



REVISTA

CÁTEDRA

Challenges of virtual education in Latin América

Desafíos de la educación virtual en Latinoamérica

Pedro Cantú-Martínez

Universidad Autónoma de Nuevo León, México

cantup@hotmail.com

<https://orcid.org/0000-0001-8924-5343>

(Received on: 07/12/2021; Accepted on: 10/12/2021; Final version received on: 23/12/2021)

Suggested citation: Cantú-Martínez, P. (2022). Challenges of virtual education in Latin América. *Revista Cátedra*, 5(1), 68-75.

Abstract

The purpose of this article is to show and exhibit the challenges of virtual education in Latin America as a result of the advances in communication and information technologies that are currently being deployed internationally, and which were also accelerated after the COVID-19 pandemic. It was known that virtual education would lead to a change in the teaching and learning processes, but not in the way it prevailed, where it was revealed in all its contextualization, since it was characterized by the abandonment in the accompaniment and tutoring of students. In Latin America, education was transfigured from the institutions to the students' homes, leading to mostly negative rather than positive educational experiences for a large number of students at all school levels. This was due to the great social inequality prevailing in Latin America, creating a new social categorization, such as the inforicos and the infopobres. In other words, between those who can and cannot access virtual education. The above, showed again the great social, economic and educational differences that still exist in Latin America. Finally, this unfortunately does not favor people's literacy, nor does it favor the universal right to education.

Keywords

Social inequality, education, virtual education, poverty.

Resumen

Este artículo tiene como intención manifestar y exhibir los retos de la educación virtual en Latinoamérica producto de los adelantos en las tecnologías de comunicación e información que hoy en día se despliegan internacionalmente, y que además se vieron acelerados tras la pandemia del covid-19. Se conocía, que la educación virtual conllevaría un cambio en los



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

Revista Cátedra, 5(1), pp. 68-75, January-June 2022. e-ISSN: 2631-2875

<https://doi.org/10.29166/catedra.v5i1.3487>

procesos de enseñanza y aprendizaje, pero no de esta manera que predominó, donde se reveló en toda su contextualización, ya que se caracterizó por el abandono en el acompañamiento y tutelaje de los estudiantes. En América Latina la educación se transfiguró de las instituciones a los hogares de los estudiantes, conllevando experiencias educativas mayormente negativas más que positivas para una gran cantidad de estudiantes de todos los niveles escolares. Esto se debió a la gran desigualdad social prevaleciente en Latinoamérica, creando una nueva categorización social, como son los inforricos y los infopobres. En otras palabras, entre los que pueden acceder y no a la educación virtual. Lo anterior, mostró nuevamente las grandes diferencias sociales, económicas y de educación que aún existen en América Latina. Por último, esto no favorece desafortunadamente a la alfabetización de las personas, como tampoco al derecho universal de la educación.

Palabras clave

Desigualdad social, educación, educación virtual, pobreza.

1. Introduction

The purpose of this article is to demonstrate and expose the challenges of virtual education in Latin America as a result of the advances in communication and information technologies that are currently being shown at the international level, and that are also generated by the effects of globalization, and that today, after the covid-19 pandemic, have arrived as a revolution in education - bursting in - and generating substantial changes in the teaching and learning processes, both for teachers, students and administrative staff (Cantú-Martínez, 2021). In view of this, the role played by governmental bodies in the field of education, as well as private initiative, has been extremely relevant, as they have involved society in general in this abrupt change as the covid-19 pandemic progressed and technology itself progressed vertiginously in the face of the demand of all institutions in the education sector to incorporate these new technologies to continue providing access to education for large masses of students at different levels of preparation.

In different Latin American countries, education moved from the institutions to the students' homes, as well as teachers and administrative workers moved their work and responsibilities to the privacy of their homes; evolving from face-to-face to distance education, and in other cases to blended learning. The use of the Internet became an ideal platform to transmit knowledge between people, and although this is still debatable particularly in the teaching-learning process and thus guarantee the competencies and skills of students, it was the most suitable response found in order to establish links in education and continue with the educational preparation of students.

On the other hand, this scenario revealed the structural deficiencies as inequalities existed in the educational systems and socioeconomic environment of the people. In this way, a large group of students throughout the Latin American region were left adrift because they did not have the capabilities and economic resources - which would make it possible - to incorporate the necessary equipment and infrastructure to maintain the continuity of their learning, remaining invisible before the education authorities and society itself.

