STUDENT ACHIEVEMENT REPORT 2019

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 six consecutive years (from 2014 to 2019) by América Economía's National Ranking (Ranking link).

UPC currently offers 59 bachelor's degree programs at the undergraduate level and 33 master's degree programs at the graduate level. Tables 1 and 2 show the number, modality and longevity of UPC's undergraduate and graduate programs.

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

No.	Program Name	Degree Level	Modality	Year Implemented
1	Accounting	Working Adult Undergraduate	On-Site	2013
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	Architecture	Traditional Undergraduate	On-Site	1994
9	Audiovisual Communication and Interactive Media	Traditional Undergraduate	On-Site	2009
10	International Relations	Traditional Undergraduate	On-Site	2020
11	Political Science	Traditional Undergraduate	On-Site	2020
12	Banking and Financial Administration	Working Adult Undergraduate	On-Site	2009
13	Business Administration	Working Adult Undergraduate	On-Site	2005
14	Business Management Engineering	Traditional Undergraduate	On-Site	2011
15	Civil Engineering	Traditional Undergraduate	On-Site	1994

No.	Program Name	Degree Level	Modality	Year Implemented
		Working Adult Undergraduate	On-Site	2012
16	Communication and Corporate Image	Traditional Undergraduate	On-Site	2008
17	Communication and Journalism	Traditional Undergraduate	On-Site	1994
18	Communication and Marketing	Traditional Undergraduate	On-Site	2008
19	Communication and Photography	Traditional Undergraduate	On-Site	2018
20	Communication and Publicity	Traditional Undergraduate	On-Site	1994
21	Computer Science	Traditional Undergraduate	On-Site	2012
22	Dentistry	Traditional Undergraduate	On-Site	2008
23	Economics and Development	Traditional Undergraduate	On-Site	2009
24	Economics and Finance	Traditional Undergraduate	On-Site	2003
25	Economics and International Business	Traditional Undergraduate	On-Site	2005
26	Economics and Public Policy	Traditional Undergraduate	On-Site	2005
27	Educational and Pedagogical Management	Traditional Undergraduate	On-Site	2012
28	Electronic Engineering	Traditional Undergraduate	On-Site	1994
29	Entrepreneurial Administration and Management	Working Adult Undergraduate	On-Site	2012
30	Environmental Engineering and Management	Traditional Undergraduate	On-Site	2017
31	Fashion Design and Management	Traditional Undergraduate	On-Site	2012
32	Gastronomy and Culinary Management	Traditional Undergraduate	On-Site	2015
33	Hospitality and Business Administration	Traditional Undergraduate	On-Site	2006
34	Hospitality and Tourism Administration	Working Adult Undergraduate	On-Site	2009
35	Human Resources Administration	Working Adult Undergraduate	On-Site	2017
36	Industrial Engineering	Traditional Undergraduate	On-Site	1994
		Working Adult Undergraduate	On-Site	2008
37	Information Systems Engineering	Traditional Undergraduate	On-Site	1994
38	International Business	Working Adult Undergraduate	On-Site	2005

No.	Program Name	Degree Level	Modality	Year Implemented
39	Law	Traditional Undergraduate	On-Site	1998
40	Managerial Economics	Traditional Undergraduate	On-Site	2012
41	Marketing	Working Adult Undergraduate	On-Site	2005
42	Mechatronics Engineering	Traditional Undergraduate	On-Site	2012
43	Medicine	Traditional Undergraduate	On-Site	2007
44	Mining Management Engineering	Traditional Undergraduate	On-Site	2012
45	Music	Traditional Undergraduate	On-Site	2010
46	Network and Communications Engineering	Working Adult Undergraduate	On-Site	2011
47	Nutrition and Dietetics	Traditional Undergraduate	On-Site	2006
48	Performing Arts	Traditional Undergraduate	On-Site	2017
49	Physical Therapy	Traditional Undergraduate	On-Site	2009
50	Professional Graphic Design	Traditional Undergraduate	On-Site	2011
51	Professional Interior Design	Traditional Undergraduate	On-Site	2011
52	Professional Translation and Interpretation	Traditional Undergraduate	On-Site	2011
53	Psychology	Traditional Undergraduate	On-Site	2006
54	Software Engineering	Traditional Undergraduate	On-Site	2004
55	Sports Administration and Business	Traditional Undergraduate	On-Site	2011
56	Systems Engineering	Working Adult Undergraduate	On-Site	1996
57	Telecommunications and Network Engineering	Traditional Undergraduate	On-Site	2006
58	Tourism and Business Administration	Traditional Undergraduate	On-Site	2009
59	Veterinary Medicine	Traditional Undergraduate	On-Site	2018

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

No.	Program Name	Degree Level	Modality	Year Implemented
1	Administration and Project Management	Masters	On-Site	2009
2	Administration and Project Management	Masters	Distance Education	2011
3	Construction Management	Masters	On-Site	2006
4	Construction Management	Masters	Distance Education	2013
5	Corporate Communications	Masters	Distance Education	2012
6	Corporate Finance	Masters	On-Site	2011
7	Corporate Law	Masters	On-Site	2001
8	Data Science	Masters	On-Site	
9	Dietetics and Nutrition Management and Pedagogy	Masters	On-Site	2011
10	E-MBA	Masters	Distance Education	2008
11	Executive MBA	Masters	On-Site	2008
12	Health MBA	Masters	On-Site	2009
13	International MBA	Masters	Distance Education	2011
14	Marketing and Sales Management	Masters	On-Site	2012
15	Communication and Digital Marketing	Masters	On-Site	2020
16	Digital Business Transformation	Masters	On-Site	2020
17	Education	Masters	On-Site	2020
18	Cybersecurity and Information Management	Masters	On-Site	2020
19	Environmental Management and Sustainability	Masters	On-Site	2020
20	Health Psychology and Lifestyles	Masters	On-Site	2020
21	Translation	Masters	On-Site	2020
22	Public Administration	Masters	Distance Education	2019
23	Strategic Management of Human Capital	Masters	Distance Education	2019
24	MBA	Masters	On-Site	2010
25	MBA for Masters	Masters	On-Site	2007
26	Mining Management	Masters	On-Site	2012
27	Operations Management and Logistics	Masters	On-Site	2003
28	Operations Management and Logistics	Masters	Distance Education	2011
29	Public Administration	Masters	On-Site	2011
30	Senior Management and Leadership	Masters	On-Site	2012
31	Senior Management MBA	Masters	On-Site	1997
32	Strategic Management of Human Capital	Masters	On-Site	2013
33	Systems and Information Technology Management	Masters	On-Site	2011

UPC STUDENT ACHIEVEMENT REPORT STRUCTURE
2019

UPC's Student Achievement Report presents the main results for 2019 regarding the following areas:

I. Students' Achievements
II. Student Learning Results
III. Academic Excellency 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 Work Status
XI. Research Results
XII. Social Responsibility Impact

I.   Students' Achievements

In 2019, UPC's students have stood out in different areas and were awarded high distinctions. These achievements are presented below:

1.1 School of Business

a) UPC's Administration and International Business program held its 11th International Business Congress "WorldWide Connection: International Logistics"

On September 28, 2019, 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.

This year, CONEGO sought to provide students of the Administration and International Business program with a space for reflection and critical thinking on recent technical developments available to big international businesses in order to improve their logistics processes and achieve trade efficiency.

Keynote speakers included outstanding professionals from national and international companies: Edgar Vásquez, Peru's Foreign Trade and Tourism Minister, Angappa Gunasekaran PhD, Expert in International Logistics and Supply Chain Management, Kannan Govindan PhD, Leading Professor of Supply Chain Management at the University of Southern Denmark, Ricardo Barrios of DHL Global Forwarding Perú [one of the leading providers of logistics services in the world], and Rafael Amat, CEO of EcoQuímica, who focused on the relevance of circular economy in transnational logistics processes based on his company's experience in the European Union.

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.

Figure 1. Students and Faculty of the Administration and International Business program during the 11th International Business Congress.

b) **For the seventh consecutive year, UPC Students participated in the Harvard National Model United Nations (HNMUN) Conference, which took place in Boston, in February 2019**

The United Nations Model UN Program is a competition that simulates a UN General Assembly session in which each university delegation must represent a foreign country, faithfully respond to its foreign policy, and put into practice its negotiation and management skills. The conference brought together more than 3,500 participants –faculty and students alike– from prestigious institutions around the world.

The UPC-MUN delegation, comprised of 12 students from different undergraduate programs, participated in the latest edition of the Model United Nations program organized by Harvard University in Boston. The conference was held at the Boston Park Plaza on February 14-17, 2019.

The UPC-MUN delegation included students from the Schools of Engineering, Business, Economics, Human Sciences, and Communications. More than 400 students of all schools and programs at UPC underwent a highly rigorous selection process between March and May 2018.

In this edition, the UPC-MUN delegation represented the Islamic Republic of Pakistan and addressed topics in fields such as economics and finance, migrations, the international situation of refugees, the World Health Organization, and human rights. In each Committee, our students competed against students from the most prestigious universities in the world, such as Yale University, the University of Chicago, and the University of Pennsylvania, among others.

The experience acquired by our students during this conference provides them with academic and social skills at the highest level, which in turn allows them to overcome language and cultural barriers and participate in international competitions that simulate real-life cases. Through this important international achievement, UPC reaffirms and demonstrates its commitment to provide

students with an education based on excellence and with a global vision, and train professionals who stand out in Peru and the world.

Figure 2. The UPC-MUN delegation that participated in the HNMUN Conference in February 2019

c) **UPC Students participated in the 8th Harvard National Model United Nations-Latin America (HMUN-LA) hosted in Lima, Peru in 2019**

The Harvard NMUN-LA conference is a space where students from around the world debate topics of global interest, such as politics, economy and society, simulating a United Nations General Assembly. The conference is organized and directed by Harvard University students, under the supervision and support of their university.

Students addressed the following topics during the 8th edition of HNMUN-LA: counter-terrorism measures, reforms to the United Nations Convention on the Law of the Sea, prevention of drug trafficking in cyberspace, global poverty and its effects on women, freedom of expression and independence of the media, and the crisis in Venezuela, among others.

This edition took place on January 17-20, 2019 and brought together university teams from the United States, Venezuela, Guyana, Brazil, El Salvador, Bolivia, Colombia, France, Chile, Panama, Germany, India and Peru, as well as school teams from Mexico, the Dominican Republic, and Peru.

A delegation of nine UPC students took part in this edition where Valeria Sánchez won the Third Party Actors Committee.

Through the merits of its students, UPC reaffirms and demonstrates its commitment to provide an education based on excellence and with a global vision, and give its students the opportunity to participate in valuable international experiences.

Figure 3. UPC student Valeria Sánchez won the Third Party Actors Committee at the 8th Harvard National Model United Nations-Latin America (HNMUN-LA) 2019.

d) Global Talks brought together more than 800 students of the School of Business

Over the past year, the Administration and International Business program of the School of Business organized ten international conferences, which brought together more than 800 UPC students and a total of 7,000 participants through online streaming.

The conferences took place on Fridays between 1 p.m. and 3 p.m. as part of UPC's Cultural Fridays in order to convene as many students as possible. This reflective space sought to promote international business with a global vision, interculturality, and case study of best business practice.

The following conferences were organized in 2019:

1. "Panamá Internacional" (International Panama), presented by Nicole Wolcovinsky, Ambassador of Panama in Peru, on April 26, 2019 at the San Isidro site.
2. "Living in Australia & Brisbane", presented by Laura Hasset, University of Queensland, on May 3, 2019 at the Monterrico campus.
3. "Conoce Villahermosa México" (Discover Villahermosa Mexico), presented by Aranza Ascencio on May 17, 2019 at the Monterrico campus.
4. "Korea & LG's Strategy", presented by Bo Seo, Marketing Manager at LG Electronics Peru, on May 24, 2019 at the San Isidro site.

5. "Conoce Nuremberg Alemania" (Discover Nuremberg, Germany), presented by Luis Frohling on May 31, 2019 at the Monterrico campus.
6. "Oportunidades y Becas en Corea" (Opportunities and Scholarships in Korea), presented by the Embassy of Korea in Peru on June 14, 2019 at the San Isidro site.
7. "Conoce Veracruz México" (Discover Veracruz Mexico), presented by Diana Quevedo and Jennifer Diaz on June 21, 2019.
8. "10 years of implementation of the US-Peru Trade Agreement", presented by James Potts, Economic Officer of the US Embassy Economic Section, on September 6, 2019 at the San Miguel site.
9. "Estrategia de mercado de LG en el Perú y el mundo" (LG's Market Strategy in Peru and the World), presented by Bo Seo, Marketing Manager at LG Electronics Peru, on October 25, 2019.
10. "Oportunidades de Negocios en los Estados Unidos" (Business Opportunities in the United States), presented by Jorge Prado, from the US Embassy in Peru, and Belén Gallegos, from SelectUSA on conference call from Washington D.C., United States, on November 8, 2019 at the Villa site.

Figure 4. UPC International Business and Administration Global Talks 2019. Conference titled "Panamá Internacional" (International Panama), presented by Nicole Wolcovinsky, Ambassador of Panama in Peru.

Figure 5. UPC International Business and Administration Global Talks 2019. Conference titled "10 years of implementation of the US-Peru Trade Agreement", presented by James Potts, Economic Officer of the US Embassy Economic Section.

e) International Business Day for Working Adult students reunites more than 200 participants –students, alumni and faculty alike.

The International Business program organized the 2019 International Business Day (IBD) for Working Adult students, which focused mainly on the 10 years of implementation of the US-Peru Trade Agreement.

More than 200 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 2019 involved the participation of Mercedes Araoz, Peru's Former Vice-President of the Republic, Eduardo Ferreyros, Former Minister of Foreign Trade and Tourism, Javier Dávila, Vice-Minister of Industry and Small and Medium Enterprises (SMEs), Yolanda Torriani del Castillo, Director of the Chamber of Commerce of Lima, and Sayuri Bayona, Vice-Minister of Foreign Trade and Tourism, among other keynote speakers.

Figure 6. From left to right: Alfonso Bustamante (President of COMEX PERÚ), Mercedes Araoz (Peru's Former Vice-President of the Republic), James Leigh (Director of UPC's International Business program), Eduardo Ferreyros (Former Minister of Foreign Trade and Tourism), Maria Cecilia Perez (Faculty of UPC's School of Business), Mayra Zorrilla (Coordinator of UPC's International Business program), Yolanda Torriani (Director of the Chamber of Commerce of Lima), Gabriel Amaro (Executive Director of AGAP), César Llona (Faculty of UPC's School of Business), and Jaqueline Barrantes, Director of UPC's San Miguel site.

f) UPC Exportador workshops gather more than 600 students, alumni and faculty of the International Business program for Working Adult students and the traditional undergraduate Administration and International Business program.

UPC Exportador (UPC Exporter) sought to provide participants with a space for interaction, learning and reflection on relevant topics in the fields of export and international trade in order to foster an export culture among students, alumni and faculty of both programs, and build a global vision so as to identify business opportunities.

In 2019, more than 600 students, alumni and faculty of both programs attended 8 workshops on Saturdays from 10 a.m. to 1 p.m. on UPC's four sites. In addition, the workshops garnered more than 6,500 views through online streaming and UPC's academic repository.

The following UPC Exportador training workshops were organized in 2019:

- "Gestión de exportaciones: Aspectos básicos" (Export Management: Basic Aspects), presented by Deckner Campusano, Faculty and Legal Representative of AUSA S.A. Customs Brokerage, on June 8, 2019.
- "Inteligencia de Mercados de exportación" (Export Market Intelligence), presented by Percy Quispe (Faculty and Expert in Business Intelligence), on June 22, 2019.

- "Ferias Internacionales" (International Fairs), presented by Israel Sanguinetti, PromPerú Expert in International Fairs, on July 6, 2019.
- "INCOTERMS", presented by Deckner Campusano, Faculty and Legal Representative of AUSA S.A. Customs Brokerage, on November 2, 2019.
- "INCOTERMS", presented by Deckner Campusano, Faculty and Legal Representative of AUSA S.A. Customs Brokerage, on November 9, 2019.
- "Instrumentos de regulación del comercio y Casos: 70 empresas peruanas en la lista roja de la FDA" (Trade Regulation Instruments and Cases: 70 Peruvian Businesses on FDA's Red List), presented by Miguel Esparta, Faculty and Expert in Customs Law, on November, 2019.
- "Certificación OEA" (AEO Certification), presented by Cesar Alva and Javier Oyarse, both Faculty and Experts in AEO Certifications, on November 23, 2019.
- "INCOTERMS", presented by Deckner Campusano, Faculty and Legal Representative of AUSA S.A. Customs Brokerage, on November 23, 2019.

Figure 7. UPC Exportador (UPC Exporter) Workshop on "INCOTERMS" presented by Professor Deckner Campusano.

g) The fifth edition of the International Congress on Business and New Technologies "Thinknovation" gathered more than 200 students and 10,000 participants through online streaming.

The fifth edition of the International Congress on Business and New Technologies "Thinknovation", organized by the Entrepreneurial Administration and Management program, took place on November 7, 2019 and gathered more than 200 students of both the traditional undergraduate and the Working Adult program. In addition, the Congress garnered more than 10,000 views through online streaming and the event's Facebook Fan Page.

This edition's main topic focused on "The Social Impact of BigData and Artificial Intelligence" so that participants learn about global companies' new innovation practices with a social impact. The event included the participation of international keynote speakers, such as Min Basadur

PhD (University of Toronto), Golan Malka (Ben-Gurion University of the Negev), Máximo San Román (Chairman of the Board of Nova Perú), Andrea de la Piedra (CEO of Aequeales Perú), Carolina Torres (Google Cloud Manager for Emerging Countries in the Latin American Region), Jorge Revilla (Expert in Data and Artificial Intelligence at Microsoft Peru), José Arenas (CEO of TeleDx), Juan Figueredo (Director of Engineering and Digital Analytics at Scotiabank Peru), and Ronald Armas (Partner Technology Strategist at Microsoft).

Source: Advertorial published by Noticias RPP on December 9, 2019 (link).

Figure 8. Undergraduate students participate in the 5th Congress on International Business "Thinknovation" in 2019.

h) Students of the Administration and Finance program won second place in the CFA Research Challenge 2019

For the second consecutive year, UPC's School of Business participated in the CFA Institute Research Challenge Peru, a competition for university students organized by the CFA Society Peru and the Lima Stock Exchange (BVL). On this occasion, Grecia Villafana, Marcelo Benavides and Mario Mujica, UPC's team of three young outstanding students of the Administration and Finance program of the School of Business, won second place among a total of 12 teams from eight universities.

The CFA Institute Research Challenge is an annual global competition that provides university students with intensive training in financial analysis and professional ethics. Students are tested on their strong financial analytical skills, valuation of a company's share price that is quoted on the Lima Stock Exchange (BVL), *ad hoc* report writing, and presentation skills to give recommendations to a panel of judges (all CFA Charterholders) who play the role of investors. The event is carried out in English and provides students with hands-on mentoring to become financial research analysts for companies.

UPC's team carried out financial research for the IFS Group (Intercorp Financial Services) with mentoring from Faculty Álvaro Gómez-Sánchez (graduate student of the Administration and Finance program and CFA Charterholder) and Luis Herrera, as well as the overall leadership of

Faculty Susana Pacheco. As a result of its findings and research report presented to the Lima Stock Exchange (BVL), the team won second place.

Source: UPC News Web page, published on March 6, 2019 (link).

Figure 9. Mario Mujica, Grecia Villafana and Marcelo Benavides, students of the Administration and Finance program at the CFA Research Challenge in 2019.

i) **Students of the Accounting and Administration program offered free tax advice to taxpayers and entrepreneurs through the Tax and Accounting Assistance Hub Program (NAF)**

The Tax and Accounting Assistance Hub Program (or Núcleo de Apoyo Contable y Fiscal – NAF, in Spanish) is an initiative organized by the European Union throughout the EuroSocial program in coordination with Tax Administrations throughout 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.

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 attended by NAF students in DBM offices as a result of an alliance formed 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).

To date, 158 UPC students have received training from SUNAT and more than 2,000 taxpayers were offered free tax advice.

