# Kebijakan Berorientasi Misi untuk Mempromosikan Teknologi Digital dalam Mengatasi Ketimpangan Pendidikan dan Mendorong Pembangunan Inklusif di Brasil

## *Mission-Oriented Policies to Promote Digital Technology to Address Educational Inequality and Foster Inclusive Development in Brazil*

Veronica Honorio Gomes de Souza
University College London
E-mail: veronica.souza.21@ucl.ac.uk

***Abstract***

*The COVID-19 pandemic's consequences have increased inequality and poverty around the world, making it harder to meet the Sustainable Development Goals. One of the main issues is the lack of education experienced by those who are mostly socioeconomically disadvantaged. Due to the technology gap, many underprivileged kids were left behind during the lockdown and school closure since access to the digital tools and infrastructure required to provide continuity of learning remotely was adopted and accessed unequally. For example, 5.5 million children and teenagers in Brazil didn't have access to education in 2020. The present and future of a generation, their families, and the economic and productive capacity of the entire society are all impacted by such a loss, which enlarges the educational gap that already existed in the nation. This situation demonstrates the necessity for governments to prioritise strong measures to close the digital gap in addition to reopening schools. These policies can encourage learning and inclusion of children and adolescents in the information age, which is influencing new methods of learning, working, and living. As a result, this article analyses the digital education gap in Brazil's context and offers suggestions to the ministry of education. The goal is to direct the creation of well-structured policies to make use of technological opportunities to develop the fundamental educational system. The ideas are based on mission-focused and frame 3 innovation strategies, with a particular emphasis on bolstering digital inclusion in basic education, which is essential to advancing social justice and the SDGs.*

***Keywords:*** *Mission-Oriented Policy, Digital Technology, Educational Inequality, Inclusive Development*

**Abstrak**

Konsekuensi pandemi COVID-19 telah meningkatkan ketimpangan dan kemiskinan di seluruh dunia, sehingga semakin sulit untuk mencapai Tujuan Pembangunan Berkelanjutan. Salah satu masalah utama adalah kurangnya pendidikan yang dialami oleh mereka yang sebagian besar kurang beruntung secara sosial ekonomi. Karena kesenjangan teknologi, banyak anak kurang mampu yang tertinggal selama penguncian dan penutupan sekolah karena akses ke alat dan infrastruktur digital yang diperlukan untuk menyediakan kesinambungan pembelajaran dari jarak jauh diadopsi dan diakses secara tidak merata. Misalnya, 5,5 juta anak dan remaja di Brasil tidak memiliki akses ke pendidikan pada tahun 2020. Masa kini dan masa depan generasi, keluarga mereka, serta kapasitas ekonomi dan produktif seluruh masyarakat terkena dampak kerugian tersebut, yang mana memperbesar kesenjangan pendidikan yang sudah ada di bangsa ini. Situasi ini menunjukkan perlunya pemerintah memprioritaskan langkah-langkah tegas untuk menutup kesenjangan digital selain membuka kembali sekolah. Kebijakan ini dapat mendorong pembelajaran dan inklusi anak-anak dan remaja di era informasi, yang

mempengaruhi metode baru dalam belajar, bekerja, dan hidup. Hasilnya, artikel ini menganalisis kesenjangan pendidikan digital dalam konteks Brasil dan menawarkan saran kepada kementerian pendidikan. Tujuannya adalah untuk mengarahkan penciptaan kebijakan yang terstruktur dengan baik untuk memanfaatkan peluang teknologi untuk mengembangkan sistem pendidikan dasar. Gagasan tersebut didasarkan pada strategi inovasi yang berfokus pada misi dan kerangka 3, dengan penekanan khusus pada penguatan inklusi digital dalam pendidikan dasar, yang penting untuk memajukan keadilan sosial dan SDG.

**Kata Kunci:** Kebijakan Berorientasi Misi, Teknologi Digital, Ketimpangan Pendidikan, Pembangunan Inklusif

## Introduction

According to the World Inequality Report (Chancel et al, 2022), the COVID-19 pandemic has widened the disparity between the world's richest and poorest, impeding the achievement of the Sustainable Development Goals (SDGs) due to the rise in poverty and negative effects on strategic areas, such as education. This is viewed as "a risk of a generational catastrophe in regards to education, as an additional 101 million children have fallen below the minimum reading proficiency level, potentially wiping out two decades of education gains." (UN, 2021).

