REGIONAL SCHOOL INTERNSHIPS, PARES
CODE: EM_O_HUERTA

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The “Regional School Internships, PaREs 2020” is an initiative of the “Science, Technology and Society” (C-TyS) team of the Vice-Rector for Innovation, Research and Graduate Studies of the University of Antofagasta, a group of professionals with more than ten years of experience in the development of initiatives and products for the dissemination, assessment and dissemination of scientific and technological knowledge.

The activity was one of the awarded projects (PAEI 02-115382) in the Contest “Environmental Support Program for Entrepreneurship and Innovation” (PAEI - R) 2019 of the Production Development Corporation (CORFO) of Chile, an organization dependent on the Ministry of Economy, which supports entrepreneurship, innovation and competitiveness, also strengthening human capital and technological capabilities.

**OBJECTIVES**

The main objective was the promotion of scientific and technological knowledge, as a motor of development, innovation and entrepreneurship, in the school community of the Antofagasta region, located in the north of Chile; through an internship program with delegations of students and professors. This area of the country has a great capacity for scientific and technological knowledge. However, the dissemination and appreciation of this work, and the promotion of an innovative culture in the educational community, is geographically limited to the regional capital, Antofagasta.

Considering the importance of developing scientific competencies in basic and secondary education, due to its impacts on citizen life (Veloza and Hernández, 2018) and the importance that culture and context have within this learning (Melo-Brito, N. 2017), the purpose of this initiative was to extend the opportunities for students from the nine communes that make up the Antofagasta region to access scientific and technological experiences, in their areas of origin and with the accompaniment of outstanding regional scientists, promoting science and technology as a vehicle for development, innovation and entrepreneurship in school communities.

**METHODOLOGY**

The Internships began with a call to apply to enroll in “PaRES 2020” to the various educational establishments of the nine communes of the Antofagasta Region. Contemplating the motivation, training and accompaniment of students and teachers with project ideas that can be executed.

A series of trainings were developed with the selected delegations, in which the participants had different theoretical and practical activities, dictated by professionals, academics or researchers from the University of Antofagasta. Each student delegation chose a specific theme or area for their project. They were followed up once the training was completed.
Captures Training for beneficiary students and professors.

To end with an exhibition of works, where the students presented their research. With the realization of this activity, it was sought to promote attitudes of innovation and entrepreneurship in the execution of scientific and technological school projects applied to regional priority areas with potential business application.

Six were the participating delegations (composed of 25 elementary and middle school students and 7 teachers) from educational establishments in Antofagasta, Calama, Tocopilla and Caspana. Their work was supported by seven scientific advisors from the University of Antofagasta.

However, its execution suffered the ravages of the emergency caused by COVID-19, and it had to first suspend its execution for the year 2020 and then adapt its programming, contents, methodologies and activities towards the virtual modality.

The execution of the “Regional Internships, PaREs 202” was structured into seven work stages, with 22 activities that took place between the months of October 2019 to June 2020. Then came a 7-month suspension (July 2020 to January 2021), to complete the work plan from February to July 2021.

**GENERATED PROJECTS**

Renewable energies, care for the environment, nutrition, among others, were the topics addressed by the delegations of Caspana, Calama, Antofagasta and Tocopilla. Looking at the different needs of their environment and their communities.

The works were the following: “Alternative energies in public spaces” (Republic of Greece School in Calama); “Bioremediation” (Liceo Domingo Latrile de Tocopilla); “Formation of compost” (Escuelita libre y feliz Aliwen de Antofagasta); “Pollution and health” (José Lancaster School in Antofagasta); “Caspana and its nopal, as an unconventional energy source for the future” (Nuestra Señora de la Candelaria de Caspana School); and “Green and happy gardens from my house” (Claudio Arrau School in Calama).
CONCLUSIONS

Despite the difficulties caused by the COVID-19 pandemic, it was possible to promote scientific and technological knowledge, as a motor for development, innovation and entrepreneurship. This, through an internship program that offered virtual training days with these guidelines; an accompaniment and follow-up with scientific advisors; and a virtual meeting that allowed the delegations to make their projects visible.

Scientific and technological contents were delivered to the students and professors in the training days; mainly in priority areas of the region. This according to the different projects carried out by the beneficiaries; which referred to issues such as renewable energy, care for the environment and healthy eating. Long-standing scientific advisors supported work in these areas.

In the training sessions, entrepreneurship and innovation content was provided with workshops and presentations to the beneficiaries. In activities carried out by the Researcher of the Bioinnovation Center of the University of Antofagasta, Dr. (c) Fernando Valenzuela Picón; and Susana Rubilar Epuyao, lawyer and Deputy director of Technology Transfer and Entrepreneurship of the Transfer and Licensing Office (OTL) of the University of Antofagasta.

With the training sessions and the follow-up and accompaniment, the beneficiary students and professors acquired a series of tools to develop scientific and technological work. This was reflected in the presentations they made at the Virtual Meeting.
Four diffusion and dissemination products were generated, which compiled the works developed by the students. These products were: a catalog of projects, an infographic by work, a traveling graphic exhibition and a video summary of “PaREs 2020”. These dissemination and dissemination products serve to make the work carried out visible to the public, be it the educational community or the general community.

It was possible to strengthen the motivation and commitment of both the beneficiary students and teachers, as well as the scientific advisors, to carry out research at the school level, assuming the challenge of working in this program, with all the difficulties caused by the COVID-19 pandemic. 19, from their homes and virtually.

Six works were carried out that started looking at the different needs of their environment, developing innovative proposals. Six proposals that can be projected, as a basis for the development of future research in the near future, with the support of public and/or private institutions.

From the impact evaluation carried out during the process, it was observed that within the main learning that teachers and students declare to obtain, learning to carry out associative science, distributing tasks in order to achieve a common objective and the use of technology for the benefit of group work.

REFERENCES:


More information: https://pares.ctysua.cl/