Thus, education is distanced from the public function, since virtual education and those who promote it are very far from the precepts of synchronous and prescriptive functionality of the learning process that guarantees the competences that students must have in order to advance in their personal training and thus integrate into the labor social space. This paper also intends to offer a reflection -from the position of hermeneutic bioethics- on this event and to exhibit the challenges that virtual education poses together with its means in the way of building a human being, in an environment that is affecting the way of being, existing and thinking of the whole society in the world. And in which, in addition, there is still a digital



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

divide that will now define the distance between people who can access education and those who cannot do so for economic and cultural reasons and/or causes, thus creating new power structures defined around access to virtual education (Venegas and Green, 2018).

2. Development

In order to understand the social implications and challenges that arise for Latin American societies in terms of virtual education, it is necessary to clarify the panorama of its use and experience as an emerging medium during this COVID-19 pandemic, which far from being an added value that allowed access to educational content was transformed into educational experiences denied to a large volume of students. Therefore, it will delve into this topic and undertake a discursive line on the role of education, the reality in Latin America and the context of virtual education in the Latin American region.

2.1 Role of education in society

When taking up again the discourse on education, it becomes pertinent to consider with great attention the foundations of education. Essentially from the fruitful dialogue that must subsist between the mentor and the learner, which according to Paulo Freire allows to meditate the deliberate, and is circumscribed to the activity of instructing in the framework of the social contextualization in which it exists (Guichot, 2006). That is, as Mires (1996) commented, it is in the formation of educating people that the threads of dialectics and the complexity of reality are interwoven, where considerations emanate that may be unequal or in agreement among human beings. Thus, education - as a social instrument - is consigned to the development of people, fundamentally in three areas such as intellectual and moral capacity and the socialization of human beings according to the socio-cultural context in which they live. Thus, education is one of the factors that have the greatest impact on the progress of societies, that is, education is inescapable in every sense (OECD/ECLAC/CAF, 2016). In such a way, education is instituted as a means for the development of all people and additionally entails the transformation of society, in which it seeks to establish a solidarity of social order that characterizes its members.

For this reason, all the nations of the world recognize the right that every person has to education, which is stated in Article 26 of the "Universal Declaration of Human Rights" (United Nations, 1948) which states in points 1 and 2 the following:

1. Everyone has the right to education. Education shall be free, at least as regards elementary and fundamental instruction. Elementary instruction shall be compulsory. Technical and vocational education shall be made generally available; access to higher education shall be equal for all, on the basis of merit.
2. Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms; it shall foster understanding, tolerance and friendship.

From this configuration, education takes on a role of formation, enlightenment, interpretation and revelation for people, which allows them to be free, objective and impartial in their actions. That is, from a positivist perspective, the ultimate aim of education is to build a human being with the necessary qualities and competencies to face his future life and overcome obstacles with the intellectual and moral capacities required by the social environment (Durkheim, 1989). Particularity -which today- is also ratified in target number 4.3 of Sustainable Development Goal 4, which addresses the aspects of education, and which indicates that the number of people in the world with sufficient skills to integrate into



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

society, and thus have access to decent work, should be increased (United Nations, 2021). It has also inscribed that the socioeconomic progress of a society is based on the education of people, and thus makes it possible to reduce the social poverty in which a large number of people subsist. In this sense, Munari (1994) expressed since the nineties of the last century that education should be considered as an institution of the common good. His argument is based on the obligatory nature of education for all people, as well as on the fact that it should be provided free of charge, precepts that are articulated in equality and in the "Universal Declaration of Human Rights" promulgated in 1948.

2.2 Situation in Latin America

The conditions of living environments in Latin America show structural gaps characterized by the presence of different social crises, in which both equality and the sustainability of economies have been affected, delaying the possibility of people's access to a condition of general wellbeing. As a result, all Latin American nations face different and varied social, economic and environmental challenges, which show inequality, marginalization, poverty and social vulnerability. In this sense, the Economic Commission for Latin America and the Caribbean (ECLAC) (2021) expresses the following with reference to Latin America:

COVID-19 reaches a region marked by a matrix of social inequality, whose structuring axes - socioeconomic stratum, gender, stage of the life cycle, ethnic-racial condition, territory, disability and migratory status, among others - generate scenarios of multiple and simultaneous exclusion and discrimination that result in greater vulnerability to the health, social and economic effects of this disease (p. 13).

