graduate), Guarnizo-Poma M., Lazaro-Alcantara H., Paico-Palacios S., Pantoja-Torres B., del Carmen Ranilla-Seguin V., Benites-Zapata V.A., Insulin Resistance and Metabolic Syndrome Research Group	Diabetes and Metabolic Syndrome: Clinical Research and Reviews	Link
Burnout syndrome in athletes and their association with body image dissatisfaction at a private university	Baella-Vigil G.V. (graduate), Hurtado-Bocanegra M., Marroquín-Quintana J., Rojas-Fernández M.V., Rosales-Medina J.M., Urbina-Rodríguez J.C., Tarabay-Barriga A.P., Carreazo N.Y.	The Journal of Sports Medicine and Physical Fitness	Link
Factors associated with self-medication in users of drugstores and pharmacies in Peru: An analysis of the national survey on	Urrunaga-Pastor D., Benites-Zapata V.A., Mezones-Holguín E.	F1000Research	Link

Title of the publication	Authors	Journal	Link
user satisfaction of health services, ENSUSALUD 2015			
First report of Myroides phaeus bacteraemia identified by Polymerase chain reaction and genetic sequencing	Pérez-Lazo G., Morales-Moreno A., Soto-Febres F., Jove-Químper H., Morales-Castillo L, Palomares-Reyes C., Del Valle-Mendoza J., Aguilar-Luis M., Silva-Caso W. (graduate)	IDCases	Link
Higher HOMA-IR index is associated with increased excess weight loss in patients with BMI ≥ 35 kg/m2 after vertical gastrectomy [Índice HOMA-IR as a predictor of excess weight reduction in patients with body mass index (BMI) ≥ 35 kg/m2 undergoing vertical gastrectomy].	Casas-Tapia C. (graduate), Araujo-Castillo R.V., Saavedra-Tafur L., Bert-Dulanto A. (graduate), Piscoya A., Casas-Lucich A.	Cirugía Española	Link
How the initiating ribosome copes with ppGpp to translate mRNAs	Vinogradova D.S., Zegarra V., Maksimova E., Nakamoto J.A., Kasatsky P., Paleskava A., Konevega A.L., Milón P.	PLoS Biology	Link
Letter to the editor regarding "Proton therapy for low-grade gliomas in adults: A systematic review"	Escobar A., Gutierrez M., Tejada R.	Clinical Neurology and Neurosurgery	Link
Leukocytoclastic vasculitis associated with nontyphoidal Salmonella in a patient infected with human immunodeficiency virus	Cornejo-Venegas G., Montenegro-Idrogo J.J., Resurrección-Delgado C., Mendez-Guerra C. (student), Quevedo-Ramirez A., García-Cortez Y., Chiappe-Gonzalez A.	International Journal of STD and AIDS	Link
Lung Cancer in Peru	Ruiz R., Galvez-Nino M., Poquioma E., Limache-García A., Amorin E., Olivera M., Valdiviezo N. (graduate), Trejo J.M., Heredia A., Sarria G., Aguilar A., Raez L., Neciosup S.P., Gomez H.L., Payet E., Mas L.	Journal of Thoracic Oncology	Link

Title of the publication	Authors	Journal	Link
Migration to study in medical schools of Peru [Migración para estudiar en escuelas de medicina humana en Perú]	Chambergo-Michilot D., Muñoz-Medina C.E., Lizarzaburu-Castagnino D., León-Jiménez F., Odar-Sampé M., Pereyra-Elías R. (student), Mayta-Tristán P., Red LIRHUS, Grupo Colaborativo Latinoamericano para la Investigacion en Recursos Humanos en Salud (Red-LIRHUS).	Revista peruana de medicina experimental y salud pública	Link
Missing asthma patients in epidemiologic survey?	Rommel Diaz F., Rojas-Luna D. (graduate), Maguiña J.L.	Journal of Asthma	Link
Oropouche infection a neglected arbovirus in patients with acute febrile illness from the Peruvian coast	Martins-Luna J., Del Valle-Mendoza J., Silva-Caso W. (graduate), Sandoval I., Del Valle L.J., Palomares-Reyes C., Carrillo-Ng H., Peña-Tuesta I., Aguilar-Luis M.A.	BMC Research Notes	Link
Performance of the FIB-4 index in esophageal varices screening in patients with the diagnosis of liver cirrhosis [Desempeñ o del índice FIB-4 en el despistaje de vá rices esofá gicas en pacientes con el diagnóstico de cirrosis hepá tica]	Cá Lamo-Guzmá N B. (graduate), De Vinatea-Serrano L. (graduate), Piscoya A., Segura E.R.	Revista de gastroenterologia del Perú: organo oficial de la Sociedad de Gastroenterologia del Perú	Link
Type 2 Sturge-Weber Syndrome [Síndrome de Sturge-Weber tipo 2]	Guerreros-Espino C. (graduate), Collazos-Huamán L. (graduate), Valdivieso-Herrera M.A., Benites-Zapata V.A.	Piel	Link
Von Hippel-Lindau disease with extramedullary and pancreatic involvement	Pantigozo-Rimachi A. (graduate), Murillo-Díaz G. (graduate), Carreazo N.Y., Cucho Dávila V.M.	Medical Journal Armed Forces India	Link

d) Medicine Program Graduate Joins Medical Team at Great Plains Health Hospital in Nebraska

Alexandra Nuñez, a Medicine graduate, had as her first professional challenge to complete a residency in internal medicine Jacobi Medical Center in New York. During her stay, the state of New York became the epicenter of the coronavirus in the United States, and it was very difficult for her

to see so many people struggling to survive. Alexandra is currently on the medical staff at Great Plains Health. (Source: link).

Figure 30. Alexandra Nuñez (center) as part of the Great Plains Health medical staff.

School of Human Sciences

a) **Professional Translation and Interpretation Student wins 1st Place in Harvard National Model United Nations LA 2020**

Model United Nations (MUN) is a competition that simulates a session of the United Nations General Assembly in which each university delegation must represent a country other than their own and faithfully respond to its foreign policy on the issues under discussion during the conference. At this conference, students have the opportunity to experience the challenges of negotiation and international diplomacy for four consecutive days, all in English.

After six months of preparation and four days of competition, the student Ericka Estremadoyro, member of the UPC - UPC MUN Model United Nations team, won 1st place in the Third Party Actors committee of Harvard NMUN LA 2020, held in the city of Puebla, Mexico between January 16 and 19, 2020. Ericka is a student of the Translation and Interpretation program and has been part of the UPC MUN team since 2018.

"The experience in a Model United Nations allows our students to develop academic competencies and soft skills at the highest level, facing a complex negotiation environment both because of the language barrier and the cultural differences of the other competitors, as well as the need to achieve consensus in an environment of cordiality and diplomacy," said Germán Terán, UPC Faculty of the International Business and Management program and leader of the UPC MUN team. (Source: link).

Figure 31. Ericka Estremadoyro, Professional Translation and Interpretion student

b) Student Participation in the I International Colloquium of Young Researchers in Translation and Interpretation UdeA-UPC

The undergraduate Translation programs+ of the Universidad de Antioquia (Colombia) and the Universidad Peruana de Ciencias Aplicadas held the I International Colloquium of Young Researchers in Translation and Interpretation.

The event aimed to create a space for dialog among senior and young researchers, and undergraduate students in the field of translation. The event was also a co-curricular experience to contribute to the of students' intercultural and research skills. In sum, the colloquium was an international experience to broaden their academic horizons.

This event took place on November 20, 2020, where six students from the UPC Translation and Interpretation program presented their research work: Piero Ruiz, Andrea Chang, Sulay Paiva, Victoria de los Santos, Juan Carlos Quiñones Portocarrero, Diego Cabada Llacsahuanga.

Additional information about this event is available at: ([link](#)).

Table 13. List of research works developed by UPC's Students of the Translation and Interpretation Program presented at UdeA-UPC

Research work	Students
Estrategias de intérpretes no profesionales de servicios médicos: un estudio de caso sobre la ONG Hands On Perú en Trujillo (Strategies of non-professional interpreters of medical services: a case study on the NGO Hands On Peru in Trujillo)	Piero Ruiz and Andrea Chang

Research work	Students
El doblaje y la subtitulación al español latinoamericano de la parodia en la serie Glow (The dubbing and subtitling into Latin American Spanish of the parody in the series Glow)	Sulay Paiva and Victoria de los Santos
El lenguaje soez y tabú en la película Dallas Buyers Club (Foul and taboo language in the movie Dallas Buyers Club)	Juan Carlos Quiñones Portocarrero and Diego Cabada Llacsahuanga

Figure 32. Andrea Chang and Piero Ruiz in the I International Colloquium of Young Researchers in Translation and Interpretation UdeA-UPC.

c) **Professional Translation and Interpretation Students Published a Research Paper in Mutatis Mutandis, the Latin American Translation Journal**

Mutatis Mutandis is a specialized journal, representative of translation research in Latin America. (Source: link). The journal is indexed in Scopus (Q2: language and linguistics).

Melissa Erika Cama-Casafranca and Lucía del Carmen Olivares-Espinoza, students of the Professional Translation and Interpretation program at UPC, published their research findings in a peer-reviewed journal.

The research entitled " The Inca country: Reframing translated news from Spanish to English by the Peruvian News Agency Andina" is an analysis of the reframing strategies and the text functions of news translated from Spanish to English by Andina, a government news agency.

School of Business

a) **UPC's Accounting and Administration Program held its Second Edition of the World Accounting Week (WAW)**

On September 7-12, 2020, UPC held its second edition of the World Accounting Week (WAW), organized by the Accounting and Administration program to provide students with a series of conferences and workshops on topics in the fields of accounting, auditing, and compliance and risk administration, among others. The event included the participation of outstanding experts so as to

strengthen the learning process through practical business experiences. The event included keynote speakers from companies such as PricewaterhouseCoopers (PwC), BBVA, RAMCOR, MINSUR, among others.

The topic of the WAW in 2020 was about Digital Transformation focused on business, where the following activities took place:

Table 14. List of activities carried out during the WAW 2020 week

Date	Speaker	Country	Topic	Company	Time	Recording
7-September	Victor Ventura	Perú	Data analytics with Power BI: A differentiator from today's Accountant	PWC	5:30pm	Link
8-September	Jorge Ramos	Perú	New investment trends in Financial Markets and the use of digital tools	BBVA Bolsa	5:30pm	Link
9-September	Natali Mena (Ramcor)	Perú	Accounting in digital times	RAMCOR	5:30pm	Link
10-September	Ronald Huaman / Dayhana Correa	Perú / Colombia	Key skills for digital transformation	MINSUR	5:30pm	Link
11-September	Bettina Castillo	Perú	The new taxation in Digital Transformation	BBVA Perú	5:30pm	Link

A total of 576 students attended conferences during the six-day event.

All activities, contests and awards were broadcasted live from the official Facebook page of the UPC Accounting program: (link).

b) **The Total Number of Free Counseling Services Provided in 2020 to Accounting and Administration Students Through the NAF Program Increased by 96% in regards to the Previous Year**

The Núcleo de Apoyo Contable y Fiscal Program (Accounting and Tax Support Center) (NAF, in Spanish) is an initiative organized by the European Union throughout the EuroSocial program in coordination with Tax Administrations in Latin America and the Caribbean (LAC) to promote the compliance of tax obligations. Tax Administrations face many challenges to increase tax collection due to many factors such as: taxpayers' lack of trust in the efficiency of public administrations to reduce social inequalities through taxes in different sectors (health, education, and water and sanitation, among others), and fear among taxpayers of being fined by tax administrations after they request information. Therefore, the NAF program, in cooperation with universities, created a space to provide timely advice to taxpayers.

The UPC is the first higher education institution to implement the NAF program in Peru. Since April 2017, fourth to tenth-term students offer free tax advice to the university community (faculty, administrative staff and students), taxpayers and entrepreneurs through the NAF program in all UPC sites (Monterrico, San Isidro, San Miguel and Villa). In addition, taxpayers are assisted by NAF students in DBM offices as a result of an alliance with the Peruvian Entrepreneurs' Association (ASEP). Prior to providing free tax advice, students receive up to 50 hours of free training in tax and customs from the National Superintendence of Tax Administration (SUNAT).

More than 17,000 queries were answered by students of the different NAF (Accounting and Tax Support Center) registered by SUNAT nationwide, in the period from April 2017 to December 2020. The UPC contributed with 25% of participation, thus occupying the first place in the service ranking, having solved more than 4,000 taxpayer inquiries. In addition, with respect to 2019, the total number of consultations increased from a total of 1,004 to 2,044 in 2020 (showing an annual increase of +96%).

Details of the services and consultations provided by NAF students are available at: (link).

On the other hand, due to COVID-19, the NAF students of the UPC's Accounting and Administration program were the first to implement virtual advising, which is being carried out from March 2020 to the present, through the Blackboard Collaborate platform.

Additional information about NAF is available at: (link).

Figure 33. Virtual program of free tax advisory services provided by the UPC's NAF team (2020).

c) International Business Day for Working Adult Students Reunites More than 400 Participants –Students, Alumni and Faculty

The International Business program organized the 2020 International Business Day (IBD) for Working Adult students, which focused mainly on "Digital Evolution in International Business."

More than 400 students, alumni and faculty of the International Business program for undergraduate Working Adult students attended the event. The latter gave participants the opportunity to interact with business leaders and state officials and discuss about relevant topics in today's society.

IDB 2020, held on May 21 2020, involved the participation of Isabel Mansilla, Key Account Manager of Skechers Perú, Christian Neuhaus, Founder and President of Veritrade and Daniela Mora, Senior Business Development & Digital Coordinator of Hapag Lloyd AG.

d) Administration and International Business Graduates Participate in the International Congress Organized by the Universidad Pablo Olavide de Sevilla (Spain)

Last December 3 and 4, 2020, the "Tax challenges in a post-Covid world - Assessment and pending challenges at the domestic and international level" international congress was held, organized by the Pablo Olavide University of Seville, Spain, with the participation of graduates of the Research Group of the Administration and International Business program. (Source: link).

The Congress was financed through the ERDF Operational Programme 2014-2020 and by the Ministry of Economy and Knowledge of the Andalusian Regional Government within the ERDF-UPO Project: "Current challenges of indirect taxation in Spain and Europe" and by the DETREDMI Project "Tax challenges in the new European and international context: digital economy and market", financed by the Ministry of Science, Innovation and Universities of Spain and the financial aids of the School of Law of the Pablo de Olavide University for the organization of scientific activities. (Source: link).

After a rigorous scientific process and the presentation to the members of the editorial committee, the paper presented at the congress was accepted in February 2021 to be published as a collective work in the prestigious Spanish publishing house "Tirant lo Blanch". The publication was prepared by graduates of the Administration and International Business program and was entitled "La digitalización del proceso de importación de bienes en el Perú y su sustentabilidad en el tiempo" (The digitalization of the process of importing goods in Peru and its sustainability over time). The graduates and faculty who participated in the project were:

1. María Chapoñan (graduate)
2. Rosario Napa (graduate)
3. Rossmery Aymara (graduate)
4. David Lezama (graduate)

5. Rodolfo Orellana (graduate)
6. Ricardo Moscoso (professor)
7. Juan Acosta (professor)

e) Administration and International Business Program Students Participated in the Virtual Conference: *"Retos y desafíos del comercio exterior peruano en el contexto de la lucha contra la Covid - 19"* (Challenges of Peruvian Foreign Trade in the Context of the Fight Against Covid - 19)

On May 15, 2020, the virtual conference "Retos y Desafíos del Comercio Exterior peruano en el contexto de la lucha contra el Covid - 19" was held. This academic conference analyzed the current regulatory framework of the Peruvian customs system and the digitalization of logistic processes in the context of Peru's state of emergency. It also analyzed the challenges of Peruvian exports, with special emphasis on the agro-export sector. (Source: link).

The conference was attended by around 1,400 participants and had more than 1,300 comments and 9 thousand reproductions.

The conference is available at the link: link.

Table 15. Speakers and moderators that participated at the conference

Speakers	Moderators
MA Deckner Campusano - Specialist in Customs Management, International Trade and Logistics	Ricardo Moscoso (Professor)
Dr. Javier Oyarse - Specialist in Customs and International Trade	Juan Acosta (Professor)

Figure 34. Virtual conference brochure.

f) UPC's Administration and International Business Program held its 12th International Business Congress "Disruptive Businesses Managing Uncertainty"

On October 14-16, 2020, the Administration and International Business program of UPC's School of Business held its 11th International Business Congress (CONEGO). More than 800 students attended the event.

Keynote speakers included outstanding professionals: Jorge Ramirez, CEO Camposol; Miguel Ángel García, COO of Hyundai Motors España; Carlos Alsúa, Senior Lecturer International Management and Global Entrepreneurship of Arizona.

Through this event, UPC reaffirms its commitment with Peru's development by providing quality education with a global vision. With the support of outstanding experts and business leaders, UPC enhances students' education so that they stand out in Peru and the world.

g) UPC Graduate Joined the Women in Tech Movement with the Purpose of Eliminating Barriers for Women in the World of Technology.

Women in Tech® is an international organization with a double mission: to close the gender gap and to help women embrace technology. The organization focuses on four primary areas that are a call for action: Education, Entrepreneurialism, Social Inclusion, Science & Innovation. The aim is to educate, equip and empower women and girls with the necessary skills and confidence to succeed in STEM career fields. (Source: link).

Isabel Velarde, a graduate of Administration and Marketing, and Communication and Publicity, joined the movement Women in Techwith the purpose of implementing global solutions to bridge the gender gap in STEM (Science, Technology, Engineering and Mathematics) areas.

Additional information available at: link,

Figure 35. Isabel Velarde, UPC graduate.

School of Engineering

a) **Environmental Engineering Program Students Participate in the II Symposium of Science for Sustainable Development, Organized by the Universidad Latina- Costa Rica, with the Presentation of Seven Projects.**

The Symposium of Science for Sustainable Development is an event led by the School of Biological Sciences of the Universidad Latina de Costa Rica, which seeks to provide an opportunity for students to disseminate their research and introduce themselves into the scientific community through the presentation of their work. (Source: link). Participants present projects that respond to a more balanced society, one allowing development with a responsible use of natural resources, seeking equality and social equity, originating knowledge and conservation of our ecosystems, but above all promoting a more sustainable world.

The II Symposium of Science for Sustainable Development was held virtually from October 8 to 9, 2020, with the participation of students of the Environmental Engineering program at UPC.

As part of the Symposium, presentations were made on seven UPC projects developed by students in their courses and related to the generation of sustainable consumption and production, development of sustainable communities and work for the accessibility of resources for all.

Source: Revista Científica, Ecología y Desarrollo Sostenible, published on November 4, 2020 (link).

Table 16. List of the seven projects developed by the students of the UPC Environmental Engineering program

No.	Title	Author	Institution
1	BIOENSAYOS EN SUELOS SALINOS NATIVOS Y SU EFECTO EN EL CRECIMIENTO Y DESARROLLO DE Hordeum vulgare (CEBADA) (Bioassays on native saline soils and their effect on growth and development of hordeum vulgare (barley))	Jareth Marlise Díaz Cervantes (student)	UPC
		Karla Elizabeth Minaya Echevarría (student)	UPC
		Silvia Agüero-Aguilar (professor)	Instituto de Biología del Suelo
2	DESCENTRALIZACIÓN ENERGÉTICA Y COMUNIDADES SOSTENIBLES EN EL PERÚ: VALORIZACIÓN ENERGÉTICA DE RESIDUOS SÓLIDOS Y LODOS DE PTAR" (Energy decentralization and sustainable communities in peru:energy valorization of solid waste and ptar sludge).	Adriana Cisneros Garcia (student)	UPC
		Lysbett Grados Chuque (student)	UPC
		Ingrid Huamali Pinedo (student)	UPC
		Darah Perea Díaz (student)	UPC
		Luciana Reátegui Gerstein (student)	UPC
		Grecia Saguma Mendoza (student)	UPC
		Andrea Tupac Yupanqui Villafuerte (student)	UPC
		Lucero Vásquez Aróstegui (student)	UPC
3	COMUNIDADES URBANAS SOSTENIBLES: SUSTAINABLE URBAN	Andrea Quintana (student)	UPC
		Sherilyn Quiroz (student)	UPC

No.	Title	Author	Institution
	COMMUNITIES: (Sustainable urban communities: electricity generated by kinetic energy from cleaner mass transit users)	Carla Ponce (student)	UPC
		Christian Cardich (student)	UPC
		Karla Minaya (student)	UPC
		Jareth Díaz (student)	UPC
		Daniel Prialé (student)	UPC
4	ESTRATEGIA AMBIENTAL: PROTECCIÓN DE LA SALUD FRENTE AL COVID-19 SIGUIENDO LOS LINEAMIENTOS DE LOS OBJETIVOS DE DESARROLLO SOSTENIBLE (Environmental strategy: health protection from Covid-19 along the lines of the sustainable development goals)	Christian Cardich (student)	UPC
5	COMUNIDADES SOSTENIBLES: EDUCACIÓN AMBIENTAL PARA LA OBTENCIÓN DE BIOGÁS A TRAVÉS DE RESIDUOS GANADEROS DEL DISTRITO DE AYABACA, DEPARTAMENTO DE PIURA (Sustainable communities: environmental education for the production of biogas from livestock waste in the district of Ayabaca, department of Piura)	Sherilyn Quiroz (student)	UPC
		Alessandra Zambrano (student)	UPC
		Andrea Quintana (student)	UPC
		Cesar Landázuri (student)	UPC
6	APLICACIÓN DE HERRAMIENTAS DE PRODUCCIÓN MÁS LIMPIA Y CONSUMO SOSTENIBLE PARA LOS CASOS DE CUERO VEGETAL Y POLLERÍAS (Application of cleaner production and sustainable consumption tools for the cases of vegetable leather and chicken restaurants)	Marvin Ayala (student)	UPC
		Gonzalo Barrantes (student)	UPC
		Viviana Bazán (student)	UPC
		Francesca Gil (student)	UPC
		Gianella Olivares (student)	UPC
		Jazmín Real (student)	UPC
		Luis Rengifo (student)	UPC
		Vania Rosas (student)	UPC
7	EL CAMBIO CLIMÁTICO VISTO DESDE EL ESPACIO: EL IMPACTO DEL CO2 EN LA IONÓSFERA A BAJAS LATITUDES (Climate change as seen from space: the impact of CO_2 on the ionosphere at low latitudes)	María Orellana (student)	UPC
		Shirley Gonzales (student)	UPC
		Cosette Girón (professor)	UPC
		Meyer Merino (professor)	UPC
		Enrique Rojas (professor)	Cornell University

Figure 36. Cover of the institutional memory of the II Symposium on Science for Sustainable Development.

b) Environmental Engineering Program Students were selected to participate in the Third Latin American Student Environmental Summit

In October 2020, the World Student Environmental Network (WSEN), the Third Latin American Student Environmental Summit, was held virtually, organized on this occasion by the School of Agronomy of the University de Buenos Aires (FAUBA). The WSEN, initiated in 2008 by the Doshisha University in Kyoto (Japan), is a student network dedicated to connecting higher education students from different countries around the world, with the aim of promoting effective change from within the universities themselves, considering the transition to an environmentally sustainable society as its guiding principle. (Source: link).

