The future of face-to-face education in secondary schools inMexico.

The future of in-person education in middle schools in Mexico.

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SUMMARY

The article "The future of face-to-face education in secondary schools in Mexico" analyzes the situation of schools worldwide due to the Covid-19 pandemic, institutional projects of virtual and hybrid education and the challenges for teachers in this stage of blended teaching. Through an anthropological approach, the sociocultural situation of the school community in Mexico during distance learning is analyzed. This situation helps to understand that in the near future the State's educational system must be strengthened to combat the educational lag and guarantee access, to the poorest, to hybrideducation.

Keywords: Covid-19. Virtual education. Hybrid learning. Educational lag. Low-income students. High schools.

ABSTRACT

In "The future on in-person education in middle schools in Mexico" we analyze the shutting down of schools around the world because of the coronavirus pandemic, the institutional projects of virtual and blended learning, and the teacher's challenges in this period of semi- in-person learning. Through an anthropological approach we analyze the school community's sociocultural situation in Mexico

Journal of Philosophy, Letters and Humanities
Department of Philosophy / Department of Letters

during distance learning. Therefore, with this article we will understand that in the foreseeable future it will be necessary to strength the state education in order to battle educational lagging and ensure blended learning to low-income students.

Secondary education in Mexico is the third and last level that makes up basic education (preschool, primary and secondary). It is provided to the population of 12 to 15 years, approximately. Secondary education consists of three grades (or years) and is of a propaedeutic nature, that is, it is mandatory to enter the upper middle level (preparatory). Secondary education consists of five modalities: 1) General secondary: they aim to provide humanistic, scientific and artistic training and work in morning and evening shifts. 2) Technical secondary schools: they provide the basic purposes and a basic technological education that allows the student to acquire knowledge, skills and abilities. 3) Telesecundarias: they serve the population that does not have access to general or technical schools, through the use of electronic and communication models (television, satellite signal or videos). 4) Secondary for workers: it is studied in three grades and serves the population, less than or over 15 years of age, who due to working or exceeding the required age could not enter secondary school. 5) Rural community secondary school: it is mainly aimed at the rural school population in small communities (Ministry of Public Education, 2017b).

Face-to-face education and the New Mexican School

It is difficult to find a definition of face-to-face education because even before the coronavirus pandemic the idea that existed about education is that it should be face-to-face. This is how most schools around the world had worked: in Asia, Africa, Europe, the United States or Mexico. For centuries, knowledge has been transmitted in schools in person, so it is important to define education and school.

Education (from lat. educatio, onis) means: 1) Action and effect of educating. 2) Upbringing, teaching and doctrine given to children and young people. 3) Instruction through teaching action. 4) Courtesy, urbanity (Royal Spanish Academy, 2020a). On the other hand, school (from lat. schola) means: 1) Public establishment where children are given primary education. 2) Establishment or institution where certain types of instruction are given or received. 3) Teaching that is given or acquired. 4) Set of teachers and students of the same teaching. 5) Method, style or taste peculiar to each teacher to teach. 6) Doctrine, principles and system of an author or set of authors (Royal Spanish Academy, 2020b). That is, teaching through a teacher in a public or private institution.

In the case of secondary schools in Mexico, they aim to provide humanistic, scientific and artistic training. It is not only about teaching but about educating, that is, transmitting knowledge with human values. This is the educational proposal of the New Mexican School (NEM) which is the new educational model proposed in 2019 by the Ministry of Public Education (SEP) and that will enter into force from the 2021-2022 school year. The State shall support technological innovation and everyone has the right to enjoy the benefits of the development of science and technology. Likewise, to contribute to the fulfillment of the objectives of the third article, the National System for Continuous Improvement of Education was created (Ministry of Public Education, 2019).

Therefore, face-to-face education in the case of secondary schools is the teaching that is provided to children through teaching action in an institution (public or private) with certain types of instruction. Face-to-face education seeks active and collaborative participation to achieve the expected learning so, despite the support for SEP technology, secondary schools and the education they provide are not planned to work virtually.

Curriculum (2011) Could it be applied virtually?

The 2011 Curriculum for Basic Education in Mexico is the guiding document that defines the competencies for life, curricular standards and expected learning that constitute the formative path of students. Pedagogical principles are essential conditions for the implementation of the

curriculum, the transformation of teaching practice, the achievement of learning and the improvement of educational quality.