All of the above adjacent to a prevailing malaise -of a general order- in Latin American countries in relation to public policies, which were usually accompanied by acts of protest and civil resistance, to plainly demand justice of a social nature. A situation that Cetrángolo and Curcio (2017) attributed to "inequality of opportunities at the beginning of life and during the education cycle, which in turn significantly impacts the possibilities of achieving higher levels of productivity, development and quality employment" (p. 7). This is projected, according to ECLAC (2021), in a very clear way during the period from 1990 to 2020 in Latin America, where extreme poverty increased from 7.8% to 11.3% -which represents 78 million people in extreme poverty- while the population in poverty increased in this same period from 27.8% to 30.5%, which represents 209 million people in this condition. This is equivalent -in the case of extreme poverty- to considering the Colombian and Venezuelan populations as a whole; while that represented by poverty would be similar to bringing together the entire population of the following countries: Argentina, Chile, Paraguay, Bolivia, Peru, Ecuador, Colombia and Venezuela. Thus, Blanco (2006) states that the Latin American region is "characterized by very disintegrated and fragmented societies due to the persistence of poverty and the great inequality in income distribution, which generates high levels of exclusion" (p. 1). This has also implied that the current situation of education in the Latin American region lags behind the global demands for building people with competencies and skills to integrate into the prevailing modernity of society. In this context, the aforementioned denotes an extremely complex scheme for Latin American countries, since the requirements in terms of educational preparation are not met, while education policies also become dissonant with the prevailing social context in the world and in their national circumstances in a particular way (Martínez, 2009).

Consequently, De la Cruz (2017) asserts that the foundation of any policy - regional or national - must be essentially equitable and inclusive, and in this case the educational one, must provide the possibility for everyone to access a full life with dignity that allows them to build their life trajectory, as well as to make their own decisions in life. This situation is



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

highly questionable in the current regional scenario. Thus, the prevailing conditions hinder an inclusive education for all people, and where it is still ostensible to find large gaps in the quality of education provided.

2.2 Scenario of virtual education in Latin America

Education in general has been affected by the changes of modernity and the advance of information and communication technologies that have influenced the teaching and learning processes. However, this interest promoted in the discourse prior to the COVID-19 pandemic now raises many questions after the emergence of virtual education. What challenges exist in Latin America to introduce an inclusive and committed virtual education? What theoretical and methodological challenges are posed by this new virtual scenario? Will the virtual experiences left by the COVID-19 pandemic be considered or simply ignored? Is it possible to aspire to this virtual modality when in the context of the Latin American region there are still large structural social lags, and the quality of education is also uneven among members of the same society?

These questions and others arise today in the field of education, "at a time when political decisions require, more urgently than ever, pertinent and substantive knowledge about schooling, education, and the diversity of actors involved" (Gluz, Lima and Elías, 2020, p. 6). Undoubtedly, this emerges in the Latin American social context because educational institutions -contrary to their substantive purposes- ceased to be providers of the space to exercise egalitarian educational practices -very purposefully- and where the right to education was violated. In reflecting on the above, Gluz (2020) comments that the health crisis revealed an educational poverty of institutional order, where it was also ostensible an education with "specific and devalued services for vulnerable population groups, different from those accessed by privileged groups" (p. 15). Therefore, the structural deficiencies became more acute, which have their genesis in the previous economic and social crises, which have also persisted over time.

In this frame of reference, for all Latin American countries, it entailed problems of institutional order with a great number of contradictions, where the urgent transition towards the virtual generated eventualities, mainly of a financial nature due to the lack of adequate infrastructure. On the other hand, it created a crisis for both teachers and students, who did not have the skills or the capacity to transfer the activities - labor and academic - to their homes; nor was it evaluated that there was more than one member of the family studying and/or with different abilities (Cantú-Martínez, 2021). In other words: "The classroom was replaced by emergent spaces: bedroom, dining room, living room, study room or other similar spaces; social contact between classmates, friends or teachers was limited only to family contact" (Aguilar, 2020, p. 217). This highlighted the digital gaps as well as the socioeconomic gaps shown by the families of both teachers and students. And in particular, in the academic training of students will weigh negative consequences where it will be ostensible an even greater decline in educational quality -if it was available- by the implementation of virtual education, since -in our opinion and experience- it does not guarantee the appropriation of competencies, skills and abilities, being only of demonstrative order. This contradicts Freire's (1997) assumption that it is in practice that "knowledge is confirmed, modified or expanded" (p. 24).

But it was also clear how education professionals were not considered in this virtual education planning, giving in to the IT professionals who set themselves up as the ones who would - and did - set the course for the education of a whole country, even containing and ignoring the voices of educators completely. By turning teachers at all levels into simple repeaters of knowledge, and in other cases as simple actors and actresses of a staging called education, where any process to check whether the student was able to obtain a skill or information, which guarantees the transformation of this and allows him to advance in his



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

development as a social subject, is bypassed (Aguilar, 2020). It was known that virtual education would come to change the teaching and learning processes, but not in this way it burst in, where it manifested itself in all its expression, since it was characterized by the abandonment in the accompaniment and tutoring of students, not attending to the particular needs and problems of the students in the learning processes. It has also "lost with it, for example, the direct or real contact with people, socializing, the relationship that one has face to face and spontaneous feelings and expressions, absences that do not contribute to the human" (Sepúlveda-Romero, 2019, p. 100).