Crysty Varillas and Alejandro Palacios, students of Environmental Engineering at UPC, were selected to participate in the Third Latin American Student Environmental Summit. The project developed by Alejandro and Crysty was the complement of an activity developed in the EEG Calculus course, during the 2020-1 academic year. The initiative postulates that due to the increase of certain greenhouse gases in the last 30 years, a cooling and shrinking of the F region in the ionosphere could be triggered. (Source: link).

c) Business Management Engineering Program Students published their research works at International Conferences in 2020

In 2020, students of the Business Management Engineering program published 22 conference papers in different international conferences. Table 17 presents the list of the papers, authors and conferences attended by students of the Business Management Engineering program.

Table 17. List of papers published by students of the Business Management program in different international conferences in 2020

No.	Article Title	Authors	Conference	Available at
1	Agile Inventory Management Model Under a Digital Transformation Approach for Stockout Reduction in Chemical Industry's MSE	Virginia Garamendi, Mercedes Cano (student and professor)	Advances in Intelligent Systems and Computing	Link
2	Application of a management model based on DMAIC methodology to an MSE in the personal beauty sector to increase profitability	Katherine Mejia, Henry Quintanilla, Carlos Cespedes (students and professor)	Advances in Intelligent Systems and Computing	Link
3	B2B Marketing Method Adapted to Sales Improvement Through the Implementation of ABC Classification Tool and Inbound Marketing in SMEs	Erika Gálvez, Milagros Cruz, Carlos Cespedes (students and professor)	Advances in Intelligent Systems and Computing	Link
4	Collaborative model based on ARIMA forecasting for reducing inventory costs at footwear SMEs	Alejandro Baca, Michael Bernal, Juan Sotelo (students and professor)	Advances in Intelligent Systems and Computing	Link
5	Comprehensive management model for solid waste collection and transportation in Peruvian urban municipalities	Renato Bernal (student)	Advances in Intelligent Systems and Computing	Link
6	Demand management model based on quantitative forecasting methods and continuous improvement to increase production planning	Denilson Contreras, Juan Sotelo (student and professor)	Advances in Intelligent Systems and Computing	Link

No.	Article Title	Authors	Conference	Available at
	efficiencies of SMEs Bakeries			
7	HIRAC-based risk management model with POKA–YOKE and TPM continuity to control and mitigate emergency scenarios in hydrocarbon sector operations	José Echevarria, Maria Quispe, Cesar Ramirez (students and professor)	Advances in Intelligent Systems and Computing	Link
8	Inventory optimization model applying the holt-winters method to improve stock levels in SMEs in the sports retail sector	Diego Amasifén, Angela Garay, Maribel Perez (students and professor)	Advances in Intelligent Systems and Computing	Link
9	Management model for pecan production using process tools in an MSE in Peru	Alejandro Muñante, Fabrizio Reyes, Maribel Perez (students and professor)	Advances in Intelligent Systems and Computing	Link
10	Management Projects Model to Reduce Lead Time of Base Station Telecom Construction in SME Based on Lean Focus and Agility	Christian Iberico, Ricardo Sun, Maribel Perez (students and professor)	Advances in Intelligent Systems and Computing	Link
11	Project planning methodology based on lean philosophy and PMBOK guidelines for SMEs in the electricity sector	Denisse Bazán, Marco Pinedo, Jose Rojas (students and professor)	Advances in Intelligent Systems and Computing	Link
12	Quality Management Model Based on Lean Six Sigma for Reducing Returns of Defective Clothing Articles in SMEs from the Clothing Industry	Maday Pacheco, Carlos Cespedes (student and professor)	Advances in Intelligent Systems and Computing	Link
13	Recruitment and training model for retaining and improving the reputation of medical specialists to	Audy Castro, Carlos Rivas, Carlos Cespedes (students and professor)	Advances in Intelligent Systems and Computing	Link

No.	Article Title	Authors	Conference	Available at
	increase revenue of a private healthcare SME			
14	Rural ecotourism associative model to optimize the development of the high Andean tourism sector in Peru	Oscar Acevedo, Jose Martinez, Mercedes Cano (students and professor)	Advances in Intelligent Systems and Computing	Link
15	Lean Thinking Simulation Model to Improve the Service Performance in Fast Food	Lady Sandoval, Antuanet Palomares, Jose Rojas (students and professor)	International Conference on Information and Computer Technologies (ICICT-2020)	Link
16	Business Architecture Model Adapted to Predictive Analysis for Customer's Increasing of SMEs of Furniture Industry through Digital Tools	Katherin Aquino, Franco Fernandez, Carlos Cespedes (students and professor)	9th International Conference on Industrial Technology and Management (ICITM 2020)	Link
17	Digital Transformation Model for the Reduction of Time Taken for Document Management with a Technology Adoption Approach for Construction SMEs	Waldir Lazaro, Fernando Manrique, Cesar Ramirez (students and professor)	9th International Conference on Industrial Technology and Management (ICITM 2020)	Link
18	Digitization Model for Reducing Costs and Operating Times in Peruvian Banks	Julio Castillo, Eder Castro, Maribel Perez (students and professor)	9th International Conference on Industrial Technology and Management (ICITM 2020)	Link
19	Waste Management Model Based on Reverse Logistics and 5S for the Generation of Biomass in the Fresh Fruit Industry	Andrea Morales, Raúl Vicuña, Maribel Perez (students and professor)	9th International Conference on Industrial Technology and Management (ICITM 2020)	Link

No.	Article Title	Authors	Conference	Available at
20	Process management model aligned with the Civil Service Law in public entities of Peru	Luis Cardenas, Gianpierre Zapata (students)	International Conference on Human Interaction & Emerging Technologies (IHIET 2020)	Link
21	Productivity model focused on Six Sigma and Lean Manufacturing to improve the quality of service in SMEs in Peru	Luis Cardenas, Gianpierre Zapata (students)	International Conference on Human Interaction & Emerging Technologies (IHIET 2020)	Link
22	Comprehensive Management model for increasing the competitiveness of small and medium artisan jewelry enterprises in Peru	Katherine Mejia (student)	IOP Conference Series: Materials Science and Engineering	Link

d) **Mining Management Engineering Program students published their research works at International Conferences in 2020**

In 2020, students of the Mining Management Engineering program published 12 conference papers in different international conferences. Table 18 presents the list of the papers, authors and conferences attended by students of the Mining Management Engineering program.

Table 18. List of research works published by students of the Mining Management Engineering program in international conferences in 2020

No.	Title	Authors	Conference	Available at
1	A Cyanide Tailings Management Method Using Pseudomonas Fluorescens to Improve Conventional Treatments for Progressive Closure at Small Gold Mines	Erika Barrezueta, Naysha Blas, Yanet Vasquez (students and professor)	Advances in Intelligent Systems and Computing	Link
2	Comprehensive Strategic Risk Management System to Reduce Evaluation Times in Small-Scale Mining Projects	Fernando Loarte, Yanet Vasquez (student and professor)	Advances in Intelligent Systems and Computing	Link

No.	Title	Authors	Conference	Available at
3	Filling Method Implementing Hydraulic Lime for Reusing Mine Tailings and Improve Sustainability in Conventional Peruvian Underground Mines	Pablo Altamirano, Jorge Supa, Humberto Pehovaz (students and professor)	Advances in Intelligent Systems and Computing	Link
4	Fundamental Criteria for Methodology of Blasting Engineering in Mining Grains to Reduce Mineral Dilution in Peruvian Polymetallic Underground Mining	Yon Fuentes, Luis Arauzo (student and professor)	Advances in Intelligent Systems and Computing	Link
5	Hydrabolt and Split Set Rock Bolt Selection Method Under the Bieniawski Rock Mass Rating for Improving Horizontal Access Support in Peruvian Mid-Scale Mining Activities	Carlos Toscano, Antoni Castillo, Humberto Pehovaz (students and professor)	Advances in Intelligent Systems and Computing	Link
6	Mathematical Model of a Drilling Mesh to Reduce Dilution in the Sublevel Stopping Method in Peru's Underground Mines	Yadira Zelaya, Luis Arauzo (student and professor)	Advances in Intelligent Systems and Computing	Link
7	Method for the Interpretation of RMR Variability Using Gaussian Simulation to Reduce the Uncertainty in Estimations of Geomechanical Models of Underground Mines	Juliet Rodriguez, José Vilcañaupa, Humberto Pehovaz (students and professor)	Advances in Intelligent Systems and Computing	Link
8	Public Management Model with a Sustainable Development Approach Based on Lean Six Sigma: Formalization of Small-Scale and Artisanal Mining in Peru	Yuler Montalvo, Vidal Aramburu (student and professor)	Advances in Intelligent Systems and Computing	Link
9	Safety Management Model with a Behavior-Based Safety Coaching Approach to Reduce Substandard Behaviors in the Mining Sector	Brahayan Gómez, Roberto Sánchez, Yanet Vasquez (students and professor)	Advances in Intelligent Systems and Computing	Link

No.	Title	Authors	Conference	Available at
10	SCAT Model Based on Bayesian Networks for Lost-Time Accident Prevention and Rate Reduction in Peruvian Mining Operations	Ana Ziegler, Luis Mera, Vidal Aramburu (students and professor)	Advances in Intelligent Systems and Computing	Link
11	Lean Six Sigma Operational Assessment Method with a Modified DMA-IC Cycle for Reducing Non-Productive Times at Mining SMEs	Fabricio Aguero, Gianfranco Ramírez, Vidal Aramburu (students and professor)	International Conference on Human Interaction & Emerging Technologies: Artificial Intelligence & Future Applications (IHIET-AI 2020)	Link
12	Modelo Matemático de Pearse y Holmberg para Reducir la Zona de Daños en Labores Horizontales de Minería Subterránea (Pearse and Holmberg Mathematical Model to Reduce the Damage Zone in Horizontal Underground Mining Works)	Jhordan Jose Mateo Mendoza, Cristhian Rivera Olano, Luis Arauzo (students and professor)	Latin American and Caribbean Consortium of Engineering Institutions (LACCEI 2020)	Link

e) Mining Management Engineering students are Finalists in the International Competition "Move Mining 2020"

Move Mining is a dynamic competition aimed at elevating the perception of mining. From grassroots to global, teams pitch their best ideas on how to share the everyday importance of mining with the public. (Source: link).

Students from the Mining Management Engineering progra, were part of the five finalist teams worldwide in the Move Mining contest of the Society for Mining, Metallurgy & Exploration (SME) supported by the transnational company Komatsu, which took place in Phoenix, Arizona, United States. The finals took place on February 23, 2020 and the event was broadcasted on SME's official Facebook page. (Source: link).

The team was formed by students of the Mining Management Engineering program Juan Diego Reyes, César Pillpe, José Carlos Manrique, Jorge Mendoza and Pablo Altamirano, who presented the opportunities that Peru has for mining projects before a jury.

f) Civil Engineering Program Graduates and Faculty Participate in the 7th International Conference on Mechanical, Materials and Manufacturing (ICMMM 2020)

The 7th International Conference on Mechanical, Materials and Manufacturing was held from September 24 to September 26, 2020. Two graduates and one Civil Engineering program professor participated: George Gonzales (graduate), Ashily Aguilar (graduate), and Guillermo Huaco (professor). This congress convenes research related to materials engineering and its relationship with Civil Engineering. They made the presentation of the research work entitled: "Seismic performance and fragility functions of confined masonry old infrastructure with handmade bricks," which develops fragility functions in order to estimate and quantify the vulnerability of confined masonry structures made with handmade bricks.

Additional information about this conference is available at: (link).

Figure 37. Presentation at the 7th International Conference on Mechanical, Materials and Manufacturing by graduates and faculty of the Civil Engineering program.

g) Civil Engineering Program Students participated in the 4th International Conference on Building Materials and Materials Engineering (ICBMM 2020)

The 4th International Conference on Building Materials and Materials Engineering (ICBMM 2020) was originally planned to be held in Barcelona, Spain. Due to the impact of the COVID-19 pandemic, the conference had to change to an online form. Finally, it was successfully held virtually on September 24-26, 2020. This conference presents research related to new building material alternatives taking into account the impact related to recycling and life cycle.

Civil Engineering program students: Wilder Dimas Soto Hinojosa and Bruno Dueñas Cervantes presented their research project at this international conference: "Evaluation of the Thermic

Efficiency of the Prototype at Scale of a Sustainable Housing that Uses Concrete with PET Fibers (CFP) and the Trombe System ". The research studied the use of recycled PET fibers and the Trombe system to improve the thermal comfort of a single-family house. (Source: link).

Additional information about this conference is available at: (link).

h) Industrial Engineering Program Students published their research works at International Conferences

In 2020, students of the Industrial Engineering program published their research works in different international conferences. See below for a list of the conferences attended by students.

Table 19. List of international conferences in which students of the Industrial Engineering program published their papers in 2020.

No.	Article Title	Authors	Conference	Available at
1	Application of Kraljic and Stowage Techniques to define Purchasing Strategies to reduce Cost Overruns in a Food Service Company.	Guillermo Pretell (student) Edgardo Carvallo (professor); Iliana Macassi (professor); Christian del Carpio (professor)	Latin American and Caribbean Consortium of Engineering Institutions (LACCEI 2020)	Link
2	Estandarización de Módulos de Madera para Ferias y Eventos (Standardization of Wooden Modules for Fairs and Events)	Luzmila Mateo (student) Katherine Ballena (student); Víctor Núñez (professor); Eloy Marcelo (professor); José Álvarez (professor)	I Conference of Computer Science, Electronics and Industrial Engineering (CSEI 2020)	Link
3	Lean Manufacturing tools applied to the metalworking industry in Peru.	Miguel Arbieto (student); José Vásquez (student); Ernesto Altamirano (student); José Álvarez (professor); Eloy Marcelo (professor)	VI International Conference on Innovation and Trends in Engineering (VI CONIITI 2020)	Link

No.	Article Title	Authors	Conference	Available at
4	Development of a Lean Manufacturing and SLP-based system for a footwear company	Victor David Paucar Chaicha (student); Sergio Enrique Munive Silvestre (student); Víctor Núñez (professor); Eloy Marcelo (professor); José Álvarez (professor); S. Nallusamy (professor)	International Conference on Industrial Engineering and Engineering Management (IEEM 2020)	Link

i) Industrial Engineering Program Student Wins the Scholarship "Iberoamérica Santander Grado Perú" 2020-2021

The Scholarship Iberoamérica Santander Grado Perú is a program promoted by Banco Santander, through its Santander Universities division, with the support of Universia Peru, which annually supports the international mobility of undergraduate university students among the different participating Ibero-American universities. All national universities registered with Universia participate.

In this scholarship program awarded in the 2020-2021 period, the student Gabriel Vega Ramirez, of the Industrial Engineering program, was one of the 25 Peruvian students selected by the Santander Peru Group to continue his studies at an Ibero-American university for an academic term in another country.

Additional information about this distinction is available at: (link).

j) Electronic Engineering Students Published 9 Research Papers and 3 Invention Patents

The Electronic Engineering program develops applied research projects in the Electronic Project 1 and Electronic Project 2 courses. Through these projects, scientific papers, as well as invention patents, are being published annually in prestigious conferences and journals.

In 2020, students from the Electronic Engineering program published a total of nine research articles and three invention patents (in utility model mode) on behalf of the UPC.

The information on published and accepted papers during 2020 is presented in Table 20.

Table 20. List of research works of the Electronic Engineering program published at international conferences in 2020

No.	Article Title	Authors	Conference	Available at
1	Development of a hybrid system for automatic identification of brushed direct current motors	Franz Hamann Pinto (student), Mesones Málaga, Gustavo Omar (professor)	International Conference on Electronics, Electrical Engineering and Computing (INTERCON 2020)	[Link](#)
2	An Algorithm to Differentiate Legumes and Wheat Based on Digital Image Processing and Support Vector Machine	Angel Oshita (student), Ricardo Parra (student), Edwin Vásquez (external support), Jossybel Nuñez (external support), Guillermo Kemper (professor)	World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020)	[Link](#)
3	Development of a flexible educational platform based on a HIL system, focused on enriching the teaching-learning process of modern control engineering	Franz Hamann (student), Omar Martinez, (student), Gustavo Mesones (professor)	World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020)	[Link](#)
4	Sensor Fusion Algorithm Implementation on Microchip PIC Microcontroller	Sergio Salas (professor), Carlos Valdez (docente), Kalun Lau (professor), Amini M.H. (external support), Kropidlowski M. (external support), Sniataa P (external support).	Proceedings of 27th International Conference on Mixed Design of Integrated Circuits and Systems (MIXDES 2020)	[Link](#)
5	Un algoritmo de clasificación de semillas forestales basado en procesamiento digital de imágenes y redes neuronales convolucionales (A forest seed classification algorithm based on	Reiner Armas (student), Miguel Tupac (student), Guillermo Kemper (professor) and Christian Del Carpio (professor)	Conferencia Iberoamericana en Sistemas, Cibernética e Informática (CISCI 2020)	[Link](#)

No.	Article Title	Authors	Conference	Available at
	digital image processing and convolutional neural networks)			
6	A Comparative Study of Deep Learning Techniques Aimed at Detection of Arrhythmias from ECG Signals	John Gómez (student), Alberto Quispe (student), Guillermo Kemper (professor)	Brazilian Technology Symposium (BTSym-2020)	Link
7	A Low-Complexity Algorithm for Diagnosis of Three-Phase Induction Motors	Marco Baltazar (student), Brian Ramírez (student), Guillermo Kemper (professor)	Brazilian Technology Symposium (BTSym-2020)	Link
8	An Electronic Equipment with Face Recognition Capacity Oriented to Measuring the Alcoholic Level in People	Luis Merino (student), Wilson Chavesta (student), Guillermo Kemper (professor), Kalun Lau (professor)	International Conference on Applied Technologies (ICAT 2020)	Link
9	Device to evaluate cleanliness of fiber optic connectors using image processing and neural networks	Victor Fernandez (graduate), Javier Chavez (graduate) and Guillermo Kemper (professor)	International Journal of Electrical and Computer Engineering (IJECE)	Link

Table 21 shows the invention patents in utility model mode, INDECOPI (National Institute for the Defense of Competition and Protection of Intellectual Property).

Table 21. Patents registered by students of the Electronic Engineering program in 2020

No.	Invention	Inventors	Grant date	File No.
1	Electronic equipment for image-based quality control of canary beans	Guillermo Kemper (professor), Miguel Ángel Salirrosas (student), Gianmarco Galván (student)	October 22, 2020	000423-2019/DIN

No.	Invention	Inventors	Grant date	File No.
2	Electronic equipment for obtaining measurements from an antenna	Guillermo Kemper (professor), Christian del Carpio (professor), Heyul Chávez (graduate), Hugo Hernández (external support)	October 15, 2020	000430-2019/DIN
3	Automatic system oriented to counting and obtaining geometric dimensions of juvenile Tilapia based on digital image processing	Guillermo Kemper (professor), Roger Mejía (student), Andrés Salas (student)	October 08, 2020	000422-2019/DIN

k) Electronic Engineering Program Graduate among the under 35 Innovators Awarded by MIT

In 2020, Jesús Mueras, UPC Electronic Engineering graduate, was considered one of the five young Peruvian innovators by the journal of the renowned Massachusetts Institute of Technology (MIT).

Each year, MIT publishes a list of 35 young Latin Americans who are considered promising in the area of technology. They must meet one of the following five categories: Inventors, Entrepreneurs, Visionaries, Humanitarians and Pioneers. (Source: link)

Jesus is the founder of IoTomato, a project that seeks to reduce power consumption and the environmental footprint. IoTomato's website promises to help companies and individuals reach their full potential, making their time more useful, generating tranquility and security in the energy field. (Source: link).

Figure 38. Jesús Mueras and his IoTomato project

l)   Mechatronics Engineering Program students published 6 research articles

The Mechatronics Engineering program develops applied research projects in the Mechatronics Project 1 and Mechatronics Project 2 courses. Through these projects, scientific articles are published annually in prestigious congresses and journals.

In 2020, Mechatronics Engineering students published 6 Research Papers The information on published and accepted papers during 2020. Table 22 presents the list of research works.