In Brazil, one of the most unequal countries in the world (Chancel et al, 2022), the COVID-19 pandemic had a significant impact on the educational system. Brazilian schools had one of the longest school closures, 78 weeks, which is equivalent to over a year and a half (UNESCO, 2022). Approximately 5,500,000 females and boys did not have access to education during this time period. The closure of institutions and lack of access to technological resources have had an effect on their personal and professional development.

The overall economic and social well-being of society was affected. As a result, students from low-income families lacked access to learning resources such as the internet, vitality, tablets, and parental support. As schools play a crucial role in providing a secure space and food for these students, they were also at greater risk of experiencing violence or food insecurity. In addition, as a result of the economic crisis, some students were compelled to leave school in order to work and support their families. Many of whom are unlikely to ever return to school (UNDP, 2020).

It has been discovered that these inequalities are more prevalent in rural areas and low-income households: "28% of families do not have access to the internet, a percentage that increases as income decreases and reaches 48% in rural areas" (PNUD, 2021). Due to the country's Federalism System and vast territory, regional disparities must also be taken into

account. In order to combat the effects of the pandemic, the governments and mayors of various states and municipalities adopted a variety of distance learning strategies, resulting in disparate implementation of actions involving remote learning and a widening of the country's regional disparities. During this time period, only 49% of pupils were enrolled in school in the North, compared to 92% in the South and 87% in the Southeast (GTSC A2030, 2021).

The disparities present within the nation are likewise manifested in the juxtaposition between public and private educational institutions. According to INEP (2021a), private schools received greater assistance in managing the crisis and saw shorter periods of closure in comparison to their public school counterparts. Furthermore, the professors who played a crucial role in implementing remote learning methodologies and ensuring the uninterrupted progress of education received greater support at private universities compared to their counterparts in public institutions. A significant number of these specialists were required to adapt to the remote system without enough operational knowledge or training.

"In the states, 79.9% of schools trained teachers to use methods or materials from non-face-to-face teaching programs. In the municipal network, 53.7% took the training. Altogether, 43.4% of state schools made equipment such as computers, notebooks, tablets and smartphones available to teachers. In the case of municipalities, this percentage is 19.7%. When the subject is free or subsidized access to the internet at home,… 15.9% of the state network adopted measures in this sense; in the municipal network, the number recorded was 2.2%." (INEP 2021b).

Furthermore, within the realm of politics and economics, where policies are influenced, the prioritisation of education has been lacking. The prevailing economic paradigms in Brazil prioritise economic savings over societal considerations or their equitable balance. In this sense, the political actors in power have been approving regulations that limit the investments in this area, such as the Constitutional Amendment n. 95, approved in 2016,[1] which freezes public investments in social areas for 20 years focusing on fiscal austerity. According to Campanha (2021), there has been a decrease in investments in public education and science, technology, and innovation (STI). In contrast to many countries that experienced budgetary increments for basic education in response to the crisis in 2020, Brazil exhibited a lack of alterations in its budget allocation for primary education, both in the year 2020 and in the subsequent year of 2021. According to the Organisation for Economic Co-operation and Development (OECD, 2021).

[1] http://www.planalto.gov.br/ccivil_03/constituicao/emendas/emc/emc95.htm

To mitigate the impact of the digital divide on educational possibilities inside the nation, several federal laws have been enacted to facilitate internet access and provision of technical tools to students attending public schools. Among these proposals, there are:

- The law 14.172/2021[2], published in June of 2021, allocated R$ 3.5 billion to guarantee internet access to students and teachers of public basic education. Until 50% of these resources could be used to purchase tablets and cell phones.
- The law 14.109/2020[3], published in December 2020, establishes the application of resources from the Fund for Universalization of Telecommunications Services (FUST) to provide all Brazilian public schools, especially those located outside the urban area, with broadband internet access, at adequate speeds, by 2024.
- Brazil Internet Programme[4], approved by the National Congress in April 2022. That aims to provide free mobile broadband internet access to 22 million students from disadvantaged socio-economic families, including basic education students enrolled in public schools, indigenous and quilombo communities, and non-profit special schools.