Figure 10. Students of the Accounting and Administration program participate in the Tax and Accounting Assistance Hub Program (NAF) in 2019.

j) UPC's Accounting and Administration program held its first edition of the World Accounting Week (WAW)

On September 9-14, 2019, UPC held its first edition of the World Accounting Week (WAW), organized by the Accounting and Administration program in order to provide students with an series of conferences and workshops on topics in the fields of accounting, auditing, and compliance and risk administration, among others. The events 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), Ernst & Young (EY), KPMG, BDO, Belcorp, Buenaventura Mining Company, and AJE Group, among others.

A total of 786 students attended conferences during the six-day event.

Figure 11. Students of the Accounting and Administration program during the World Accounting Week (WAW) in 2019.

1.2 School of Engineering

a) Student of the Information Systems Engineering program was appointed One Young World's Coordinating Ambassador for South America and Delegate at the United Nations Youth Assembly.

One Young World is a UK-based not-for-profit organization that gathers young leaders from around the world to develop solutions to the globe's most pressing issues (in the fields of education, human rights, health, poverty, migration, and sustainable development).

One Young World identifies, promotes and connects the world's most impactful young leaders to create a better world, with more responsible, more effective leadership. Every year this organization hosts an annual summit that convenes the brightest young talent from every country and sector, working to accelerate social impact. Delegates from more than 190 countries are mentored by influential political, business and humanitarian leaders. Since 2010, nearly 20.9 million of people have been positively impacted by initiatives led by One Young World Ambassadors.

After a rigorous selection process for Coordinating Ambassadors in 2019, Jason Pareja Jauregui, student of the Information Systems Engineering program, was appointed Coordinating Ambassador for South America after showing his skills, passion and commitment to support his community at a regional level in the coming year. At present, Jason Pareja Jauregui is also a Delegate at the United Nations Youth Assembly.

Source: One Young World website (link) and "Meet your 2019-2020 Coordinating Ambassadors" section (link).

Figure 12. Jason Pareja Jauregui, Peruvian Delegate at the United Nations Youth Assembly (2019).

Figure 13. Jason Pareja Jauregui, One Young World's Coordinating Ambassador for South America (2019).

b) Students of the Information Systems Engineering program published their research assignments in the 17th LACCEI International Multi-Conference for Engineering, Education, and Technology in Jamaica

The Latin American and Caribbean Consortium of Engineering Institutions (LACCEI) is a non-profit organization of Latin American and Caribbean (LAC) institutions that offer academic programs in Engineering and Technology as well as institutions (i.e. universities, colleges, schools and businesses) from other parts of the world that have showed interest and developed activities with LAC institutions.

In 2019, the 17th LACCEI International Multi-Conference for Engineering, Education, and Technology, indexed in SCOPUS, was hosted on July 24-26, 2019 in Montego Bay, Jamaica. The topic of the conference was "Industry, Innovation and Infrastructure for Sustainable Cities and Communities".

Jhonatan Espinoza, Brian Dueñas, Santiago Aguirre, Juan López, Miguel Purizaca, Cristhian Natividad and Angel Gutiérrez, students of the Information Systems Engineering program, presented their research assignments during the 17th LACCEI International Multi-Conference for Engineering, Education, and Technology. See below a list of the research assignments that were presented at the Conference:

Predictive analysis for calculating the valuation of the affiliated fund of a private pension system using machine learning techniques and tools

Authors: Jimmy Armas (Universidad Peruana de Ciencias Aplicadas, Peru), Jhonatan Espinoza Ladera (Universidad Peruana de Ciencias Aplicadas, Peru), Brian Dueñas Castillo (Universidad Peruana de Ciencias Aplicadas, Peru), and Santiago Aguirre Mayorga (Pontificia Universidad Javeriana, Colombia)

Available at: Link

A Frugal Technological Model for Leukemia Detection Using Digital Microscopy

Authors: Juan Lopez (Universidad Peruana de Ciencias Aplicadas, Peru), Miguel Purizaca (Universidad Peruana de Ciencias Aplicadas, Peru), Jimmy Armas (Universidad Peruana de Ciencias Aplicadas, Peru), and Paola Gonzalez (Dalhousie University, Canada).

Available at: Link

Security model to protect patient data in mHealth systems through a Blockchain network

Authors: Cristian Natividad (Universidad Peruana de Ciencias Aplicadas, Peru), Angel Gutiérrez (Universidad Peruana de Ciencias Aplicadas, Peru), Jimmy Armas (Universidad Peruana de Ciencias Aplicadas, Peru), and Juan Madrid (Universidad Icesi, Colombia).

Available at: Link

Figure 14. Students of the Information Systems Engineering program at the 17th LACCEI International Multi-Conference for Engineering, Education, and Technology in 2019.

c) Graduate student of the Software Engineering program has joined the Google staff in Germany as a Site Reliability Engineer

Following a rigorous international selection process, Jean Pierre Barcia, alumnus of the Software Engineering program who graduated in December 2019, joined Google in Munich, Germany as a Site Reliability Engineer.

Figure 15. Jean Pierre Barcia, Software Engineering Alumnus, is now a Site Reliability Engineer at Google.

d) Graduate student of the Software Engineering program is now a Software Engineer at Amazon.

Following a rigorous international selection process, Carlos Mendoza Farfán, graduate student of the Software Engineering program, joined Amazon as a Software Engineer in December 2019.

Figure 16. Carlos Mendoza Farfán, Software Engineering Alumnus, is now a Software Engineer at Amazon.

e) Students of the Mining Management Engineering program earned first, second and third place at the 15th National Congress of Mining Engineering Students (CONEIMIN)

"The National Congress of Mining Engineering Students (CONEIMIN), attended by public and private universities across Peru, seeks to strengthen Peruvian Mining Engineering students' training process through keynote lectures and high-level academic and professional competitions, develop and improve soft skills through leadership and mentoring workshops, raise awareness among future professionals and participants on social responsibility and sustainable development in the mining industry, and encourage participants to contribute to the technological development of the mining sector through workshops on entrepreneurship and innovation." (Source: Tecnología Minera, 2018)

The 15th edition of CONEIMIN took place on November 4-8, 2019 in Arequipa, Peru. In this edition, 11 students of the Mining Management Engineering program attended the event and earned the top three places in different competitions:

- Juliet Rodriguez and José Paucar, first place in mining research.
- Fabio Urcuhuaranga, second place in integrated management systems.
- Hernán Camacho, Odalis Chelin and Jhoseph La Fuente, third place in structural geology.
- Bruce Bustamante, Kimberly Alberca and Kevin Rojas, third place in mining debate.
- Francisco Grados and Jorge Mendoza, third place in mineralogy and petrology.

Source: Tecnología Minera 2018 (link).

Figure 17. Students of the Mining Management Engineering program at the CONEIMIN 2019.

f) Students of the Mining Management Engineering program earned first place in the Promine Latin American Interuniversity Competition (CLIP)

The CLIP competition convenes university students across Latin America in order to address academic challenges, and outstanding professionals who share their experiences with future

engineers and geologists. The first edition of the CLIP competition took place on November 7-8, 2019 at the Universidad Nacional de Medellin, Colombia.

The following universities attended the event: UNAL (Colombia), UPC (Peru), UCSM (Peru), ESPOL (Ecuador), Universidad Estatal de Sonora (Mexico), UTPL (Ecuador), Universidad Continental (Peru), and UPTC (Colombia).

Brahayan Gomez and Vidal Zamora, both students of the Mining Management Engineering program, earned first place in the 2019 Promine Latin American Interuniversity Competition (CLIP).

Figure 18. Brahayan Gomez and Vidal Zamora, both students of the Mining Management Engineering program, earned first place in the 2019 CLIP competition.

g) Students of the Business Management Engineering program published their research assignments in different international conferences in 2019

In 2019, students of the Business Management Engineering program published 19 conference papers in different international conferences. See below a list of the papers, authors and conferences attended by students of the Business Management Engineering program.

Table 3. List of Research Assignments of the Business Management Engineering Program Published in International Conferences in 2019

No.	Title	Authors	International Conference	Date and Place
1	Sales and Operation Planning Model to Improve Inventory Management in Peruvian SMEs	Alexa Alfaro, Fanny Valverde and Carlos Raymundo	International Conference on Industrial Technology and Management (ICITM) 2019	Cambridge, United Kingdom (March 2-4, 2019)
2	Método ágil y sostenible para implementar 6s en mypes de confeccion textil	Camila Quea, Karla Sánchez, David Mauricio and Carlos Raymundo	Conferencia Iberoamericana en Sistemas, Cibernética e Informática (CISCI) 2019	Orlando, United States (July 6-9, 2019)
3	Design of a model of marketing a product of detection and identification with technology of positioning in interiors based on RFID	Carlos Raymundo, Amy Canepa, Grecia Rodríguez and José Rojas	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
4	Process improvement model applying the 5s methodology and menu engineering to reduce production costs in an Mype of the hotel sector in Ancash	Carlos Raymundo, Jose Rojas, Indira Alva and Jose Alvarez	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
5	Project planning based on Lean Philosophy and PMBOK Guidelines for SMEs in the Electricity Sector	Carlos Raymundo, Jose Alvarez, Jose Rojas,Denisse Bazán and Marco Pinedo	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
6	Strategic planning model to increase the profitability of an HR Outsourcing SME through the digital transformation	Carlos Raymundo, Jose Alvarez, Jose Rojas, Andrea Bautista and Adriana Leon	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
7	Management model based on the Lean Thinking philosophy for medium-sized Peruvian companies in the apparel sector	Carlos Raymundo, Luis Loayza, Sebastián Olave and Maribel Perez	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
8	Lean Service Quality model to improve the performance of service in automotive dealer	Carlos Raymundo, Jeysev Estocalenko, Franco Valenzuela and Jose Rojas	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
9	Comprehensive Management Model for Solid Waste Collection and Transportation in Peruvian Urban Municipalities	Carlos Raymundo, David Mauricio, Renato Bernal and Stephan Sánchez	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
10	Application of a Management Model Based on DMAIC Methodology to an MSE in the Personal Beauty Sector to Increase Profitability	Carlos Raymundo, Katherine Mejía, Henrry Quintanilla, José Rojas y Carlos Cespedes	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
11	Strategic Planning Model to Improve Competitiveness for Service Industry SMEs Using the Balanced Scorecard	Miguel Casas, Maribel Perez, José Alvarez and José Rojas	International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France (August 22-24, 2019)
12	Designing a Procurement Management Model to Reduce Project Delays in a Hydraulic and Automation Systems Company	Melanie Vereau, Jose Rojas, Daniel Aderhold and Carlos Raymundo	International Conference on Human Systems Engineering and Design: Future Trends and Applications (IHSED) in 2019	Munich, Germany (September 16-18, 2019)

No.	Title	Authors	International Conference	Date and Place
13	Precision farming model to increase the production of exportable blueberries by implementing an adapting-to-change approach and risk assessment in agribusinesses in Peru's coastal regions	Carlos Chaman Cortez, Adrian Eusebio Palomino, Encarnación, Maribel Perez Paredes, Carlos Raymundo Ibañez and José Alvarez-Rodriguez	International Conference on Industrial and Business Engineering (ICIBE) 2019	Hong Kong, China (September 27-29, 2019)
14	A cooperative logistics management model based on traceability for reducing the logistics cost of coffee storage in Peru´s agro-export sector	Daniella Cruces Flores, Gustavo André Valdivia Capellino, Cesar Ramirez Valdivia, Carlos Raymundo Ibañez and Jose María Alvarez	International Conference on Industrial and Business Engineering (ICIBE) 2019	Hong Kong, China (September 27-29, 2019)
15	Lean management model for waste reduction in the production area of a food processing and preservation SME	Harwi Ruben Valverde Curi, Alexis De la Cruz Angles, Mercedes Cano Lazarte, Carlos Raymundo Ibañez and Jose María Alvarez	International Conference on Industrial and Business Engineering (ICIBE) 2019	Hong Kong, China (September 27-29, 2019)
16	Production management model under the knowledge management approach to increase labor productivity in the sewing area of a garment production SME	Madeley Fiorela Torres Blasido , Diana Marycel, Yacha Solís, Juan Sotelo Raffo, Carlos Raymundo Ibañez and Jose María Alvarez	International Conference on Industrial and Business Engineering (ICIBE) 2019	Hong Kong, China (September 27-29, 2019)
17	Modelo de compras estratégico para mejorar la rentabilidad de una empresa de servicios textiles mediante herramientas Lean y matriz de Kraljic	Maricarmen Ramírez, Jose Rojas Garcia, Carlos Torres and Carlos Raymundo	2019 Brazilian Technology Symposium (BTSym') ** on November 5-7, 2019. The BTSym'19 organizing committee invites researchers to submit papers to the satellite event developed at UPC (Lima-Peru).	Sao Paulo, Brazil (October 22-25, 2019) and Lima, Peru (satellite event) (November 5-7, 2019)
18	Modelo Lean evaluación ergonómica basado en mejora continua para disminuir los productos no conformes y mermas en la industria de imprentas	Rafaela Lazo Durand, Jose Rojas Garcia, Carlos Torres Sifuentes and Carlos Raymundo Ibañez	2019 Brazilian Technology Symposium (BTSym') ** on November 5-7, 2019. The BTSym'19 organizing committee invites researchers to submit papers to the satellite event developed at UPC (Lima-Peru).	Sao Paulo, Brazil (October 22-25, 2019) and Lima, Peru (satellite event) (November 5-7, 2019)
19	Modelo basado en transformación digital con un enfoque en gestión total de la calidad y Lean Service en una pyme del sector textil para mejorar la productividad	Erika Briones, Gianmarco Carlos, José Rojas, Carlos Torres and Carlos Raymundo	2019 Brazilian Technology Symposium (BTSym') ** on November 5-7, 2019. The BTSym'19 organizing committee invites researchers to submit papers to the satellite event developed at UPC (Lima-Peru).	Sao Paulo, Brazil (October 22-25, 2019) and Lima, Peru (satellite event) (November 5-7, 2019)

Figure 19. Students of the Business Management Engineering program present their research assignment at the International Conference on Industrial Technology and Management (ICITM 2019).

h) Students of the Electronic Engineering program published 12 papers in indexed conferences

In 2019, Students of the Electronic Engineering program published 12 papers in different SCOPUS indexed conferences at national and international level. See below a list of the papers, authors and conferences attended by students of the Electronic Engineering program:

Table 4. List of Research Assignments of the Electronic Engineering Program Published in International Conferences in 2019

No.	Article Title	Authors	Conference
1	An Algorithm for Detection of Nutritional Deficiencies from Digital Images of Coffee Leaves Based on Descriptors and Neural Networks	**Students:** Janidet Ramírez and José Sosa **Faculty:** Guillermo Kemper and Luis Vives	STSIVA 2019
2	A Computational Algorithm Based on Convolutional Neural Networks Aimed at Estimating the MOS Quality Parameter According to the Norm UIT-T P.862	**Students:** Rodrigo Gutierrez and Brallan Asca **Faculty:** Guillermo Kemper	STSIVA 2019
3	A Wireless Communication Device Based on Lora Module Aimed at Detecting Rectilinear Proximity Between Vehicles	**Students:** Flavio Chaffo and Percy Saravia **Faculty:** Guillermo Kemper	CONIITI 2019
4	An Electronic Equipment for Automatic Detection of Mycobacteria in MGIT Cultures Based on Digital Image Processing	**Students:** Guillermo Cruz and Raúl Ulloa **Faculty:** Guillermo Kemper External: Alonso Soto and Juan Agapito	CONIITI 2019
5	A Neural Network Based Algorithm Oriented to Identifying the Damage Degree Caused by the Meloidogyne Incognita Nematode In Digital Images of Vegetable Roots	**Students:** Daniel Aragón and Roberto Landa **Faculty**: Christian del Carpio and Guillermo Kemper External: Luis Saire	CONIITI 2019

No.	Article Title	Authors	Conference
6	Correspondence Between TOVA Test Results and Characteristics of EEG Signals Acquired Through the MUSE Sensor in Positions AF7 – AF8	**Students:** Ober Castillo, Simy Sotomayor **Faculty**: Guillermo Kemper External: Vincent Clement	BTSYM 2019
7	An Algorithm Oriented to the Detection of the Level of Blood Filling in Venipuncture Tubes Based on Digital Image Processing	**Students:** Jorge Castillo, Nelson Apfata Huallpa **Faculty**: Guillermo Kemper	BTSYM 2019
8	An Algorithm for Detection of Raising Eyebrows and Jaw Clenching Artifacts in EEG Signals Using Neurosky Mindwave Headset	**Students:** Luis Velez **Faculty**: Guillermo Kemper	BTSYM 2019
9	An Algorithm Oriented at Obtaining the Molecular Weight and Concentration of DNA Samples in Agarose Gel Images	**Students:** Marcelo García **Faculty**: Guillermo Kemper and Christian del Carpio External: Julio Elías and David Laván	BTSYM 2019
10	An Algorithm to Measure the Stress Level from EEG, EMG and HRV Signals	**Students:** Diego Ugarte, David Linares **Faculty**: Guillermo Kemper External: Carlos Almenara	INCISCOS 2019
11	A Sociometric Sensor Based on Proximity, Movement and Verbal Interaction Detection	**Students:** Jorge Tuesta and Demetrio Albornoz **Faculty:** Guillermo Kemper External: Carlos Almenara	INCISCOS 2019
12	Un Algoritmo de Control de Activación de Módulos GPS para Fines de Ahorro de Energía en Dispositivos Portátiles Orientados a Estudios Epidemiológicos	**Students:** José Saldaña, Sergio Rabanal **Faculty**: Sergio Salas, Kalun Lau, Guillermo Kemper and Christian del Carpio External: Gabriel Carrasco and Pierre Padilla (UPC graduate student)	Laccei 2019

Figure 20. Ober Castillo and Simy Sotomayor, students of the Electronic Engineering program and coauthors of "Correspondence Between TOVA Test Results and Characteristics of EEG Signals Acquired Through the MUSE Sensor in Positions AF7 – AF8", paper published at the BTSYM 2019.

i) Students of the Mechatronics Engineering program published 15 papers in indexed conferences

In 2019, Students of the Mechatronics Engineering program published 15 papers in different SCOPUS indexed conferences at national and international level. See below a list of the papers, authors and conferences attended by students of the Mechatronics Engineering program.