Table 22. List of research works of the Mechatronics Engineering program published at international conferences in 2020

No.	Title	Authors	Conference	Available at
1	A Vibratory Conveying System for Automatic Sorting of Lima Beans through Image Processing	Hugo Injante Esteban Gutiérrez (student), Leonardo Vinces (professor)	International Conference on Electronics, Electrical Engineering and Computing (INTERCON 2020)	[Link](#)
2	Acquiring, Monitoring, and Recording Data Based on the Industrie 4.0 Standard Geared Toward the Maca Drying Process	Gianmarco Nagaro (student), Abel Koc-Lem A. (student), Leonardo Vinces (professor), Julio Ronceros (professor), Gustavo Mesones (professor)	Advances in Intelligent Systems and Computing	[Link](#)
3	Design of a multiwhole cylindrical extruder, driven by a linear actuator and used for the formation of bakery dough	César Padilla (student), Aida Vivanco (student), Leonardo Vinces (professor)	International Conference on Electronics, Electrical Engineering and Computing (INTERCON 2020)	[Link](#)
4	Design of a system for the external washing and winding of fire hoses composed of a polyester and rubber jacket	Gustavo Paredes (student), Felix Neira (student), Leonardo Vinces (student), José Oliden (professor)	International Conference on Electronics, Electrical Engineering and Computing (INTERCON 2020)	[Link](#)
5	Development of a simulator with two degrees of freedom of the direction system of Massey-Ferguson's 3640 agricultural tractors	Andre Mixán (student), Andy Mamani (student), Leonardo Vinces (professor), Christian del Carpio (professor)	Advances in Intelligent Systems and Computing	[Link](#)

No.	Title	Authors	Conference	Available at
6	Low cost semi-industrial 3GDL CNC vertical milling center design with non-ferrous metal machining capability	Satoshi Shimabukuro (student), Piero Díaz (student), Leonardo Vinces (professor)	International Conference on Electronics, Electrical Engineering and Computing (INTERCON 2020)	Link

m) Information Systems Engineering Students Create an Application that Reduces Stress

Students of the Information Systems Engineering program developed an application called "Desestressfull" to measure stress using the SAP Cloud Platform. The solution aims to improve people's quality of life and increase their work productivity. The application leverages SAP Cloud Platform web services to store and process historical patient data, identify stress levels and notify guided activities to combat stress.

A study identified that 57% of people suffer from chronic diseases due to stress. The sample consisted of students who were close to taking an exam and workers exposed to a day with a high workload. The "Desestressfull" application responds precisely to this fact of great social impact, since it detects, monitors and controls physiological variables through a wearable device. (Source: link).

Luis Guillermo Antezana Raymondi and Fabricio Eduardo Aguirre Guzmán presented the prototype as a thesis project and research paper, under the title of "Technological solution for the identification and reduction of stress level using wearables," with the international co-authorship of the Dalhousie University of Canada. The project has been accepted at the 15th Iberian Conference on Information Systems and Technologies (CISTI 2020) and will be indexed in IEEE XPlore, ISI, SCOPUS, EI-Compendex, INSPEC and Google Scholar.

Figure 39. Luis Guillermo Antezana Raymondi and Fabricio Eduardo Aguirre Guzmán

n) UPC Team Students won the First National University Chess Tournament 2020

The UPC Chess team managed to win the university only organized by the University Sports Federation of Peru (FEDUP), on September 5, 2020, through the virtual platform LICHESS.COM. (Source: link).

The tournament was streamed live through the official FEDUP accounts on Facebook and YouTube (Source: link), where Julio Granda and the world chess champion, Deysi Cori, participated as commentators. This competition gathered 47 institutions and 443 students, making it the event with the largest number of participants in the university system in recent years.

The UPC Chess team students obtained the highest scores:

In the Men's category:

- Marco Delgado, Economics and Finance student
- Luis Flores, Civil Engineering student
- Luis Guerrero, Administration and Marketing student
- Mels Ccerhuayo, Music student

In the Women's category:

- Paola Castillo, Architecture student
- Stephanie Puppi, Information Systems Engineering student

RESULTADOS GENERALES

NÚMERO DE PARTICIPANTES: 443
PARTICIPARON: 47 INSTITUCIONES

UBICACIÓN GENERAL		
LUGAR	**INSTITUCIÓN**	**PUNTAJE**
CAMPEÓN	UNIVERSIDAD PERUANA DE CIENCIAS APLICADAS	42
SUB CAMPEÓN	UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS	40.5

Figure 40. General ranking results, where UPC won the championship.

2. Student Learning Results

UPC's Educational Model guides the design of the curricular plan of each program and establishes a course structure that allows students to gradually achieve level 3 of each learning outcome as defined in the Graduate Student Profile (GP), for the undergraduate level, and level 4 of each learning outcome defined in the GP for the graduate level.

The GP, defined by each program, integrates UPC's Institutional Learning Outcomes (ILOs), being these: Critical Thinking, Oral Communication, Written Communication, Innovative Thinking, Citizenship, Information Literacy and Quantitative Reasoning; and the Program specific Learning Outcomes (PLOs). The attainment of each learning outcome is evaluated based on three levels of performance at the undergraduate level, being these: beginner (level 1), intermediate (level 2) and advanced (level 3) and the expert level (level 4) at graduate programs.

The Educational Quality Department (EQD), through its Curriculum Development and Assessment Department and a committee of experts, performs the Assessment of the Institutional Learning Outcomes (ILOs). The committee of experts is in charge of developing the rubric, method, definition, and instruments, as well as defining the sample size. After the assessment of each learning outcome is completed, every program develops an improvement action plan.

Remote instruction due to the Covid-19 emergency context in 2020 did not prevent the development of the assessment processes planned for the year. This was possible because in recent years the UPC has been working to identify and incorporate digital tools to support the online educational processes with the strategic objective of university of the future. Since 2020-2, the assessments of the undergraduate ILOs were developed on the Blackboard platform. Student evidence was collected through the virtual classrooms and evaluated on the same platform by an assessment committee. There is an assessment committee determined for each ILO, made up of expert faculty in said ILO, who are previously selected to carry out this assessment. In the case of the PLO assessment processes, which are still in the process of being integrated into Blackboard, the evidence was collected by faculty at the end of each course and sent to the assessment committees by e-mail to analyze the results.

2.1 ILO Results at the Undergraduate Level

UPC's Assessment Plan has been defined to consolidate a systematic process that gathers, reviews, and analyzes evidence of the development of each learning outcome. This contributes to enhance students' continuous improvement and consolidate the evaluation process in order to improve the effectiveness and quality of the different processes involved in the students' acquisition of learning outcomes.

Table 23 shows the timeline defined for the assessment loops of the ILOs at the undergraduate level.

Table 23. Institutional Learning Outcome Assessment Timeline – Undergraduate Programs

First loop	Second loop	ILO
2014-2	2017-2	Written Communication
2015-1	2018-1	Information Literacy
2015-1	2019-1	Quantitative Reasoning
2015-2	2019-2	Oral Communication
2016-2	2020-2	Critical Thinking
2016-2	2021-2	Citizenship
2017-2	2022-2	Innovative Thinking

In regards to the assessment results at the undergraduate level, see below the results for each ILO. These results have been updated as of December 2020.

Assessment Results: Critical Thinking

The first assessment loop of the Critical Thinking ILO has been carried out in 2016-2 in the different courses assigned by each program. It was decided to assess level 2 and level 3 of the rubric. Based on this information, a stratified probabilistic sampling method was used in order to guarantee the representativeness of the results. The sample comprised 658 students at level 2 and 526 students at level 3 in order to assess the ILO. Figure 41 shows the general result per Dimension for the Critical Thinking ILO at level 2 and Figure 42 at level 3.
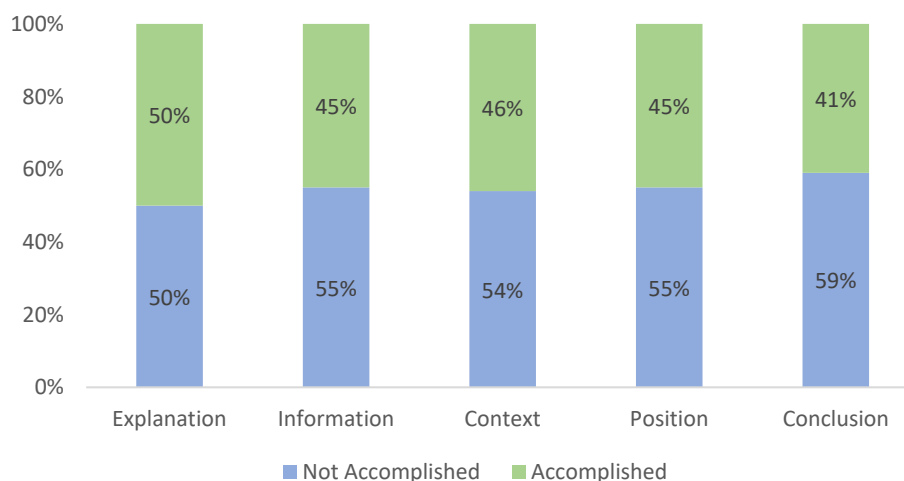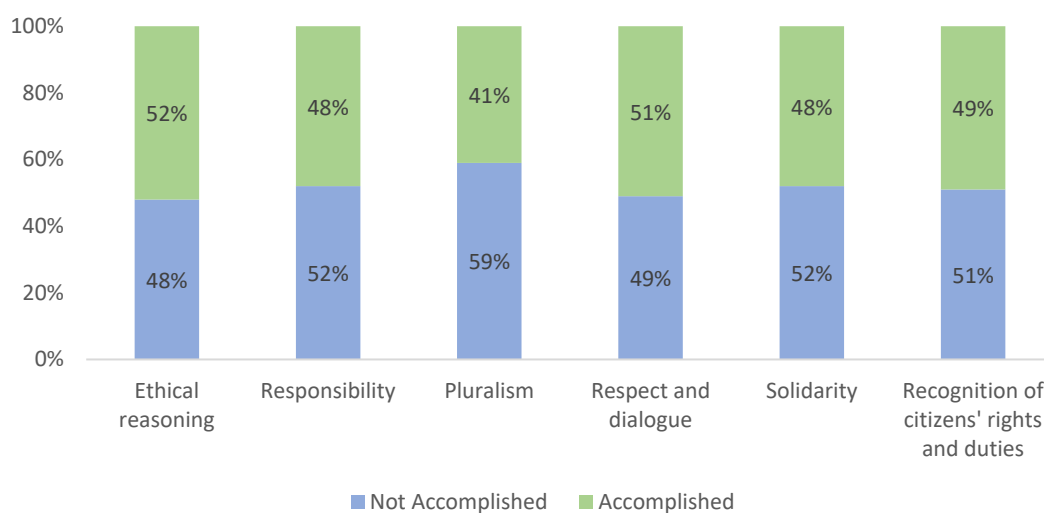

Figure 41. Critical Thinking ILO (Level 2) – General Results per Dimension
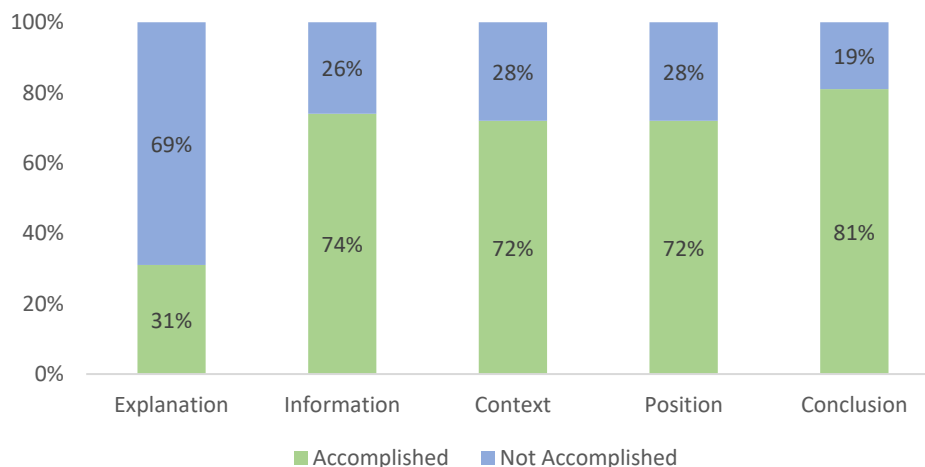
Figure 42. Critical Thinking ILO (Level 3) – General Results per Dimension

Upon analysis of the results, evaluation committee in charge of assessing the ILO identified the following improvement actions:

- It is necessary to redefine the ILO evaluation rubric and improve the definitions of the descriptors for the "Information", "Context" and "Position" dimensions. In 2017, a new rubric was developed to assess the ILO. The rubric was disseminated and explained to the different programs and students prior to its implementation in the courses articulated with the ILO.

- The evidence provided by the programs in order to carry out the assessment of the ILO at level 2 and 3 did not allow for an optimum assessment of all the dimensions of the Critical Thinking ILO. As a result, a work plan was drawn up in order to review all the assessment instruments applied in the courses articulated with the ILO and evaluate the adequacy of the expected outcomes for each dimension and level. Subsequently, different types of assessment evidence (such as essays and case studies) were included to analyze students' level of argumentation in order to provide a critical perspective on a specific topic, taking into account primary and secondary sources of information.

- Faculty training was improved by including the following topics: design of competency-based course, design of competency-based rubrics, competency-based assessment, and class activities for the development of competencies. In order to meet these requirements, a training proposal was developed to provide resources to design evaluations and activities, and acquire skills and mastery in the application of instruments to assess all three levels of the Critical Thinking ILO in an adequate manner.

The following assessment loop of the Critical Thinking ILO started in 2020-2. To date, the following stages of the process have been completed:

- Review of the rubric and simplification of the Critical Thinking ILO assessment tool. The approved rubric was shared and disseminated to all programs.
- Selection of the courses from which the evidence for the assessment was collected. Program directors were responsible for the selection.
- Training workshops on the use of the rubric, whose target audience were the coordinators and faculty of the selected courses.
- Advisory sessions for course coordinators and faculty for the review or design of the evidence for the assessment.
- Determination of the sample size to guarantee the representativeness of the results.
- Collection of evidence from the Blackboard technological platform, through the virtual classrooms of the selected courses.

Currently, the evidence is being evaluated on the Blackboard technology platform by an assessment committee made up of faculty with experience in the ILOs; the final results are expected in the first semester of 2021.

Assessment Results: Citizenship

The first assessment loop of the Citizenship ILO has been carried out in 2016-2 in the different courses assigned by each program. It was decided to assess Level 2 and 3 of the rubric. Based on this information, a stratified probabilistic sampling method was used in order to guarantee the representativeness of the results. The sample comprised 580 students at level 2 and 474 students at level 3 to assess the ILO. Figure 43 shows the general result per Dimension for this ILO at level 2 and Figure 44 at level 3.

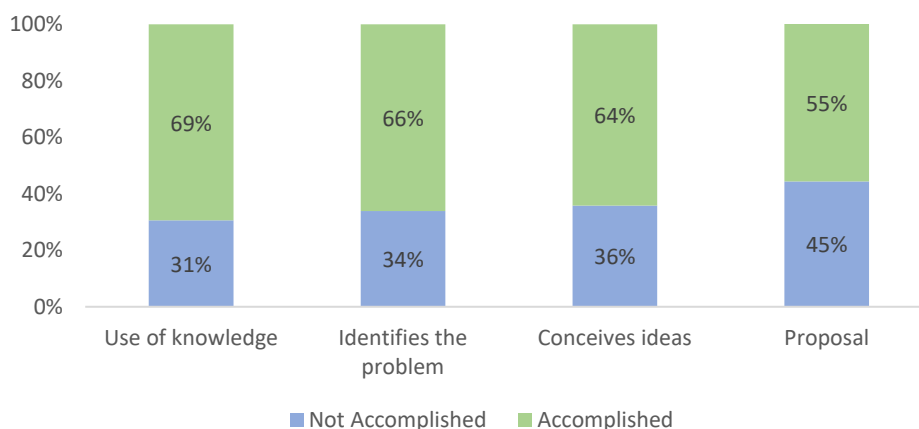**Figure 43**. Citizenship ILO (Level 2) – General Results per Dimension
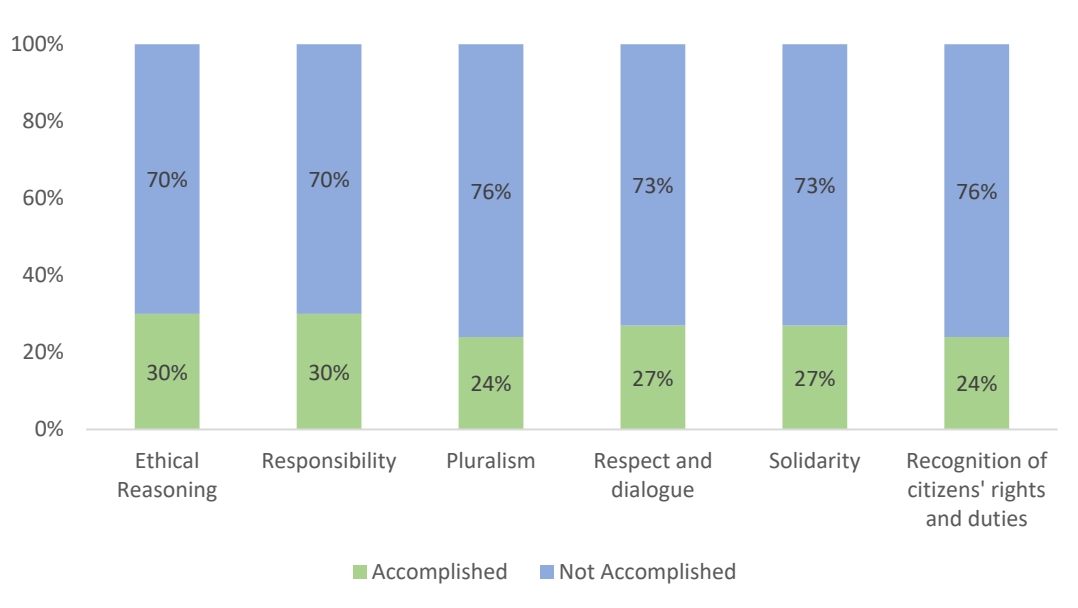
Figure 44. Citizenship ILO (Level 3) – General Results per Dimension

Upon analysis of the results, the committee of faculty in charge of assessing the ILO identified the following improvement actions:

- It is necessary to redefine the ILO evaluation rubric and rename the "Solidarity" dimension with "Solidary Perspective" in order to take into account the importance of acting together and/or seek collaborative support for the common good when assessing the ILO. The new rubric was disseminated among the different programs and students, and is available at: link.

- The instruments and evidence to assess this ILO were redefined in accordance with the new rubric so as to ensure that the evaluations include an ethical dilemma of students' everyday life, which is relevant to each program and level. Based on this recommendation, we coordinated directly with the Humanities Department, as the courses it provides are articulated with the ILO and are taught in all undergraduate programs. One of said courses is Ethics and Citizenship, whose syllabus was redesigned in order to ensure that the ILO is developed while meeting the outcome levels defined in the new rubric.

As part of the continuous improvement process and to ensure the relevance of the proposed improvement actions, a control evaluation process was carried out in different courses at all three levels so as to validate the rubric and improve the evidence-gathering process. It was concluded that the new rubric is relevant and reliable. The latter was approved for implementation in the next assessment loop in 2021-2, which will assess the ILO at all three levels.

Assessment Results: Innovative Thinking

In 2017-2, the assessment of the Innovative Thinking ILO at all three levels was carried out based on a sample measurement. In order to do so, it was necessary to identify which programs would participate in the process, the courses in which the ILO would be assessed, the type of evidence, and the schedule for collecting the evidence.

A probabilistic and stratified sampling method was used to guarantee the representativeness of the results. The sample comprised 3,296 students, of which 1,259 students at level 1, 1,111 at level 2, and 926 at level 3.

Course-coordinators faculty and the Registrars Office of each campus/site participated in the evidence-gathering process, collecting both physical and digital evidence. An evaluation committee of faculty of each program was appointed to evaluate the evidence. Faculty attended meetings to validate the calibration process in order to guarantee the evaluation's objectivity.

Figure 45, Figure 46 and Figure 47 show the results for the Innovative Thinking ILO at level 1, 2 and 3, respectively.
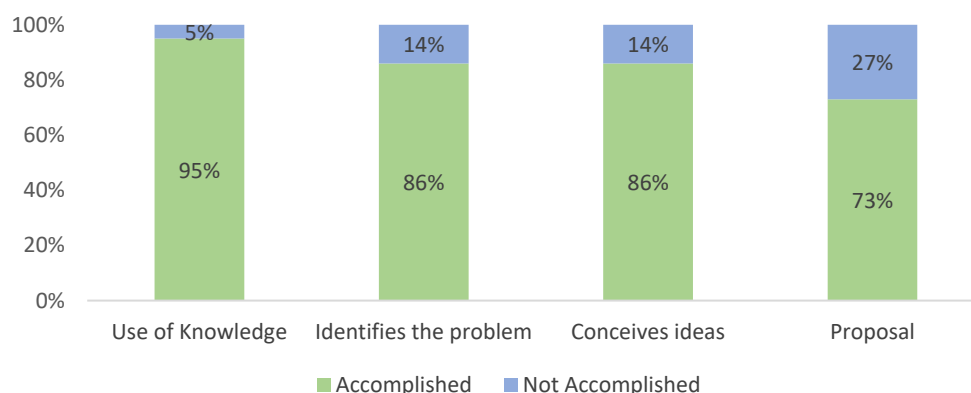
Figure 45. Innovative Thinking ILO (Level 1) – General Results per Dimension
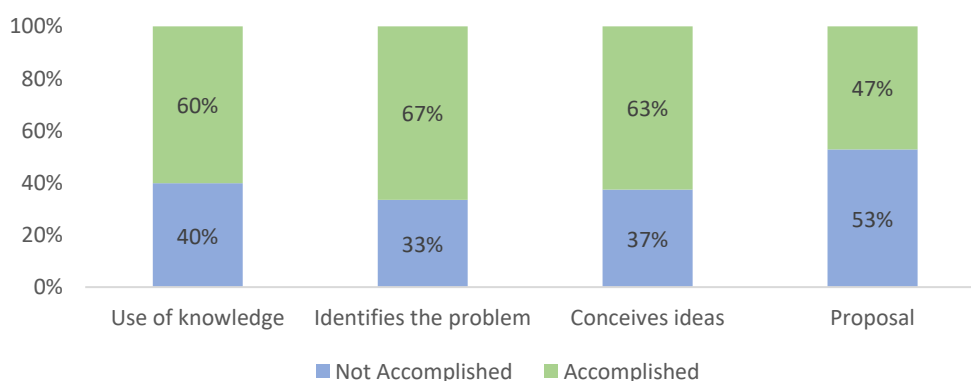
Figure 46. Innovative Thinking ILO (Level 2) – General Results per Dimension

Figure 47. Innovative Thinking ILO (Level 3) – General Results per Dimension

Upon analysis of the results, the faculty committee in charge of assessing the Innovative Thinking ILO identified the following improvement actions:

- To appoint a committee of experts to review the rubric dimensions that need redesigning, make adjustments according to the level of each School and program, and select individual evaluations to collect evidence that is relevant to the assessment.

