

# International Journal of Human Sciences Research

## DEMAND: LEARN TO TEACH IN SCHOOL CONFINEMENTNORMAL SUPERIOR OF MEXICO

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**Abstract:** The closure of schools due to the Covid-19 pandemic affected 1.4 million children, adolescents, young people and adults in Mexico (UN 2020); schoolchildren are in a situation of compulsory confinement. Uncertainty and its possible answers in a framework of imaginary, where it was assured that young people for being young mastered new technologies and vice versa, that adults are far from digital skills, in the course of 2020 we realized that these are not absolute truths. Given the urgency of planning a flexible program due to the circumstances, we proposed the methodology of problem solving from its immediate context, so we use new and old technologies (messages in emails), keeping in mind the human, considering the sensitivity of the circumstances, which resulted in a closer academic experience.

**Keywords:** Wellness, Problems, Science

## INTRODUCTION

The complexity of our scenario, with technological infrastructure restrictions in the most precarious sectors of our society presents more complexity to unresolved problems. The complexities of our scenario, with restrictions in the technological infrastructure in the most precarious sectors of our society presents more complexity to the unsolved problems. The complexities of our scenario, with restrictions in the technological infrastructure in the most precarious sectors of our society presents more complexity to the unsolved problems, such as maintaining enrollment, made, among other circumstances, that the Escuela Normal Superior de México faced with teachers with diverse and valuable experiences to meet this challenge, on this basis we worked tirelessly, the days without schedules, without holidays or rest days for an "Official School Journal" to make the virtual environments their own, accompany students by any means of communication and train teachers in the

various alternatives, so that no student would be left out according to their technological and family possibilities. From the action research and with observation records, we arrived at the proposal of the development of learning by problems from its immediate context, an ally, the institutional response was fast and collective, alternative solutions were sought to connect to available platforms and solutions were sought to what was found, always having as a guiding principle the inclusion of teachers and students looking for quality in this new modality that is offered.

## DEVELOPMENT

**Didactic Experience:** In a scenario characterized by uncertainty, confinement and the search for well-being, rather than expected learning. "The idea of well-being is not only emotional, it also has a social, physical and cognitive dimension; therefore, this well-being must be thought of as something more complex and interrelated, where continuing to learn and remain connected with the school world, with peers and education professionals, is part of the well-being of our students" (Marzabal 2020 ), the unknowns of What to teach? and with what device to teach?, although we have our study program with a previous planning, now it changes even the way of planning.

For teaching-learning in science, attention must be paid to the procedural, since the fact that someone knows how to do something in science is not synonymous with being able to teach that something that they master, the language and initial approach to address science is complicated. The students need personal work, sometimes they do not master basic knowledge of science and do not handle theoretical conceptual knowledge; students fail in calculations, do not understand the classes, there is a lack of interest and self-confidence; Usually, in Mexico, the results

of the OECD (2019) always the lowest scores of the students are in the knowledge of science and they refer to difficulties in the student in calculation, when students study science they face difficulties with memory, work, application, complication, way, understanding, knowledge, confidence, interest, calculation and problems in the class, the difficulty of applying the theory is higher.

You can't keep thinking that the research is possible only from the dedication and sacrifice of isolated researchers, but must be the result of the organization and strengthening of communities (Romero 2002), so that the virtual classroom can become that main spot of researchers.

From the Action Research with observations recorded in the teacher's diaries, the emphasis is placed on seeking well-being in the student who was very sensitive to the events that the Pandemic presented. Ainoa Marzabal is taken up again with her argument that the pandemic context can become an opportunity for analysis and learning, this situation will serve to justify why it is important that people have scientific knowledge, understand the world in which they live and know make good decisions (2020), in this sense it would be necessary to look for references that, as at no time were within our reach (national and international congresses and conferences were opened by highly experienced authors for free, referents that will triangulate with the program of the subject and the implications that science has in daily life and the impact on the future.

As an alternative with the students, the problem solving methodology was proposed for the group, it is sought that the student creates his own knowledge from the research, of their interest in knowing and learning seeking to promote a type of active learning, it is that from topics proposed by the teacher the contents that we take from the program

are covered, students learn to search for information on the topics that are raised, is oriented so that they know how to discern between valuable and secondary information, we strengthen cooperative work so that it encourages their critical thinking and learns to respect and put themselves in the place of the other, it was sought that the motivation that moves students is intrinsic and is based on your own need to improve and learn. The interest resides in the fact that the knowledge is created by the student himself in an active way, which constitutes an opportunity to develop relevant knowledge, skills and attitudes for them.

The subject of Sustainability and Technological Innovation of the 6th semester of the Specialty in Physics of the Bachelor of Secondary Education plan 2018, has the purpose that the student designs a contextualized proposal to his environment through reviewing technological and innovative projects that transform and generate energy efficient and clean or sustainable to promote sustainable environmental practices.