Table 4. List of Research Assignments of the Mechatronics Engineering Program Published in International Conferences in 2019

No.	Article Title	Authors	Conference
1	Acquiring, Monitoring, and Recording Data Based on the Industrie 4.0 Standard Geared Toward the Maca Drying Process	**Students:** Gianmarco Nagaro, Abel Koc-Lem **Faculty**: Leonardo Vinces, Julio Ronceros and Gustavo Mesones	ICAET ECUADOR
2	Development of a Simulator with Two Degrees of Freedom of the Direction System of Massey-Ferguson's 3640 Agricultural Tractors	**Students:** André Mixán, Andy Mamani **Faculty**: Leonardo Vinces and Christian Del Carpio	ICAET ECUADOR
3	Development of automatic control for temperature-based reduction of bitterness in Tarwi	**Students:** Alejandro Alvino, Martín Matos **Faculty**: Christian Del Carpio and Leonardo Vinces	ACA-ICCA CHILE
4	A CAD / CAM system for rapid prototyping by adding or subtracting materials using Computer Numerical Control (CNC)	**Students:** Richard Pardo and Kasen Tong **Faculty**: Leonardo Vinces	INTERCON PERU

No.	Article Title	Authors	Conference
5	Un Novedoso Diseño Mecánico para un robot móvil que transporta una carga de 30 Kg	**Students:** Milagros Loayza, Juan Alfaro **Faculty**: Leonardo Vinces and Christian Del Carpio	LACCEI JAMAICA
6	Desarrollo de un prototipo de mano para sujeción de granadas explosivas tipo piña aplicando elementos de robótica blanda y sensores embebidos	**Students:** Mijail Guerrero **Faculty**: Leonardo Vinces and Christian Del Carpio	LACCEI JAMAICA
7	Desarrollo de un sistema de posicionamiento mediante control "híbrido" para el seguimiento de una trayectoria fija aplicado a un robot móvil con arquitectura oruga	**Students:** Julio Artica and Marco Klepatzky **Faculty**: Leonardo Vinces and Christian Del Carpio	LACCEI JAMAICA
8	An iron filings filter for desulfurization of biogas	**Students:** Enrique Lazaro and Juan Condori **Faculty**: Leonardo Vinces, Christian Del Carpio, and José Oliden	CONIITI COLOMBIA
9	A machine for the pasteurization process of Tarwi milk	**Students:** Fhebry Miranda, Junior Flores **Faculty**: Mirko Klusmann, Leonardo Vinces and Christian Del Carpio	CONIITI COLOMBIA
10	Development of an Automatic Equipment for Craft Beer Maceration	**Students:** Luis Rodriguez and Nildo Mata **Faculty:** Leonardo Vinces and Christian Del Carpio	CONIITI COLOMBIA
11	Development of a machine to control the level of washing in Panca chili seeds	**Students:** Anthony De La Cruz, Jaime Cárdenas **Faculty**: Leonardo Vinces	BTSYM 2019
12	An automatic biodiesel decanting system for the optimization of glycerin separation time by applying electric field and temperature	**Students:** Kevin Bulnes and Diego Paredes **Faculty**: Leonardo Vinces	BTSYM 2019
13	A mechanical development of a dry cell to obtain HHO from water electrolysis	**Students:** Gustavo Salazar, Wilmer Solis **Faculty**: Leonardo Vinces	BTSYM 2019
14	A development of a mobile application for monitoring Siemens S7-1200 controller variables through Firebase	**Students:** Alexander Diaz and Steven Rivera **Faculty**: Leonardo Vinces and Christian Del Carpio	BTSYM 2019
15	An automated system for the stage of hydrolysis and filtration in the extraction of pectin from the cocoa shell	**Students:** Maritza Ccencho and Valeria Quijada **Faculty**: Leonardo Vinces	BTSYM 2019

Figure 21. Kevin Bulnes and Diego Paredes, students of the Mechatronics Engineering program and coauthors of "An automatic biodiesel decanting system for the optimization of glycerin separation time by applying electric field and temperature", paper published at the BTSYM 2019.

j) Students of the Industrial Engineering program published their research assignments in different international conferences

In 2019, 35 students of the Industrial Engineering program published their research assignments in different international conferences. See below a list of the conferences attended by students.

Table 5. List of International Conferences in which Students of the Industrial Engineering Program Published their Papers in 2019.

Total Students of the Industrial Engineering Program who Attended International Conferences	Name of the International Conference	Date and Place of the International Conference
2	10th International Conference on Applied Human Factors and Ergonomics (AHFE 2019)	Washington, United States, July 2019
5	17th LACCEI International Multi-Conference for Engineering, Education, and Technology: "Industry, Innovation, and Infrastructure for Sustainable Cities and Communities"	Montego Bay, Jamaica, June 2019
10	2nd International Conference on Human Interaction & Emerging Technologies (IHIET) 2019	Nice, France, August 2019
6	2nd International Conference on Human Systems Engineering and Design: Future Trends and Applications (IHSED)	Munich, Germany, September 2019

Total Students of the Industrial Engineering Program who Attended International Conferences	Name of the International Conference	Date and Place of the International Conference
6	CONIITI 2019	Bogota, Colombia, October 2019
4	7th International Engineering, Sciences and Technology Conference (IESTEC)	Panama, October 2019
1	6th International Conference on Mechanical, Materials and Manufacturing (ICMMM)	Boston, United States, October 2019
1	The IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)	Macao, China, December 2019

Figure 22. Delegation of the Industrial Engineering program who attended the International Conference on Human Interaction & Emerging Technologies (IHIET 2019).

k) Students of the Environmental Engineering and Management program presented their research assignment titled "Suelos salinos nativos y los efectos de inoculantes microbianos en un cultivo indicador (cebada)" at the 18th National Congress and 9th International Congress on Soil Science in 2019

During the 18th National Congress and 9th International Congress on Soil Science, which took place on May 20-23, 2019 in Pucallpa, Peru, students of the Environmental Engineering and Management program presented a poster of their research assignment on native saline soils and the effects of microbial inoculants in an indicator crop (barley). This assignment seeks to develop research in the reclamation of saline soils of anthropogenic origin where soil contamination is mainly due to an excessive use of agrochemicals.

Students Jareth Diaz Cervantes and Karla Minaya Echevarría, and Faculty and MSc in Biology Silvia Agüero Aguilar attended the event.

UPC's participation in the event was crucial as it gathers all relevant key actors and leading researchers in the field of soil sciences at national and international level in order to share academic research advances and progress in the industrial sector.
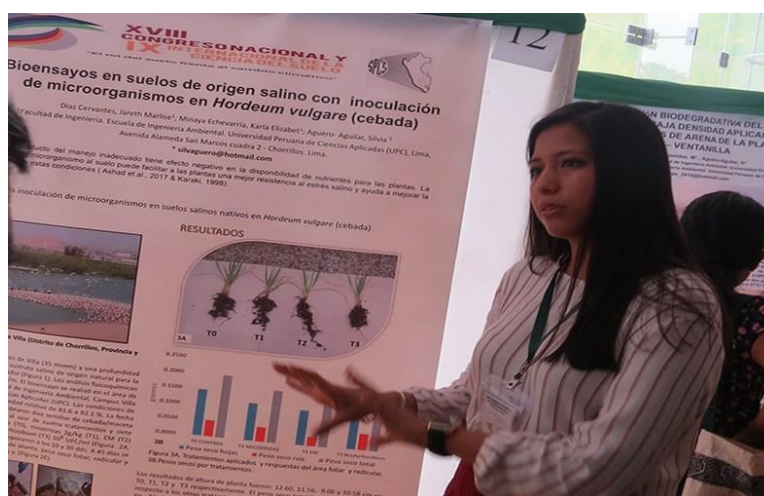
Figure 23. Karla Minaya, of the Environmental Engineering and Management program, presenting her research poster at the 18th National Congress and 9th International Congress on Soil Science in 2019.

l) Students of the Computer Science program attended the Fintech Festival 2019 and the Singapore Week of Innovation & Technology (SWITCH) 2019

"Embassies and trade promotion agencies of member countries of the Pacific Alliance organized a business promotion event held in Singapore on November 11, 2019. The event took place during the Fintech Festival 2019 and the Singapore Week of Innovation & Technology (SWITCH) 2019. Peru was represented by Franco Pastor, cofounder of Impulsus and Blazar Labs, and student of the Computer Science program." (Single Digital Platform of the Peruvian State, 2019)

Source: Single Digital Platform of the Peruvian State (link).

Figure 24. Franco Pastor at Fintech 2019 in Singapore.

1.3 School of Economics

a) **Faculty and graduate students of the School of Economics attended both as exhibitors and panelists the 30th Annual Research Seminar of the Economic and Social Research Consortium (CIES) in 2019**

The Annual Seminar on Economic and Social Research organized by CIES is one of the most important events of the Peruvian academia and includes the participation of keynote speakers such as Nobel Laureates, international experts, and government and civil society leaders. The 2019 edition brought together more than 1,300 experts from the public and private sectors, international cooperation, academia, students and the press. In addition, 74 national and international exhibitors and panelists participated in 27 academic events. This edition also included a dialogue with young university students, an exchange between graduating students from Peru and the European Union, as well as closed meetings with the Ministry of Economy and Finance (MEF), the Central Bank of Reserve of Peru (BCRP), opinion leaders, and entrepreneurs.

During the 2019 edition, faculty and graduate students of the School of Economy attended the event as exhibitors and panelists during the Research Round Table on Farming and Diversification, in which Carlos Paredes and Kenji Moreno, both graduate students, presented the results of their research titled "Cooperativismo y su impacto en el rendimiento agropecuario local" (Cooperativism and its Impact on Local Agricultural Performance).

Figure 25. Panelists during the Research Round Table on Farming and Diversification at the CIES 2019 Seminar.

b) Students of the School of Economics have been selected for the 67th Extension Course on Advanced Economics organized by the Central Bank of Reserve of Peru in 2019

Stephanie Carolina Ávila Herrera and Juan Luis Leiva Torres, both students of the School of Economics, attended the 67th Extension Course on Advanced Economics organized by the Central Bank of Reserve of Peru (BCRP) in 2019. This competition convenes students of the Economics, Administration, Finance, Industrial Engineering, and Systems Engineering programs, as well as any other related program from universities across the country. Students must have a cumulated weighted average in the upper third and an advanced level of English.

Each year, 35 students are selected at national level, of which 10 are from provinces. Participants are selected through a rigorous evaluation process and have to sit an exam that covers knowledge in advanced topics of economics.

c) Students of the School of Economics attended the 2019 PAÍS volunteer program

The PAÍS volunteer program is UPC's first Social Academic Mission. Students of the School of Economics are given the opportunity to participate in the Platform of Action for Social Inclusion (PAÍS) of Peru's Ministry of Development and Social Inclusion in order to contribute to the improvement of communities and their socioeconomic situation (i.e. education, health, production management, environment and financial inclusion in the rural sector). The program took place on July 11-27, 2019 in Puno, Peru.

Juan Carlos Gonzales, Lucero Angulo, José Aldave, Briguit Grajeda, Guadalupe Garay and Rita Muchotrigo, all students of the School of Economics, took part in the project and organized a workshop on financial inclusion in the community's school for parents. In addition, they collected socioeconomic data in the community so that supply center operators may update their databases and perform a diagnosis on the main problems in different communities of Puno.

Figure 26. Delegation of UPC students who participated in the PAÍS volunteer program in Puno, Peru in 2019.

d) Research project developed by graduate students of the Economics and Finance program won the Economic and Social Research Consortium (CIES) Annual Competition in 2018

Each year, the Economic and Social Research Consortium (CIES) hosts a competition for 49 prestigious Peruvian institutions (among universities and research centers) that focus on research and teaching in the field of economic, environmental and social sciences. The CIES Annual Competition has funded more than 600 studies to date, published more than 200 papers, and organized an array of seminars, debates, workshops, and academic exchanges on economic and social policy.

During the 2018 edition, 63 research proposals have been submitted by public and private institutions associated with CIES, of which the proposal submitted by Carlos Paredes and Kenji Moreno, both graduate students of the Economics and Finance program, titled "Cooperativismo y su impacto en el rendimiento agropecuario local" (Cooperativism and its impact on Local Agricultural Performance) won in the category "Short Projects". This research project sought to analyze the impact of farmers' cooperative membership on financial and production performance in 2015 and 2016. The authors used the Propensity Score Matching and Pooled OLS models to analyze data of both the Cooperative Census and the National Farm Survey. The study shows that farmers' cooperative membership has a positive impact on the farming and agricultural sectors' performance, as opposed to the fisheries sector. Said impact is higher than in other forms of association.

Figure 27. Carlos Paredes and Kenji Moreno, both graduate students of the Economics and Finance program, at the Economic and Social Research Consortium (CIES) Annual Competition in 2018.

1.4 School of Human Science

a) Student of the Professional Translation and Interpretation program received a scholarship from Lacocca Institute and Lehigh University to attend the Global Village program.

Ericka Estremadoyro, student of the Professional Translation and Interpretation program received a scholarship from Lacocca Institute and Lehigh University to attend the Global Village program in the United States. This five-week program consists of seminars and workshops conducted by international professors on topics in the fields of management, leadership, and multiculturalism. The seminars allow "Villagers" to build a global professional network and strengthen their leadership and management skills.

Figure 28. Ericka Estremadoyro, student of the Professional Translation and Interpretation program, received a scholarship to attend Lehigh University in the United States.

b) Students of the Professional Translation and Interpretation program were granted the Emerging Leaders in The Americas Program (ELAP) scholarship to attend the University of Prince Edward Island in Canada

In 2009, the Government of Canada announced the Emerging Leaders in the Americas Program (ELAP) to support the development of human capital and the next generation of leaders in the Americas while strengthening the linkages between post-secondary institutions in Canada and Latin America and the Caribbean.

Scholarships are granted based on a rigorous selection and assessment process of each candidate's application. Candidates from more than 30 Latin American and Caribbean countries apply for the scholarship each year. The scholarship includes accommodation, health insurance, books, ground public transportation, and living expenses.

In 2019, Carol Torres and Nuria Ávalos, both students of the Professional Translation and Interpretation program, were granted the ELAP scholarship to study at the University of Prince Edward Island in Canada from October 2019 to March 2020.

c) Student of the Professional Translation and Interpretation program took part in the LabCitoyen 2019 international meeting

LabCitoyen is a program organized by the French Institute in Paris and the French Government. The program convenes participants from different countries around the world in order to discuss topics of international interest. The latest edition of LabCitoyen took place in July 2019 in Paris, France. The central theme of the event was "Women's Rights: Equality and Citizenship". In total, 57 participants from 50 countries took part in the event.

Nuria Ávalos, student of the Professional Translation and Interpretation program, took part in the LabCitoyen 2019 international meeting to discuss major issues relating to human rights at the National Assembly in Paris.

During her stay, Nuria participated in several meetings, talks and workshops to discuss issues relating to women's rights in politics, the workplace and everyday life. Participants visited hospitals and women's help centers, as well as the Organization for Economic Co-operation and Development (OECD) and the National Assembly. Discussions included the participation of feminist activists such as Author Leïla Slimani, Historian Michelle Perrot, and France's First Lady Brigitte Macron.
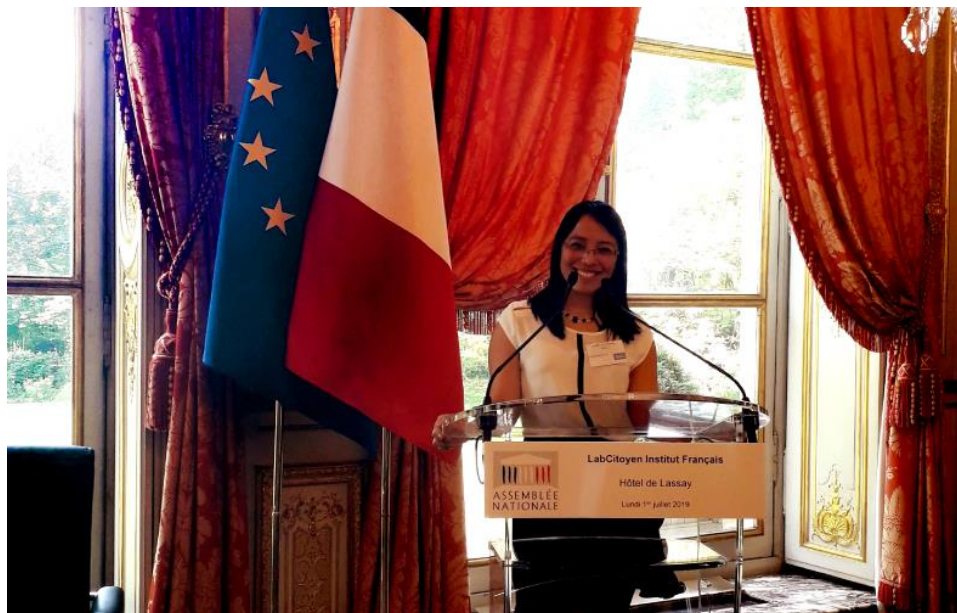
Figure 29. Nuria Ávalos, student of the Professional Translation and Interpretation program took part in the LabCitoyen 2019 international meeting.

d) **Students and graduate students of the Professional Translation and Interpretation program published their research assignments in the journals Mutatis Mutandis and Hikma, respectively.**

Jacqueline Antialon and Katherine Marquez, both students of the Professional Translation and Interpretation program, published their undergraduate research assignment in the Journal Mutatis Mutandis. Allison Ponce de León and Raúl Espinoza, both graduate students of the same program, published their research project that allowed them to obtain their professional title in the Spanish journal Hikma.

See below the published research assignments:

1. Antialon-Yauri, J. and Márquez-Llatance, K. (2019). *Las principales motivaciones de los ingresantes para estudiar traducción e interpretación profesional en la Universidad Peruana de Ciencias Aplicadas.* Mutatis Mutandis, 12(1), pp. 250-271. Available at: https://aprendeenlinea.udea.edu.co/revistas/index.php/mutatismutandis/article/view/337340

2. Ponce de León, A. A., Espinoza Chocña, R. A. and Mangelinckx, J. (2019). *Las preferencias en torno al doblaje y la subtitulación de géneros de cine entre estudiantes universitarios de Lima Metropolitana.* Hikma: estudios de traducción, (18), 2019, pp. 181-209. Available at: https://www.uco.es/ucopress/ojs/index.php/hikma/article/view/11206/pdf**.**

e) Students of the Professional Translation and Interpretation program volunteered in the Language Services of the Lima 2019 Pan American and Parapan American Games

Between July and September 2019, students of the Professional Translation and Interpretation program actively volunteered in the Language Services of the Lima 2019 Pan American and Parapan American Games. Volunteers were divided in two groups: translators based in the Lima Convention Center (LCC), acting as the main operations center, and interpreters who were present in all the competition venues to provide interpretation services in mixed areas to athletes and the international press.

Figure 30. Volunteers of the Professional Translation and Interpretation program at the Lima 2019 Pan American and Parapan American Games.

f) Distinction awarded to the students of the Professional Translation and Interpretation program by the United Nations Office on Drugs and Crime (UNODC) for their good performance and professionalism

On October 23, 2019, the United Nations Office on Drugs and Crime (UNODC) honored the students of the Professional Translation and Interpretation program for their good performance and professionalism as they translated eight university modules of UNODC's Education for Justice initiative. The latter contributes to the training of people who work in Peru's criminal justice system, especially in the fields of violence against women, illicit arms trafficking, and corruption.

Figure 31. Recognition ceremony to students of the Professional Translation and Interpretation program for their collaboration with UNODC in 2019.

1.5 School of Health Sciences

a) Student of the Medicine program won a silver medal at the Lima 2019 Pan American Games in Taekwondo Poomsae

Hugo Del Castillo Palomino, student of the eleventh-term of the Medicine program, won a silver medal at the Lima 2019 Pan American Games in Taekwondo Poomsae.

Figure 32. Hugo Del Castillo Palomino, student of the Medicine program, won a silver medal at the Lima 2019 Pan American Games in Taekwondo Poomsae.

1.6 School of Psychology

a) **Students of the Psychology program organized three health campaigns in Schools in 2019**

In 2019, students of the Psychology program organized three health campaigns in the following educational institutions:

1. Colegio Mayor Secundaria Presidente de la República – COAR Lima: In March 2019, 275 students in the third year of secondary school participated in psychoeducational activities focusing on life projects and time management. In addition, 300 parents participated in discussions on how to support teens' learning and the importance of spending family time together.

2. Centro de Escritura y Lectura y Esparcimiento (CELES): In June 2019, students of the Psychology program conducted psychological counseling sessions and psychoeducational activities for families attending CELES, which focused on intra-family communication, positive parenting, and prevention of sexual violence against children.

3. Institución Educativa Santa Rosa 6094 Chorrillos: In March 2019, students of the Psychology program conducted psychological counseling sessions and psychoeducational activities to meet the needs of students and parents of said school.

Figure 33. Students of the Psychology program during health campaigns in educational institutions in 2019.

1.7 School of Communications

a) **Graduate student of the Audiovisual Communication and Interactive Media program participated in the production and promotion of "Jardín de Oro" (The Golden Garden), a multidisciplinary theater project performed at the Grand National Theater.**

In September 2019, Andrea Benavente, graduate student of the Audiovisual Communication and Interactive Media program, participated in the production and promotion of "Jardín de Oro" (The Golden Garden), a multidisciplinary theater project performed at the Grand National Theater. "Jardín de Oro" is a critical and ceremonial place in the mind, which appears in the folds of society and different levels of mystical truths. Rather than a story, it is a condition and an intangible revelation. The dark areas of the soul are part of human nature and doors open to connect them with landscapes and opposite dimensions.