## Methods

The research utilised a qualitative case study approach to investigate the dynamics of the digital education gap in Brazil. The researcher employed a purposive technique to select a specific case study in Brazil. This approach was undertaken to get insights into the wide range of socio-economic situations prevalent in the country (Yin, 2009). The present study was conducted under the guidance of a conceptual framework that integrated mission-oriented policies alongside a focus on inclusive development, innovation initiatives, and social justice (Mazzucato, 2018).

The utilisation of the case study analysis approach facilitated a comprehensive and contextual comprehension of the intricacies associated with digital disparities within the educational system of Brazil. This research made a valuable contribution to the ongoing dialogue surrounding the use of technology to enhance educational outcomes in Brazil, by adopting a mission-oriented approach and placing a strong emphasis on social justice and inclusive development.

A variety of sources of evidence were utilised in order to obtain a comprehensive understanding of the matter at hand. These sources include document analysis, which involves

[2] https://www.in.gov.br/en/web/dou/-/lei-n-14.172-de-10-de-junho-de-2021-325242900
[3] http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/lei/l14109.htm
[4] https://www.gov.br/mcom/pt-br/noticias/2022/abril/senado-federal-aprova-o-programa-internet-brasil

examining government policies, reports, and other pertinent documents pertaining to education and digital technology in Brazil. Additionally, virtual observations were conducted in schools and educational institutions to observe the integration of digital technologies within the educational process.

Thematic analysis was employed to analyse the data, with a specific focus on identifying prominent patterns and themes that arose from the case studies (Braun & Clarke, 2006). These themes encompassed disparities in the accessibility and utilisation of digital technologies, the assessment of current policies and initiatives, and their efficacy in fostering digital inclusion in education (Bardach, 2011). Additionally, the examination of innovative strategies and their alignment with mission-oriented objectives was also conducted. In order to bolster the credibility of the findings, the researchers choose to utilise triangulation, a process that involves the integration of several sources and approaches to validate the results (Denzin, 1978).

## Result and Discussion

### Case Analysis

The digital divide exacerbates the educational divide, thereby directly affecting the achievement of Goal 4, as outlined by the United Nations (UN) in their agenda to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This, in turn, has significant implications for various other goals, including the provision of adequate healthcare and well-being, the promotion of decent work, and the facilitation of economic growth. It is important to note that the progress of a country in these domains is closely intertwined with the advancement of human development. Furthermore, the disparities between developed and developing nations have been exacerbated as a result of the pandemic. Consequently, there is a pressing need for investment in knowledge, human capital, and Science, Technology, and Innovation (STI) to foster socioeconomic progress and mitigate these inequalities (Hulten & Isaksson, 2007). Therefore, it is imperative for governments, especially those in developing nations, to enhance their policies in these domains.

However, it is important to note that these policies, as highlighted in frame 3 (Schot & Steinmueller, 2018), must be in accordance with environmental and social issues in order to effectively accomplish the Sustainable Development Goals (SDGs). This necessitates significant transformations in the systems of production, distribution, and consumption. The aforementioned framework underscores the notion that the existing innovation system has engendered the predicaments confronting societies, notably the inequitable access to novel

technology primarily tailored for customers possessing substantial purchasing capabilities. Therefore, this framework emphasises the imperative of harmonising the advancement of science, technology, and innovation (STI) with the ecological and sociological challenges that communities encounter. This alignment is crucial for fostering profound and impactful transformations essential for pursuing ambitious objectives, such as the Sustainable Development Goals (SDGs).

Moreover, within the context of Information and Communication Technology (ICT) and the rapid progress of frontier technologies, it is evident that the digital divide in education has had a significant impact on the capacity for these tools to foster social development. This impact has become particularly apparent during the ongoing pandemic. The closing of schools has exacerbated existing disparities, leading to a widening gap in learning chances. Specifically, individuals with access to internet and computers have gained a significant advantage over those without such resources. Simultaneously, the United Nations Conference on Trade and Development (UNCTAD, 2021) emphasises the importance of developing nations making adequate preparations for an imminent era of extensive and expeditious technology advancements, which will have far-reaching implications on both markets and societies. Holistic policies encompassing the cultivation of digital skills among students and the workforce, as well as the mitigation of digital disparities, should be implemented to address this matter.