The next assessment loop for the Innovative Thinking ILO at all three levels will be implemented in 2022-2.

Assessment Results: Written Communication

As a result of the first assessment loop of the Written Communication ILO in 2014-2, it was identified, among other improvement opportunities, the need to review and update the ILO rubric, in particular for the "Organization and Structure" dimension at level 4. The updated rubric was implemented in the second assessment loop in 2017-2.

The Written Communication ILO was assessed at level 2 and 3 based on a representative sample of evidence developed by students in different courses where the assessment took place.

Based on this information, a stratified probabilistic sampling method was used for the assessment of this ILO developed in 2017-02 in order to guarantee the representativeness of the results. The sample comprised 1,225 students at level 1, 1,181 at level 2, and 939 at level 3 to assess the ILO. This represents 53 programs at level 1, 48 at level 2, and 43 at level 3. The coordinating faculty of each program and the Registrars Office of each campus/site participated in the evidence-gathering process.
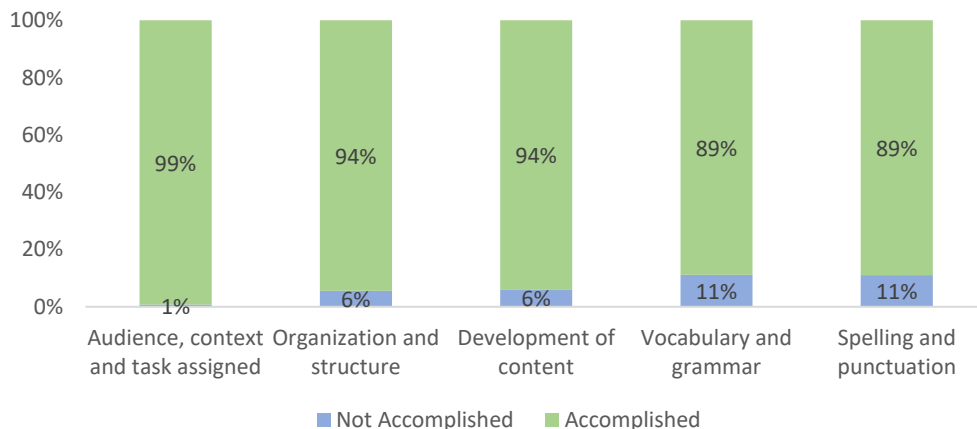
Figure 48. Written Communication ILO (Level 1) – General Results per Dimension
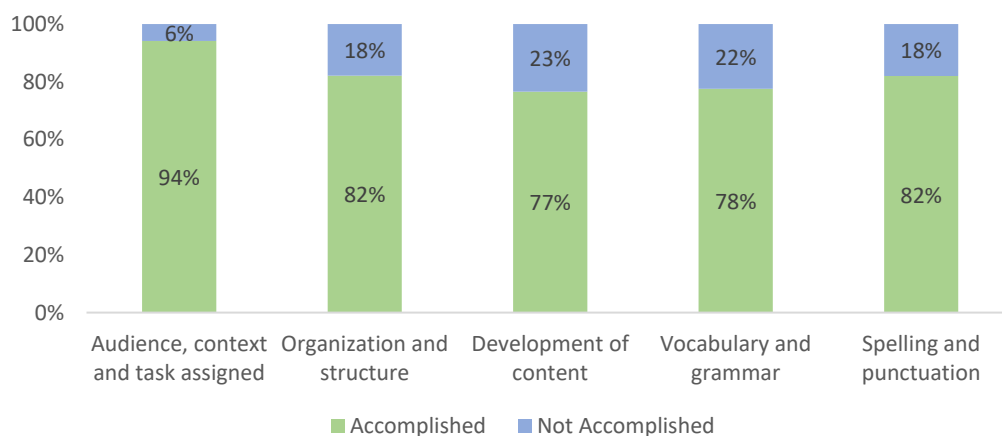
Figure 49. Written Communication ILO (Level 2) – General Results per Dimension
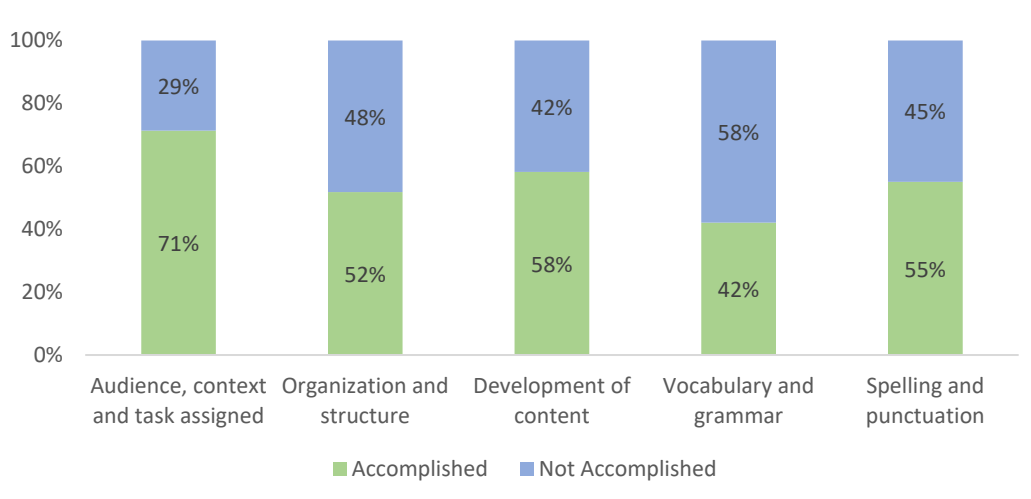
Figure 50. Written Communication ILO (Level 3) – General Results per Dimension

Based on these results, we have reached the conclusion that the results obtained are favorable, as they demonstrate an important improvement compared to the first assessment loop of the Written Communication ILO. Levels 1 and 2 reached the expected outcome (75%) in each dimension. Even though they did not reach 100%, the results show significant improvements. Several improvement opportunities were identified for level 3, which will be included in each program's action plan for the ILO.

Based on the results obtained during the first and second assessment loop of the Written Communication ILO, we identified the following improvement actions:

- The rubrics for the "Development of Content" and "Spelling and Punctuation" dimensions need to be reviewed and redesigned in order to align the evaluation with the outcome level expected for this ILO. As a result, the "Online Assignment" activities, in which faculty reviewed and provided feedback on student assignments, have been included in the courses articulated with the ILO in 2015 and 2016. The implementation of the aforementioned improvement action has resulted in an increase from 58% to 77% for the "Development of Content" dimension and from 59% to 82% for the "Spelling and Punctuation" dimension at level 2 during the second assessment loop. There is no data available on the progress of the Written Communication ILO at level 3, as only level 2 was assessed in the first assessment loop.

- Workshops to design evidence and use rubrics for this ILO will be carried out.

- In addition, UPC will provide the teams in charge of the assessment of each program with a space to reflect on the results obtained in order to formulate action plans for each program.

Assessment Results: Information Literacy

The second assessment loop of the Information Literacy ILO at all three levels was carried out in 2018-1 based on a representative sample of evidence developed by students in different courses selected by each program.

Based on this information, a probabilistic and stratified sampling method was used to guarantee the representativeness of the results. The sample comprised 704 students at level 1, 757 at level 2, and 585 at level 3. This means that 30 programs took part in the assessment of the Information Literacy ILO at level 1, 26 at level 2, and 27 at level 3.

Finally, an evaluating committee of faculty with expertise in the ILO took part in the evaluation of the evidence collected during this process.

Figure 51, Figure 52 and Figure 53 show the results for the Information Literacy ILO at level 1, 2 and 3, respectively.
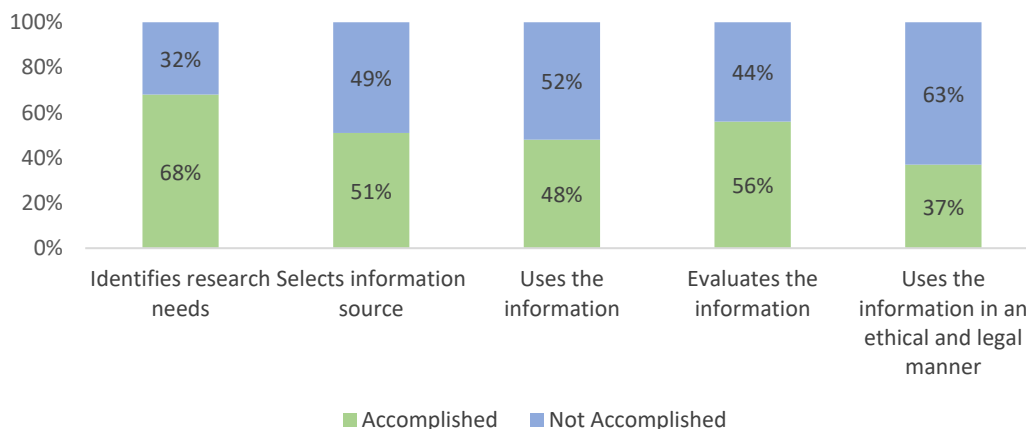
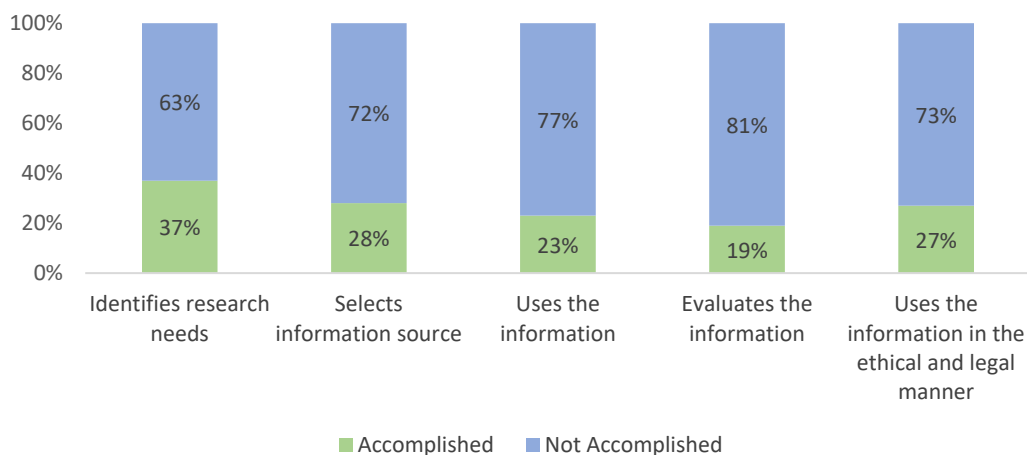**Figure 51**. Information Literacy ILO (Level 1) – General Results per Dimension

Figure 52. Information Literacy ILO (Level 2) – General Results per Dimension
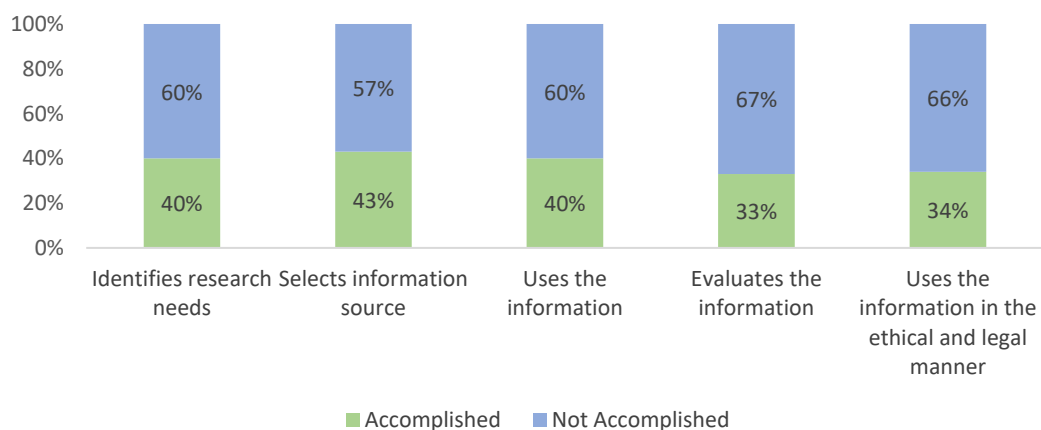

Figure 53. Information Literacy ILO (Level 3) – General Results per Dimension

Based on the results obtained during the first and second assessment loop of the Information Literacy ILO, we identified the following improvement actions:

- It is necessary to review the pool of courses articulated with the Information Literacy ILO in order to improve the progression and coherence between the courses that develop the ILO with respect to the contents and structure.

- The development of dimensions and the outcome level expected must be included when designing syllabi to ensure that the evaluation system is based on a competency-based scheme. Based on these findings, we appointed a work committee of representatives of the Educational Quality Department, the Knowledge Management Department, the Research Department, and the Humanities Department to review and disseminate the evaluation rubric with the evaluation committees of each program and provide guidance on how to adjust the ILO rubric to each program and its specificities.

Assessment Results: Quantitative Reasoning

The second ILO assessment loop. Quantitative Reasoning was conducted in 2019-1 in the courses assigned by each program. Based on this information, a stratified probability sampling method was used to guarantee the representativeness of the results. The sample consisted of 1086 students in level 1, 862 in level 2 and 704 in level 3 to evaluate ILOs. This represents 51 programs at level 1, 33 at level 2 and 31 at level 3.

When comparing the results of the second assessment loop in 2019-1 with those of the first assessment loop in 2015-1, results show that around 70% of students achieved level 1 of the ILO (compared to 37% in the first assessment loop). Figure 54 shows the results of the second assessment loop of the Quantitative Reasoning ILO at level 1.
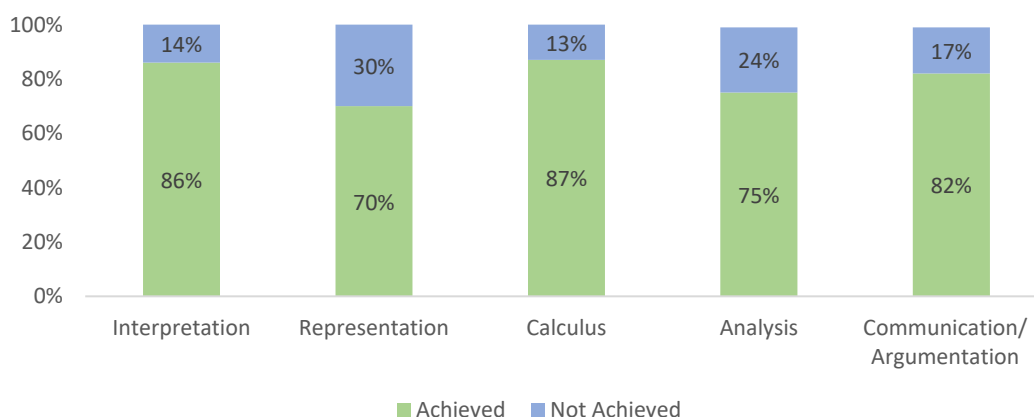

Figure 54. Quantitative Reasoning ILO (Level 1) – General Results per Dimension

Results of the second assessment loop also show that around 45% of students achieved level 2 of the ILO (compared to 44% in the first assessment loop).
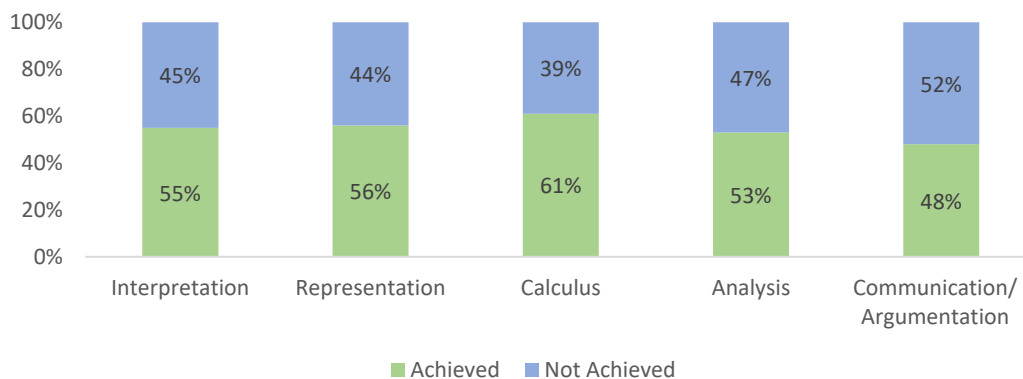
Figure 55. Quantitative Reasoning ILO (Level 2) – General Results per Dimension

The overall improvement in outcomes in the second assessment loop of the Quantitative Reasoning ILO is due to the implementation of the following improvement actions:

- In 2015-1, we appointed a work committee of faculty of the Science Department to review and redefine the ILO evaluation rubric, review the evaluation instruments for each course articulated with the ILO, and identify the evidence to be collected for the assessment.

- In 2019, we appointed a committee of experts to review that the evaluations used to assess the ILO are aligned with the new rubric and allow assessing the rubric dimensions in an objective and comprehensive manner.

In regards to level 3 of the ILO, around 55% of students achieved the expected level of the "Interpretation" dimension, 47% the "Representation" dimension, 40% the "Calculus" dimension, 42% the "Analysis" dimension, and 38% the "Communication/Argumentation" dimension. With respect to the courses selected by the programs to assess level 3 of the ILO, results showed that the evidence collected was not suitable for assessing all the rubric dimensions. In terms of improvement opportunities, the assessment committees will be provided with further training to design evaluations in accordance with the ILO's rubric criteria.

These workshops will allow faculty to gain a deeper understanding of the ILO's criteria and conduct a more comprehensive review of the course activities. It is expected that these workshops will be available to all faculty at UPC in 2021.
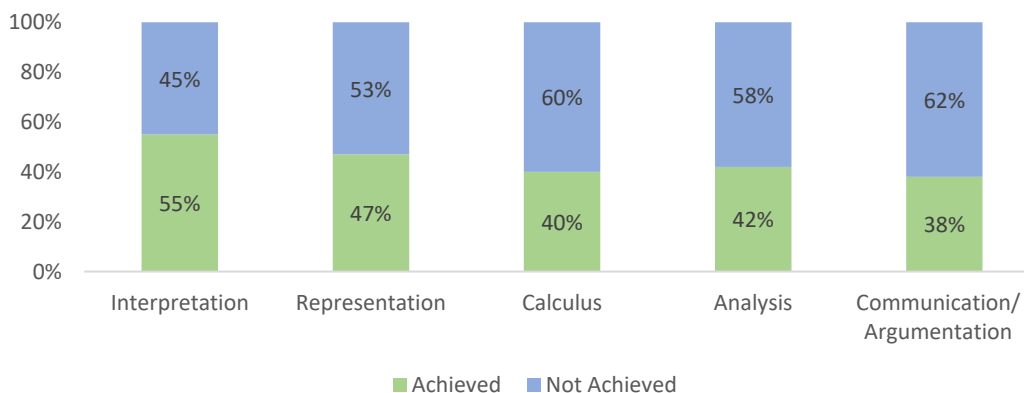
Figure 56. Quantitative Reasoning ILO (Level 3) – General Results per Dimension

Assessment Results: Oral Communication

The second assessment loop of the Oral Communication ILO at all three levels was held in 2019-2. Each program selected a course to assess each level according to their curricular articulation. Based on this information, a probabilistic and stratified sampling method was used to guarantee the representativeness of the results. The sample comprised 947 students at level 1, 584 at level 2, and 593 at level 3.

With respect to the action plan defined based on the results of the first assessment loop of the Oral Communication ILO, the following improvement actions have been implemented:

- **Review of the rubric:** A committee of experts was appointed, including faculty of the Humanities Department and the School of Communications. The committee analyzed the rubric definition and structure used in the first assessment loop in 2015-2. As a result, the ILO rubric and dimensions have been redesigned in order to include "Active Listening" as an evaluation criteria or when using descriptors to assess the outcomes in a concrete and objective manner.

- **Dissemination of the rubric and training workshops for coordinators:** The coordinators of the courses selected in accordance with the curricular articulation of each program were invited to participate in on-site workshops where the updated rubric was disseminated and explained. In addition, coordinators were provided with strategies to design evidence of their course, taking into accounts the ILO's rubric dimensions. A total of 72 out of 106 coordinators took part in the workshops.

- **Face-to-face evaluation of the evidence:** Due to the nature of the evidence to be collected for the assessment of the ILO, it was necessary to carry out a synchronic evaluation of students. An evaluation committee was appointed and trained in order to carry out face-to-face evaluations. This improvement action has allowed us to address issues that arose during the last assessment loop (such as audio problems and recordings out of sync).