Figure 34. Presentation of "Jardín de Oro" (The Golden Garden) at the Grand National Theater.

b) **Graduate student of the Audiovisual Communication and Interactive Media program won first place in the 2019 National Bicentennial Short Films Contest (DAFO), organized by the Ministry of Culture, with his project "El guardián y los últimos criollos" (The Guardian and the Last Criollos).**

Josué Palomino, graduate student of the Audiovisual Communication and Interactive Media program, won first place with his project "El guardián y los últimos criollos" (The Guardian and the Last Criollos) in the 2019 National Bicentennial Short Films Contest (DAFO), organized by the Ministry of Culture to celebrate the Bicentennial of the Independence of Peru.

This short film is set in the house of Wendor Salgado, "The Guardian", located in the last blocks of Jirón Pariacoto, in the district of Breña, Lima, Peru. Along with a group of old Criollo men, he collects, interprets and revives the voices of singers and composers form the past. This way, he maintains bicentennial musical expressions and traditions of Peru's coast that disappear with time. Next to Wendor's house, the "Catedral del Criollismo" (The Cathedral of Criollismo) preserves and recalls a piece of Peru's history every Friday.

Each song is a reflection of the authors' story, culture and experiences. "El guardián y los últimos criollos" aims to reflect on those songs, the lost lifestyle, and how it will affect Peru's next generations who are born without acknowledging this important part of our Republican history.


Figure 35. Josué Palomino, winner of the 2019 National Bicentennial Short Films Contest (DAFO).

c) **Graduate student of the Communication and Publicity program has been selected among 12 other participants for this year's See It Be It program in Colombia.**

Diana Flores Luna, graduate student of the Communication and Publicity program and current Creative Director at Harrison Peru, has been selected as one of the 12 representatives for this year's See It Be It program in Colombia. This mentoring program for creative women of the region aims to maximize female talent and shape the creative industry in order to achieve gender equality in executive positions. This program is supported by the El Dorado Festival and the Cannes Lions International Festival of Creativity.
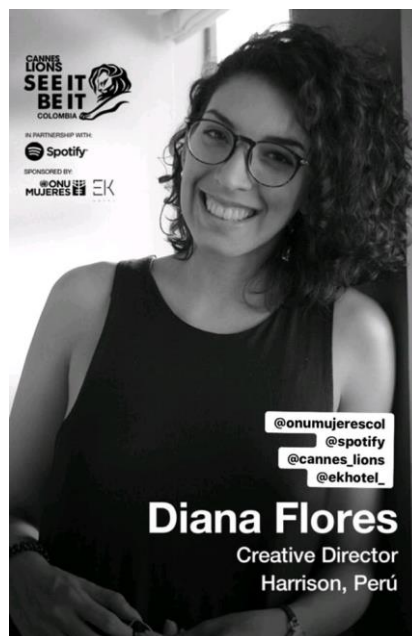
Figure 36. Diana Flores, graduate student of the Communication and Publicity program.

d) Graduate student of the Communication and Publicity program won two bronze prizes for LifeStreams at the 2019 El Ojo de Iberoamérica Festival.

The 2019 El Ojo de Iberoamérica Festival recognizes the best projects and companies in the communication, marketing and advertising fields both at the regional and international level. This festival offers "a space to meet, debate, train and inspire advertisers and advertising, technology, media, digital, promotion, marketing, innovation and press agencies, as well as audiovisual production companies, specialized media, and university students from related programs." (El Ojo de Iberoamérica, 2019).

Pedro Bergelund Echeandía, graduate student of the Communication and Publicity program, took part in the festival as a member of the Wunderman Thompson Lima agency team, which conducted a campaign for the Peruvian League in the Fight against Cancer. Pedro Bergelund developed the proposal called "Lifestreams", through which "[they] gave a voice to child cancer patients from the Peruvian Cancer Foundation, making everyone understand their condition and motivating them to donate by splitting the screen through a double streaming on Instagram, combining two faces simultaneously, one from an influencer and the other from a cancer child patient, with the new function Go live with a friend."

With this proposal, Pedro won two bronze prizes in the 2019 Ojo de Iberoamérica Festival and came third in the 2019 Portfolio Night Contest (The One Show).

Source: El Ojo de Iberoamérica (link).

Figure 37. Pedro Bergelund Echeandía, graduate student of the Communication and Publicity program.

e) Graduate student of the Communication and Journalism program published the book "El reto de la democracia digital. Hacia una ciudad interconectada" (The Challenges of Digital Democracy. Towards an Interconnected City) in 2019, achieving recognition from Latin American countries.

Elaine Ford, graduate student of the Communication and Journalism program, founding director of Democracia & Desarrollo Internacional (D&D Internacional) and creator of the Democracia Digital program in Peru, published the book "El reto de la democracia digital. Hacia una ciudad interconectada" (The Challenges of Digital Democracy. Towards an Interconnected City), achieving recognition from different Latin American countries. This book was co-edited by Peru's National Electoral Jury (JNE), the National Office of Electoral Processes (ONPE) and the Konrad Adenauer Foundation (KAS).

The book is available at: (link).
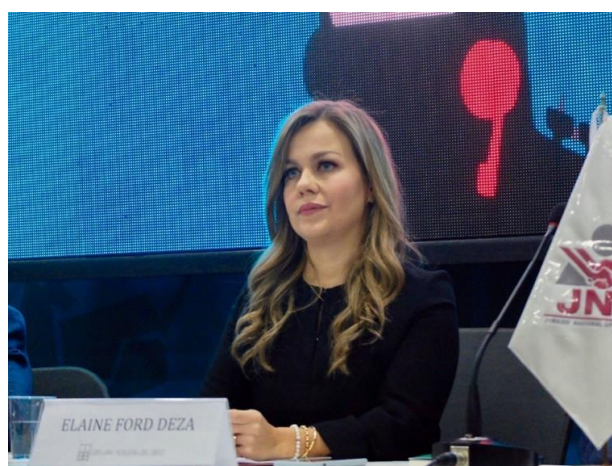
Figure 38. Elaine Ford published the book "El reto de la democracia digital. Hacia una ciudad interconectada" (The Challenges of Digital Democracy. Towards an Interconnected City) in 2019.

f) Student of the Communication and Marketing program won a gold medal in the International Aerobic Gymnastics Competition.

Thaís Fernández, student of the Communication and Marketing program, won a gold medal in the Senior category in the 2019 Pan American Aerobic Gymnastics Championship held in Buenos Aires, Argentina. At present, she is seventh in her category, according to the last ranking of the International Federation of Gymnastics, updated as of October 2019.

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

Figure 39. Thaís Fernández, winner of the gold medal in Aerobic Gymnastics in the senior category (2019).

g) Graduate student of the Audiovisual Communication and Interactive Media program published his first novel titled "Peatón" (The Pedestrian).

José Manuel Rodríguez Peña, graduate student of the Audiovisual Communication and Interactive Media program, published his first novel titled "Peatón" (The Pedestrian). This novel tells the story of "Lorenzo Zevallos, "The Pedestrian", who walks between two worlds, what he wants to be and what he "must" be. The streets –whether commercial, conservative or more liberal– accompany Lorenzo at all stages of his life, good or bad. His friendships, his love for Valentina (his first great love) and his family are important aspects of his journey. They may disagree at times, but they are essential for his transition towards adulthood and the real world." (Portal Libros Peruanos, 2019).

Source: Portal Libros Peruanos 2019 (link)

Figure 40. José Manuel Rodríguez Peña and his first novel titled "Peatón" (The Pedestrian).

h) **Graduate students of the Audiovisual Communication and Interactive Media program achieved recognition in international festivals for their short film "Toda una vida" (A Lifetime's Worth).**

The short film "Toda una vida" (A Lifetime's Worth) was chosen as finalist in the PROYECTA XIII - CEU Competition in Valencia, Spain and won the "Best Short Film of the Year" award in the 2nd Latin American Short Film Festival Cine Valor (2019). It also achieved recognition on ten other occasions, becoming the most acclaimed fictional short film within the framework of the Audiovisual Project course since its production in September 2019.

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 she has left in her life.

Figure 41. Recognition for the short film "Toda una vida" (A Lifetime's Worth).

i) **Graduate students of the Audiovisual Communication and Interactive Media program participated in the 5th International Audiovisual Festival FIAFest.**

The International Audiovisual Festival FIAFest is an academic and cultural space that promotes discussion and learning about audiovisual narrative and production with the aim of consolidating the artistic education of university and school students. The festival is organized by the School of Communication of the Universidad de La Sabana, Colombia.

Luis Vallejo, Sandra Concha, Allison Villacrés, Sol Eyzaguirre, Michelle Velásquez, Ximena Rojas, Willy León, Augusto Mostajo Pantoja and Carlos Chávez, graduate students of the Audiovisual Communication and Interactive Media program, took part in the 5th International Audiovisual Festival FIAFest, which was held at the Universidad de la Sabana, Colombia on April 8-11, 2019.

Figure 42. Gengis Hidalgo (Faculty of the Audiovisual Communication and Interactive Media program) and graduate students of the program (from left to right): Luis Vallejos, Sandra Concha, Allison Villacrés, Sol Eyzaguirre, Michelle Velásquez, Ximena Rojas, Willy León, Augusto Mostajo and Carlos Chávez, at the 5th International Audiovisual Festival FIAFest.

j) **Graduate students of the Audiovisual Communication and Interactive Media program among the finalists of the PROYECTA XIV edition of the University Audiovisual Creation Competition with their short film "El Santo de la Máscara" (The Masked Saint).**

The short film "El Santo de la Máscara" (The Masked Saint) (link) was a project carried out by graduate students as their final short film of the Audiovisual Communication and Interactive Media program. In 2019, the project was selected among the finalists in the Fiction category of the PROYECTA University Audiovisual Creation Competition.

The PROYECTA XIV edition of the University Audiovisual Creation Competition is organized by the Universidad CEU Cardenal Herrera (Spain) and brings together university or film school students at an international level.

The short film titled "El Santo de la Máscara" tells the story of Pocholo, the owner of a wrestling academy, who is about to be in the most important fight of his career. The day before the event, his

star wrestler decides to abandon him. In view of this situation, Pocholo will have to find a solution so as not to lose everything and, most importantly, not disappoint his little daughter.

Figure 43. The production team of "El Santo de la Máscara" (The Masked Saint).

k) **Graduate students of the Communication and Journalism program, members of the El Comercio team (a Peruvian newspaper), won the 2019 Grand National Prize for Journalism in the Best Written Report category.**

On December 12, 2019, Carls Mayo and Carlos Hidalgo, both graduate students of the Communication and Journalism program, won the award for "Best Written Report" in the 2019 Grand National Prize for Journalism with their #NoTePases campaign, which aimed to improve road safety education and support the creation of the Urban Transportation Authority.

The Grand National Prize for Journalism is the highest distinction in Peru for quality journalism, in any of the categories of the contest, and that shows the following characteristics: "showcase a relevant social problem (national or local), promote change in the state of affairs, and show that the journalist has displayed one or more fundamental journalism values in an exemplary manner during its development." (2019 Grand National Prize for Journalism)

"The winner is chosen by secret ballot by 25 judges, including five editors appointed by the president of the Peruvian Press Council, five members of the Foreign Press Association appointed by its President, five directors of Schools of Journalism appointed by the Awards Committee, five celebrities appointed by the Awards Committee, and five journalists appointed by the president of the National Society of Radio and Television (SNRTV)." (2019 Grand National Prize for Journalism)

Source: 2019 Grand National Prize for Journalism (link).

Figure 44. Carls Mayo and Carlos Hidalgo, both graduate students of the Communication and Journalism program, members of the El Comercio team (a Peruvian newspaper), won the 2019 Grand National Prize for Journalism in the Best Written Report category.

l) **Short film "La Película" (The Movie), directed by a graduate student of the Audiovisual Communication and Interactive Media program, won the 2019 Cortos de Vista Festival for Best Screenplay.**

Since its first edition in 2007, the Cortos de Vista Festival has started a revolution in the city of Chiclayo, Peru as it bridges the gap in the country's social, economic and educational reality, by enhancing pluriculturalism and promoting filmmaking among university students in Peru. The festival covers different sections, which include film appreciation, new screens and technology, international dissemination, project creation, and a competition.

Andrea Lovatón, graduate student of the Audiovisual Communication and Interactive Media program, directed the short film titled "La Película" (The Movie). The project won the Best Screenplay award in the 12th Cortos de Vista Festival, which took place in the city of Chiclayo, Peru on October 24-26, 2019. "La Película" is a documentary that seeks to share the views of the people who live in Lima in regards to the movie they write and record every day –their lives– through testimonials and a census documentary.

Figure 45. Short film "La Película" (The Movie), directed by Andrea Lovatón, won the Best Screenplay award in the 12th Cortos de Vista Festival (2019).

m) Graduate student of the Audiovisual Communication and Interactive Media program achieves recognition for her project "¿Bailamos?" (Shall We Dance?) in the 2nd Cine Valor Latin American Film Festival (2019).

Daniela Brenis directed the short film "¿Bailamos?" (Shall We Dance?), which won second place in the Best Film Editing category and third place in the Best Fictional Short Film category. The award ceremony was held on September 20, 2019 during the 2nd Cine Valor Latin American Film Festival (2019).

This short film tells the story of Abril and Mateo, who are celebrating their recent engagement during a masquerade party. During the party, an unexpected guest arrives. It is Valeria, Mateo's ex-girlfriend. This causes Abril to become extremely jealous and insecure –something she seemingly had overcome. Abril tries to control herself, but the close relationship between Valeria and Mateo makes her lose her mind little by little. A voice starts to give her bad advice, which unleashes a series of events and leads her to act in a way she would have never imagined, putting her engagement at risk.

Figure 46. Promotional poster of "¿Bailamos?" (Shall We Dance?), directed by Daniela Brenis.

n) Graduate student of the Audiovisual Communication and Interactive Media program earned an award in the 2nd Cine Valor Latin American Film Festival (2019).

Sebastian Olmos Lawezzari, graduate student of the Audiovisual Communication and Interactive Media program, directed the short film "Psychotria", which won first place in the Best Fictional Short Film category in the 2nd Cine Valor Latin American Film Festival (2019). Cine Valor is an institution that aims to foster culture in Peru, develop content with moral values, and recognize the work of filmmakers, by promoting the dissemination of their productions.

"Psychotria" portrays the conflict between a man from the city and another from the Peruvian jungle. López is an explorer who finds gold in the jungle. Before going back to the city, he is bitten by a poisonous snake. In the midst of his despair, he finds a wise man who has the cure for his problem. However, López must first overcome the challenges imposed on him by the wise man.

Figure 47. Members of the team who directed the short film "Psychotria".

o) Graduate student of the Audiovisual Communication and Interactive Media program earned the 2019 DAFO award.

Elva Arrieta, graduate student of the Audiovisual Communication and Interactive Media program, earned an award for her short film "Alba" in the 2019 National Short Film Projects Contest (DAFO), organized by the Ministry of Culture.

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

Figure 48. Elva Arrieta, director of the short film "Alba", winner of the 2019 DAFO award.

II.   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 for the undergraduate level and level 4 of each learning outcome defined in the Graduate Student Profile for the graduate level. The Graduate Student Profile, defined by each program, integrates UPC's institutional learning outcomes (Critical Thinking, Oral Communication, Written Communication, Innovative Thinking, Citizenship, Information Literacy and Quantitative Reasoning) and the program specific learning outcomes. The achievement of each learning outcome is evaluated on the basis of three levels of performance: beginner, intermediate and advanced. Assessment is carried out at the intermediate level (level 2) and advanced level (level 3) for undergraduate programs, and the expert level (level 4) for 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.

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 allows us to ensure 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 6 shows the timeline defined for the assessment loops of the ILOs at the undergraduate level.

Table 6.
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	2021-1	Citizenship
2017-2	2021-2	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 October 2019.
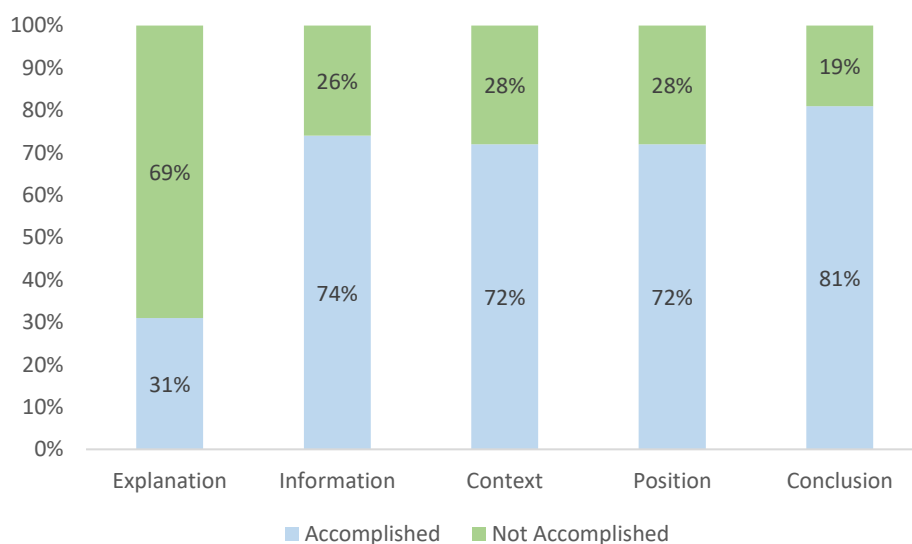
Assessment Results: Critical Thinking

The first assessment loop of the Critical Thinking ILO has been carried out in 2016-2 in the different courses assigned by each program. We 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 49 shows the general result per Dimension for the Critical Thinking ILO at level 2 and Figure 50 at level 3.
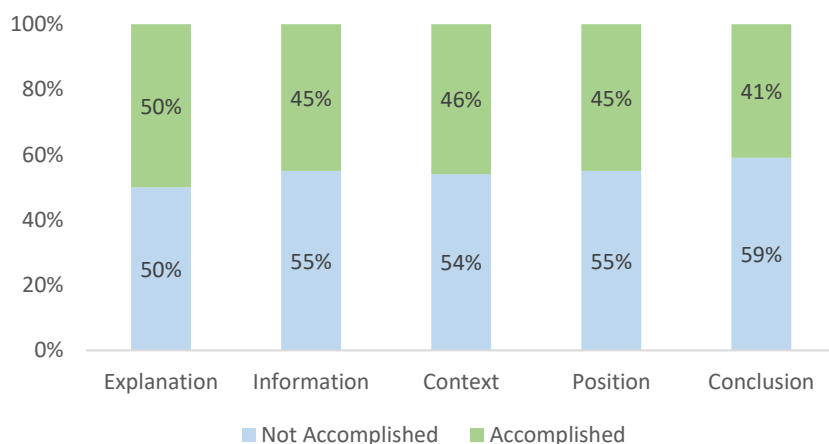
Figure 49. Critical Thinking ILO (Level 2) – General Results per Dimension

Figure 50. Critical Thinking 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 improve the definitions of the descriptors for the "Information", "Context" and "Position" dimensions. In 2017, we developed a new rubric 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. After the test was carried out, the design of the rubric was deemed relevant and adequate for the next assessment loop in 2020-2.

- 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. Said workshops will be held in 2020-1 and are open to all faculty at UPC.

  The following assessment loop of the Critical Thinking ILO will be carried out in 2020-2. We expect to assess all three levels of the ILO based on the new rubric.