In Brazil, recent initiatives and regulations have prioritised the expansion of internet accessibility in underserved regions and public educational institutions. This strategic approach acknowledges the necessity and significance of this resource in addressing pertinent challenges. The global health crisis has presented a unique opportunity to facilitate and encourage the discussion at hand. Nevertheless, these proposals encompass numerous challenges when it comes to tackling the educational and digital divide in terms of enhancing and promoting learning, with the aim of compensating for the lost instructional time due to school closures and equipping students with the necessary competencies for the rapidly evolving ICT and technological landscape in the professional sphere, which necessitates the acquisition of novel skills and capabilities. One of the primary shortcomings is in the rules' emphasis on cell phones, rather than on laptops or tablets, which have proven to be more conducive to successful studying. Additionally, the authors fail to provide recommendations for implementing training programmes or revising teachers' syllabi, which is crucial for enhancing the efficacy of technological instruments.

Furthermore, it is argued that in order to address the adverse effects of the pandemic and mitigate socioeconomic and regional disparities, it is imperative to enhance the national public educational system. This can be achieved through the inclusion of all students and the adoption of a mission-oriented innovation perspective, as proposed by Mazzucato (2015), which aims to bridge the technology and education gap in the country.

The objective of this perspective is to advocate for the implementation of systematically organised policies that may effectively tackle societal difficulties, as highlighted in Frame 3. According to Mazzucato (2018), the initial stage in formulating such policies involves the establishment of explicit missions accompanied by well-defined time objectives. Additionally, it is imperative for government entities to assume a crucial role in facilitating the coordination of many sectors, fostering collaborations, and facilitating effective investments across multiple domains to successfully accomplish the suggested objectives. Therefore, given the objective of promoting digital inclusion for the purpose of enhancing education and development, it is imperative to strategically create collaborations with corporate, governmental, national, and regional entities, while also fostering the integration of academics, families, and students. The encouragement of such initiatives could be facilitated by the Ministry of Education within the respective country, as it assumes the responsibility of executing and coordinating these policies.

## Case Finding

The subsequent enactment of these laws and regulations at the national level is insufficient to ensure the provision of essential digital tools and competencies for foundational education within the country. Towards the conclusion of 2021, the Government introduced the Brazil Internet Programme, which received approval in April 2022 and is anticipated to be released in May. The proposed plan will be executed in a series of sequential stages and may require several years to achieve complete implementation. In spite of the stated objectives to promote digital education, the plan will allocate cellphones and chips that are deemed less efficacious for educational purposes in comparison to desktops or tablets. Furthermore, there is now a lack of regulation pertaining to the training methods employed by professors to enhance their proficiency in digital learning techniques.

Diverse policies and initiatives have been implemented by individual Brazilian states in response to the ramifications of the pandemic. Despite the liberty granted by the federalism system, it is imperative that the national initiatives authorised effectively address regional inequities within the country. This approach is crucial for fostering greater cooperation and

coordination across the regions. The implementation of this initiative has the potential to enhance the dissemination of knowledge and expertise, thereby fostering significant outcomes within the education system and broader society.

Moreover, it is crucial to acknowledge the significant role that schools play in safeguarding the well-being, protection, and nutritional needs of numerous pupils. Hence, it is not advisable to consider remote learning as a complete replacement for in-person education for children and adolescents. Rather, it should be regarded as supplementary resources that educational institutions should incorporate to ensure digital and educational inclusivity. By doing so, schools can facilitate their students' engagement in the digital age and equip them with the necessary skills for a more promising professional future.

**Policy Recommendations**

Given the imperative of effectively addressing the current problem, it is crucial to adopt a holistic policy design. To tackle this challenge, a mission-oriented approach should be implemented, which entails the involvement of various actors and stakeholders, ranging from the public to the private sector. Additionally, the active participation of citizens is essential to ensure the successful pursuit of this objective. To accomplish this objective, the Ministry of Education has the potential to establish a specialised committee of diverse stakeholders. This committee would engage in deliberations and collaborative efforts to formulate a comprehensive and strategic policy aimed at effectively tackling this challenge.

At a start point, this policy could follow the model adopted by Argentina through the programme `Conectar Igualdade`[5] (Intel, n.d.). This is a well-structured policy example to address Argentina's educational divide and learning in an integrated way, involving coordination and investments with the integration of direct sectors and stakeholders. The initiative acts on different fronts in order to provide computers for all students from low-income backgrounds, internet access to them as well to promote the development of professors. The development of professors is emphasised as an important aspect of this policy to promote not only the quantitative inclusion of students in the digital world with the infrastructural tools, but also to promote qualitative outcomes regarding digital literacy and learning. The programme is structured into five main axes: digital inclusion; curricula and assessment, professional development, information and communication technology (ICT); and Research and Evaluation (ibid.).