Curricular standards are descriptors of achievement and define what students will demonstrate at the end of a school term; synthesize the expected learning that, in primary and secondary education programs, is organized by subject-grade-block. There are six curricular standards: 1) Spanish, 2) National reading ability standards, 3) Second language standards: English, 4) Mathematics, 5) Science and 6) Digital skills. On the other hand, the expected learnings are indicators of achievement that, in terms of the temporality established in the study programs, define what is expected of each student in terms of knowledge, know-how and know-how. In addition, they give concreteness to the teaching work by making verifiable what students achieve and constitute a reference for planning and evaluation in the classroom (Ministry of Public Education, 2011a).

In the 2019-2020 school year, during the stage of the coronavirus pandemic, secondary schools followed the 2011 Curriculum, with some reforms to basic education in Mexico and the Curriculum that were added in 2017. These reforms were poured into the curriculum entitled Key Learnings for Integral Education. Curriculum and curricula for basic education (Ministry of Public Education, 2017a).

In the case of the Study Programs, those created in 2011 were also used. For example, in the case of the subject of Spanish it contains the purposes, approaches, curricular standards and expected learning. It focuses on the development of competencies so that each student can function in society. The curricular standard of Spanish are the elements that allow students of Basic Education to effectively use language as a tool and is divided into five components: I) processes of reading and interpretation of texts, II) production of written texts, III) production of oral texts and participation in communicative events, IV) knowledge of the characteristics, function and use of language, and V) attitudes towards language, that is, valuing the linguistic and cultural richness of Mexico. On the other hand, the purposes of teaching Spanish are: 1) to efficiently use language in various social practices. 2) Read and understand different types of text. 3) Recognize the importance of language. 4) Expand knowledge of oral and written

Journal of Philosophy, Letters and Humanities
Department of Philosophy / Department of Letters

language. 5) Interpret and produce texts. 6) To value the linguistic and cultural richness of Mexico. 7) Use printed and electronic collections (Ministry of Public Education, 2011b).

In this way, it can be noted that the basis of secondary education in Mexico is the curricula and curricula of 2011 with some reforms in 2017. However, despite being less than ten years old, the 2011 Curriculum was created to be carried out in person, so in the current context it is necessary to carry out reforms so that the contents adapt to the needs of distance education.

Distance education in times of coronavirus

Before the pandemic caused by Covid-19, in Mexico distance learning was not as widely used in Basic Education and was associated with telesecondary. However, since March 2020 the concept that is most heard at all levels of learning in the country is: virtual or distance education. For its part, UNESCO supports the fundamental role of distance education and open learning because they are educational modalities focused on expanding access to education and training. At the global level, the curricula and knowledge of teachers in the use of educational technologies must be renewed because this type of learning is basic in the creation of a global society. The internet has completely transformed education since the most important distance programs allow to achieve the same number of graduates at a lower cost than traditional institutions, but with the disadvantage that many communities do not have access to technologies (UNESCO, 2002, pp. 10-14).

One of the most important actions to prevent the spread of the coronavirus was to close schools worldwide, which is why specialists say that the paradigms of education will change. Within this context, UNESCO stated that more than one billion students and young people around the world have been affected by the closure of schools and universities due to Covid-19. Due to this situation, UNESCO presented the Global Coalition for Covid-19 Education that offers inclusive learning options. Its members are UN agencies, the private sector, civil society, non-profit organizations, media partners, networks and associations. This coalition seeks to have the largest number of actors and resources to provide an effective and unified response, coordinate measures to reach the most disadvantaged and achieve immediate solutions. In addition, it seeks

to provide free technological solutions through radio, television and online digital tools for schools, students, parents and teachers (UNESCO, 2020a).

Teaching remotely during the pandemic is very important in Mexico to contain the spread of the coronavirus because there are more than 34 million students representing almost 30% of the population. According to preliminary information from the SEP, through the Interactive System of Consultation of Educational Statistics, enrollment in the school year was 34,459,623 students. 25,253,306 belong to Basic Education, 5,144,673 to Upper Secondary Education (Preparatory), 3,813,616 to Higher Education (Bachelor's Degree) and 248,018 to a Postgraduate (United Nations Development Programme, 2020, pp. 44-45).