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. We 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 51 shows the general result per Dimension for this ILO at level 2 and Figure 52 at level 3.
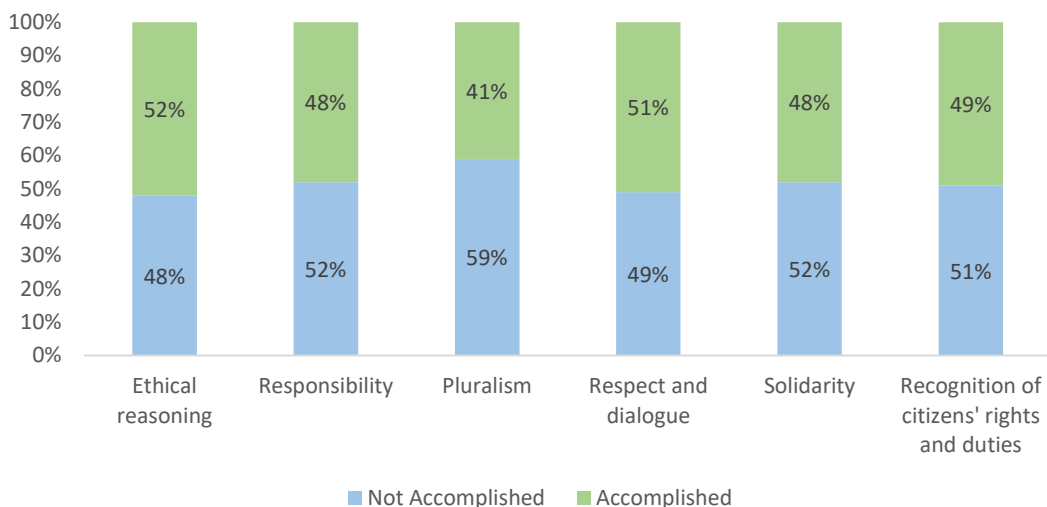
Figure 51. Citizenship ILO (Level 2) – General Results per Dimension
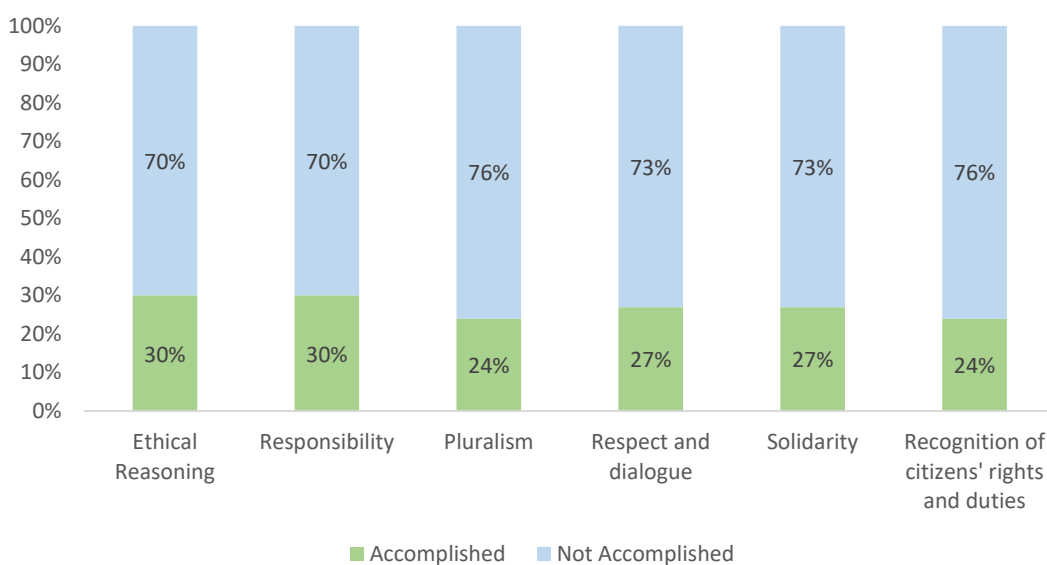
Figure 52. Citizenship ILO (Level 3) – General Results per Dimension

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 2021-1, 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.

Coordinating faculty and the Academic Records Office of each campus/site participated in the evidence-gathering process. 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 53, Figure 54 and Figure 55 show the results for the Innovative Thinking ILO at level 1, 2 and 3, respectively.
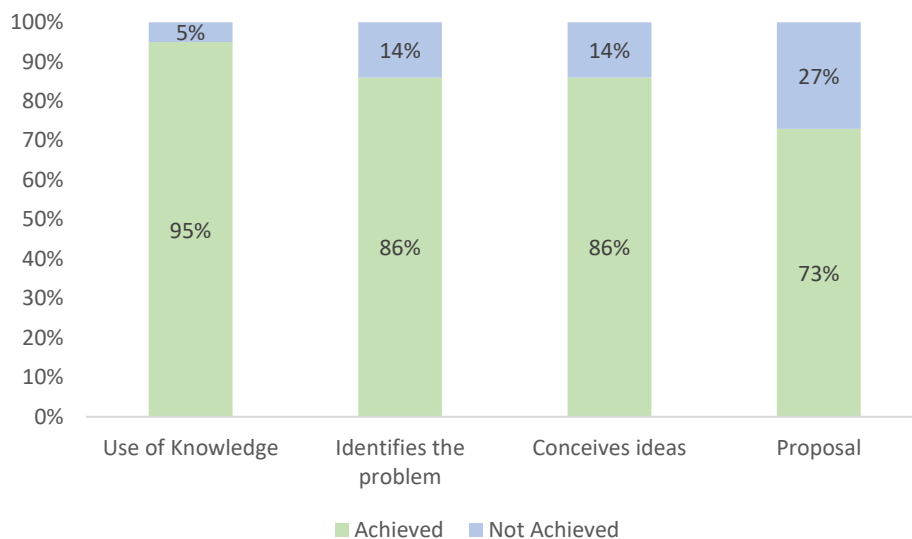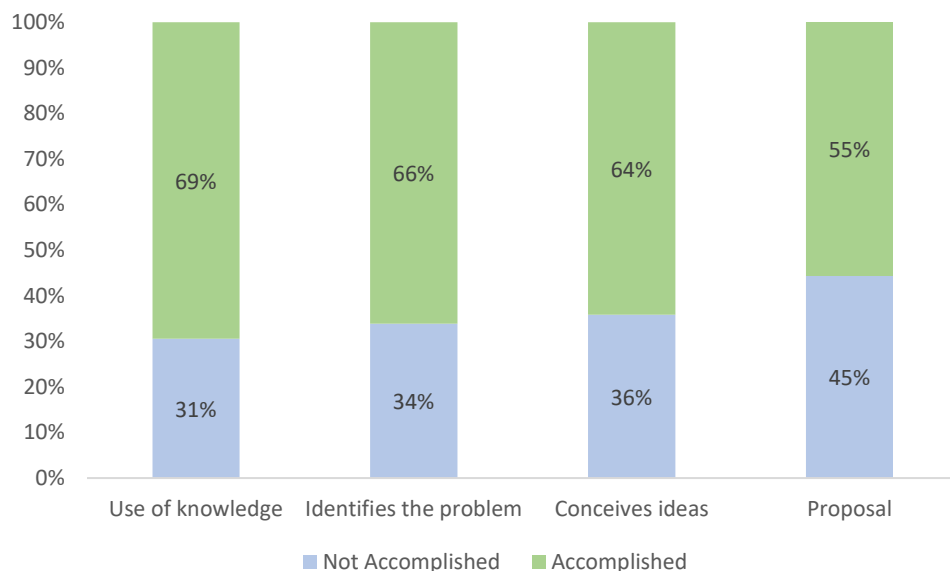
Figure 53. Innovative Thinking ILO (Level 1) – General Results per Dimension
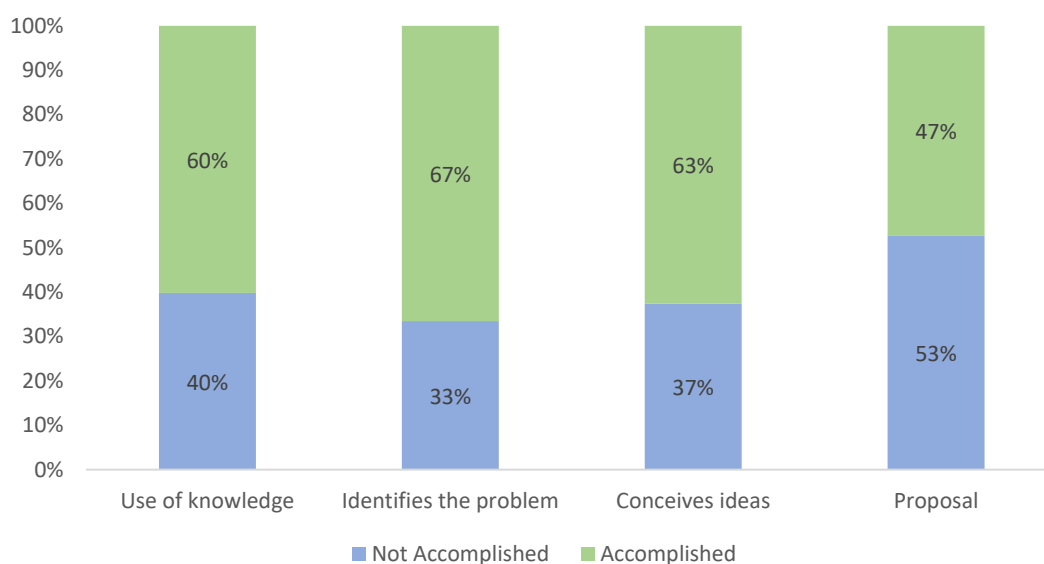
Figure 54. Innovative Thinking ILO (Level 2) – General Results per Dimension

Figure 55. Innovative Thinking ILO (Level 3) – General Results per Dimension

Upon analysis of the results, the committee of faculty 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 2021-2.
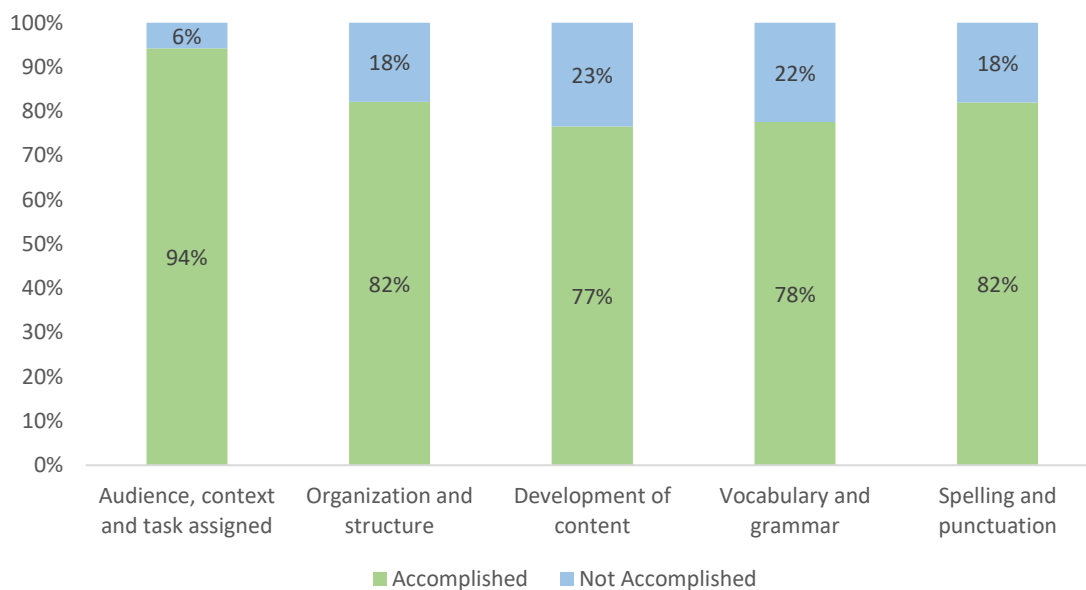
Assessment Results: Written Communication

As a result of the first assessment loop of the Written Communication ILO in 2014-2, we 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 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 Academic Records Office of each campus/site participated in the evidence-gathering process.
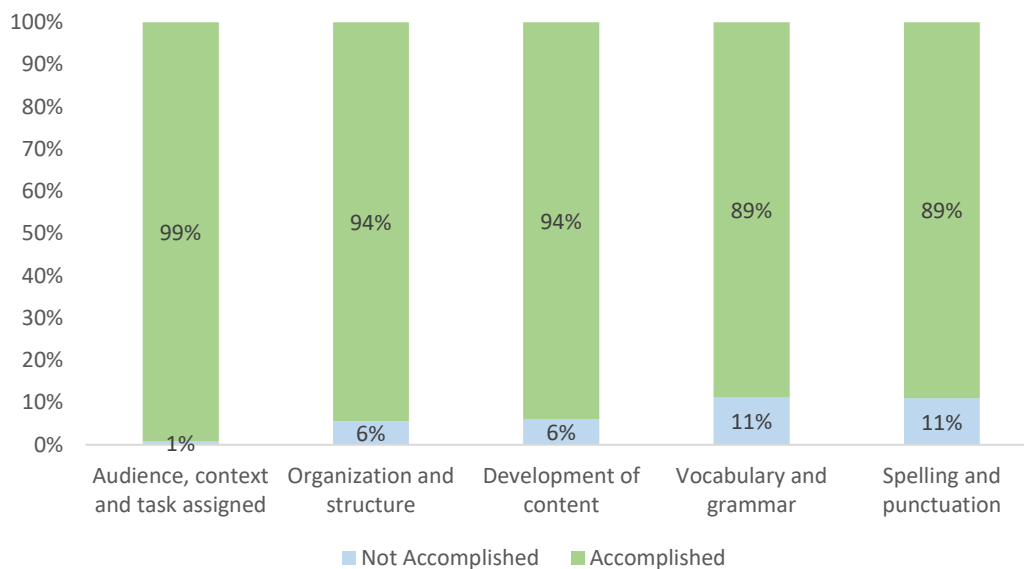
Figure 56. Written Communication ILO (Level 1) – General Results per Dimension

Figure 57. Written Communication ILO (Level 2) – General Results per Dimension
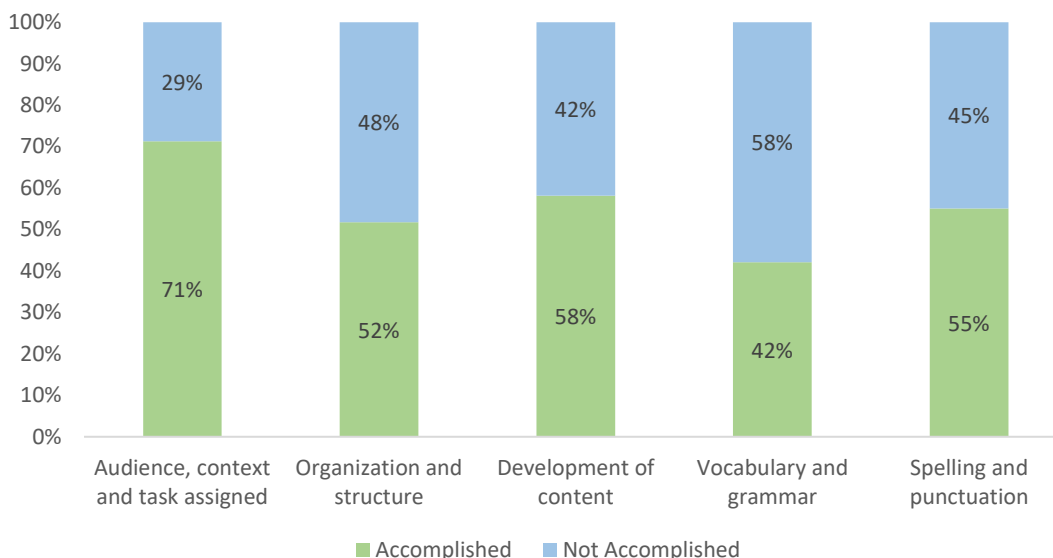
Figure 58. Written Communication ILO (Level 3) – General Results per Dimension

Based on these results, we have reached the preliminary 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 2020-1, *ad hoc* workshops will be held to address the improvement opportunities.

- 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.

The next assessment loop for the Written Communication ILO at all three levels will be held in 2021-2.
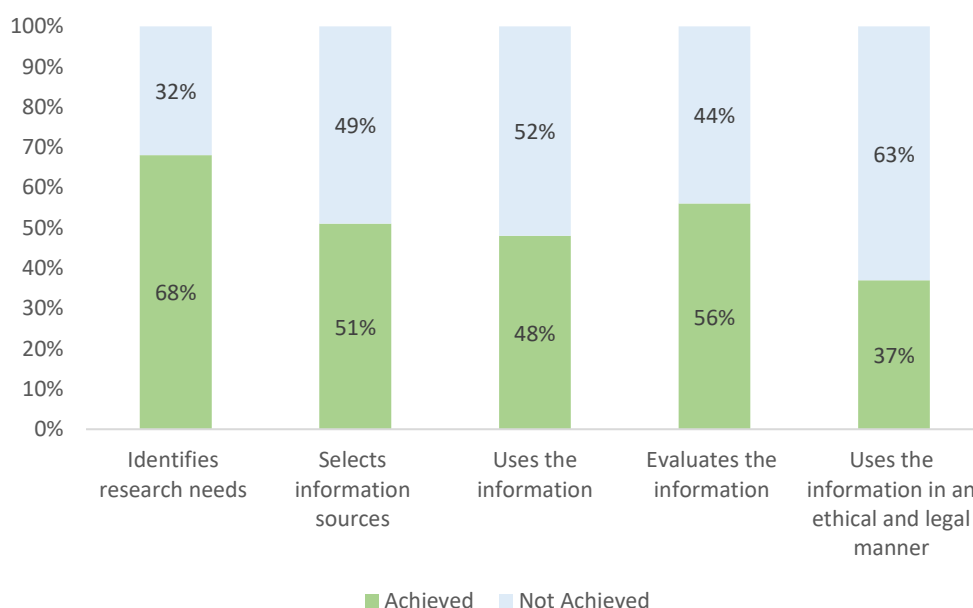
Assessment Results: Information Literacy

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.
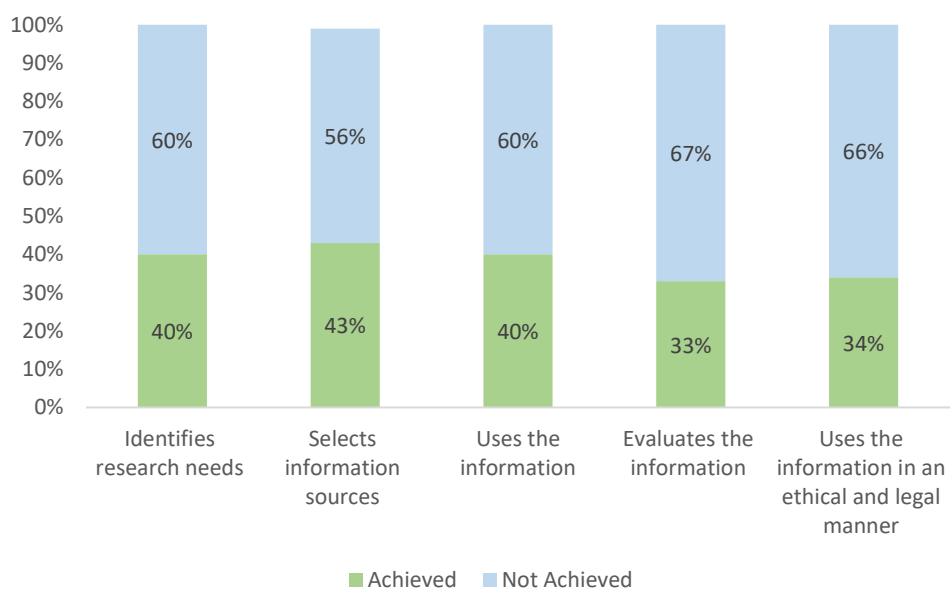
Figure 59, Figure 60 and Figure 61 show the results for the Information Literacy ILO at level 1, 2 and 3, respectively.

Figure 59. Information Literacy ILO (Level 1) – General Results per Dimension
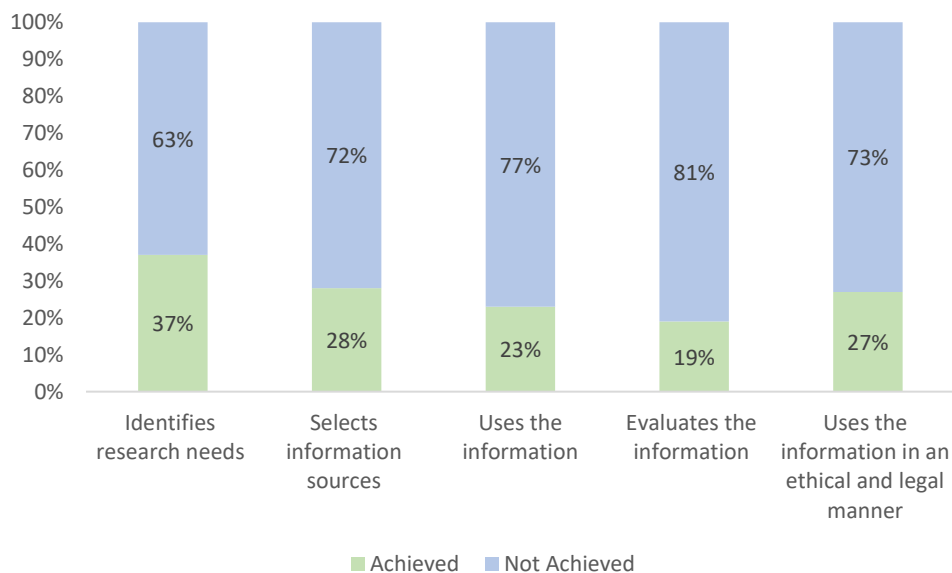
Figure 60. Information Literacy ILO (Level 2) – General Results per Dimension

Figure 61. 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.