[5] https://conectarigualdad.edu.ar/inicio

This particular group has the potential to develop methods aimed at fostering greater inclusivity and coordination of these policies on a national scale. This can be achieved through enhanced data and knowledge management, with active involvement of governmental bodies and mayors in the decision-making process. This objective might be achieved through the establishment of a comprehensive online platform and the implementation of workshops aimed at enhancing accessibility, facilitating knowledge sharing, and providing training opportunities to promote the adoption of best practices within the nation. These proposals necessitate effective leadership to facilitate the promotion of engagement, bottom-up efforts, and necessary reforms.

According to Schot and Steinmueller (2018), frame 3 emphasises that alterations encounter opposition from established entities within the government and society that get advantages from the existing structure. However, it is imperative to implement modifications in order to effectively tackle the socioeconomic difficulties that contemporary societies are confronted with. The crucial aspect of supporting new options and routes revealed throughout the policy process is the establishment of a directionality for the development of Science, Technology, and Innovation (STI) that involves the cooperation and participation of a diverse range of actors. In conclusion, the successful implementation of this goal entails not only the inclusion of a significant portion of society that has been historically marginalised, but also pertains to the country's capacity to advance in a manner that is both more economically prosperous and socially equitable, leading to substantial societal benefits.

## Conclusion

This research shows the urgent need for a holistic, mission-oriented strategy to closing the educational inequality. The report stresses the need for concerted efforts beyond traditional policy-making, including varied actors and stakeholders from the public and commercial sectors and citizen participation. Brazil's Ministry of Education should form a special committee of actors and stakeholders to develop a holistic, effective policy to strategically handle the situation. This group would facilitate cross-sector collaboration, consensus-building, and strategic initiatives.

Brazil might emulate Argentina's well-structured "Conectar Igualdad" programme. This program's holistic approach to digital inclusion, curriculum enhancement, professional development, ICT integration, and research and evaluation can help bridge Brazil's educational divide. However, quantitative inclusion like computers and internet access should be balanced with qualitative outcomes. Educator professional development for digital literacy and better

learning is also crucial. Strategies should promote national inclusion and collaboration, such as using a website and seminars to share best practices, training, and expertise across governments and mayors can foster an integrated approach.

To encourage bottom-up efforts and continual improvement, these guidelines demand strong leadership, commitment, and involvement at all levels. As noted by Schot & Steinmueller (2018), changes often face resistance from existing beneficiaries of the current system. In this case, a directionality in the development of Science, Technology, and Innovation (STI) policies, with broad cooperation and participation, is pivotal for discovering new possibilities and pathways.

Addressing the digital educational divide in Brazil is not merely a matter of social justice; it is tied to the nation's ability to progress in a more prosperous and equitable manner. The recommendations provided represent a comprehensive approach that acknowledges the complexity of the challenge and provides a clear roadmap for action. They emphasize the importance of collaborative efforts, strategic alignment, continuous learning, and strong leadership. By recognizing and acting upon these insights, Brazil has the opportunity to transform its educational landscape and contribute to a more inclusive and sustainable future.

## Reference

Bardach, E. (2011). A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving. CQ Press

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. Qualitative Research in Psychology, 3:2, 77-101, DOI: 10.1191/1478088706qp063oa

Campanha (2021). Não é uma crise, é um projeto. Os efeitos das reformas do Estado entre 2016 e 2021 na Educação. Caderno 1. Campanha Nacional pelo Direito à Educação – Campanha. Link: https://actionaid.org.br/wp-content/files_mf/1633966731NAO_E_UMA_CRISE_CADERNO1.pdf

Chancel, L., Piketty, T., Saez, E., Zucman, G. et al. (2022). World Inequality Report 2022, World Inequality Lab wir2022.wid.world. Link: https://wir2022.wid.world/

Denzin, N. K. (1978). The Research Act: A Theoretical Introduction to Sociological Methods. New York: Routledge

GTSC A2030. (2021). V Relatório Luz da Sociedade Civil Agenda 2030 de Desenvolvimento Sustentável Brasil. Grupo de Trabalho da Sociedade Civil para a Agenda 2030. Link:

https://brasilnaagenda2030.files.wordpress.com/2021/07/por_rl_2021_completo_vs_03_lowres.pdf