On the other hand, when talking about distance education it is important to know what percentage of families have access to the internet in Mexico. Taking into account the INEGI (ENDUTIH) study in 2019 on the percentage of households with a computer and internet connection by socioeconomic stratum, the results are: low stratum (16.4%), lower middle stratum (40.2%), upper middle stratum (62%) and high stratum (79%). This study shows the great problem of low-income families to access distance education, because while statistics indicate that about 56% of families in Mexico have internet, they do not show the difference between the low and high strata (United Nations Development Program, 2020, q. 39). Therefore, one of the most important challenges in Mexico during the coronavirus pandemic is to teach classes remotely taking into account the low-income population that does not have access to a device with internet.

Virtual education and teacher training projects

The school must improve as an institution, as stated by the Italian educational psychologist Francesco Tonnucci, who considers that quarantine to prevent the spread of Covid-19 has to serve to improve the school in different aspects, such as promoting the habit of reading (Ayuso, 2020). On the other hand, during the 2020-2021 school year, universities worldwide will implement more virtual classes to avoid the spread of the coronavirus. The Minister of Universities in Spain, Manuel Castells, believes that universities have to improve virtual teaching,

Journal of Philosophy, Letters and Humanities
Department of Philosophy / Department of Letters

as part of a "bimodal system", in the face of a subsequent outbreak of coronavirus. The return to face-to-face classes will be until September, by regions and in a staggered manner, so society must get used to an increase in digitalization (Silió, 2020).

Inevitably, after the coronavirus pandemic, education will evolve and educational technologies will be used more. Despite the fact that students return to face-to-face classes, a kind of distance classes will continue to be used, so the Ministry of Public Education should benefit from technological knowledge and use it to make the necessary reforms to the plans and programs of studies so that they can be used during distance or blended education projects.

In response to the coronavirus pandemic, UNESCO launched the initiative "Education in Latin America and the Caribbean in the face of Covid-19" which is divided into: 1) "Monitoring of the suspension of classes" with global information on the suspension of classes and the return to the classrooms. 2) "National Educational Responses" presents each country's options for providing distance education. 3) "Thematic Resources" is an effort of the Regional Working Group on Education for Latin America and the Caribbean in its response to the Covid-19 crisis. 4) "Webinars" are virtual seminars, starting in April 2020, on: "Reopening and safe operation of schools", "Resources and platforms for the educational response to Covid-19" or "Health at school: preparing for back to school" (UNESCO, 2020b).

The world changed with the coronavirus, affecting people in different ways, so UNICEF presented a guide on the coronavirus "What mothers, fathers, and educators should know" with information on how to prevent contagion. UNICEF in its analysis of the effects of the coronavirus focuses on how it affects children and their families, so it addresses education from home, the role of mothers and fathers, the psychological environment and the mental health of children and adolescents. For these reasons, it launched the "I learn at home" program with virtual activities to play and learn with children in times of the coronavirus (UNICEF, 2020).

As has been observed, different institutional distance education projects have been created, but, as Tomás Andújar Palma in "The digital training of teachers, the challenge of education that comes" (2020) points out, an attempt has been made to move the face-to-face classroom to the virtual classroom because some teachers were not prepared or had the

Journal of Philosophy, Letters and Humanities
Department of Philosophy / Department of Letters

necessary training. Likewise, there are educational centers that were better prepared with a technology management project. For these reasons, teachers must be trained in the use of technologies and virtual education to adapt to the current circumstances of teaching.

The coronavirus has forced the entire educational community (students, parents and teachers) to learn because it is necessary to delve into technology to transfer knowledge to virtual classrooms. Teachers, without training from the authorities, have looked for the best way to learn to use educational platforms, but it has not been easy this school year because it was a great change to move completely to virtual education. At this stage, education has been a challenge because teachers have had to find suitable activities for students, depending on the educational level, to do with their parents. However, teachers cannot know if the expected learning is consolidated because there is little interaction. In this way, teachers have had to quickly become familiar with educational platforms and adapt their contents so that students continue learning in this time of pandemic (Campuzano, 2020).

For its part, the Ministry of Public Education (SEP), due to the contingency of the coronavirus, launched the platform "Teachers at Home" so that they can train in virtual education. This platform makes available to teachers (preparatory level) a series of resources to be able to train and continue teaching from home. There are didactic resources (videos, teaching library, tools, online resources, etc.) according to the expected learning and specific contents of the second, fourth and sixth semester of high school curricula. With these tools, teaching and learning strategies can be designed according to the students (Teachers at Home, 2020). Therefore, it is necessary for Mexican teachers to be trained in the use of educational technologies and platforms to deliver a quality virtual education that motivates students.