● In addition, 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.

The next assessment loop of the Information Literacy ILO at all three levels will be held in 2023-1.
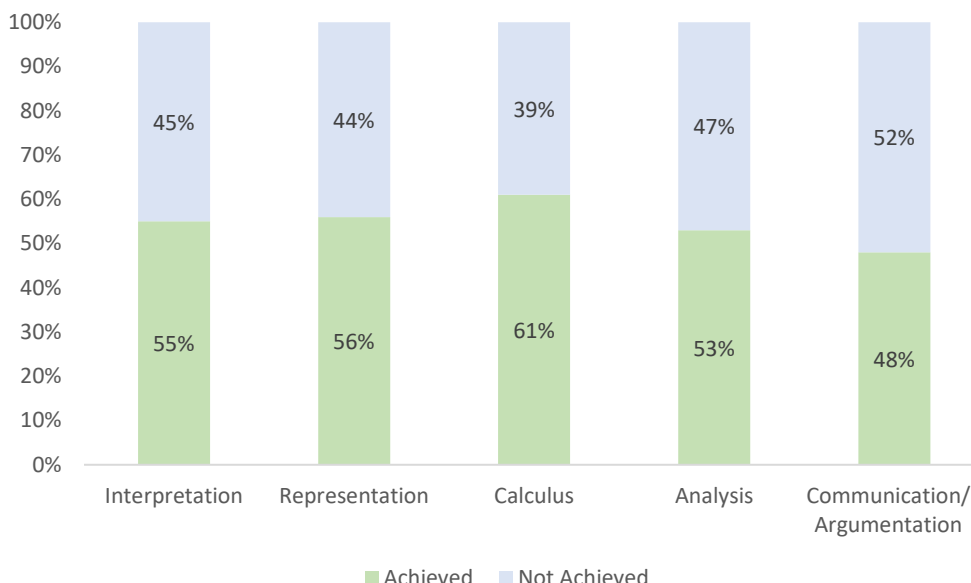
Assessment Results: Quantitative Reasoning

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 62 shows the results of the second assessment loop of the Quantitative Reasoning ILO at level 1.
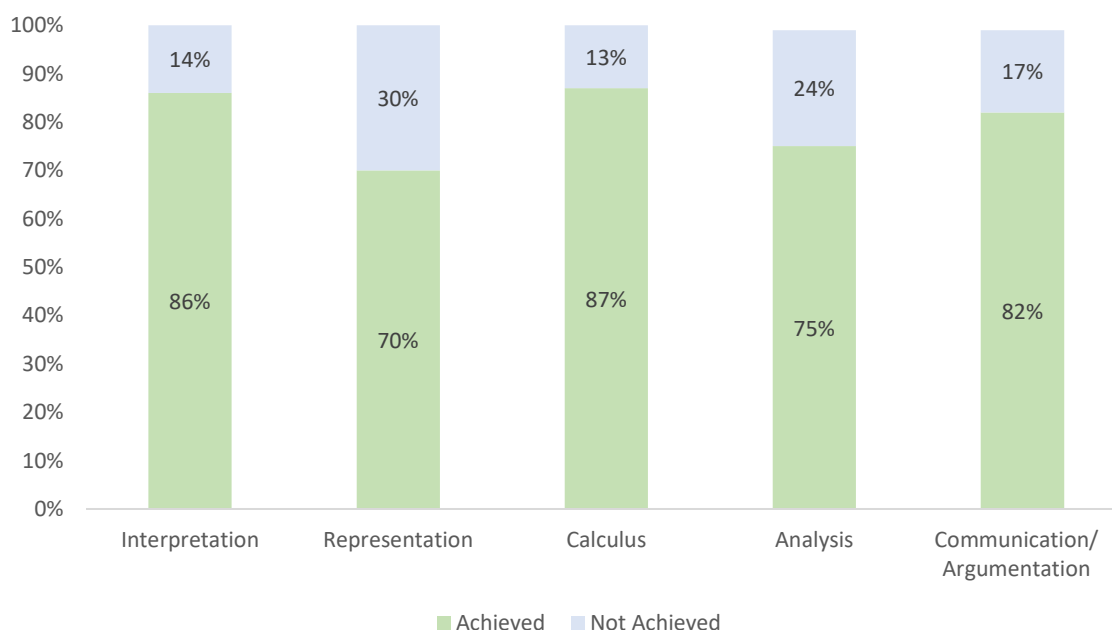
Figure 62. Quantitative Reasoning ILO (Level 1) – General Results per Dimension

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).
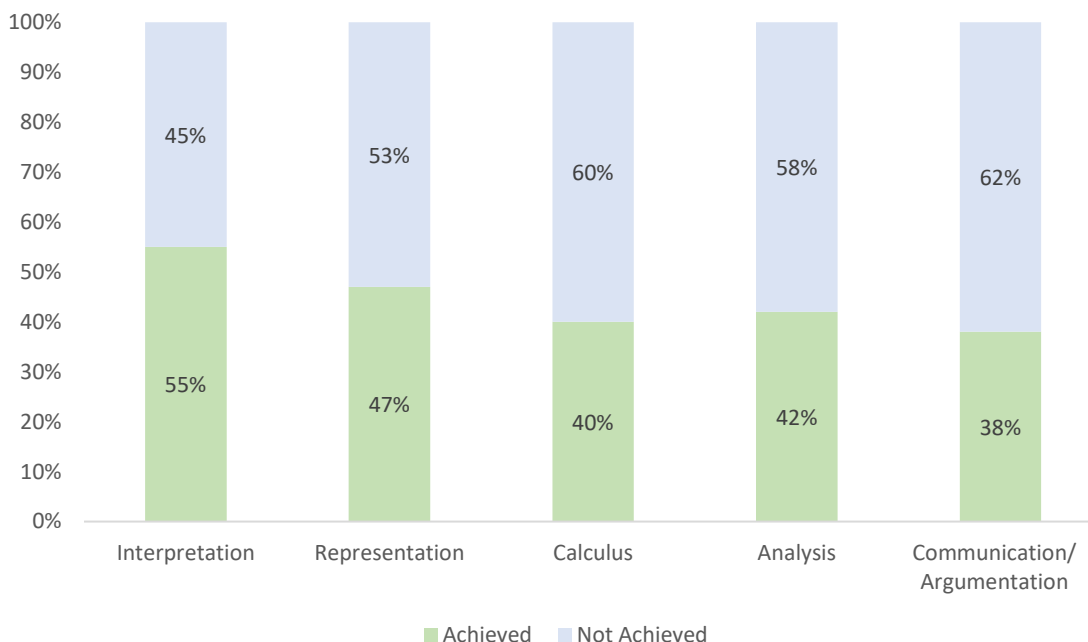
Figure 63. Quantitative Reasoning ILO (Level 2) – General Results per Dimension

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. We hope that the workshops will be made available to all faculty at UPC in 2020.

Figure 64. 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 739 students at level 1, 733 at level 2, and 735 at level 3.

To date, the School of Business is still in the process of assessing the ILO as it participated in the Blackboard Assessment pilot. Said pilot seeks to carry out the entire assessment process on the Blackboard platform, including the evaluations. This is why the institutional results will be available as of May 2020, as we are still assessing the evaluations.

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).

2.2 ILO Results at the Graduate Level

Table 6 shows the timeline defined for the assessment loops of the ILOs at the graduate level.

Table 6
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	2020-1	Quantitative Reasoning
2016-1	2020-1	Oral Communication
2017-2	2020-2	Critical Thinking
2017-2	2021-1	Innovative Thinking
2018-1	2021-2	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 65 shows the general results per dimension and achievement levels of the Written Communication ILO.
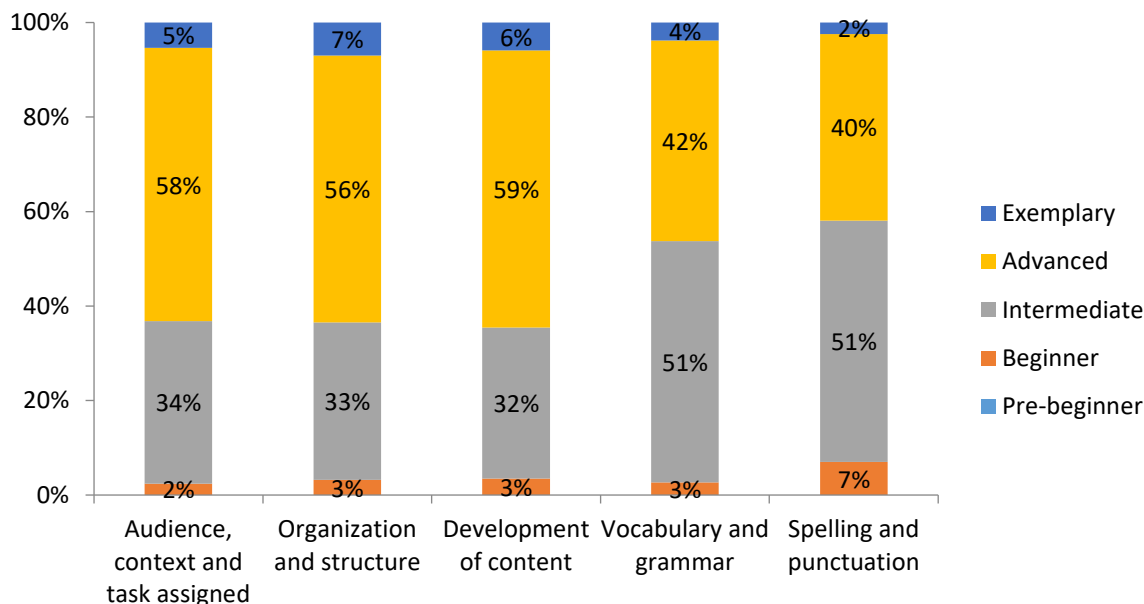
Figure 65. General results per dimension and achievement levels of the Written Communication ILO – UPC Graduate School.

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 177 students from 10 programs were evaluated** as part of the evidence-gathering process in 2019-2 and 2020-1. ***We hope to collect evidence from 17 programs by the end of 2020-1.*** With regard to the second assessment loop, we will evaluate the last term of the Master's degree programs to assess the outcome level of the ILO and measure the progression of the improvement actions implemented during the first assessment loop.

Figure 66 shows the results for the Written Communication ILO as of March 2020.
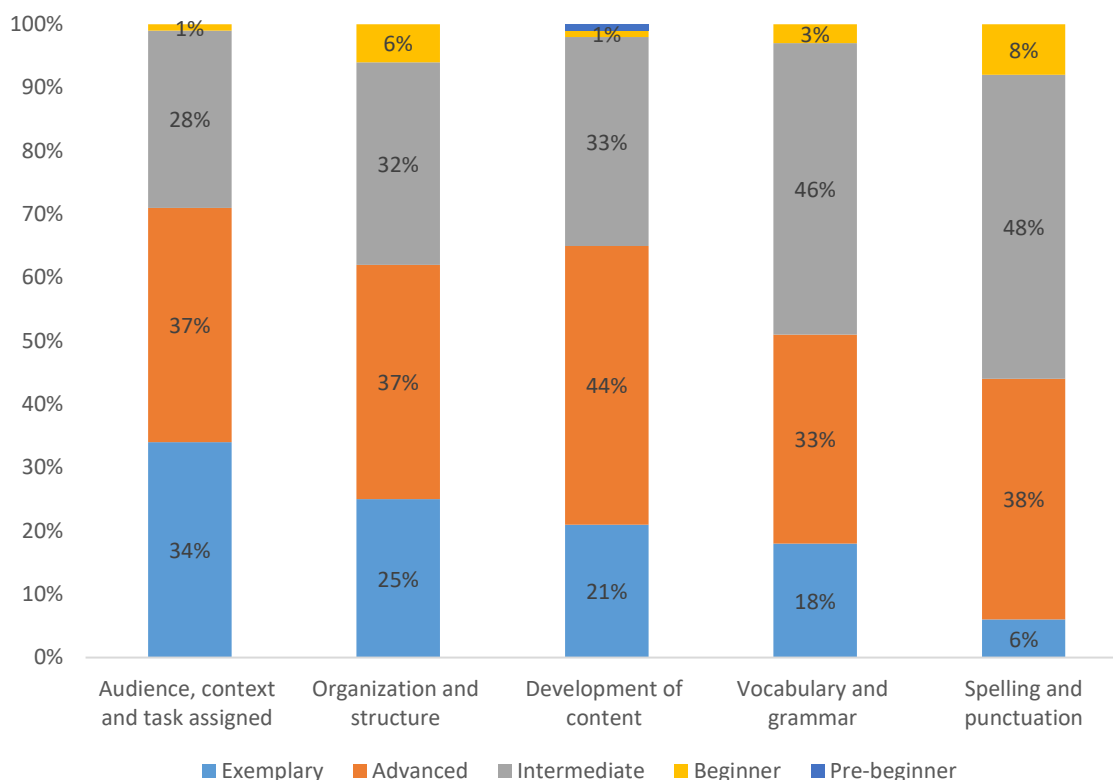
Figure 66. General results per dimension and achievement levels of the Written Communication ILO – Second Loop – UPC Graduate School.

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.
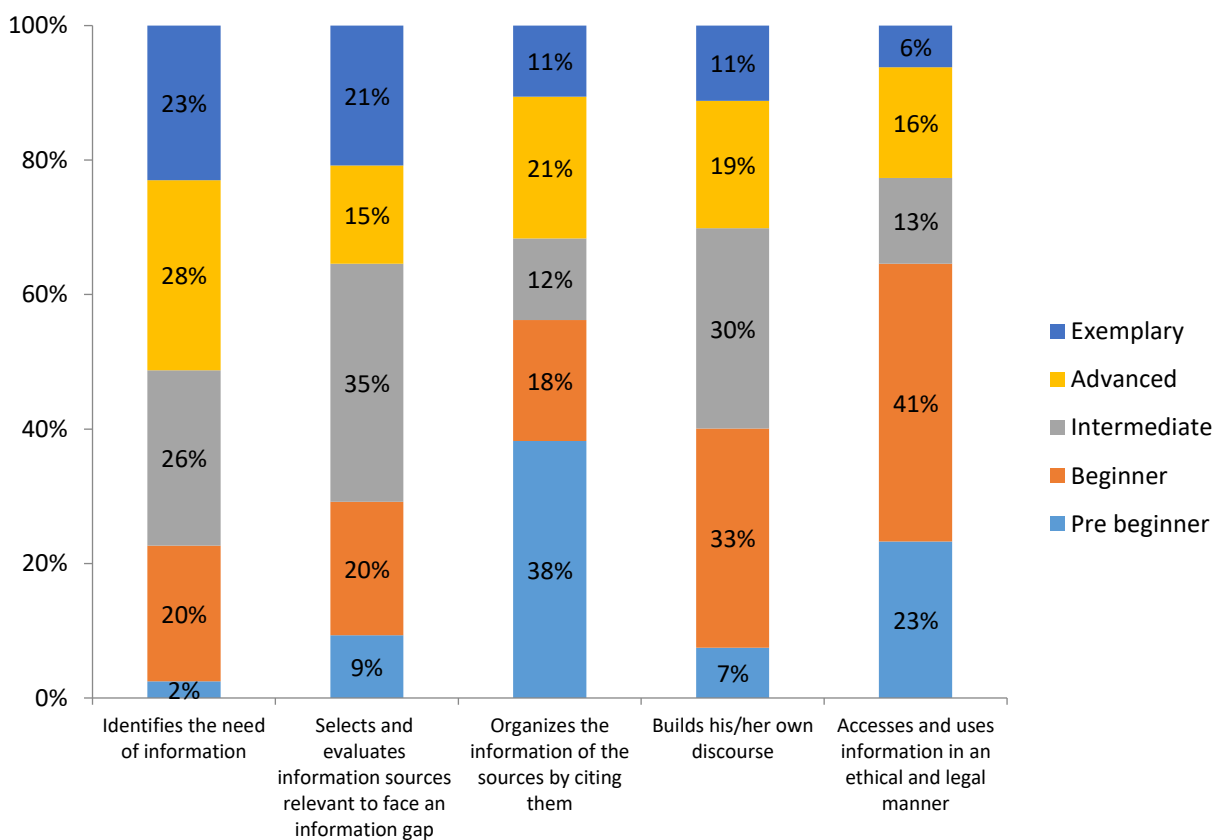
Information Literacy

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

Figure 67. 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. Therefore, the Information Literacy ILO is still in the evidence-gathering process, which will be evaluated later on. We hope to present the final results of the second assessment loop end 2020.
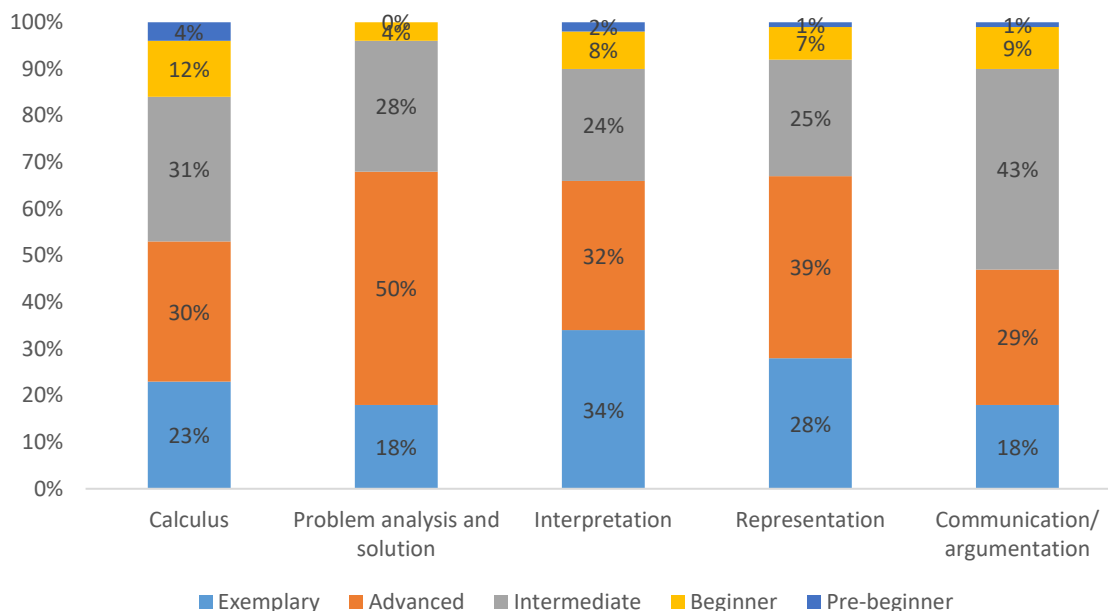
Quantitative Reasoning

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 68. 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 2020-1.