Figure 57, Figure 58, and Figure 59 present the overall results by dimension of the Oral Communication ILO for levels 1, 2 and 3, respectively.
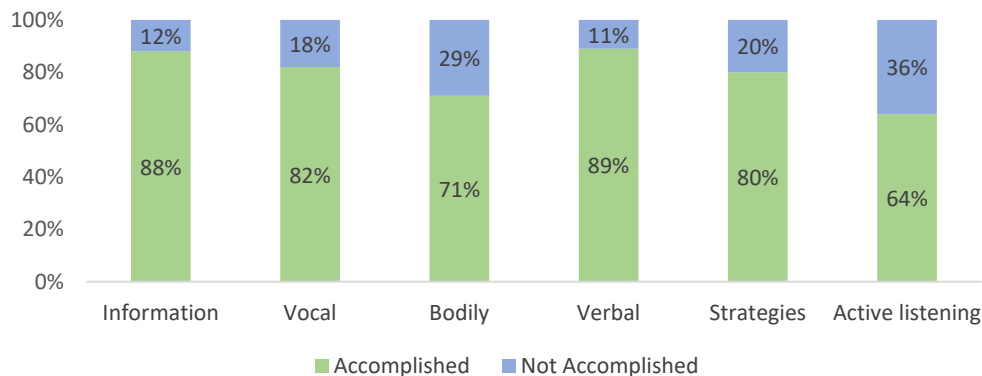

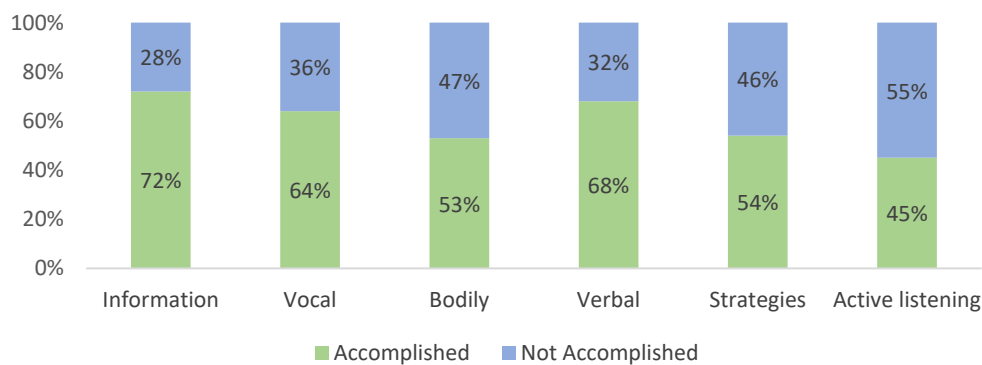**Figure 57**. ILO Oral Communication (Level 1) - General Results by Dimension

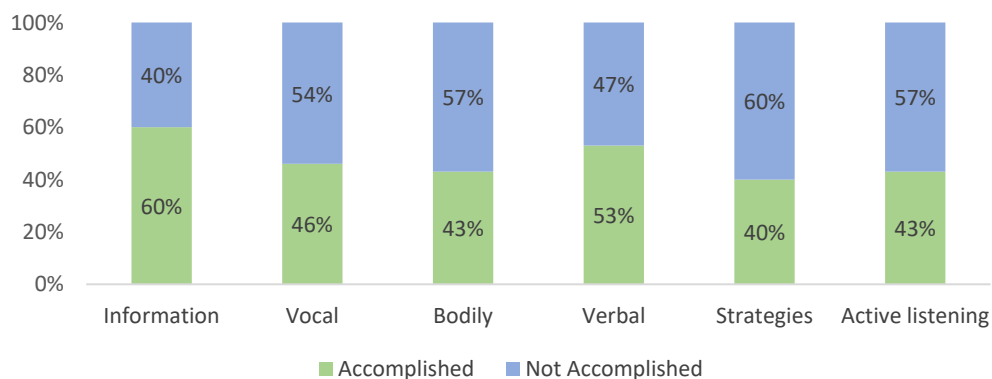**Image 58**. ILO Oral Communication (Level 2) - General Results by Dimension

Figure 59. ILO Oral Communication (Level 3) - General Results by Dimension

Based on the results obtained during the second loop of the Oral Communication ILO assessment, the following improvement action was identified:

- **Design of evidence that allows the assessment of all dimensions:** validate that the activity selected as evidence allows the assessment of all the dimensions of the learning outcome. In the assessment, the "active listening" dimension was not evidenced in all the selected activities. As an improvement action, training will be developed to provide faculty with the resources to design assessments and activities, and to acquire skills and mastery in the development of the learning outcome and in the application of instruments to assess the three levels of the ILO in all its dimensions.

- **Review of curricular design and syllabi:** The programs must review and guarantee the development of the learning outcome in their curricular designs and in the design of the course syllabi.

2.2 ILO Results at the Graduate Level

Table 24 shows the timeline defined for the assessment loops of the ILOs at the graduate level.

Table 24. Institutional Learning Outcomes Assessment Timeline – Master's Degree Programs

First loop	Second loop	ILO
2015-2	2018-2	Written Communication
2015-2	2019-1	Information Literacy
2016-1	2021-1	Quantitative Reasoning
2016-1	2021-1	Oral Communication
2017-2	2021-2	Critical Thinking
2017-2	2022-1	Innovative Thinking
2018-1	2022-2	Citizenship

2.2.1   Assessment Results

Written Communication

The assessment process of the Written Communication ILO for the Master's degree programs started in 2015-2. As a first step, the committee of experts reviewed the rubric and defined the ILO assessment rubric. The evidence used to assess the ILO included final assignments and/or theses of the courses articulated with the ILO. We collected evidence from 11 Master's degree programs in 2016, and 10 in 2017. In total, we have collected evidence from 21 Master's degree programs. The sample comprised 372 students.

The assessment loop for the Written Communication ILO has been implemented mid-way through each program to monitor students' performance and identify intervention and improvement opportunities that contribute to the achievement of the expected level (level 4) of the ILO upon completion of the Master's degree program.

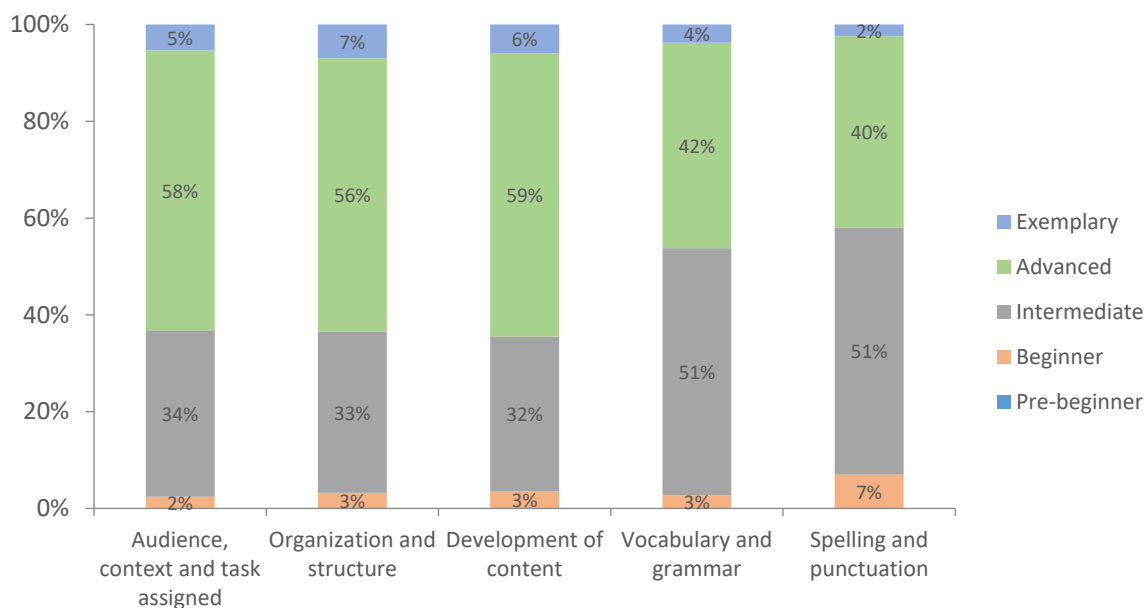Figure 60 shows the general results per dimension and achievement levels of the Written Communication ILO.

Figure 60. General results per dimension and achievement levels of the Written Communication ILO – UPC Graduate School

Upon analysis of the cumulative results, we observed that most of the students achieved an intermediate or advanced level in each dimension of the ILO. Based on this information, the assessment committee of each Master's degree program developed improvement actions to strengthen the activities of the courses articulated with this ILO at level 4, and contribute to the students' achievement of the exemplary level upon completion of the Master's degree program. The improvement actions will be assessed in the second assessment loop.

Second loop

The second assessment loop of the Written Communication ILO for the Master's degree programs has been implemented in 2018-2. As a first step, the committee of experts reviewed the rubric and determined the assessment rubric based on the expected learning results for this ILO. We collaborated with faculty to identify the evidence used to evaluate the learning results. Faculty participated in training workshops focusing on relevant evidence for the assessment of the ILO in order to select the final assignments and/or theses of the courses articulated with the ILO in the last terms of the different programs.

A total of 293 students from 17 programs were assessed as part of the evidence gathering process in 2019-2 and 2020. In this second assessment loop, we evaluated the last term of the master's degree programs to assess the level of ILO results and measure the progression of the improvement actions implemented during the first assessment loop.

Figure 61 shows the ILO assessment second loop results. Written Communication.
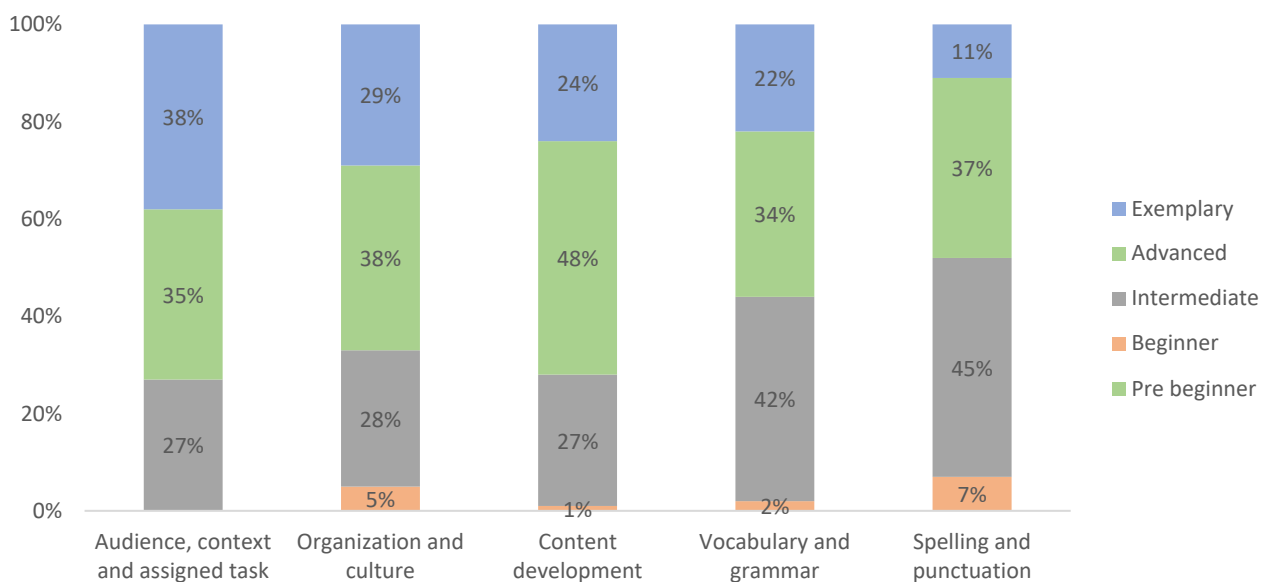
Figure 61. General results per dimension and achievement levels of the Written Communication ILO – Second Loop – UPC Graduate School

Based on these findings, we came to the preliminary conclusion that the results are positive, as they show a significant improvement with respect to the results obtained in the first assessment loop.

The improvement actions have allowed students to improve in terms of outcome levels. Said actions include the implementation of the *entry-level placement evaluation* and *competency-enhancement workshops* for students of the first terms of the Master's degree programs.

The *entry-level placement evaluation* is applied to students in order to assess the entry level of each institutional learning outcome, as required. Students with a level below the expected level (level 3) will attend a remedial course programmed by the Educational Quality Department, as required, to reinforce and ensure the development of each ILO at level 3 and contribute to students' success in the program. A maximum time of 4 hours is allocated to develop the initial evaluation. The latter is graded by an assessment committee of experts for each ILO based on the institutional rubric at level 3, with which experts define the outcome level of each ILO for incoming students to the Master's degree programs.

Information Literacy

The first assessment loop of the Information Literacy ILO for the Master's degree programs started in 2015-2. The evidence used to assess the ILO included final assignments and/or theses of the courses articulated with the ILO.

We collected evidence from 11 Master's degree programs in 2016, and 8 in 2017. In total, we have collected evidence from 19 Master's degree programs. The sample comprised 322 students.

In order to assess the evidence based on the rubric, an assessment committee was appointed and included four full-time and part-time faculty trained by the Curricular Development and Assessment Department in the assessment process and calibration of the rubric.

The assessment loop for the Information Literacy ILO has been implemented mid-way through each program to monitor students' performance and identify intervention and improvement opportunities that contribute to the achievement of the expected level (level 4) of the ILO upon completion of the Master's degree program.

Figure 62 shows the general results per dimension and achievement levels of the Information Literacy ILO.
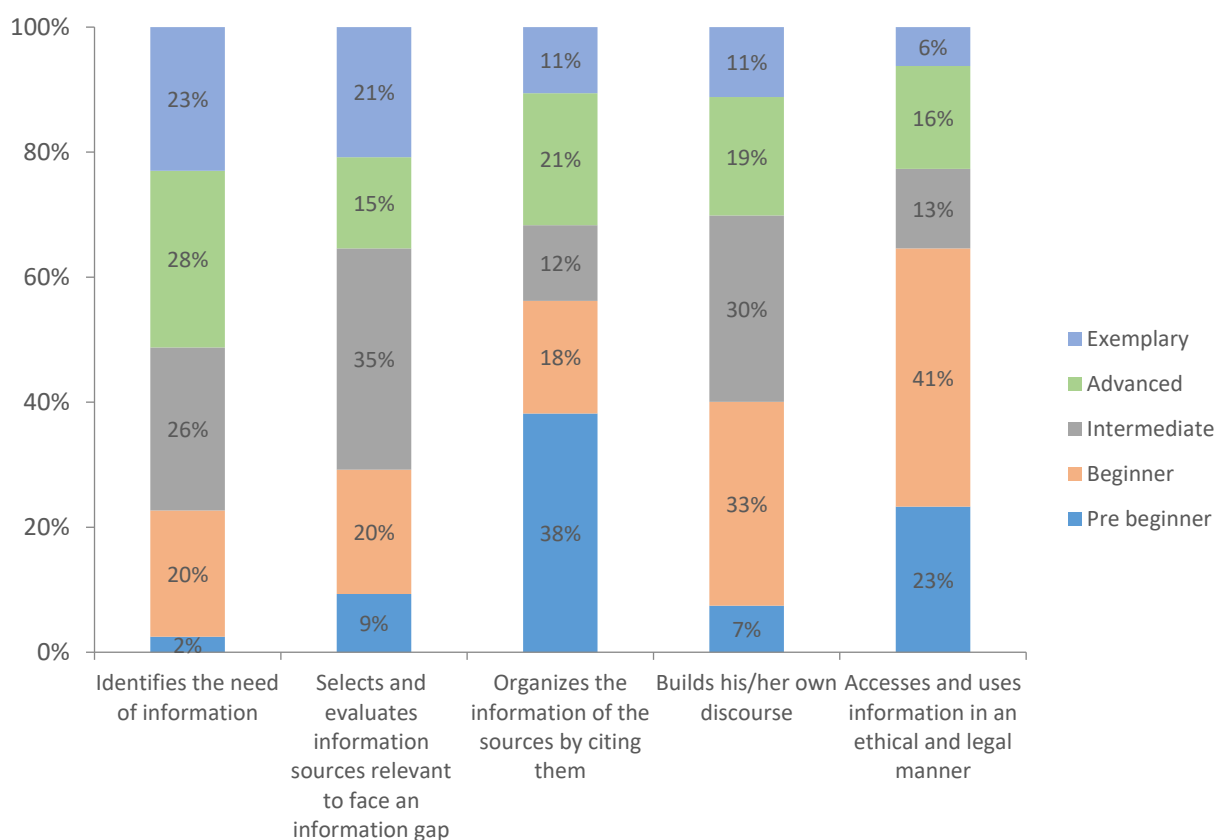

Figure 62. General results per dimension and achievement levels of the Information Literacy ILO – UPC Graduate School

Upon analysis of the cumulative results, we observed that students needed to strengthen their skills in terms of appropriate use of information sources and data bases, and their ability to cite correctly when preparing research projects or search for reliable sources, etc.

Second loop

The second assessment loop of the Information Literacy ILO for the Master's degree programs has been implemented in 2018-2. As a first step, the committee of experts reviewed the rubric and determined the assessment rubric based on the expected learning results for this ILO. After that, we developed a work plan to collect evidence for the evaluation of the learning results based on final assignments and/or theses of the courses articulates with the ILO in the last terms of the programs. The implementation of the work plan was postponed until 2020 as the Thesis courses of the Master's degree programs, selected to assess the Information Literacy ILO, were under review. By the end of 2020, the Information Literacy ILO was still in the evidence gathering process. The final results of the second assessment loop are expected in 2021.

Quantitative Reasoning

The first assessment loop of the Quantitative Reasoning ILO for the Master's degree programs of UPC's Graduate School was implemented in the 2016-1. As a first step, a committee of experts was appointed, including directors and faculty in charge of reviewing the rubric. In addition, given the nature of the ILO, the instrument consisted of a standardized exam, including 3 cases, each with 5 questions that assessed the 5 dimensions of the ILO (one question per dimension).

The instrument went through a validation process, for which each program provided a sample. This allowed us to make adjustments and improvements to assess the ILO for a specific sample of students.

The instrument was later applied in the courses articulated with the ILO. We collected evidence from 5 Master's degree programs in 2016, and 16 in 2017. In total, we have collected evidence from 21 Master's degree programs. The sample comprised 362 students.

The assessment loop for the Quantitative Reasoning ILO has been implemented mid-way through each program to monitor students' performance and identify intervention and improvement opportunities that contribute to the achievement of the expected level (level 4) of the ILO upon completion of the Master's degree program. Figure 68 shows the general results per dimension and achievement levels of the Quantitative Reasoning ILO.
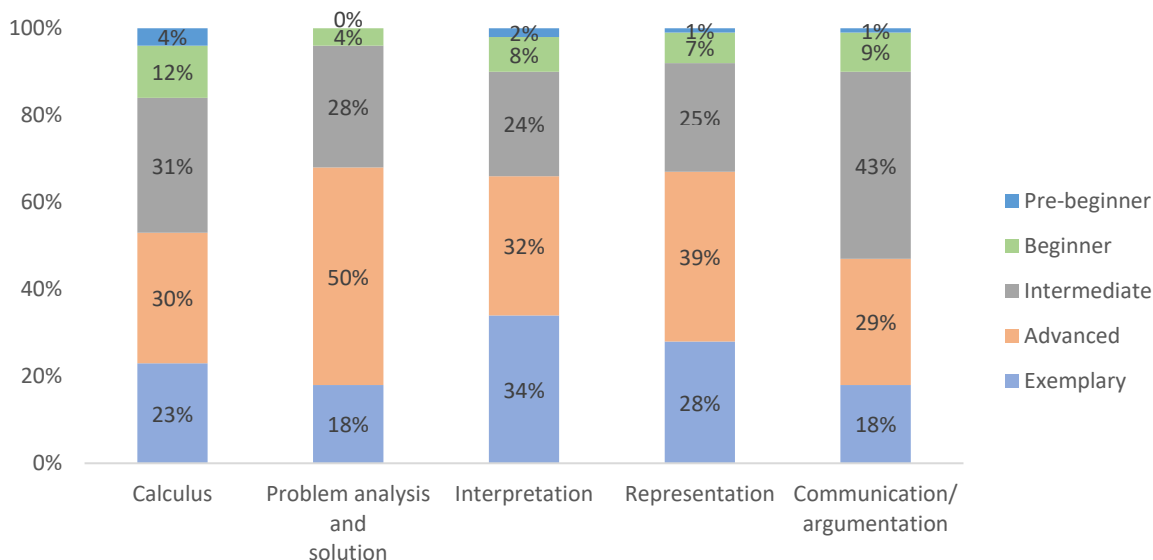
Figure 63. General results per dimension and achievement levels of the Quantitative Reasoning ILO – UPC Graduate School

Upon analysis of the cumulative results, we observed that most of the students achieved a beginner, intermediate or advanced level in each dimension of the ILO. Based on this information, the assessment committee of each Master's degree program developed improvement actions to introduce reinforcement activities in the courses articulated with this ILO at level 4, and contribute to the students' achievement of the exemplary level upon completion of the Master's degree program.

In addition, the improvement actions include the implementation of the *entry-level placement evaluation* and *competency-enhancement workshops* for students of the first terms of the Master's degree programs.

The *entry-level placement evaluation* is applied to students in order to assess the entry level of each ILO, as required. Students with a level below the expected level (level 3) will attend a remedial course programmed by the Educational Quality Department, as required, to reinforce and ensure the development of level 3 and contribute to students' success in the program. A maximum of 4 hours is allocated to develop the initial evaluation. The latter is graded by the assessment committee of experts for each ILO based on the institutional rubric at level 3, with which experts define the outcome level of each ILO for incoming students to the Master's degree programs.

The second assessment loop of the Quantitative Reasoning ILO will be implemented in 2021-1.