Hulten, C. & Isaksson, A. (2007). Why Development Levels Differ: The Sources of Differential Economic Growth in a Panel of High and Low Income Countries, NBER Working Paper No. w13469

INEP (2021a). Pesquisa Resposta Educacional à Pandemia de Covid-19. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira - Inep. Retrieved April 29, 2022, from https://www.gov.br/inep/pt-br/areas-de-atuacao/pesquisas-estatisticas-e-indicadores/censo-escolar/pesquisas-suplementares/pesquisa-covid-19

INEP (2021b). Divulgados dados sobre Impacto da Pandemia na Educação. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira - Inep. Retrieved April 29, 2022, from https://www.gov.br/inep/pt-br/assuntos/noticias/censo-escolar/divulgados-dados-sobre-impacto-da-pandemia-na-educacao

Intel (n.d.). Pioneering program expands education opportunities across Argentina. Intel.it. (n.d.). Retrieved May 3, 2022, from https://www.intel.it/content/dam/doc/case-study/learning-series-pioneering-program-study.pdf

Mazzucato, M. (2015). Building the Entrepreneurial State: A New Framework for Envisioning and Evaluating a Mission-oriented Public Sector, Levy Economics Institute Working Paper No. 824, http://www.levyinstitute.org/pubs/wp_824.pdf

Mazzucato, M (2018). 'Mission-Oriented Research & Innovation in the European Union: A problem-solving approach to fuel innovation-led growth'(European Commission, 2018)

Mazzucato, M. (2018). The Value of Everything: Making and Taking in the Global Economy. PublicAffairs

OECD (2021), Education at a Glance 2021: OECD Indicators, OECD Publishing, Paris, https://doi.org/10.1787/b35a14e5-en

PNUD (2021). Covid-19 e Desenvolvimento Sustentável: Avaliando a Crise de Olho Na Recuperação. Saúde Global. Programa das Nações Unidas para o Desenvolvimento (PNUD), Fundo das Nações Unidas para a Infância (UNICEF) : Organização das Nações Unidas para a Educação, a Ciência e a Cultura (UNESCO), Organização Pan-americana da Saúde (OPAS), Retrieved April 30, 2022, from https://saudeglobal.org/covid-19-e-desenvolvimento-sustentavel-avaliando-a-crise-de-olho-na-recuperacao/

Schot, J. & Steinmueller, W. (2018). Three frames for innovation policy: R&D, systems of innovation and transformative change, Research Policy, Volume 47, Issue 9, November 2018,

The World Bank, UNESCO and UNICEF (2021). The State of the Global Education Crisis: A Path to Recovery. Washington D.C., Paris, New York: The World Bank, UNESCO, and UNICEF. Link: https://www.unicef.org/reports/state-global-education-crisis

UN. (n.d.). The 17 goals | sustainable development. United Nations. Retrieved April 16, 2022, from https://sdgs.un.org/goals

UN. (2021). The Sustainable Development Goals Report 2021. United Nations. Retrieved April 16, 2022, from — SDG Indicators (un.org)

UNCTAD (2021). Technology and innovation report 2021. Catching technological waves: innovation with equity, United Nations, Geneva

UNDP (2020). COVID-19 and primary and secondary education: the impact of the crisis and public policy implications for Latin America and the Caribbean. United Nations. Retrieved April 27, 2022, from: https://www.latinamerica.undp.org/content/rblac/en/home/library/crisis_prevention_and_recovery/covid-19-y-educacion-primaria-y-secundaria--repercusiones-de-la-.html

UNESCO. (2022). Education: From disruption to recovery. UNESCO. (2022, February 28). Retrieved April 27, 2022, from https://en.unesco.org/covid19/educationresponse#durationschoolclosures

UNICEF. (2021). Perdas de aprendizagem com a covid-19 podem custar a esta geração de estudantes quase US$ 17 trilhões em ganhos durante a vida. UNICEF. Retrieved April 27, 2022, fro https://www.unicef.org/brazil/comunicados-de-imprensa/perdas-de-aprendizagem-com-covid-19-podem-custar-a-esta-geracao-de-estudantes-ganhos-durante-a-vida

Yin, R. (2009). Case Study Research: Design and Methods. SAGE Publisher.