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

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.
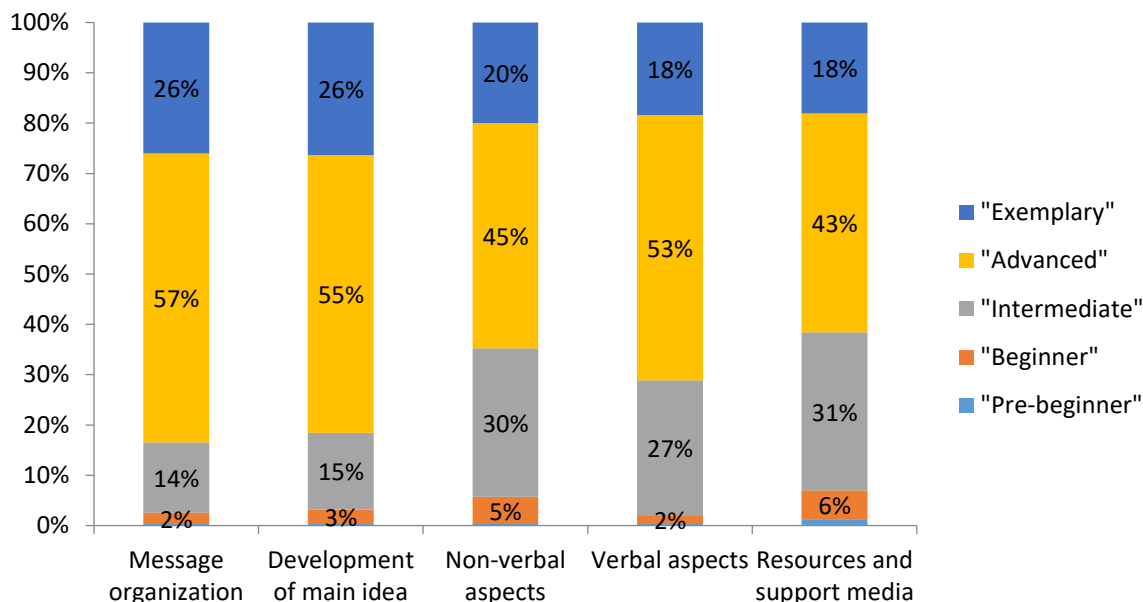
Figure 69. General results per dimension and achievement levels of the Oral Communication ILO – UPC Graduate School.

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 2020-1.

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 70 shows the general results per dimension and achievement levels of the Critical Thinking ILO.
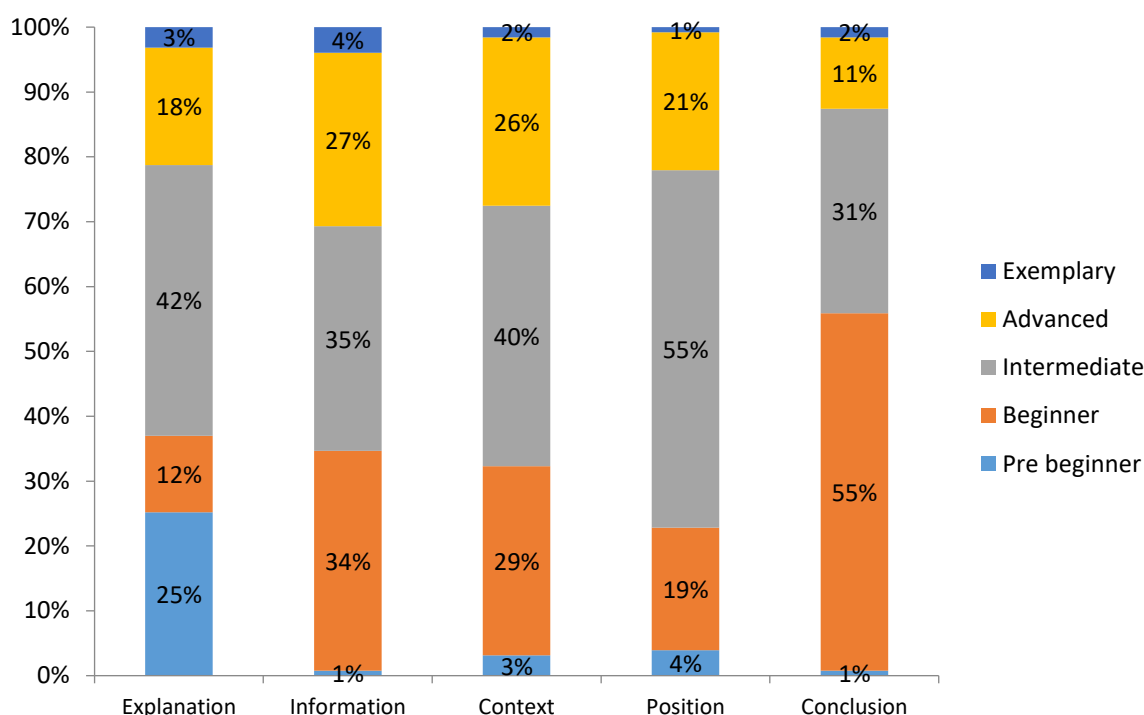
Figure 70. General results per dimension and achievement levels of the Critical Thinking ILO – UPC Graduate School.

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 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 2020-2.

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 71 shows the general results per dimension and achievement levels of the Innovative Thinking ILO.
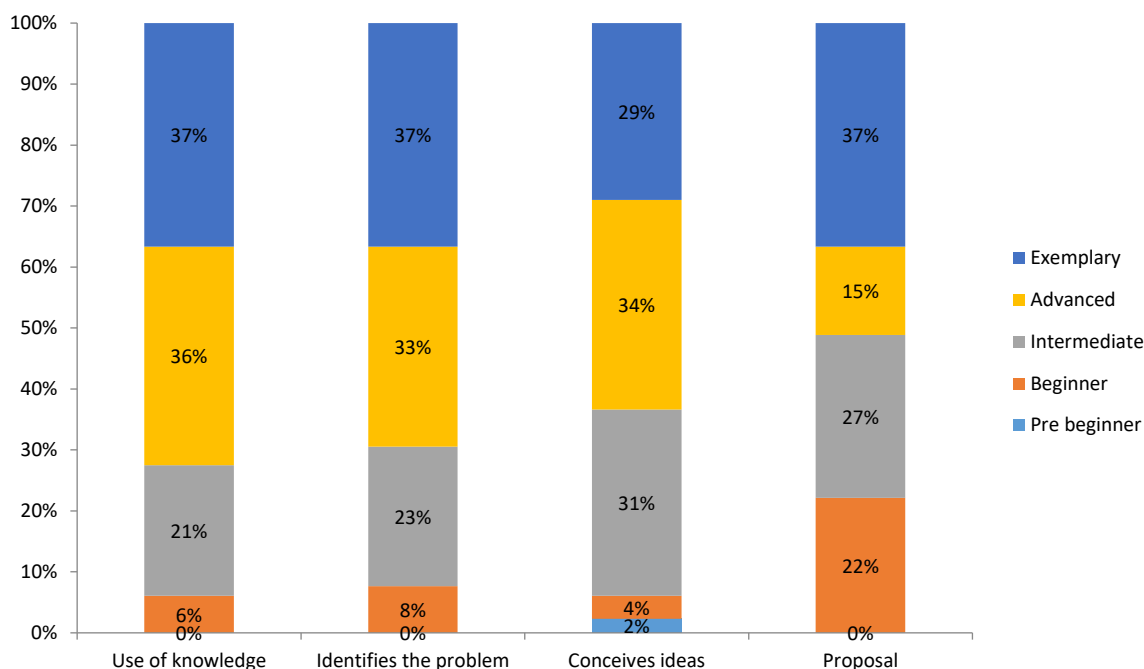
Figure 71. General results per dimension and achievement levels of the Innovative Thinking ILO – UPC Graduate School.

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 2021-1.

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 2020-1. According to the current work plan, the results of the first assessment loop will be available end 2021-1.

2.3.1 Improvement plan of learning results at the graduate level (2017-2019)

Upon analysis of the assessment results at the graduate level, a team of experts has developed an action plan for 2017-2019 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 2017-2019 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: In process).
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 2018-2019, and its progress to date.

2017-2
- 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.

2018
- 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.

2019
- Implementation of the initial evaluation in 23 Master's degree programs; 459 incoming students received individual reports, which were used to identify the students that needed to attend the competency-enhancement workshops.

- Twelve competency-enhancement workshops were held.

Figure 72. Progress of the Implementation Plan of the Initial Evaluation of Competencies in Master's Degree Programs (2017-2019).

See below the results per dimension and outcome level for each ILO assessed in 2019:

Table 7. Results of the Initial Evaluation of Competencies in Master's Degree Programs (2019)

TOTAL MASTER'S DEGREE PROGRAMS EVALUATED	23					Total	459
Learning Outcomes	Level 0 (Pre-Beginner)	Level 1 (Beginner)	Level 2 (Intermediate)	Level 3 (Advanced)	NS: Video not submitted (applies only for the Oral Communication ILO)	% Achieved	% Not Achieved
WRITTEN COMMUNICATION	0%	11%	34%	54%	-	54%	46%
INFORMATION LITERACY	1%	34%	37%	28%	-	28%	72%
QUANTITATIVE REASONING	11%	33%	33%	23%	-	23%	77%
CRITICAL THINKING	0%	30%	42%	28%	-	28%	72%
INNOVATIVE THINKING	1%	10%	39%	50%	-	50%	50%
CITIZENSHIP	6%	23%	31%	40%	-	40%	60%
ORAL COMMUNICATION	0%	14%	52%	15%	18%	19%	81%

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. The dimension that needs to be strengthened is: "Organizes the information of the sources by citing them". Therefore, we recommend that students use direct and indirect citations and references to information sources throughout their assignments, not only at the end.

- In regards to the **Quantitative Reasoning ILO**, students achieved lower results, as 77% did not achieve the expected outcome. More emphasis will be given to the development of the rubric in all its dimensions, especially the "Communication/Argumentation" dimension, for which it is necessary to present and discuss conclusions based on quantitative information in an orderly and coherent manner.

- In regards to the **Critical Thinking ILO**, results show that most students achieved an intermediate level, which is why we recommend putting emphasis on strengthening all its

dimensions during the competency-enhancement workshops in order to achieve the advanced level.

- In regards to the **Innovative Thinking ILO**, results show that 50% 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**, 40% of students achieved the expected level, whereas 31% achieved the intermediate level. The workshops have allowed students to learn and put into practice fundamental concepts of ethics and citizenship.

- In regards to the **Oral Communication ILO**, results show that 18% of students did not submit the video or that the uploaded file did not work properly. This means that we were unable to grade the evaluation. On the other hand, 52% of students achieved an intermediate level, as they need to strengthen the "Resources and Support Media" dimension.

Among the improvement opportunities identified in the initial evaluation carried out in 2019 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).

- We included the evaluation of the Oral Communication ILO based on the recording of a video.

- Students are provided with feedback through Blackboard.

In regards to the competency-enhancement workshops implemented in 2018-2019 to strengthen the ILOs, Table 8 shows the objective of each workshop and the number of workshops implemented per ILO.

Table 8. Competency-Enhancement Workshops (2018-2019)

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**
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 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.	**24 participants**	**1**	**2020**
	TOTAL	**318 participants**	**19**	**2018-2020**

III. Academic Excellency Group Results

The Academic Excellency 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, seven 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 2019, UPC had a total of 1,120 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.

- **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 in 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 2019, 415 students participated in the Leadership Program.**

Figure 74. AEG students who completed their training in the Leadership Program in 2019.

- **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 2019, 75 students participated in the Entrepreneurship Bootcamp.**

Figure 75. AEG students during the 2019 Entrepreneurial Leadership Bootcamp, with faculty of the Monterrey Institute of Technology and Higher Education (Mexico) and representatives of the Municipality of Lima.

- **University Leadership Meeting**

These one-day meetings allow students to develop their soft-skills and provide them with an opportunity to strengthen their friendship with other AEG students. Students participate as speakers and work in group dynamics. **In 2019, 200 students participated in the University Leadership Meeting.**

Figure 76. AEG Students during a Leadership Meeting in 2019.

- **"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 2019, 100 students participated in the Congress.**

Figure 77. "Trasciende Perú" (Transcend Peru) Congress on Social Entrepreneurship for Education held in 2019.

- **AEG Service Learning:**

These social support missions are carried out in Lima and other provinces. Over the last five years, AEG students have made more than 40 visits to the Center for Comprehensive Family Development in Villa El Salvador (CEDIF Villa Hermosa) and the Workshop Association for Children (TANI) in Lima. In addition, AEG students carried out ten lengthy missions in the communities of Fundo Colorado and Fundo Amarillo in Chincha, Ica. **In 2019, 100 students participated in these missions.**

Figure 78. AEG Students during the social support mission in Chincha in 2019.

- **AEG 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 2019, 200 students participated in the workshops.**

**Figure 79**. AEG Students during the workshops in 2019.

IV.   Student Life Results

The Student Life Office disseminates, manages and promotes different artistic, cultural, sports and social responsibility activities, which complete students' academic training 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.

The Student Life Office's main results for 2019 are presented in Figure 80 and Figure 81.
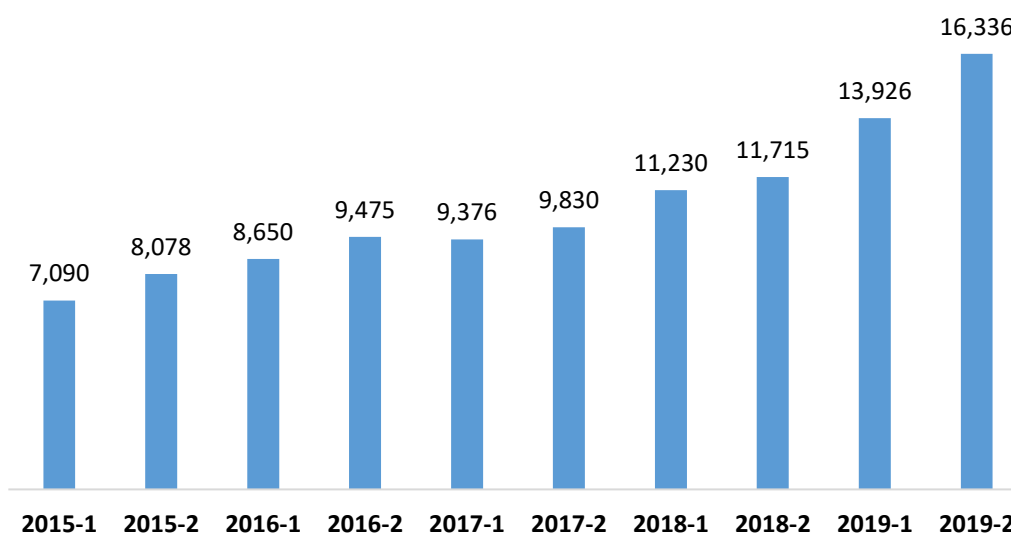
Figure 80. Co-Curricular Credits Awarded per Academic Semester (2015-2019).
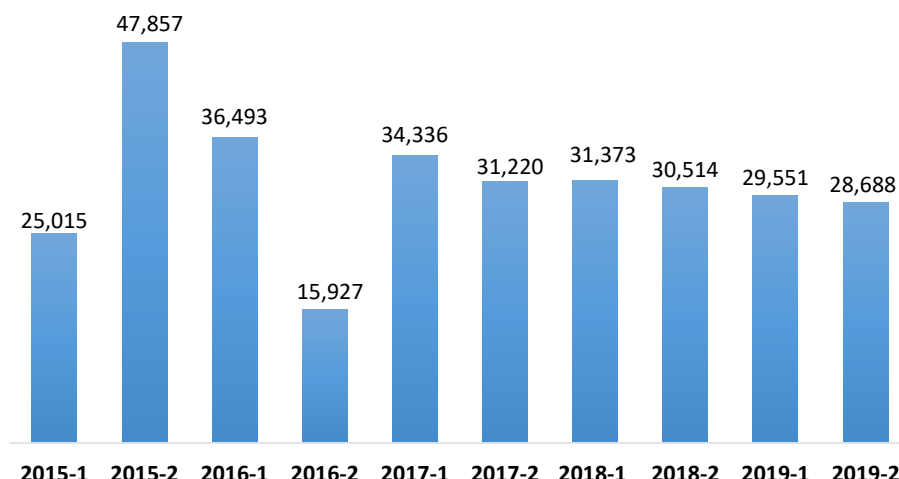
Figure 81. Number of Contacts in Co-Curricular Activities per Academic Semester (2015-2019)
Note: The indicator "number of contacts" represents the total number of students who participated in co-curricular activities and were not awarded credits during the semester. This indicator considers the attendance of every student in each event organized by the Student Life Office.

In regards to students' accomplishments in co-curricular activities, see below a summary of the main results of 2019 by activity:

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.

By the end of 2019, there were 7 troupes:

- **The Peruvian Music Troupe**: In 2019, they performed eight shows at the Grand National Theater, as well as performances at the 24th International Book Fair and the Culturaymi festival, which was part of the Lima's 2019 cultural program. In addition, they launched their first studio album "Perú, un sonido" (Peru, One Sound) in 2019. (Figure 82 shows the cover of the album).

- **The Peruvian Dance Troupe**: In 2019, they participated as hosts in the folklore show "Ritmos del Perú" (Peruvian Rhythms) at the Peruvian Japanese Cultural Center. They also performed at the 24th International Book Fair and the Culturaymi festival, which was part of the Lima's 2019 cultural program. Finally, they participated as special guests in the preventive health campaign "Cuidando Mi Salud" (Taking Care of my Health) organized by UPC.

- **The Improvisation Troupe**: In 2019, they participated in different activities, such as the duo improv tournament "Impro Callejera" (Street Improv) performed during TEDxUPC at UPC and the show "Legión Impro" (Improv Legion) at the Culturaymi festival, which was part of the Lima's 2019 cultural program.

- **The Polyphonic Choir Troupe**: In 2019, they performed in different events, such as the 35th Music Contest Nueva Acrópoli, "Lunes de Clásicos" (Classical Mondays), organized by the Culture Management Office of the Municipality of Lima, the 9th University Choir Festival of the Grand National Theater, as well as "Homenaje a Grandes Autores" (An Hommage to Great Composers), a special performance at the Congress of the Republic. In addition, they celebrated their second anniversary in July with a Great Anniversary Concert. Finally, they participated in a social initiative with a Christmas concert for the children of the Puericultorio Pérez Araníbar.

- **The Master-of-Ceremonies Troupe:** In 2019, they presented the Cultural Fridays in UPC's four sites. They also presented the Peruvian Dances, Peruvian Music and Improvisation Troupes, such as the show "Sonidos y Ritmos del Perú" (Peruvian Sounds and Rhythms) and the improv tournament "Impro Callejera" (Street Improv).

- **Theater Troupe**: In 2019, they performed a theatrical exploration at UPC's San Miguel site called "Una Historia de Guerra" (A History of War) as part of Cultural Fridays. It is worth mentioning that this project was written and produced by students of the troupe and their directors.

- **Urban Dance Troupe:** In 2019, they have started their activities by participating in the first edition of the TEDxUPC event and in the Closure of Extra-Academic Activities Ceremony, officially presenting themselves to the UPC community.
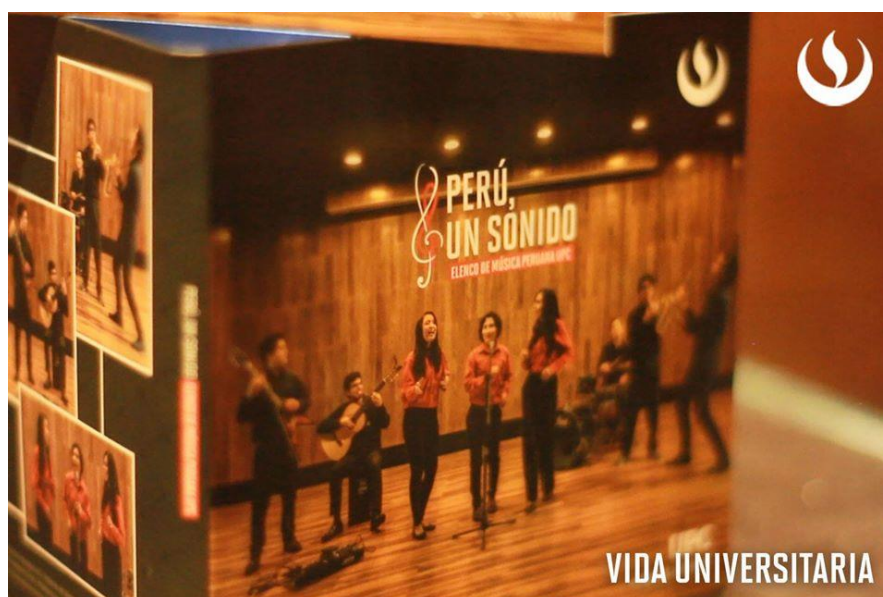
Figure 82. CD Cover of "Perú, un sonido" (Peru, one Sound)*, musical album produced by UPC's Peruvian Music Troupe.