Assessment Results: Oral Communication

The first assessment loop of the Oral Communication ILO for the Master's degree programs of UPC's Graduate School was implemented in 2016-1. As a first step, a committee of experts was appointed, including one director and three faculty of UPC's Graduate School. The rubric was developed based

on the undergraduate rubric, which included three levels. In order to obtain the Oral Communication ILO rubric at the graduate level, we added level 4.

In order to gather evidence of the ILO, we used face-to-face observations of class activities, where students showed their capacity to communicate orally. Said activities included oral defenses of final assignments, discussions and debates.

We collected evidence from 10 Master's degree programs in 2016, and 7 in 2017. In total, we have collected evidence from 17 Master's degree programs. The sample comprised 315 students.

The assessment loop for the Oral Communication ILO has been implemented mid-way through each program to monitor students' performance and identify intervention and improvement opportunities that contribute to the achievement of the expected level (level 4) of the ILO upon completion of the Master's degree program.

Figure 64 shows the general results per dimension and achievement levels of the Oral Communication ILO.
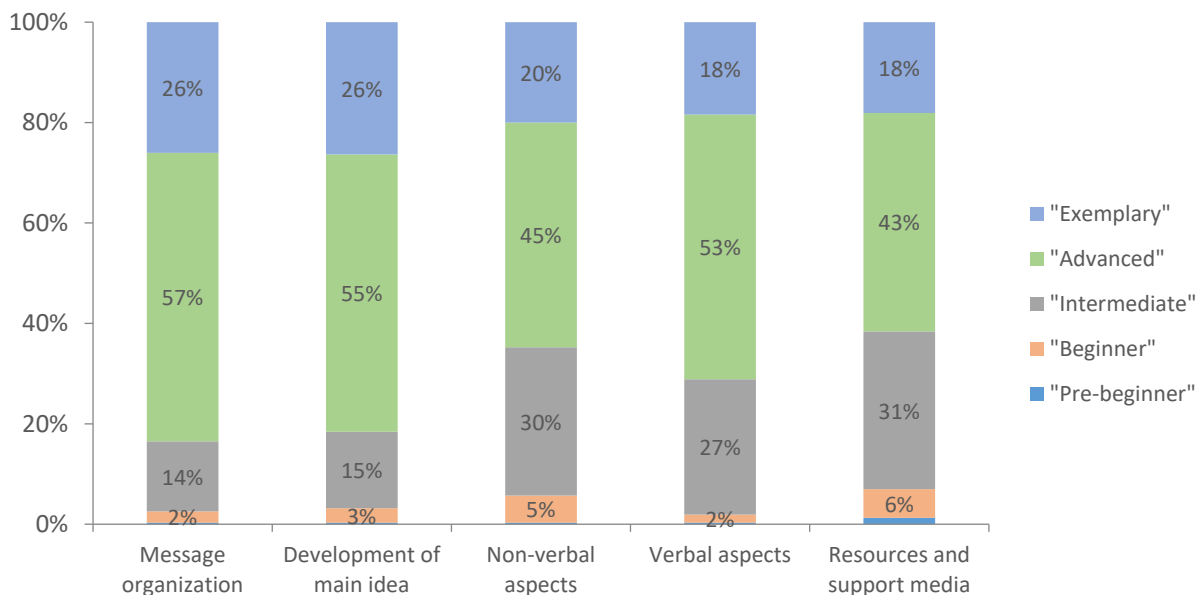

Figure 64. General results per dimension and achievement levels of the Oral Communication ILO – UPC Graduate School.

Upon analysis of the cumulative results, we observed that most of the students achieved a beginner, intermediate or advanced level in each dimension of the ILO. Based on this information, the assessment committee of each Master's degree program developed improvement actions to strengthen the activities of the courses articulated with this ILO at level 4, and contribute to the students' achievement of the exemplary level upon completion of the Master's degree program.

In addition, the improvement actions include the implementation of the *entry-level placement evaluation* and *competency-enhancement workshops* for students of the first terms of the Master's degree programs.

The *entry-level placement evaluation* is applied to students in order to assess the entry level of each ILO, as required. Students with a level below the expected level (level 3) will attend a remedial course programmed by the Educational Quality Department, as required, to reinforce and ensure the development of level 3 and contribute to students' success in the program. A maximum of 4 hours is allocated to develop the initial evaluation. The latter is graded by the assessment committee of experts for each ILO based on the institutional rubric at level 3, with which experts define the outcome level of each ILO for incoming students to the Master's degree programs.

The second assessment loop of the Quantitative Reasoning ILO will be implemented in 2021-1.

Critical Thinking

The first assessment loop of the Critical Thinking ILO for the Master's degree programs of UPC's Graduate School was implemented in the 2017-2. As a first step, we reviewed level 4 of the rubric and adjusted some concepts. The evidence used to assess the ILO included final assignments and exams of the courses articulated with the ILO. The sample comprised 121 students.

The assessment loop of the Critical Thinking ILO has been implemented mid-way through each program to monitor students' performance and identify intervention and improvement opportunities that contribute to the achievement of the expected level (level 4) of the ILO upon completion of the Master's degree program.

Figure 65 shows the general results per dimension and achievement levels of the Critical Thinking ILO.
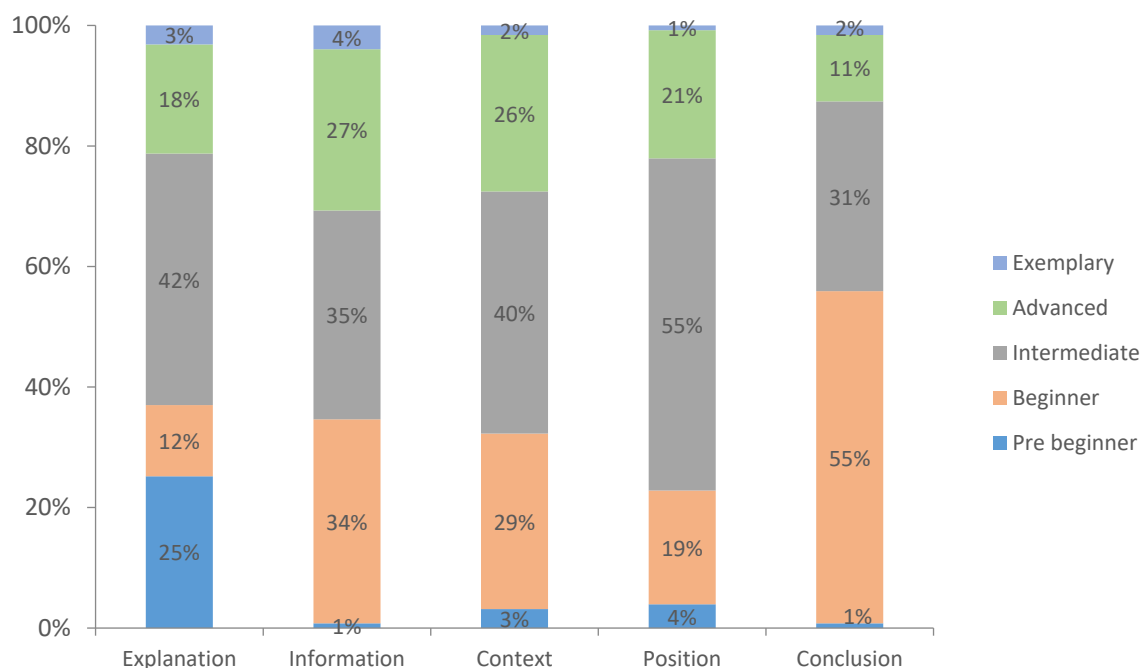

Figure 65. General results per dimension and achievement levels of the Critical Thinking ILO – UPC Graduate School

Upon analysis of the cumulative results, the assessment committee of each Master's degree program developed improvement actions to introduce reinforcement activities in the courses articulated with this ILO at level 4, and contribute to the students' achievement of the exemplary level upon completion of the Master's degree program.

In addition, the improvement actions include the implementation of the *entry-level placement evaluation* and *competency-enhancement workshops* for students of the first terms of the Master's degree programs.

The *entry-level placement evaluation* is applied to students in order to assess the entry level of each ILO, as required. Students with a level below the expected level (level 3) will attend a remedial course programmed by the Educational Quality Department, as required, to reinforce and ensure the development of level 3 and contribute to students' success in the program. A maximum of 4 hours is allocated to develop the initial evaluation. The latter is graded by the assessment committee of experts for each ILO based on the institutional rubric at level 3, with which experts define the outcome level for each ILO of the incoming students to the Master's degree programs.

The second assessment loop of the Critical Thinking ILO will be implemented in 2021-2.

Innovative Thinking

The first assessment loop of the Innovative Thinking ILO for the Master's degree programs of UPC's Graduate School was implemented in the 2017-2. As a first step, we reviewed level 4 of the rubric and adjusted some concepts. The evidence used to assess the ILO included final assignments and exams of the courses articulated with the ILO. The sample comprised 131 students.

The assessment loop for the Innovative Thinking ILO has been implemented mid-way through each program to monitor students' performance and identify intervention and improvement opportunities that contribute to the achievement of the expected level (level 4) of the ILO upon completion of the Master's degree program.

Figure 66 shows the general results per dimension and achievement levels of the Innovative Thinking ILO.
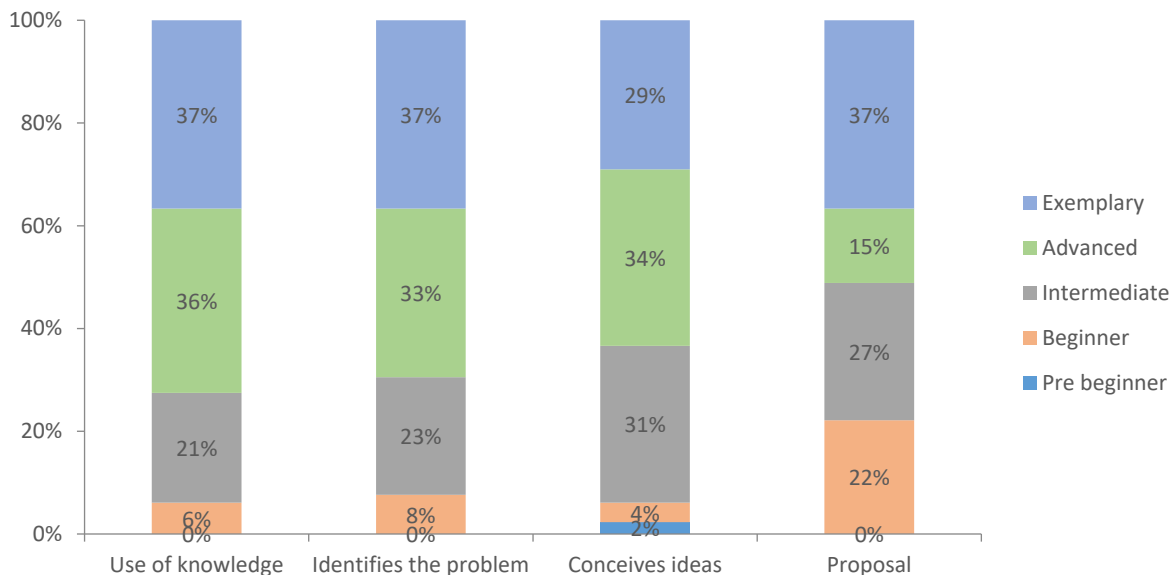
Figure 66. General results per dimension and achievement levels of the Innovative Thinking ILO – UPC Graduate School

Upon analysis of the cumulative results, we observed that most of the students achieved an intermediate, advanced or exemplary level in each dimension of the ILO. Based on this information, the assessment committee of each Master's degree program developed improvement actions to introduce reinforcement activities in the courses articulated with this ILO at level 4, and contribute to the students' achievement of the exemplary level upon completion of the Master's degree program.

In addition, the improvement actions include the implementation of the *entry-level placement evaluation* and *competency-enhancement workshops* for students of the first terms of the Master's degree programs.

The *entry-level placement evaluation* is applied to students in order to assess the entry level of each ILO, as required. Students with a level below the expected level (level 3) will attend a remedial course programmed by the Educational Quality Department, as required, to reinforce and ensure the development of level 3 and contribute to students' success in the program. A maximum of 4 hours is allocated to develop the initial evaluation. The latter is graded by the assessment committee of experts for each ILO based on the institutional rubric at level 3, with which experts define the outcome level of each ILO for incoming students to the Master's degree programs.

The second assessment loop of the Innovative Thinking ILO will be implemented in 2022-1.

Citizenship

The first assessment loop of the Citizenship ILO was implemented in 2018-1. As a first step, a committee of experts of UPC's Graduate School was appointed to review the rubric, specify the guidelines for the evidence-gathering process, and develop a work plan. Upon review of the syllabi of the courses articulated with the ILO selected for the assessment process, we observed a lack of

evidence to assess the ILO. As a result, the Graduate School academic committee and the assessment team convened experts on citizenship to design the Ethics, Social Responsibility and Compliance course, which was included in the curricula of all Master's degree programs as of 2018 and 2019. This first improvement action to collect evidence based on this new course aligned with the ILO in all its dimensions has resulted in the postponement of the evidence-gathering process to 2020-2.

The Citizenship ILO is still in the evidence gathering process and has partial results. According to the current work plan, the results of the first assessment loop will be available by the end of 2021-1.

Figure 67 presents the partial results per dimension and achievement levels of the Citizenship ILO.

Image 67. Partial results per dimension and achievement levels of the Citizenship ILO - UPC Graduate School

After the analysis of the partial results, we can observe that most of the students reached an intermediate or advanced level in the ILO dimensions. However, the incorporation of improvement actions for the "Pluralism" dimension should be prioritized, as well as the review of the assessment instrument.

2.3.1 Improvement plan of learning results at the graduate level (2017-2020)

Upon analysis of the assessment results at the graduate level, a team of experts has developed an action plan for 2017-2020 for all Master's degree programs of UPC's Graduate School. This action plan includes the strategies implemented or in process of implementation aimed at ensuring continuous improvement of students' learning results at the graduate level.

See below the actions included in the 2017-2020 action plan. It is worth mentioning that this plan is updated on a yearly basis.

1. Development of an initial evaluation of competencies to obtain a diagnosis of incoming students (Status: Implemented).
2. Execution of the initial evaluation of competencies in all Master's degree programs of UPC's Graduate School during the induction session (Status: Implemented).
3. Elaboration of individual reports on competencies to provide students with feedback (Status: Implemented).
4. Design and development of competency-enhancement workshops in line with each ILO and the lower results (Status: Implemented).
5. Execution of competency-enhancement workshops in line with the dimensions with lower results (Status: Implemented).
6. Comprehensive review of the Thesis courses of all Master's degree programs to improve and strengthen the Information Literacy and Written Communication ILOs in all their dimensions (Status: Implemented).
7. Review and redesign of course summaries by including the ILO developed in each course and the course outcome per ILO. *To date, we reviewed 16 out of 21 Master's degree programs* (Status: In process).
8. Creation of ILO training workshops for faculty: Elaboration and implementation of training workshops for faculty and directors on the development and evaluation of the Information Literacy and Written Communication ILOs. (Status: Implemented).

Furthermore, it is worth highlighting that the implementation of the initial evaluation of competencies at the graduate level, as well as the competency-enhancement workshops have provided students with adequate support and guidance to develop the ILOs. See below the main results of the initial evaluation of competencies for 2017-2020, and its progress to date.

2017	2018	2019	2020
• Meetings with the committee of experts in charge of developing the initial evaluation. • First calibration of the evaluation and implementation of a pilot in two Master's degree programs end 2017	• Implementation of the initial evaluation in 23 Master's degree programs; 438 incoming students received individual reports, which were used to identify the students that needed to attend the competency-enhancement workshops. • Six competency-enhancement workshops were held	• Implementation of the initial evaluation in 23 Master's degree programs; 465 incoming students received individual reports, which were used to identify the students that needed to attend the competency-enhancement workshops. • Ten competency-enhancement workshops were held.	• Three competency-enhancement workshops went online. • Implementation of the initial assessment in 25 master's degree programs. 340 incoming students received individual reports, which were used to identify students who needed to attend the workshops. • Eight competency-enhacement workshops were held.

Figure 68. Progress of the Implementation Plan of the Initial Evaluation of Competencies in Master's Degree Programs (2017-2020).

See below the results per dimension and outcome level for each ILO assessed in the Initial Evaluation in 2020:

Table 25. Results of the Initial Evaluation of Competencies in Master's Degree Programs (2020)

TOTAL MASTER'S DEGREE PROGRAMS EVALUATED	25				Total	341
Learning Outcomes	Level 0 (Pre-Beginner)	Level 1 (Beginner)	Level 2 (Intermediate)	Level 3 (Advanced)	% Accomplished	% Not Accomplished
Written communication	0%	5%	27%	68%	68%	32%
Information Literacy	5%	21%	40%	34%	34%	66%
Quantitative Reasoning	11%	23%	33%	33%	33%	67%
Critical Thinking	1%	21%	35%	42%	42%	58%
Innovative Thinking	1%	7%	39%	53%	53%	47%
Citizenship	7%	9%	29%	55%	55%	45%

Based on these results, the following conclusions can be drawn:

- In regards to the **Written Communication ILO**, the results are satisfactory, as students achieved an advanced level.
- In regards to the **Information Literacy ILO**, most students achieved an intermediate level, which allows for a seamless transition between level 2 and level 3 as a result of the competency-enhancement workshops.
- In regards to the **Quantitative Reasoning ILO**, students achieved lower results, as 67% did not achieve the expected outcome. Students participation at the competency-enhancement workshops will be enhanced.
- In regards to the **Critical Thinking ILO**, results show that 42% of students achieved an advanced level, which is why we will continue on strengthening all its dimensions during the competency-enhancement workshops.
- In regards to the **Innovative Thinking ILO**, results show that 53% of students achieved the advanced level, whereas 39% achieved the intermediate level. Students will be provided with support through the competency-enhancement workshops so as to ensure that they achieve the advanced level in an optimal way and are able to develop level 4 of the ILO, which is the expected level upon completion of the Master's degree program.
- In regards to the **Citizenship ILO**, 55% of students achieved the expected level. The workshops have allowed students to learn and put into practice fundamental concepts of ethics and citizenship.

Among the improvement opportunities identified in the initial evaluation carried out in 2020 are the following:

- The committee of experts, who designed the initial evaluation, was appointed to the evaluation committee along with other faculty of UPC's Graduate School. The committee was tasked to review the structure and contents of the initial evaluation. Once completed, the evaluation of the rubric's dimensions was described in a one-sentence definition in each ILO. This way, an evaluator is able to assess all ILOs more swiftly, through the creation of the comprehensive evaluator figure.

- Among the actions aiming at improving the initial evaluation, we canceled the Quantitative Reasoning test and included the "Quantitative Justification" section in the project to assess all ILOs.

- We carried out the virtualization of the entire test (which is now available on Blackboard).

- Students are provided with feedback through Blackboard.

In regards to the competency-enhancement workshops implemented in 2018-2020 to strengthen the ILOs, Table 26 shows the objective of each workshop and the number of workshops implemented per ILO.

Table 26. Competency-Enhancement Workshops (2018-2020)

Workshops	Workshop objective	Total participating students	N° of times implemented	Year implemented
Citizenship (On-Site)	Upon completion of the workshop, students analyze a situation of their daily life from an ethical and civic perspective, taking into account the role of responsibility, solidarity, and respect for diversity via a final exam.	45 participants	4	2018/2019
Information Literacy (On-Site)	Upon completion of the workshop, students identify information needs, select and evaluate information sources, assess their suitability and use them in an adequate manner, respecting the ethical principle of academic integrity and the regulations for the protection of copyright, to solve the problem stated.	143 participants	8	2018/2019
Critical and Innovative Thinking (On-Site)	Upon completion of the workshop, students propose innovative and creative solutions to a problem based on the analysis of an organization and its context.	74 participants	4	2019

Workshops	Workshop objective	Total participating students	N° of times implemented	Year implemented
Communication (Blended)	Upon completion of the workshop, students write an essay in which they explain a problem in their specialty field using reliable sources of information.	32 participants	2	2020
Information Literacy (Online)	Upon completion of the workshop, students recognize their need for information, where to locate it, how to evaluate its suitability and use it appropriately, respecting the ethical principle of academic integrity and the Copyright according to the problem they are proposed.	54 participants	2	2020
Citizenship (Online)	Upon completion of the workshop, students evaluate, from an ethical and civic perspective, a situation in their professional environment, taking into account the role of responsibility, solidarity and respect for diversity through a final assignment.	56 participants	2	2020
Critical and Innovative Thinking (Online)	Upon completion of the workshop, students propose creative and innovative solutions to a problem, based on the analysis of an organization and its context.	23 participants	1	2020
TOTAL		**427 participants**	**23**	**2018-2020**

3. Academic Excellence Group Results

The Academic Excellence Group (AEG) was created in 2012 in order to recognize UPC's best students and offer them a series of benefits and opportunities to allow them to grow in terms of professional competencies and personal leadership with the purpose of becoming UPC referents in our society.

Since 2012 and under the direction of the Vice Rectorate of Academic Affairs and Research, the AEG has grown in both positioning and value within our institution. At present, eight years after its creation, all students are aware of the fact that our institution recognizes and rewards talent.

The ultimate goal of this project is to promote a culture of high academic standards within UPC in order to promote a healthy competition to become the best student possible; not only for personal benefit, but also with a vision that transcends the pursuit of their future career.

The AEG requires that we constantly innovate in order to offer new and better benefits to our students. As a result, in 2014, UPC created the Leadership Program so as to complement academic education with the development of leadership skills.

The program is constantly evolving and, without a doubt, we will face many more challenges. Some initiatives, which are aligned with the promotion of research and culture, are already being developed, always guided by our vision to strengthen AEG students' skills and allow them to have a transcendental impact on our community.