But, above all, the four fundamental elements for learning were completely ignored: "elements of the environment (sound, light, temperature and furniture), emotional elements (motivation, persistence, responsibility, structure), sociological and physical elements (perception potential, intake, time, mobility) these determine the ability, processing and retention of information, values, facts and concepts" (Castro and Guzmán de Castro, 2005, p. 86). As also, there was a silent disavowal, of the recognition of learning styles that may be present in students, such as the active, reflective, theoretical and pragmatic profile, as made known by Alonso, Gallegos and Honey (1994) and Cantú-Martínez and Rojas-Márquez (2018). Definitely, by these judgments that we have made known other education professionals, such as Nieto (2012) have critically pronounced and consider this virtual education a "computer and communicative paraphernalia as a substitute or substitute good" (p. 143), of obsolete characteristics that pretends to replace traditional education.

3. Final considerations

Currently in Latin America there is an education differentiated now by the mechanisms of virtualization and digitalization, as a result of the health contingency of COVID-19, where it has been found that a large part of society has been excluded from access to education, coming from sectors characterized by being humble and of scarce economic resources, with different expressions and particularities in each Latin American nation.

These common attributes shared by different population groups throughout Latin America, have given new visibility to the existing structural flaws in education, in which many people still subsist. In this way, the foundation pointed out by Simón Rodríguez of an education for all, whose argument holds that education is the support for building a more just and egalitarian society, is overturned (García, 2010). In addition, virtual education in the Latin American region is giving rise to a new social phenomenon - which, based on the particularities of these populations mentioned above - can be called computer illiteracy, as a result of the existing gap in accessing and knowing how to use this technology, and thus gaining access to public education for people with limited resources. This has created a new social categorization such as the inforrich and the infopoor, where the former is those who have access to the Internet and have the appropriate equipment, while the latter remain segregated from these technologies (Cantú-Martínez, 2021).

In addition to the above, there are still more questions that constitute debatable challenges to be overcome by virtual education for its correct implementation in Latin America, such as: Is teaching the same as the virtual demonstration of contents? Is learning virtually only cultivating contents of theoretical exposure? Does virtual education guarantee students' competencies? Do students in their immaturity glimpse that they are in a virtual education with collaborative and critical environments about knowledge? Does communication through educational virtuality surpass communication between people face to face? Does virtual education favor people's sociability? Does virtual education contribute to people's human rights? Does virtual education guarantee social sustainability? Is virtual education a



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

self-taught education? Or is virtual education another social artifice of power and political control?

Finally, let us make a deep, reserved and honest reflection: Does virtual education favor the benefit of people's literacy, as well as the universal right to education that every person in Latin America has?

4. Bibliography

- Aguilar, F.R. (2020). Del aprendizaje en escenarios presenciales al aprendizaje virtual en tiempos de pandemia. *Estudios Pedagógicos*, 46(3), 213-223.
- Alonso, C., Gallegos, D. y Honey, P. (1994). *Los Estilos de Aprendizaje Procedimiento de Diagnóstico y Mejora*. España. Ediciones Mensajero S.A.
- Blanco, R. (2006). La equidad y la inclusión social: uno de los desafíos de la educación y la escuela hoy. *REICE-Revista Electrónica Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 4(3), 1-15.
- Cantú-Martínez, P.C. (2021). Educación superior durante y tras la pandemia de COVID-19 examinada mediante la bioética hermenéutica. En: P. Quezada (Coord.) *SARS-COV2. COVID-19. La pandemia: reflexión y retos desde la bioética y la tanatología*. (pp. 76-96). México. Fondo Editorial de Nuevo León el Instituto de Investigaciones Jurídicas y Docencia de la Administración Pública del Estado de Nuevo León.
- Cantú-Martínez, P.C. y Rojas-Márquez, J.M. (2018). Estilos de aprendizaje: La experiencia de la Escuela Preparatoria Técnica Médica en la Universidad Autónoma de Nuevo León, México. *Revista Electrónica Educare*, 22 (2), 1-8.
- Castro, S. y Guzmán de Castro, B. (2005). Los estilos de aprendizaje en la enseñanza y el aprendizaje: Una propuesta para su implementación, *Revista de Investigación*, 58, 83-102.
- Cetrángolo, O. y Curcio, J. (2017). *Financiamiento y gasto educativo en América Latina*. Santiago. CEPAL y Ministerio de Asuntos Exteriores de Noruega.
- Comisión Económica para América Latina y el Caribe (2021). *Panorama Social de América Latina, 2020*. Santiago. CEPAL.
- De la Cruz, G. (2017). Igualdad y equidad en educación: retos para una América Latina en transición. *Educación*, 26(51), 159-178.
- Durkheim, E. (1989). *Educación y Sociología*. México. Colofón.
- Freire, P. (1997). *Pedagogía de la autonomía. Saberes necesarios para la práctica educativa*. México. Siglo XXI Editores.
- García, B. (2010). Pensamiento de Simón Rodríguez: la educación como proyecto de inclusión social. *Revista Colombiana de Educación*, 59, 134-147.
- Gluz, N.B. (2020). Educación y desigualdades: desafíos para las políticas públicas en tiempos de pandemia. En: N.B. Gluz, C.M. Lima y R. Elias (Coords). *Estado y derecho a la educación en América Latina. Desafíos para la investigación educativa a partir de la pandemia*. (pp. 9-20). Buenos Aires. CLACSO.
- Gluz, N.B., Lima, C.M. y Elias, R. (2020). *Estado y derecho a la educación en América Latina. Desafíos para la investigación educativa a partir de la pandemia*. Buenos Aires. CLACSO.