The following students, who are members of different troupes, have gained recognition for their artistic achievements in 2019 and were honored by UPC for their accomplishments:

- **Vanessa Carrillo**, student of the Music program and member of the Polyphonic Choir Troupe, represented Peru in the 7th International Choir Competition AMERIDE in Brasil with the Loyola's Singers choir.

- **Javier Abregu**, graduate student of the Music program and member of the Peruvian Music Troupe, wrote the lyrics and music of the song *La Polka* on the album *Perú, un sonido* (Peru, One Sound).

UPC Sports

In 2019, UPC's Sports Teams participated in the Metropolitan and National University Games organized by the University Sports Federation (FEDUP) in 2019-1 and 2019-2, where UPC athletes won most of the national championships:

- **Chess**: The team won the National Championship in 2019-1 and 2019-2.

- **Track and Field**: The team won the National Championship in 2019-1 and 2019-2.

- **Women's Basketball:** In 2019-1, the team came second in the Metropolitan Championship, and third in 2019-2, qualifying for the University National Games in 2020.

- **Men's Basketball:** In 2019-1, the team came second in the Metropolitan Championship, and fourth in 2019-2, qualifying for the University National Games in 2020.

- **Climbing:** Second place at the National Championship in 2019-1 and 2019-2.

- **Men's Soccer:** UPC's First XI came second at the Metropolitan Championship in 2019-1 and fourth in 2019-2, qualifying for the University National Games in 2020.

- **Women's Futsal:** The team came fifth in 2019-1 and 2019-2, qualifying for the University National Games in 2020.

- **Men's Futsal:** The team came second in 2019-1 and 2019-2, qualifying for the University National Games in 2020.

- **Judo:** The team won the National Tournament in 2019-1 and came fourth in 2019-2.

- **Karate**: The team won the National Championship in 2019-1 and came second in 2019-2.

- **Wushu:** The team came second in 2019-1 and 2019-2.

- **Swimming**: The team came second in the Metropolitan Championship in 2019-1, and won its first National Championship in 2019-2.

- **Weight Lifting**: The team won the national Championship in 2019-1, and came second in 2019-2.

- **Men's Rugby**: The team, undefeated all season, won the 2019 national championship.

- **Taekwondo**: The team came first in the National Championship in 2019-1 and 2019-2.

- **Table Tennis**: The team came first in the National Championship in 2019-1 and 2019-2.

- **Women's Volleyball**: The team came second in 2019-1 and got promoted to first division. In 2019-2, the team came seventh and was relegated to second division.

- **Men's Volleyball:** The team won the Metropolitan Championship in 2019-1, and came fourth in 2019-2, qualifying for the University National Games in 2020.

- **Shooting**: The team came first in the National Championship in 2019-1 and 2019-2.

In 2019, 69 UPC athletes competed at the Lima 2019 Pan American and Parapan American Games, which is more than any other university in Peru. Seven students won medals:

- **Vania Torres,** student of the Administration and International Business program, won the silver medal in Stand-Up Paddle Surfing.

- **Hugo del Castillo,** student of the Medicine program, won the silver medal in Taekwondo Poomsae.

- **Nicholas Pacheco,** student of the Administration and Agribusiness program, won the bronze medal in Shooting and qualified for the Olympic Games.

- **Mia Rodriguez,** student of the Communication and Marketing program, won the bronze medal in Frontennis.

- **Nathaly Paredes,** student of the Administration and Marketing program, won the bronze medal in Frontennis.

- **Ariana Vera**, student of the Medicine program, won the bronze medal in Taekwondo Poomsae.

- **Jesus Salva**, student of the Communication and Journalism program, won the bronze medal in Para-Badminton.

Figure 83 and Figure 84 show the recognition ceremony awarding UPC athletes and medal winners of the Lima 2019 Pan American and Parapan American Games, as well as the Captains of UPC's Sport Teams in 2019.

Figure 83. Recognition Ceremony for UPC Athletes of the Lima 2019 Pan American and Parapan American Games.

Figure 84. Annual Award Ceremony for Outstanding UPC Athletes in 2019.

UPC Volunteering program

UPC provides multiple volunteering activities for students to share their time and knowledge as well as to connect and learn about the needs of different communities in Peru.

The Student Life Office has more than 1,000 students who provide support each year to different social organizations. Thanks to our students who volunteered in the Lima 2019 Pan American and Parapan American Games, this number increased more than threefold in 2019, awarding 3,617 co-curricular credits for volunteering activities, which accounts for an estimated 72,000 hours of volunteering services.

We also developed volunteering opportunities in preventive health campaigns in communities, aimed at promoting good hygiene and healthy habits. These campaigns are organized by faculty of the School of Health Sciences and are carried out by their students.

Figure 85 and Figure 86 show students' involvement in UPC's preventive health campaigns, which include the participation of students of our Peruvian Dance Troupe, who joined the campaigns to provide an opportunity for cultural exchange.

Figure 85. Students of the Dentistry program at a preventive health campaign in 2019

Figure 86. Students of the Peruvian Dance Troupe at a preventive health campaign in 2019.

V.   Internationality Results

Table 9 shows the main internationality results for 2019 for undergraduate programs. Outbound students participated in academic exchange and study abroad experiences (224 students), academic short-term programs (618 students), work & travel programs (743 students), international mobility programs for athletes (68 students), and other international experiences such as certificates, postgraduate programs, and transfer credit international programs (26 students). The most popular destinations among UPC students were Spain, United States, Chile, Brazil, Colombia, Germany, Mexico and Italy.

Table 9. **Internationality Indicators for Undergraduate Programs (2019)**

Indicator	Result
Inbound Students	193
Outbound Students (including international mobility programs for athletes)	1,679
Number of scholarships granted to students who participated in international experiences	19
Number of students participating in international conferences held in Peru	29,872

Note: Information Updated to 09/03/2020.

In 2019, 366 outbound students at the graduate level (11% more than in 2018) visited prestigious academic institutions around the world, such as Harvard University, Babson College, Kellogg School of Management, Universidad Politécnica de Catalunya, and University of Fudan, among other institutions from the United States, Latin America, Spain. In addition, 19 UPC faculty and staff participated in international academic missions, and UPC welcomed 53 international professors that have had an impact on more than 1,400 students of different Graduate School programs in 2019.

Table 10 shows the main internationality results for graduate programs in 2019.

Table 10. Internationality Indicators for Graduate Programs (2019)

Indicators	2016	2017	2018	2019
Outbound Students International Missions	297	366	329	**366**
Inbound Students International Missions	15	8	26	**9**
Faculty Mobility Outbound	15	17	17	**19**
Faculty Mobility Inbound	32	49	47	**53**
TOTAL MOBILITY	**359**	**440**	**419**	**447**

Figure 87. International inbound students during their Welcome session in March 2019. UPC welcomed 193 inbound students at the undergraduate level.

Figure 88. UPC undergraduate students during their Farewell session in 2019, after receiving important information regarding upcoming international programs.

Figure 89. Graduate School students participating in the International Mission to China attending classes at Fudan University.

Figure 90. Graduate School students participating at an International Seminar at the Universitat Politécnica de Catalunya, Spain.

VI. Employability Results

Table 11 shows the main employability results for traditional undergraduate programs in 2019.

Table 11. Employability Results for Graduate Students of Traditional Undergraduate Programs (2019)

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

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 2019, 14 UPC programs were recognized to have the most graduate students in higher-paying jobs. See Table 12 below for detailed information.

Table 12. UPC Programs with Most Graduate Students in Higher-Paying Jobs in Peru – According to the Ponte en Carrera website (2019)

No.	Program	Average Monthly Salary (Expressed in PEN)
1	**Information Systems Engineering** (Traditional Undergraduate)	**4,362**
2	**Systems Engineering** (Working Adult Undergraduate)	**4,362**
3	**Software Engineering** (Traditional Undergraduate)	**4,362**
4	**Economics and Finance** (Traditional Undergraduate)	**4,203**
5	**Economics and International Business** (Traditional Undergraduate)	**4,203**
6	**Administration and Agribusiness** (Traditional Undergraduate)	**4,033**
7	**Administration and Marketing** (Traditional Undergraduate)	**3,727**

No.	Program	Average Monthly Salary (Expressed in PEN)
8	**Administration and International Business** (Traditional Undergraduate)	**3,475**
9	**Banking and Financial Administration** (Working Adult Undergraduate)	**3,345**
10	**Entrepreneurial Administration and Management** (Working Adult Undergraduate)	**3,345**
11	**Administration and Human Resources** (Traditional Undergraduate)	**3,345**
12	**Hospitality and Business Administration** (Traditional Undergraduate)	**2,888**
13	**Tourism and Business Administration** (Traditional Undergraduate)	**2,888**
14	**Dentistry** (Traditional Undergraduate)	**1,685**

VII.   Alumni Results

Table 13 shows the alumni results for 2017, 2018 and 2019, respectively.

Table 13. UPC Alumni Results (2017-2019)

Indicator	Result
UPC Alumni 2019 [3]	**Total Alumni: 40,660** Traditional Undergraduate Alumni: 21,246 Working Adult Undergraduate Alumni: 10,850 Graduate School Alumni[4]: 8,564
UPC Alumni 2018 [2]	**Total Alumni: 36,312** Traditional Undergraduate Alumni: 18,318 Working Adult Undergraduate Alumni: 9,703 Graduate School Alumni[4]: 8,291
UPC Alumni 2017 [1]	**Total Alumni: 31,208** Traditional Undergraduate Alumni: 15,466 Working Adult Undergraduate Alumni: 7,944 Graduate School Alumni[4]: 7,798

(1)   Note 1: Cumulative alumni results updated to December 2017.
(2)   Note 2: Cumulative alumni results updated to December 2018.
(3)   Note 2: Cumulative alumni results updated to December 2019.
(4)   Note 4: Cumulative results for the Graduate School Alumni considers alumni from graduate programs that have a length of more than 9 months.

7.1 Alumni Conferences and Events in 2019

In 2019, the Alumni Office organized a series of events for UPC's alumni to build an engagement-driven culture, foster networking, enhance employability, and provide opportunities for continuing education.

See below a brief summary of some of the events organized in 2019:

- **5th UPC Alumni Reunion**

In October 2019, UPC held its 5th Alumni Reunion. This event brought together alumni at the undergraduate, working adult undergraduate and graduate levels. All the activities were built around the "Welcome Home" concept. In 2019, the event celebrated both the graduate student community and UPC's 25th anniversary.

Figure 91. Fifth UPC Alumni Reunion Flyer.

The event brought together more than 800 participants who enjoyed a great evening, in which Edward Roekaert PhD, UPC's Rector, addressed the crowd. After that, Gachi Rivero and Carlos Palma, both famous presenters, led the event. The closing ceremony was in charge of the Gran Orquesta Internacional (a Peruvian band) with whom UPC celebrated its 25th anniversary.

Figure 92. Edward Roekaert

Figure 93. Gachi Rivero, Edward Roekaert and Carlos Palma.

Graduate students of UPC's first class were invited as special guests. Edward Roekaert PhD, UPC's Rector, thanked them for attending the ceremony, congratulated them for their constant professional development, and expressed UPC's admiration and recognition for all graduate students' achievements.

Figure 94. Graduate students of UPC's first class.

Figure 95. Warm hug between two graduate students of UPC's first class.

UPC's Alumni enjoyed an amazing evening with a raffle to win great prizes.

Figure 96. Alumnus winner of one of the raffle prizes.

Figure 97. UPC's alumni celebrating with the Gran Orquesta Internacional (2019).

Figure 98. UPC's alumni celebrating its 25th anniversary (2019).

Additional information about this event is available at: (Link 1) and (Link 2).

- **2019 Master's degree closing dinners**

In November 2019, UPC's Graduate School organized closing dinners to honor and celebrate the Master's degree graduate students' efforts to successfully achieve this professional and personal milestone. The closing dinners took place on November 27-28, 2019.

Figure 99. 2019 Master's degree closing dinners.

Additional information on this event is available at the following links: (Link 1) and (Link 2).

- **First Dinner Honoring Successful Working Adult Undergraduate Alumni**

In November 2019, UPC organized its first dinner honoring successful Working Adult undergraduate alumni of the Business and Engineering programs. This dinner sought to create an important space for networking for the 10 alumni and enabled them to strengthen the link with their *alma mater*.

Figure 100. First Dinner honoring successful Working Adult undergraduate alumni in 2019.

Additional information on this event is available at the following link: (Link 1)

7.2 Recognitions and Achievements of Alumni in 2019

- **Naysha Montes participated in the closing ceremony of the Lima 2019 Pan American and Parapan American Games**

Naysha Montes, graduate student of the Music program, played in the closing ceremony of the Lima 2019 Pan American and Parapan American Games and shared her professional experience in the music industry.

Figure 101. Naysha Montes in the closing ceremony of the Lima 2019 Pan American and Parapan American Games.

Additional information about this event is available at the following link: (Link 1)

- **Elva Arrieta, Winner of the 2019 National Contest for Short-Film Projects**

Elva Arrieta, graduate student of the Audiovisual Communication and Interactive Media program, won the 2019 National Contest for Short-Film Projects organized by the Peruvian Ministry of Culture, with her short film titled "Alba", a story based on gender stereotypes.

Figure 102. UPC's alumnus Elva Arrieta, Director of "Alba".

Additional information on this event is available at the following link: (Link 1)

- **Daniel Chang represented UPC at the 2019 Annecy International Animation Film Festival**

Daniel Chang, graduate student of the Audiovisual Communication and Interactive Media program, and his team from Bicicleta Casa Audiovisual (a Peruvian production company), participated in the 2019 Annecy International Animation Film Festival with their animated series titled "Love Quest" in the category "World Animation".

"Love Quest" is a 2D animated comedy for teens from 12 to 14 years. It tells the story of three magical beings in their quest for love in order to return home. The only problem is that they do not know what love is, what it looks like, or if it even exists.

Figure 103. Alumnus Daniel Chang represented UPC at the 2019 Annecy International Animation Film Festival.

Additional information on this event is available at the following link: (Link 1).

VIII. Retention, Graduation and Enrollment Results

In this section, the retention, graduation and enrollment results for 2019 are included in the historical data presented for each section.

8.1 Retention Results

Table 14. Retention Results for Traditional Undergraduate Programs (2017-2019) [1]

Metric	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02 [2]
Attrition	12.5%	12.4%	12.4%	11.8%	12.6%	14.6%
Graduation	2.5%	3.2%	3.2%	3.9%	3.4%	2.6%
Retention	85.1%	84.4%	84.4%	84.3%	84.0%	82.8%
Total	100%	100%	100%	100%	100%	100%

(1) Note 1: Information Updated to April 2020.
(2) Note 2: To measure the attrition rate for 2019-2 we use enrollment information from 2020-1, this academic term has been impacted by COVID-19 and the national regulations taken by the government that have impacted students and its families negatively.

Table 15. Retention Results for Working Adult Undergraduate Programs (2017-2019) [1]

Metric	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02 [2]
Attrition	20.0%	24.4%	23.7%	26.6%	27.0%	35.2%
Graduation	5.5%	8.2%	6.4%	8.7%	5.9%	2.2%
Retention	74.5%	67.4%	69.9%	64.7%	67.1%	62.6%
Total	100%	100%	100%	100%	100%	100%

(1) Note 1: Information Updated to Note: Information Updated to April 2020.
(2) Note 2: To measure the attrition rate for 2019-2 we use enrollment information from 2020-1, this academic term has been impacted by COVID-19 and the national regulations taken by the government that have impacted students and its families negatively.

Table 16. Retention Results for Graduate School Master Degree Programs (2017-2019) [1]

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

(1) 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 17. Graduation Results for Undergraduate Programs (2015-2019) [1]

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

(1) Note 1: Information Updated to April 2020.

Table 18. Graduation Results for Graduate School Programs (2015-2019) [1]

Year	Graduates [2]
2015	301
2016	322
2017	478
2018	566
2019	412

(1) Note 1: Information Updated to April 2020.
(2) Note 2: Graduates are those that have completed the curricular master degree plan, approved the dissertation of its thesis project, demonstrate proficiency in a second language at an intermediate level and payed all the administrative fees.

8.3 Enrollment Results

Table 19. Total Enrollment Results for Undergraduate Programs (2016-2019) [1]

Term	Total Enrollment
Traditional Undergraduate	
2016-01	37,775
2016-02	36,696
2017-01	42,743
2017-02	41,065
2018-01	47,436
2018-02	44,584
2019-01	49,628
2019-02	47,171
Working Adult Undergraduate	
2016-01	13,288
2016-02	13,660
2017-01	12,985
2017-02	12,948
2018-01	12,266
2018-02	12,020
2019-01	11,597
2019-02	11,044

(1) Note 1: Information Updated to April 2020.

Table 20. Total Enrollment Results for Graduate School Master Degree Programs (2015-2019) [1]

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

(1) Note 1: Information Updated to April 2020.

IX.   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 graduated 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 graduated at 150% of the time of graduation expected for the program over the total incoming students for each admission cohort, respectively.

Table 21 presents the institutional completion results within 100% and 150% for undergraduate programs. Completion results within 100% in 2019 show that 14.7% of undergraduate students graduated at the expected time and 34.7 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 21. Graduation Results within 100% and 150% for Undergraduate Programs [1]

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

(1) Note 1. Updated April 2020.

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 aforementioned 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 22 presents the completion results within 100% and 150% for Master's degree programs.

Table 22. Graduation Results within 100% and 150% for Master's Degree Programs [1]

	2016		2017		2018		2019 [2]	
Completion within 100%	248	82.9%	289	69.1%	352	69.8%	247	60.0%
Completion within 150%	41	13.7%	77	18.4%	79	15.7%	41	10.0%
Completion less than 150%	10	3.3%	52	12.4%	73	14.5%	124	30.1%
Total	299		418		504		412	

(1) Note 1. Updated April 2020.
(2) 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 degree on time.

X.   Faculty Qualifications and Distribution by Work Status

By semester 2019-02, UPC had 1,025 full-time faculty and 2,522 part-time faculty. This represents around 29% of full-time faculty and 71% of part-time faculty, respectively. Table 23 and Table 24 show the evolution of the number of faculty by work status between 2017 and 2019.

Table 23. UPC Number of Faculty per Academic Semester (by Work Status) [1]

Work Regime	2017-01	2017-02	2018-01	2018-02	2019-01	2019-02
Full-time faculty	880	909	949	972	1,004	1,025
Part-time faculty	2,350	2,386	2,465	2,564	2,576	2,522
Total	**3,230**	**3,295**	**3,414**	**3,536**	**3,580**	**3,547**

(1)   Note 1. Updated to April 2020.

Table 24. Percentage Frequency Distribution of UPC Faculty per Academic Semester (by Work Status) [1]

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

(1)   Note 1. Updated to April 2020.

In regards to the progress made in terms of faculty holding master's and doctoral degrees, Table 25 and Table 26 show the evolution of faculty credentials between 2017 and 2019.

Table 25. UPC Number of Faculty per Academic Semester (by Academic Credentials) [1]

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

(1)   Note 1. Updated to April 2020.

Table 26. Percentage Frequency Distribution of UPC Faculty per Academic Semester (by Academic Credentials) [1]

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

(1)   Note 1. Updated to April 2020.

XI.   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 is 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.

See below some key achievements in research at UPC:

9.1 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).

9.2 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)

9.3 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)

9.4 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).

XII. Social Responsibility Impact

UPC launched several social responsibility initiatives that involve the active participation of both students and faculty with the aim to contribute to different social projects that benefit the community. Table 27 shows the main social responsibility impact results for 2019.

Table 27. UPC's Social Responsibility Impact (2019)

Indicator	Result
Total Investment in Social Responsibility Initiatives	PEN. 9,515,151.18
Number of students who participated in UPC's Social Responsibility Initiatives	10,988

Note: Information Updated to April 2020.