Hybrid education the answer?

Due to the contingency with the coronavirus, there is no certainty about when and under what conditions the 2020-2021 school year will take place in Mexico, but some schools are already planning their educational strategies. More than ten years ago, the hybrid education model began to be used, which combines face-to-face and virtual education, creating flexible models in line

Journal of Philosophy, Letters and Humanities
Department of Philosophy / Department of Letters

with the new times. Blended Learning is known as hybrid or blended learning and this proposal is not simply about using new educational technologies but about giving each student a personalized experience according to their needs. The coronavirus pandemic has caused the boundaries between face-to-face and distance education to be blurred. Therefore, in the return to the new normal with social distancing, it is necessary to incorporate digital tools into face-to-face education in public and private schools. In hybrid education it is about combining tools and didactic resources of the face-to-face and virtual modalities, which allows students freedom to choose their study schedules, since classes can be distance, face-to-face or mixed. In hybrid learning, the focus should be on students with the support of technology, so the curricula should be structured taking into account face-to-face and virtual education (Servín, 2020).

Hybrid learning or Blended Learning has been used for more than ten years, especially as a solution to allow students to reconcile studies-work-family. François Bédard, Patrick Pelletier and Christiane Le Clech in "L'apprentissage hybride" point out that hybrid learning is an opportunity to integrate the innovations and technological advances offered by online learning with the interaction of best practices of face-to-face learning. There are five reasons to use hybrid learning: 1) It allows the teacher to experience a student-centered approach and their learning preferences. 2) It allows the teacher to explore more active pedagogies that stimulate student engagement and develop autonomy. 3) Offer students a more collaborative learning environment. 4) It offers more flexibility to students who must combine studies-work-family. 5) Improves learning outcomes if pedagogical strategies are clearly active. Therefore, hybrid learning can produce rich environments from a pedagogical point of view by combining the advantages of face-to-face and virtual learning (Bédard, Pelletier and Le Clech, 2020).

Alex Kumi-Yeboah states that blended learning is not about online learning but about a type of learning that includes the use of virtual teaching, online courses and the management of educational platforms. One of the reasons why hybrid learning in schools up to K-12 Schools (12 grades from elementary to high school) is used in the United States is because it allows students to recover courses they did not take or failed. In addition, in urban schools, hybrid learning has become an alternative to increase the percentage of graduation of students. Therefore, hybrid

Sincronía

Journal of Philosophy, Letters and Humanities
Department of Philosophy / Department of Letters

learning in K-12 schools in the United States allows students to empower and develop skills in critical-analytical thinking competencies through active responses through online resources (Kumi-Yeboah, 2014).

For his part, on July 22, 2020, the Secretary of Public Education in Mexico, Esteban Moctezuma Barragán, led the XLIX Virtual Ordinary Meeting of the National Council of Educational Authorities (CONAEDU). There, he pointed out that the pedagogical approach that will survive into the future will be a hybrid model, with both distance and face-to-face education, according to the needs of each of the state education systems. In addition, he mentioned that, to ensure the well-being of the school community in the return to face-to-face classes, they will only be carried out (in different stages and with different preventive health measures) if the epidemiological traffic light is green and depending on the evolution of the pandemic in each federal entity (Ministry of Public Education, 2020).

Conclusions

The future of face-to-face education globally is changing due to the coronavirus pandemic. Secondary schools in Mexico, as far as possible, will use some form of hybrid education to teach and prepare students in their transition to high school, so in Education in Mexico strategies for the delivery of virtual classes must be systematized by taking up the projects of UNESCO, UNICEF and SEP. Education is going to evolve and when face-to-face classes return, a certain form of virtual classes is going to be maintained so that students are in touch with technology and educational platforms. The future of education will be hybrid learning because combining the advantages of face-to-face and virtual learning can achieve great pedagogical advances. Therefore, in Mexico, work plans and study programs must be adapted so that they can also be used in distance or hybrid education and compete with international standards.

After the coronavirus pandemic, the use of new technologies is very important, so the SEP has to launch a platform similar to that of "Teachers at Home", but with information for Basic Education (preschool, primary and secondary) because more than 25 million Mexicans belong to this educational level and teachers require digital tools. Teachers must be trained so that they

can deliver a virtual education that motivates students in these times of pandemic. Likewise, it is necessary to take into account the socioeconomic context of families to include, in the distance or hybrid educational project, low-income students who do not have access to a computer withinternet.

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