Problems are solved when the student has previous theoretical notions, that they learn the methodology for solving problems and that they learn to solve them, that they understand that it is part of the skills of scientific thinking, as in the problems of scientific subject exams, which are not only to evaluate, Rather, problem solving allows: Diagnosing students' previous ideas and helping them build their new knowledge; Acquire skills of different cognitive range; Promote positive attitudes towards Science and scientific attitudes; Bring the fields of scientific and daily knowledge closer, enabling the student to solve problematic situations in this field and to evaluate the scientific learning of the student. (Perales 1998).

Theories and issues on sustainability and sustainability were analyzed through

environmental concepts and policies at a national and international level to identify an environmental problem in their environment, we saw projects focused on environmental conservation, to achieve awareness about its use, through through the application of different technologies in Mexico and the world.

The presentation of a problem of a real world identifies the need for learning, we tried to accompany them in the data collection, so that they know what they know and what they do not know and for the resolution of the problem that they had raised; The resolution process, as well as the final work, was carried out in small groups and many times based on individual consultancies, to move forward together and rework initial ideas together; The aim was to provoke collaborative work since what one student does not reflect on, the other reflects on when effective communication is achieved and the progress is made.

We identified in the first instance, the concepts of sustainability and sustainability, the process through history. The science of sustainability is a research program resulting from the tendency of scientific and technological movements to promote the transition of societies towards sustainability, through the study of the dynamic interactions between nature and society (Clark and Dickson, 2003). The term sustainability is a concept and an adjective proposed by the Swedish ex-minister of the environment, Gro Harlem Brundtland (1984), to characterize a model of economic and social development based on the systematized use of natural resources in the long term, whose premise is more relevant is that the satisfaction of present needs does not compromise the satisfaction the needs of future generations.

They reflected on the objectives of sustainable development worldwide and which ones they believe are carried out in their

community; the comment is the following: "The objectives are very good, seen from the point of view of the future and their purpose is the mere ideal that we wish to achieve, however in practice and execution they are far behind as well as unsatisfactory, from small communities to large companies and governments do not observe a change, much less results that the objectives of these plans are being achieved, although today there are a certain number of more protected green areas, there is also an increase in consumerism and contamination by humanity."; however, there is no concrete answer about its implementation in your community.

From this, an activity was left for them to carry out with their family members or people around them, which had the objective of helping the participants to see the local activity with a look towards the three components of sustainability: economy, society and environment. About what was commented in the group, broadly speaking, was the lack of local participation to carry out some neighborhood activities and thus improve their environmental environment, in each case, they identified local problems and got involved mentioning their participation and responsibility. As an example, they endorse recycling water, waste and garbage, reflecting on the impact in times of pandemic; We showed a comparative table on the environmental initiatives of the students, the environmental initiatives of Mexico and the global ones on the environmental issues.

To take advantage in digital resources, we showed videos for debates, pages recommended for scientific and academic studies were searched, information was cataloged as a primary or secondary source, and the priority that justified it was argued.

The seven keys for Mexico to be a sustainable country were analyzed as a reference for the final project taking as a reference the objectives

of sustainable development worldwide and which ones they believe are carried out in their community; to develop a local project and it is feasible to carry it out.

Regarding the care of the monitoring process in this semester of full pandemic, I will mention two functions of the evaluation, the first consists of verifying to what extent the expected results have been achieved in relation to the proposed objectives and the second function allows to rethink the organization of activities Ruiz (1998), understanding the evaluation process as a reflective analysis, which allows understanding the nature of the object of study and make value judgments about it, I can comment that the purpose of the subject was achieved, I analyzed how they made decisions collectively, how they analyzed the problem as a challenge and observed the level of responsibility that was generated. What has been achieved is possibly due to the fact that the time dedicated to this semester was not only 4 hours per week for the group as it would have been in person, however, we still have challenges, students who had to look for work either because at home, who was in charge of the expenses was left without a job, made it difficult to finish the semester, other forms of communication were sought, reaching the individual consultancies.

## **CONCLUSIONS**

Problem solving encourages creative thinking, favors the student by increasing their ability to solve them. It is recommended for the development of competencies in students, this from the contextualization of any required science theme, seeking to be present in the contents of study programs,

when working with this methodology, several strategies are distinguished to reach a result from the attempt to solve a problem in the real world without having a theoretical basis, that is, in this methodology the learning and skills are developed in the process of solving the problem, that is, the problem guides the learning and generally the time invested to solve a problem is usually long, which requires that you keep up to date the motivated student during this process (Restrepo, 2005).

The new technologies played an important role in this time of the pandemic, the way to present materials was facilitated, the resources were enriched and presented by various means, the students were motivated trying to make their activities meaningful, new skills were put into operation and the use of the information acquired to solve problems was made possible. problems and explain phenomena in their environment, access to scientific research and listening to scientists was facilitated, platforms allowed communication with teachers and colleagues from distant places (Casanova 2002), however, the abuse of networks is deteriorating needs such as rest or person-to-person interaction or person with family and friends The pandemic left us lessons: with the infrastructure and digital skills gap that are still present, which leaves us without an answer when asking ourselves how the social right to education is positioned in a framework of equity and access, with public financing and “not leaving any student behind” (UNESCO. 2020), a big obstacle is the segmentation of students with difficulties in accessing the Internet and most importantly “The teacher can never be replaced by a digital tool”.

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