The criteria for inclusion in the AEG consider the following: (a) to be enrolled in a minimum of 15 academic credits during the regular term of the second semester of the academic year, (b) to have earned at least 40 accumulated and passed academic credits (passed courses correspond to summer tuition and/or two regular terms during the year); and (c) to achieve an accumulated weighted average which is two standard deviations above the general average of their academic program.

AEG students participate in a Leadership program that has been especially designed for them. Said program develops and strengthens soft skills, self-knowledge, and develops innovation and social responsibility ventures. The program entails 140 hours, has a duration of 2 years, and includes 4 modules: (a) foundations and development of personal leadership, (b) foundations and development of social leadership, (c) advanced knowledge of leadership, and (d) transcendent leadership. At present, more than 300 participants take part in the Leadership program and its different activities at UPC Campus and Sites, simultaneously. This program is offered by faculty of the Monterrey Institute of Technology and Higher Education (Mexico).

By the end of 2020, UPC had 1,533 AEG students. Of all the students participating in the program, around 80% participated in at least one of the conferences and events that were offered especially to them.

See below the list of activities and conferences developed for AEG students. Due to the COVID-19 global scenario, these programs were delivered online.

- **Leadership Program:**

This program is designed especially for AEG students and seeks to develop and strengthen soft skills, self-knowledge, innovation and social responsibility. It lasts two years and includes simultaneous activities at all UPC sites. The Leadership program includes three training modules on Personal Leadership, Emotional Intelligence, and Transcendent Leadership, as well as a fourth international module on Innovation and Entrepreneurship (organized by the Monterrey Institute of Technology and Higher Education, Mexico). **In 2020, 539 students participated in the Leadership Program.**
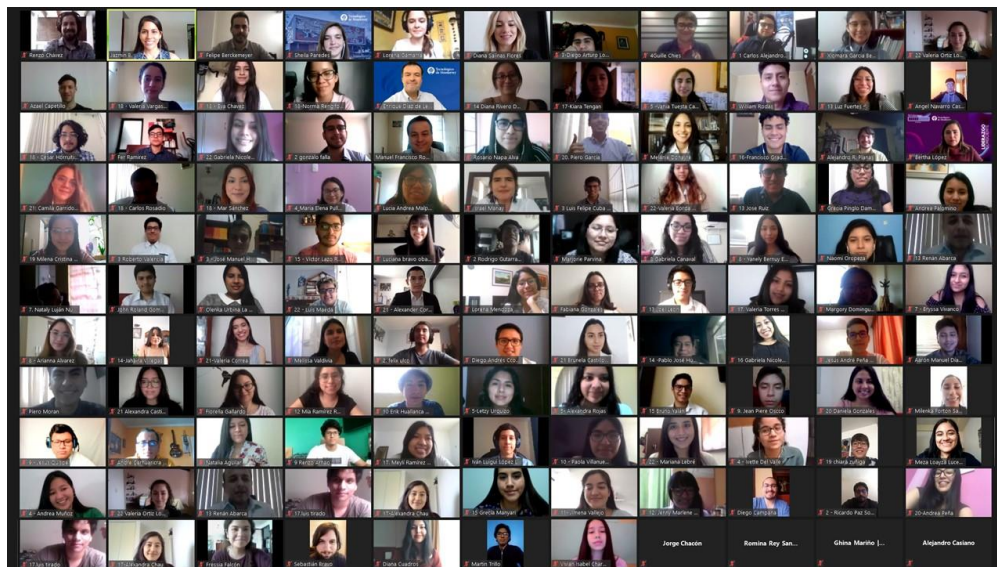

Figure 69. AEG students who completed their training in the Leadership Program in 2020.

- **Entrepreneurship Bootcamp**

Leadership Program students of the fourth module participate in a three full-day bootcamp where they develop social entrepreneurship projects under the mentoring of faculty with expertise in innovation and entrepreneurship from the Monterrey Institute of Technology and Higher Education (Mexico). During its latest edition, students received support from the Municipality of Lima, from project conception to final presentation and feedback. **In 2020, 116 students participated in the Leadership Bootcamp.**

Figure 70. AEG students during the 2020 Entrepreneurial Leadership Bootcamp, with faculty of the Monterrey Institute of Technology and Higher Education (Mexico).

- **"Trasciende Perú" (Transcend Peru) Congress**

This congress was born as an initiative of AEG students. It includes the participation of external speakers to discuss topics of national relevance. Topics in prior editions included: education, environmental sustainability, and social entrepreneurship. Congress participants work in groups to develop solution proposals to the great challenges clustered around the main topics. **In 2020, 120 students participated in the Congress.**
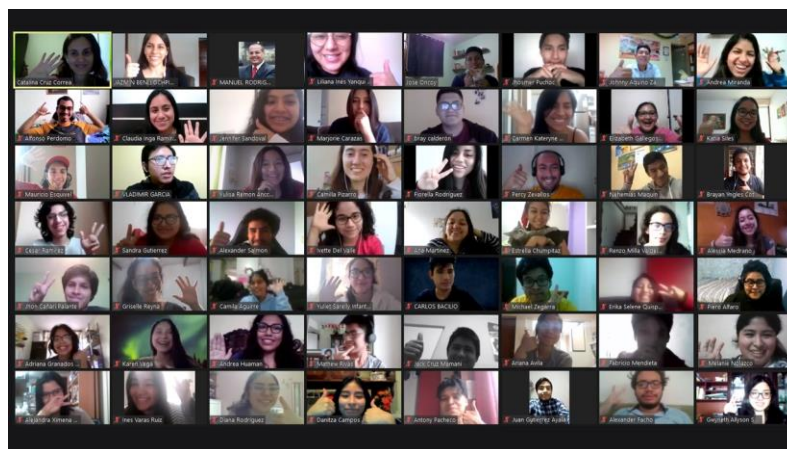
Figure 71. AEG students at the "Trasciende Perú" Congress on Ethics and Happiness held in 2020.

-   **AEG Conference & Workshops:**

These workshops are especially designed for AEG students and seek to develop professional skills. Some workshops focus on personal branding, oratory, negotiation, and high-impact presentations, among other topics. **In 2020, 450 students participated in the Workshops and Conferences.**

Figure 72. AEG students during the conferences in 2020.

4.   Student Life Results

The Student Life Office disseminates, manages and promotes different artistic, cultural, sports and social responsibility a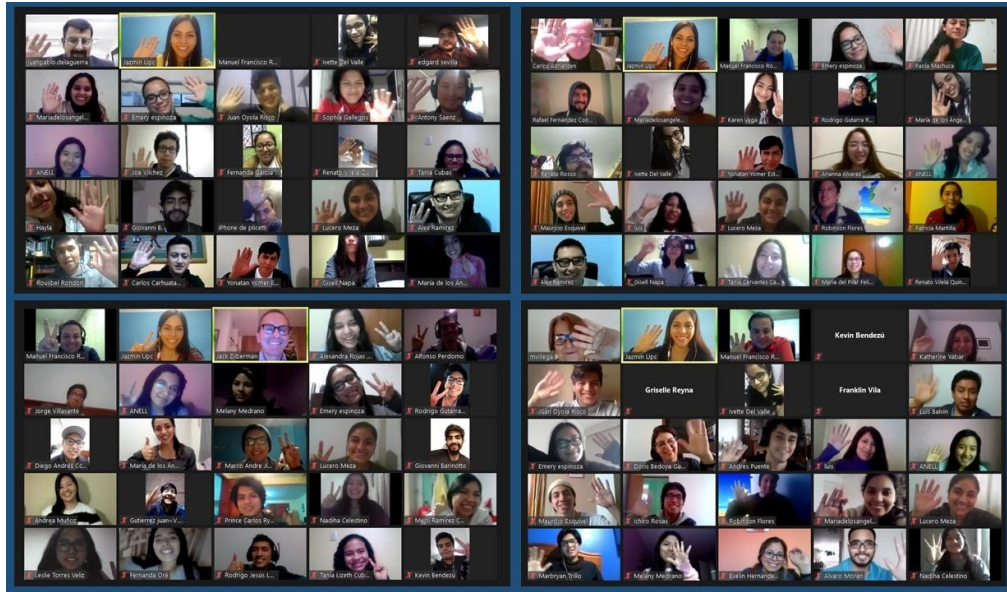ctivities, which enrich students' educational experience as they explore, express and broaden their vision of the world through engaging actively in society. Through these activities, the Student Life Office seeks to develop four co-curricular learning outcomes that are part of UPC's educational model: leadership, self-development, global vision and social initiative.

As part of the requirements to obtain the Bachelor's academic degree, students must fulfill four extracurricular credits.

Students have multiple options for completing extracurricular credits, including the following: UPC Clubs, Course Representatives, Qualified Athletes, UPC Troupes, UPC Groups, Cultural Activities Passport, Student Representation, UPC Sports Teams, Extracurricular Workshops and Volunteering in organizations or by campaign.

During 2020, the offer of extracurricular activities had to be adapted so that they could be provided virtually. This demanded a lot of willingness and creativity from facilitators, directors, trainers and students to adapt their disciplines and spaces to virtual environments.

In 2020, with the exception of UPC Groups, University Week, CADE Universitario, all university activities and university life programs were successfully implemented, being now delivered 100% online, ensuring the achievement of the respective learning outcomes through the design of each experience. While in the 2020-1 term the volunteering programs in organizations and Cultural Activities Passport could not be developed, in 2020-2 it was again possible to offer students these alternatives for their extracurricular credits.

The accommodations incorporated in 2020 for the university life activities experiences are presented below:

In the case of artistic troupes and sports teams, students continued their training and participation through videoconferences. UPC Troupes continued to rehearse virtually and performed at internal and external virtual events. Sports teams continued training and participating in competitions at the interuniversity level. Students received training materials and musical instruments at home to continue their training and to keep the community united and engaged.

Cultural Fridays, which occupied different in-person spaces on the campuses, every Friday from 1:00 pm to 3:00 pm, were developed through platforms such as Blackboard Collaborate, Zoom, Facebook, Instagram and Youtube. Entrance to the activities on Cultural Fridays was free and the following options were offered: cultural, social, academic or sporting activities through various means.

Figure 73 shows an example of the activities proposed for Cultural Fridays.

Figure 73. Cultural Friday Activities Agenda (09/25/2020) through virtual platforms.

Additionally, during 2020, Chess, Karate, Taekwondo, Judo and Wushu lightning tournaments were organized, as well as eSports tournaments such as FIFA, DOTA, LOL on special platforms and Twitch.

The Student Life Office's main results for the period 2015-2020 are presented in Figure 74 and Figure 75.
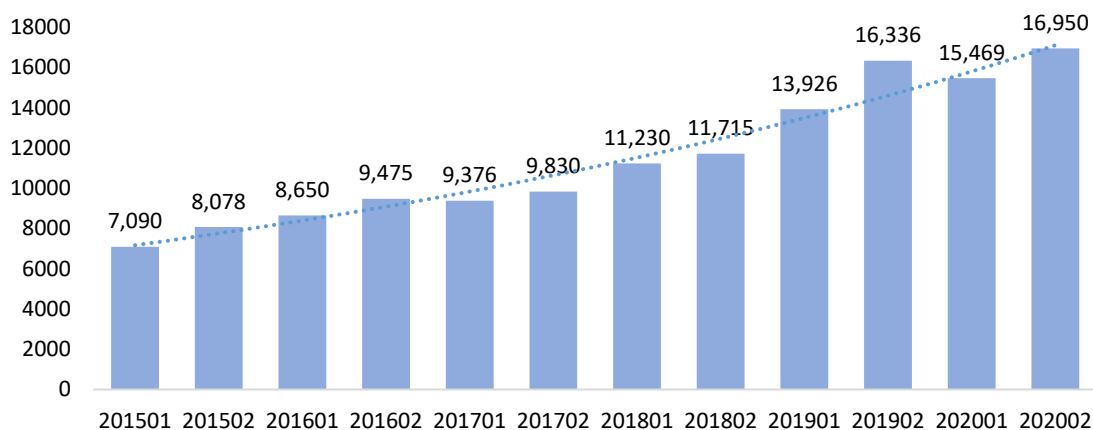
Figure 74. Co-curricular credits awarded per academic semester (2015-2020).

In 2020, more than 285 activities were carried out during the year, with more than 50,000 views considering both academic periods (2020-1 and 2020-2).
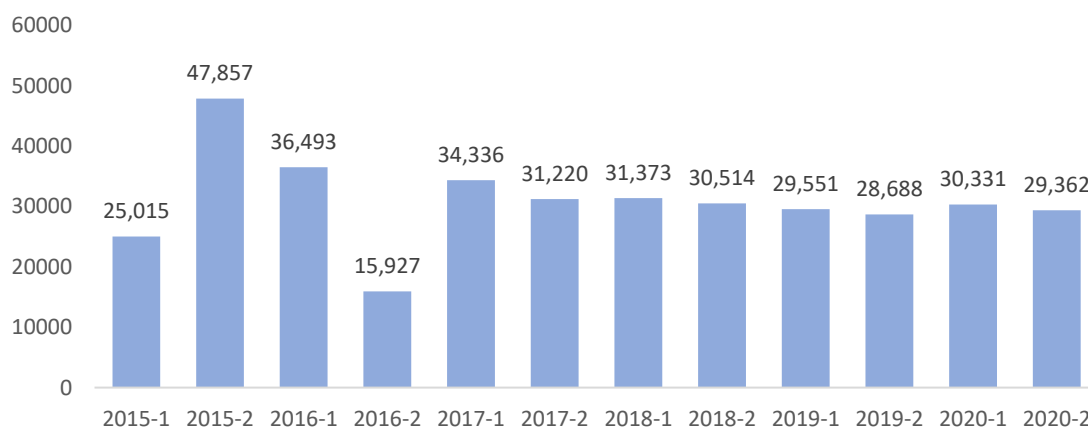
Figure 75. Number of contacts in co-curricular activities according to the academic term (2015-2020).

Note: The indicator "number of contacts" represents the total number of students who participated in co-curricular activities and did not receive credit during the term. This indicator takes into account the attendance of each student to each event organized by the University Life Office. In 2020, participation and number of views are taken into account.

In regards to students' accomplishments in co-curricular activities, see below a summary of the main results of 2020 by activity:

h) UPC Troupes (Elencos UPC, in Spanish)

UPC Troupes have been created in order to provide students with a space to develop performing arts, such as singing, dancing, and music, as well as entertainment, theater and improvisation. The Troupes include students from different programs who perform inside and outside the university. In 2020, UPC Troupes moved to the virtual platforms offered by the university and complemented their routines with other digital tools that allowed them to continue with the prepandemic work pace. In addition, with a view to adaptation, they found new opportunities for artistic creation in each discipline.

In 2020, UPC Troupes presented its talent in different virtual scenarios, obtaining several recognitions:

- **Peruvian Dances Troupe:** They won the first place in the I University Folkloric Dance Contest "Bailémoslo Siempre." They created an emotional video that reflected the emotions that its members experienced as a result of the isolation and managed to move not only the UPC community, but also the entire audience with 40,000 views on Instagram.

- **Improv Troupe:** They created a live virtual improvisation show called: "Re-conectados: historias virtuales". A sample of the premises of improv: accepting and proposing ideas. This show has been presented at the Live UPC Cultural Fridays, at the 2020 International Book Fair and at the Peruvian-Japanese Cultural Center.

- **Peruvian Dances and Street Dance Troupe:** They offered several model dance classes for the whole community, an opportunity to put into practice what they had learned and actively disseminate the art they practice. These classes have been held in different spaces such as the Lima Book Fair 2020, the Live UPC Cultural Fridays, the cultural spaces of the Club Regatas de Lima and through social networks.

- **Polyphonic Choir and Peruvian Music Troupes:** They were part of the EDM (School of Music) Session programs, streamed on the Music program's Facebook page, where they had the opportunity to learn more about the work of each troupe and enjoy their music, produced from home.

- **Theater Troupe:** They presented a virtual theater proposal with the first act of "Hamlet," which was the product of a research and creation process based on digital platforms.

- **Master-of-Ceremonies Troupe:** Throughout the year, they accompanied the activities carried out on Cultural Fridays for the community, through different resources provided by social networks.

Finally, the virtual scene project "AdaptArte al 2020," gathered members of the **UPC Troupes** to create an emotional virtual theater proposal, taking their talents, their experiences and the challenges they have faced during this year as a starting point.

Figure 76. UPC Peruvian Music Troupe in the microprogram EDM Sessions.

Figure 77. UPC Improv Troupe in the show " Re-conectados".

UPC Sports

In 2020, among the activities promoted by UPC, in addition to being organizers and hosts of the competitions, the following results were achieved:

- Championship in the UPC Karate Cup - Kata
- Championship in the UPC Taekwondo Cup
- Sub-championship in the Chess Team Battle, the Wushu - Taolu Cup, the Virtual Chess Cup and the Super Chess League.
- Chess team championship in the International Championship organized by the Universidad de la Punta, Argentina, where nine universities from Argentina, Uruguay and Peru participated.
- Organization of the first International Virtual Taekwondo Cup with the participation of clubs and universities from Colombia, Mexico, Ecuador and Costa Rica.

- First place in the Chess and Karate championships in the first term (2020-01), and Taekwondo in the second term (2020-02), virtual competitions organized by the University Sports Federation of Peru - FEDUP. More than 30 universities participated in each competition nationwide. Thanks to these results, in 2020, UPC was recognized by FEDUP as the most successful university sports program.

Figure 78. Recognition for the UPC in the FEDUP 2020 Excellence Awards.

In addition, since 2020, national eSports festivals (FIFA 20, DOTA2, League of Legends and Fortnite) were put together, where UPC students have classified to international competitions organized by the International University Sports Federation - FISU.

- In the 2020-1 FIFA20 championship, three students reached the semifinals, taking first and second place. Both finalists classified to the regional tournament organized by FISU America.
- Second place in the 2020-2 League of Legends championship.
- First place in the 2020-2 Fortnite championship.

Figure 79. UPC results in the FEDUP eSports competitions.

In 2020, UPC athletes and Qualified Athletes competed in the following national and international championships. They obtained the following results:

- **Hugo del Castillo**, Medicine student, won two silver medals in the Austria Open, 2 medals in the German Open (1 gold in couple and a bronze in individual), he also won a gold medal in the International Taekwondo Poomsae Friendly Tournament - UPC Cup 2020.
- **Inés Castillo**, Fashion Design and Management student, won a silver medal in doubles and singles at the South American Senior Championship, silver medal at the International Tournament of Mexico 2020, in Badminton.
- **Fernanda Saponara**, Administration and Marketing student, won the bronze medal in doubles in the Jamaican International 2020, bronze medal in the Peru Future Series 2020, in Badminton.
- **Danica Nishimura**, Administration and Marketing student, won the gold medal in women's doubles and silver medal in mixed doubles at the South American Junior and Senior Championships in Lima 2020, silver medal in women's doubles at the Jamaican International 2020, in Badminton.
- **Jesus Salva**, Communication and Journalism student, won first place in the National Para Badminton Championship.
- **Sandy Quiroz**, Psychology student, obtained the fifth place in the Duet Mixed Artistic Swimming Open Aleksander Maltev, in Israel.
- **Lucia Bazo**, Professional Graphic Design student, won the gold medal in the National Virtual Figure Skating Championship.
- **Joaquín Vargas**, Industrial Engineering student, won the best swimmer award at the Florida 2020 Virtual Championship, in the United States.
- **Brillith Gamarra**, Psychology student, won the silver medal in the 52kg category at the Open Pan American Judo in Lima.
- **Jorge Arcela**, Psychology student, won the gold medal in the R1 - R3 - R6 modalities of the National Para Sport Shooting Championship.

Figure 80. Brillith Gamarra's participation in the Open Pan American Judo Championship.

Also, with great commitment to the sports sector and, particularly, to promoting gender equality in sports and physical activity, in 2020 an inter-institutional cooperation agreement was signed with Ligas Femeninas - LF7. As a result of this agreement, various activities were initiated, such as discussions, training for female students, coaching for athletes, and coordinated and inclusive communication on this important topic.

In addition, in September 2020, the UPC sports podcast was launched through Spotify, hosted by the sports journalist and professor of the institution, Mariano Naranjo. The interview format includes well-known specialists from the Peruvian and international sports sector among its guests.

Figure 81. Promotion of episode II of the podcast "En Nombre del Deporte".

UPC Volunteering program

In 2020, more than 200 students carried out volunteering activities, both in-person and virtually. They worked with organizations that adapted the way they did their volunteering work and made calls for different volunteering opportunities for our students, such as Techo Perú, Asociación KP, Colectivo Piecitos, Por un Perú Mejor, among others. With this, they were able to establish a new dynamics based on social work, allowing them to connect and reach more places in our country through virtuality.

Figure 82. Images of students doing virtual volunteering at Asociación KP.

Furthermore, at the beginning of 2020-01, the validation process of the voluntaring work of students who are part of the following institutions began:

- Cuerpo General de Bomberos Voluntarios del Perú – CGBVP
- Programa Voluntarios del Bicentenario del Proyecto Especial Bicentenario 2021– PEB which is part of the Peruvian Ministry of Culture.

Figure 83. Invitation to register students who are volunteering.

5.   Internationality Results

Given the global health emergency, the design, delivery and evaluation system of programs that promote international mobility, such as exchanges, study abroad, certificates, among others, were developed 100% online. Both UPC students and international students, coming from different universities and countries, were able to continue participating in international experiences that contribute to their academic education during 2020. The courses offered by UPC were delivered through Blackboard and, in the case of foreign universities, through the digital platforms determined by them.

The Academic Director's Office of each program and the UPC International Office provided permanent assistance to the students in these programs to help them with any questions they might have.

5.1 Undergraduate Programs

In 2020, a total of 1,082 UPC's students participated in international academic experiences, being those: academic exchange and Study Abroad experiences (115 students); short-term academic programs (181 students); Work & Travel programs (704 students); and other international experiences such as certificates, graduate programs and credit transfer programs (82 students).