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)

- Guichot, V. (2006). Historia de la educación: reflexiones sobre su objeto, ubicación epistemológica, devenir histórico y tendencias actuales. *Revista Latinoamericana de Estudios Educativos*, 2(1), 11-51.
- Martínez, A. (2009). La educación en América Latina: un horizonte complejo. *Revista Iberoamericana de Educación*, 49, 163-179.
- Mires, F. (1996). *La revolución que nadie soñó o la otra posmodernidad*. Caracas. Editorial Nueva Sociedad.
- Munari, A. (1994). De la aventura de la OIE a los principios educativos de Piaget. *Perspectivas-Revista de Educación Comparada*, 24(2), 315-332.
- Naciones Unidas (1948). La Declaración Universal de Derechos Humanos. Recuperado de <https://www.un.org/es/about-us/universal-declaration-of-human-rights>
- Naciones Unidas (2021). Objetivo 4: Garantizar una educación inclusiva, equitativa y de calidad y promover oportunidades de aprendizaje durante toda la vida para todos. Recuperado de <https://www.un.org/sustainabledevelopment/es/education/>
- Nieto, R.A. (2012). Educación virtual o virtualidad de la educación. *Revista Historia de la Educación Latinoamericana*, 14(19), 137-150
- OCDE/CEPAL/CAF (2016), *Perspectivas económicas de América Latina 2017: Juventud, competencias y emprendimiento*. Paris. OECD Publishing.
- Sepúlveda-Romero, M.E. (2019). Humanización del acto de la retroalimentación en la educación virtual. *Revista Virtu@lmente*, 7(1), 95-115.
- Venegas, L.K. y Green, L.V. (2018) Medios interactivos: la brecha digital como agenciadora de la construcción de subjetividades. *Educación y Ciudad*, 35, 115-124.

Author

PEDRO CÉSAR CANTÚ-MARTÍNEZ, D. in Biological Sciences, Master's Degree in Public Health and Bachelor's Degree in Biology from the Universidad Autónoma de Nuevo León (UANL). He also has an Honorary Doctorate from the International Organization for Inclusion and Quality Education (OIICE). He is a Full Time Professor "B" assigned to the Faculty of Biological Sciences of the UANL. He also collaborates in the Institute of Social Research of the UANL and in the Institute for Research in Bioethics, A.C., where he is an invited member of the academic staff.

He is a member of the National System of Researchers Level I in the area of social sciences and has PRODEP Profile. She is a member of the Academic Body UANL-181 of Exact Sciences and Human Development, which is Consolidated. Her line of research is quality of life, sustainable human and environmental development, bioethics and public health in which she has directed graduate and undergraduate theses. She has collaborated with the Pan American Health Organization, the United States-Mexico Border Health Commission, among other organizations. She is a member of the Mexican Network of Bioethics Education attached to UNESCO, Educational Research Network of the UANL, Network of Sustainable Development and Environment in Latin America, Mexican National Academy of Bioethics, University Academy for Sustainable Development of the UANL and Iberoamerican Network of Teachers. He has published 22 books, plus 51 chapters and countless articles in the area of his specialty, as a result of research projects and training of human resources.



[Licencia Creative Commons Atribución 4.0 Internacional \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/)