From this total, 922 students completed their international experience program onsite and 160 online. The most popular destinations, excluding Work & Travel programs, among UPC students were: Spain (23%), United States (9%), Colombia (15%), United Kingdom (12%), Uruguay (10%), Australia (9%), Brazil (9%), among others.

Additionally, 172 foreign students studied at UPC during 2020. There were in-person academic exchanges (77 students); and short-term programs and medical rotations (14 students). In 2020, for the first time, a virtual exchange program was offered, with 81 international students participating in it and pursuing the semester at UPC. International students came from Mexico (49%), France (14%), Colombia (12%), the Netherlands (6%), the United States (2%), and others.

Table 27 shows the main internationality results for undergraduate programs in 2020.

Table 27. **Internationality Indicators for Undergraduate Programs (2020)**

Indicator	Result
Inbound Students	172
Outbound Students	1082
Students that completed Work & Travel programs.	704
Number of students participating in international conferences	43,686

Note: Information Updated to 23/02/2021.

Figure 84. Inbound student, from Universitá degli Studi of Trieste, was one of the exchange students at UPC during the 2020-02 term. In the picture, she is receiving a diploma for winning the trivia contest organized by the UPC International Office.

Figure 85. UPC students in the Work & Travel program in the U.S. during 2020.

5.2 Graduate School Programs

At the beginning of 2020, twenty-four (24) programs of the UPC's Graduate School planned international trips and seminars at the various partner universities abroad. After the Peruvian government ordered a lockdown due to the pandemic, the International Seminars were transformed into Digital Seminars, so that students would not miss the international component of their program. More than 100 students were able to participate in the International Seminars, led by experts from the Fundación Politécnica de Catalunya (FPC), DeSales University, Universidad Oberta de Catalunya and the EOI.

Table 28 shows the details of the programs that, due to the circumstances, had to become online and the student participation in them.

Table 28. International Seminars that Underwent a Change of Modality - 2020

International Seminar	Foreign Partner	No. of Participants
Certificate Program in Management and Administration (MEGA)	EOI	20
Master's Program in Operations and Logistics Management	FPC	20
Master's Program in Construction Management 2019-l	FPC	39
Master's Program in Construction Management 2019-ll	FPC	19
Master's Program in Human Factor Management	EOI	10

Note: Information Updated to 23/02/2021.

Additionally, 65 international faculty members participated —23% more than in 2019— impacting more than 1,000 students in the Graduate School. Also, together with the Academic Departments and the Graduate School Events team, a total of 2,672 students were reached through the International Talks and Webinars.

Finally, Innovation Experience, which is a professional organization oriented to connect Israel with the word, helping entrepreneurs and business leaders to generate global business opportunities (source: link), invited UPC to sponsor two of its biggest events: Israel Summit 2020 (link) and Israel MedTech Summit (link). Both events were attended by more than 10,000 people worldwide.

Table 29 and Table 30 present the main internationality results for UPC Graduate Programs in 2020.

Table 29. Main internationality results for graduate programs in 2020

Indicator	Result
International missions of GS - UPC students abroad (in-person)	16
International missions of GS - UPC students abroad (online)	108
Foreign faculty mobility inbound (in-person)	8
Foreign faculty mobility inbound (online)	65
Participation as International Sponsors - Summit	2

Note: Information Updated to 23/02/2021.

Table 30. Internationality Indicators for Graduate Programs (2020)

Indicators	2016	2017	2018	2019	2020
Outbound Students International Missions	297	366	329	366	1242 [(1)]
Inbound Students International Missions	15	8	26	9	0
Faculty Mobility Outbound	15	17	17	19	0
Faculty Mobility Inbound	32	49	47	53	733
Number of students who participated in international conferences based in Peru	-	-	-	-	1,037
Number of students who participated in classes with international faculty					2,672
Total Mobility	359	440	419	447	3,906

Note: Information Updated to 23/02/2021.

(1) Outbound Students International Missions (onsite and online).

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[2] Outbound Students International Missions (in-person and online)
[3] Faculty Mobility Outbound (in-person and online)

6.   Employability Results

Table 31 shows the main employability results for traditional undergraduate programs in 2020. The employment rate was impacted by the health emergency context due to Covid-19.

Table 31. Employability Results for Graduate Students of Traditional Undergraduate Programs

Indicator	Result 2017	Result 2018	Result 2019	Result 2020
Employment Rate[1]	90.50%	94.32%	94.26%	82.84%
Skill Match Rate[2]	98.98%	99.17%	98.04%	98.00%

Note: 1) Employment Rate Formula: (Full Time + Part Time + Self Employed Alumni) / [Survey Respondents – (Not seeking employment + currently enrolled in a higher education program)] = Emp. Rate %. **2) Skill Match Rate Formula:** (Alumni Employed Full Time + Part Time + Self Employed in field of study) / (Employed Survey Respondents) = Skills match %.

In addition, UPC analyzes the employment results attained by graduate students of all higher education institutions in Peru and their average salary. Data is obtained through the Portal Ponte en Carrera.

The Ponte en Carrera website (link) is a web platform developed by the Peruvian Ministry of Labor and Employment Promotion, the Peruvian Ministry of Education and IPAE Asociación Empresarial to provide reliable and public information on current educational alternatives available and labor market demand for better decision making from students in view of future career opportunities.

In 2020, 14 UPC programs were recognized to have the most graduate students in higher-paying jobs. See Table 32 below for detailed information.

Table 32. UPC Programs with Most Graduate Students in Higher-Paying Jobs in Peru – According to the Ponte en Carrera website (2020)

No.	Program	Average Monthly Salary (Expressed in PEN)
1	**Medicine** (Traditional Undergraduate)	**4,370**
2	**Information Systems Engineering** (Traditional Undergraduate)	**4,310**
3	**Systems Engineering** (Working Adult Undergraduate)	**4,310**
4	**Software Engineering** (Traditional Undergraduate)	**4,310**
5	**Economics and Finance** (Traditional Undergraduate)	**4,089**
6	**Economics and International Business** (Traditional Undergraduate)	**4,089**
7	**Electronic Engineering** (Traditional Undergraduate)	**3,478**
8	**Administration and Marketing** (Traditional Undergraduate)	**3,442**
9	**Banking and Financial Administration** (Working Adult Undergraduate)	**3,278**
10	**Entrepreneurial Administration and Management** (Working Adult Undergraduate)	**3,278**
11	**Administration and Human Resources** (Traditional Undergraduate)	**3,278**
12	**Administration and International Business** (Traditional Undergraduate)	**2,917**
13	**Hospitality and Business Administration** (Traditional Undergraduate)	**2,634**
14	**Tourism and Business Administration** (Traditional Undergraduate)	**2,634**

7. Alumni Results

Table 33 shows the alumni results for 2018, 2019 and 2020, respectively.

Table 33. UPC Alumni Results (2018-2020)

Indicator	Result
UPC Graduate Students 2020[3]	**Total Graduates: 45,026** Traditional undergraduate graduates: 24,274 Working Adult program undergraduate graduates: 11,888 Graduate School graduates[4]: 8,864
UPC Graduates 2019[2]	**Total Graduates: 40,660** Traditional undergraduate graduates: 21,246 Working Adult program undergraduate graduates: 10,850 Graduate School graduates[4]: 8,564
UPC Graduates 2018[1]	**Total Graduates: 36,312** Traditional undergraduate graduates: 18,318 Working Adult program undergraduate graduates: 9,703 Graduate School graduates[4]: 8,291

(1) Note 1: Cumulative graduate results updated as of December 2018.
(2) Note 2: Cumulative graduate results updated as of December 2019.
(3) Note 3: Cumulative graduate results updated as of December 2020.
(4) Note 3: The cumulative results for Graduate School graduates take into consideration the graduates of graduate programs with a duration of more than 9 months.

7.1 Alumni Conferences and Events in 2020

In 2020, the Alumni Office organized the 6th UPC Alumni Reunion to build an engagement-driven culture, foster networking, enhance employability, and provide opportunities for continuing education.

See below a brief summary of this virtual event organized in 2020:

a) 6th UPC Alumni Reunion – Home Edition

In December 2020, UPC held the first edition of the Alumni Reunion virtually. This event brought together Alumni from the undergraduate, WA undergraduate and graduate levels. In previous years, this reunion was based on the concept "Welcome Home" and in 2020 we sought to maintain the link with the concept, but this time from home, so "Home Edition" was proposed to bring together the entire alumni community around a current conference.

Figure 86. Key Visual of the UPC Alumni reunion Home Edition.

This event brought together more than 600 alumni who enjoyed a great virtual conference, in which Dr. Edward Roekaert, rector of the UPC, addressed a very emotional opening speech to the alumni. The virtual conference was in charge of the international lecturer Victor Küppers, who spoke about "The importance of attitude and spirit," a very relevant topic given the situation that was experienced in those months in our country.

The virtual meeting UPC Alumni 2020 - Home Edition is available at: link.

8. Retention, Graduation and Enrollment Results

In this section, the retention, graduation, and enrollment results for 2020 are included in the historical data presented for each section.

8.1 Retention Results

Table 34. Retention Results for Traditional Undergraduate Programs (2017-2020)

Metric	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
Attrition	12.5%	12.4%	12.4%	11.8%	12.7%	14.6%	19.8%	10.6%
Graduation	2.5%	3.2%	3.2%	3.9%	2.9%	2.6%	2.1%	3.8%
Retention	85.1%	84.4%	84.4%	84.3%	84.4%	82.8%	78.1%	85.6%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Note 1: Information Updated to April 2021.

Table 35. Retention Results for Working Adult Undergraduate Programs (2017-2020)

Metric	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
Attrition	20.0%	24.4%	23.7%	26.6%	27.0%	33.3%	29.9%	29.6%
Graduation	5.5%	8.2%	6.4%	8.7%	5.9%	2.2%	2.2%	3.3%
Retention	74.5%	67.4%	69.9%	64.7%	67.1%	64.5%	67.9%	67.1%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Note 1: Information Updated to April 2021.

Table 36. Retention Results for Graduate School Master's Degree Programs (2017-2020)

Metric	2016	2017	2018	2019	2020
Retention	96.1%	97.2%	97.8%	94.0%	96.2%

Note 1: 2019 was a year impacted by a decreasing GDP in Peru and in some cases students had to quit their studies during the year.

8.2 Graduation Results

Table 37. **Graduation Results for Undergraduate Programs (2015-2020)**

Year	Graduates
2015	2,657
2016	3,416
2017	4,241
2018	4,898
2019	4,933
2020	5,854

Note: Information Updated to April 2021.

Table 38. **Graduation Results for Graduate School Programs (2015-2020)**

Year	Graduates
2015	301
2016	322
2017	478
2018	566
2019	412
2020	618

Note: Information Updated to April 2021.

8.3 Enrollment Results

Table 39. **UPC Students Total Enrollment Distribution (2016-2020)**

Term	Traditional Undergraduate	Working Adult Undergraduate	*Total Undergraduate*
2016-01	37,775	13,288	51,063
2016-02	36,696	13,660	50,356
2017-01	42,743	12,985	55,728
2017-02	41,065	12,948	54,013
2018-01	47,436	12,266	59,702
2018-02	44,584	12,020	56,604
2019-01	49,447	11,339	60,786
2019-02	47,169	10,802	57,971
2020-01	50,107	10,427	60,534
2020-02	44,431	9,531	53,962

Note: Information Updated to April 2021

Table 40. **Total Enrollment Results for Graduate School Master's Degree Programs (2015-2020)**

Year	Total Enrollment
2015	1,402
2016	1,536
2017	1,256
2018	1,220
2019	1,395
2020	1,625

Note: Information Updated to April 2021

9. Completion results within 100% and 150%

See below the definitions used to calculate the results for completion within 100% and 150% for undergraduate programs:

- **Completion within 100%** is estimated considering the number of students who have completed the curricular plan at 100% of the time of graduation expected for the program over the total incoming students for each admission cohort, respectively.

- **Completion within 150%** is estimated considering the number of students who have completed the curricular plan at 100% of the time of graduation expected for the program over the total incoming students for each admission cohort, respectively.

Table 41 presents the institutional completion results within 100% and 150% for undergraduate programs. Completion results within 100% in 2020-01 show that 12.2% of undergraduate students graduated at the expected time and 34.6% at 150% of the expected time of graduation (considering an expected time of graduation of 5 years, students of the second group graduated after 7.5 years, for instance).

The institutional completion results within 100% and 150% of time are estimated by weighting the completion results of each program and the total number of graduate students per program who graduated within 100% and 150%.

Table 41. Graduation Results within 100% and 150% for Undergraduate Programs

Period	Number of Graduate students within 100%	Number of Graduate students within 150%	Completion within 100% (Percentage)	Completion within 150% (Percentage)	N
2020-01	602	2433	12.2	34.6	7028
2019-01	452	1380	14.7	34.7	7,774
2018-01	387	1259	13.6	35.9	6,080
2017-01	345	1198	12.6	36	5,411
2016-01	335	982	14.2	36.1	4,487
2015-01	297	810	14.1	35.2	3,272
2014-01	216	762	13.3	36.3	2,421
2013-01	227	643	14.2	35.8	2,130

Note: These results include both Traditional Undergraduate and Working Adult Undergraduate Programs.

To attain their Master's degree, students must complete the curricular plan, submit and defend their thesis, demonstrate proficiency in a second language at an intermediate level, and pay all administrative fees.

Based on the afore mentioned definitions, the following ratios have been estimated:

- **Completion within 100%**

$$\frac{\begin{array}{c}(\text{Graduates who have completed the curricular plan, submitted and defended their} \\ \text{thesis, demonstrated proficiency in a second language at an intermediate} \\ \text{level, and payed all administrative fees}) \\ \text{within 2 years after completing the program}\end{array}}{\sum \quad \text{number of graduates in the year}} * 100\%$$

- **Completion within 150%**

$$\frac{\begin{array}{c}(\text{Graduates who have completed the curricular plan, submitted and defended their} \\ \text{thesis, demonstrated proficiency in a second language at an intermediate} \\ \text{level, and payed all administrative fees}) \\ \text{within 3 years after completing the program}\end{array}}{\sum \quad \text{number of graduates in the year}} * 100$$

Table 42 presents the completion results within 100% and 150% for Master's Degree Programs.

Table 42. Graduation Results within 100% and 150% for Master's Degree Programs

	2016		2017		2018		2019		2020	
Completion within 100%	248	82.9%	289	69.1%	352	69.8%	247	60.0%	376	60.8%
Completion within 150%	41	13.7%	77	18.4%	79	15.7%	41	10.0%	71	11.5%
Completion more than 150%	10	3.3%	52	12.4%	73	14.5%	124	30.1%	171	27.7%
Total	**299**		**418**		**504**		**412**		**618**	

Note 1. Updated April 2021.
Note 2. In 2019, there were more students from past incoming cohorts that submitted and defended its thesis. These students came from the "Updating Thesis Program" promoted by the Graduate School as an important effort to accomplish that more graduates attain their master's degree program (redeemed the units taken in the program into a master's degree). Regarding completion results within 100%, it was identified that demonstrating proficiency in a second language was the main cause that delayed students from attain its master's degree on time.

10. Faculty Qualifications and Distribution by Dedication

By semester 2020-02, UPC had 937 full-time faculty and 2,266 part-time faculty. This represents around 29% of full-time faculty and 71% of part-time faculty, respectively. Table 43 and Table 44 show the evolution of the number of faculty by dedication between 2017 and 2020.

Table 43. UPC Faculty Distribution by dedication (2017 – 2020)

Dedication	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
Full-time faculty	880	909	949	972	1,004	1,025	1,020	937
Part-time faculty	2,350	2,386	2,465	2,564	2,576	2,522	2,617	2,266
Total	**3,230**	**3,295**	**3,414**	**3,536**	**3,580**	**3,547**	**3,637**	**3,203**

Table 44. UPC Faculty Percentage Distribution by dedication (2017 – 2020)

Dedication	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
Full-time faculty	27%	28%	28%	27%	28%	29%	28%	29%
Part-time faculty	73%	72%	72%	73%	72%	71%	72%	71%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

In regards to the progress made in terms of faculty holding master's and doctoral degrees, Table 45 and Table 46 show the evolution of faculty credentials between 2017 and 2020.

Table 45. UPC Faculty Distribution by degree (2017 – 2020)

Degree	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
Doctoral's Degree	163	167	208	221	236	240	238	226
Master's degree	1,502	1,590	1,936	2,073	2,263	2,328	2,618	2,334
Bachelor's degree	1,448	1,408	1,177	1,155	1,004	911	724	586
No Degree	117	130	93	87	77	68	57	57
Total	**3,230**	**3,295**	**3,414**	**3,536**	**3,580**	**3,547**	**3,637**	**3,203**

Table 46. UPC Faculty Percentage Distribution by degree (2017 – 2020)

Degree	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02	2020-01	2020-02
Doctoral's Degree	5%	5%	6%	6%	7%	7%	7%	7%
Master's degree	47%	48%	57%	59%	63%	66%	72%	73%
Bachelor's degree	45%	43%	34%	33%	28%	26%	20%	18%
No Degree	4%	4%	3%	2%	2%	2%	2%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

11. Research Results

UPC is committed to promoting scientific research in all areas of knowledge of the university, and actively encourages the participation of faculty and students in research projects.

UPC's Research Director, who operates under the leadership of the Vice Rector for Academic Affairs and Research (VRAAR), is responsible for supervising and supporting all institutional research activities.

UPC organizes an Annual Research Contest (ARC), which aims to promote research among faculty. The ARC provides funding for faculty research projects. An ad hoc committee is appointed by the Research Office to review project proposals and recommend their funding to the VRAAR. The funding criteria are explicit about the quality expectations of faculty's intellectual contributions, which must be published in a peer-reviewed journal listed in ISI-Web of Science (WOS) or SCOPUS.

In 2020, UPC researchers carried out their activities remotely due to the health emergency context caused by COVID-19. Those research projects that required the use of laboratories and other face-to-face activities were carried out with the corresponding authorizations and under strict biosafety protocols established by the Government.

The main research results of UPC are presented below:

11.1 Research Ranking among Peruvian Universities:

1) In 2011, UPC ranked **24th** among all 140 Peruvian universities (Source: Scimago)
2) In 2013, UPC ranked **11th** among all 140 Peruvian universities (Source: Scimago)
3) In 2017, UPC ranked **3rd** among Peruvian universities (Source: Scopus/Scimago)
4) In 2018, UPC ranked **4th** among Peruvian universities (Source: Scimago Globe IR)
5) In 2019, UPC ranked **2nd** among Peruvian universities (Source: Scimago Globe IR)
6) In 2020, UPC ranked **2nd** among Peruvian universities (Source: Scimago Globe IR)

11.2 Annual Papers in Peer Review and Indexed Journals:

1) In 2012, UPC published **32** papers in indexed journals (Source: Scopus)
2) In 2013, UPC published **31** papers in indexed journals (Source: Scopus)
3) In 2014, UPC published **72** papers in indexed journals (Source: Scopus)
4) In 2015, UPC published **143** papers in indexed journals (Source: Scopus)
5) In 2016, UPC published **150** papers in indexed journals (Source: Scopus)
6) In 2017, UPC published **141** papers in indexed journals (Source: Scopus)
7) In 2018, UPC published **231** papers in indexed journals (source: Scopus)
8) In 2019, UPC published **363** papers in indexed journals (source: Scopus)
9) In 2020, UPC published **465** papers in indexed journals (source: Scopus)

11.3 Five-Year Papers in Peer Review and Indexed Journals:

1) During 2008-2012, UPC published **80** papers (Source: Scopus/Scimago)
2) During 2009-2013, UPC published **110** papers (Source: Scopus/Scimago)
3) During 2010-2014, UPC published **177** papers (Source: Scopus/Scimago)
4) During 2011-2015, UPC published **306** papers (Source: Scopus/Scimago)
5) During 2012-2016, UPC published **428** papers (Source: Scopus/Scimago)
6) During 2013-2017, UPC published **537** papers (Source: Scopus/Scimago)
7) During 2014-2018, UPC published **737** papers (Source: Scopus/Scimago)
8) During 2015-2019, UPC published **1,028** papers (Source: Scopus/Scimago)
9) During 2016-2020, UPC published **1,383** papers (Source: Scopus/Scimago)

11.4 Students in Research:

1) In 2015, **90** students participated in research projects (Source: Research Office, UPC)
2) In 2016, **110** students participated in research projects (Source: Research Office, UPC)
3) In 2017, **130** students participated in research projects (Source: Research Office, UPC)
4) In 2018, **245** students participated in research projects (Source: Research Office, UPC)
5) In 2019, **320** students participated in research projects (Source: Research Office, UPC)
6) In 2020, **514** students participated in research projects (Source: Research Office, UPC)

12. Social Responsibility Impact

UPC launched several sustainability projects and initiatives that involved the active participation of students, faculty and administrative staff for the benefit of stakeholders, taking into account the prevention and control measures for Covid-19. Table 47 shows the main sustainability impact results for 2020.

Table 47. UPC's Social Responsibility Impact (2020)

Indicator	Result
Total Investment in Social Responsibility Initiatives	PEN 37,894,813.98
Number of students who participated in UPC's Social Responsibility Initiatives	5,740

Note: Information Updated to January 2021.

12.1 Main achievements of this area in 2020:

- For the fourth consecutive year, UPC wins the Socially Responsible Company Distinction awarded by Peru 2021 (link).
- Financial support initiatives that amounted to more than 7 million PEN were implemented for the academic continuity of students in the face of the crisis caused by the pandemic. (link).
- UPC creates a free training platform on digital tools for faculty throughout Peru: "Educador digital" (link).
- UPC inaugurated the 20th edition of the International Congress of Educators (link) developed 100% online.
- The tenth edition of Protagonists of Change UPC was held virtually (link).
- In 2020, the international certification ISO14001:2005 - Environmental Management System became effective for all programs and processes at the four university sites and the University Health Center. (link).