





FROM NATIVES TO DIGITAL INHABITANTS

An exploratory look into a new generation of individuals seduced by the apparent benefits of digital technologies

Fernando I. Gutiérrez C. PhD Jerónimo L. Rivera B. PhD.

September 20, 2024

Alfred Korzybski Memorial Lecture and the Symposium on Communication, Consciousness, and Culture New York, NY.

ABSTRACT

Digital inhabitants now want to solve everything with generative artificial intelligence.

The crisis stemming from the COVID-19 pandemic has contributed to the emergence of a new generation with goals and expectations different from those of previous generations. In the field of education, this new generation of centennials explores various paths of learning and professional development; particularly, they exhibit diverse learning styles and preferences in how they engage with and process information, highlighting the need for increased flexibility in pedagogical approaches. The concept of "digital natives", proposed by Prensky in 2001, has become limited over time. For this reason, a renewed term is suggested: "digital inhabitants." These individuals seemingly master digital technologies, prioritize immediacy, and navigate a hyperconnected world characterized by an overwhelming deluge of data and stimuli. In this environment, distinguishing between relevant and superfluous information becomes a crucial challenge for their cognitive development and critical capacity. The ability to filter, analyze, and effectively utilize this informational overload should be an essential skill; however, its development is hindered.

INTRODUCTION

We analyze, in this article, the general consequences of the international health emergency in the educational field, as well as the particular effects of a prolonged confinement that has significantly affected the educational practices and dynamics in which young students were immersed (Pan American Health Organization [PAHO], 2023).

New generations have grown up in a digital environment and therefore think and learn differently from previous ones (Sánchez-Espinoza & Castro-Ricalde, 2013). Digital immigrants must make more effort to learn how to use digital technology and may struggle to adapt to the mindset of digital natives.

Strict lockdown measures due to the Covid-19 pandemic, which lasted more than six months in Latin American countries such as Colombia, Mexico, Chile, Peru, and Ecuador, have significantly contributed to some important behavioral changes in the generations currently in university. They had to undergo two to three years of secondary education under abnormal and suboptimal conditions, attending remote classes or in hybrid groups (Esquivel-Méndez et al., 2021; Ramírez-Noriega et al., 2022).

DIGITAL INHABITANTS

Multidevice users: With constant access to smartphones, laptops, tablets, and smartwatches, university students excel at seamlessly switching between different activities.

Fragmented attention: Their focus is often divided, constantly shifting between apps or platforms. The continuous partial attention concept, discussed by Linda Stone and deeply studied by Sherry Turkle, is even more pronounced in this generation.

On-demand mentality: Accustomed to instant information, they expect quick answers and immediate solutions, whether through search engines like Google, Al tools like ChatGPT, or YouTube tutorials.

Self-directed learners: They prefer to learn at their own pace, leveraging digital resources. Videos, podcasts, articles, and online tools supplement classroom learning. They rapidly adapt to new platforms or software, exploring and learning independently, with a preference for experiences tailored to their specific interests and needs.

Hyper-connected: Their mobile devices keep them in constant touch with their social circles. This always-on connectivity allows them to instantly interact with friends, family, professors, and peers.

Image-based social media users: Platforms like Instagram, TikTok, and Snapchat are central to their identity and social relationships. Their engagement on these platforms shapes both their self-image and interpersonal connections.

Disconnection anxiety: Many experience anxiety at the thought of being without internet or losing access to their devices.



PROBLEM

We are now seemingly interacting with an entire generation of students who enter university classrooms without clear study rituals or habits, experiencing social anxiety issues and low concentration. Students increasingly come to classrooms with more deficiencies, mainly due to the growing number of family difficulties, mental health problems, and harmful habits fostered by digital media, which hinder attention and reflection.

We have a tremendous opportunity to connect students with more accessible, motivating, and interactive educational environments.

Former Dean of Harvard College, Harry R. Lewis (2007), critiques the economistic conception of many universities and their abandonment of comprehensive student education. In a way, this aligns with the intention of many students to leave classrooms in favor of pragmatic education focused on workforce skills, enabling them to earn money quickly.

METHODOLOGY

Based on the compilation and literary review of documents (books, articles, reports, and other written materials relevant to this study topic), an analysis is added on the new generation of students called centennials who have grown up in a digital environment, marked by the omnipresence of technology and accessibility to information. In this collection of recent texts (from 2019 to 2023), the relevance of recognizing the particularities of this generation is also emphasized. Faced with this reality, both significant challenges and opportunities are presented.

To carry out this analysis, we have employed a qualitative methodology based on a documentary analysis of journalistic, academic, and scientific sources from March 2019 to December 2023.

DISCUSSION

Some people talk about a "generation of glass" or "crystal generation" characterized by its sensitivity, fragility, and low tolerance for criticism and rejection.

This is a generation that has developed in a hyperconnected world, where the individual self is constantly exposed to the public sphere. This situation can lead, in some cases, to anxiety and depression due to increased exposure to stimuli and information, as well as heightened awareness of one's public image (Zavodna, 2022; Chibás-Ortiz and Novomisky, 2022). Moreover, it is also a generation with a strong voice on social issues, willing to fight for their rights. This generation is more aware of inequality and injustice and is willing to take action to change the world (Mejía, 2023).

Lukianoff and Haidt (2018), for their part, refute the characterization of young people as a fragile generation, arguing that unlike previous generations, they distinguish pain from trauma and prioritize safety as a supreme value.

Second Part

DISCUSSION

The South Korean philosopher **Byung-Chul Han** (2015) **has** also **emphasized** the issue **that for many young people their own opinion is more important than reality**, and that they are entrenched in the culture of "likes and selfies," which leads to an expansion of narcissism and a conception of a world without nuances that he calls "the hell of the same"

Young people migrate much of their lives to the digital environment with the consequent addiction to their devices and disconnection from the "real world" (Yuste, 2015). It is possible that this hyperconnection produces real loneliness and a feeling of vulnerability in young people, who seek to fill their time with hedonistic stimuli that generate short-term satisfaction. The social media TikTok is a clear example of this phenomenon and could well exemplify this transactional and impersonal relationship of young people with their social media.



THE GENERATION OF RELATIVISM

There is a trend among young people to value the protection and security of home, which likely increased with the pandemic and is related to the ease of interacting with the world through mobile devices and social media (Rubio & Duffaut, 2020). This, coupled with a greater emphasis on the development of individual personality and audience segmentation, has fostered the idea that everyone should find their own path; a notion that is incredibly powerful but nonetheless presents some challenges related to anxiety and uncertainty it generates.

Relativism holds that truths and values are contextual and depend on individual or cultural perspectives. Torralba emphasizes the danger of relativism when he states: "Moral relativism, which holds that there are no universal moral norms, can lead to a moral crisis and justify all kinds of behaviors, even the most aberrant ones" (Torralba, 2023:17).

RESULTS

One of the main challenges Centennials face is managing the overwhelming exposure to information. As "digital inhabitants" in a hyperconnected world, they struggle to differentiate between relevant and superfluous information. Developing the ability to filter, analyze, and effectively use the influx of data is critical for their cognitive development and critical thinking, yet they often lack this skill (Cadena et al., 2020).

Educators and leaders can employ strategies that align with this generation's preferences. Centennials often require different motivators than previous generations, driven by their context, including a need for instant gratification and frequent online interaction.

"Digital inhabitants" value collaboration and active participation in social causes, making teamwork and community engagement powerful motivators (Housand, 2019). Centennials also learn best through hands-on experiences and real-world applications. Educators and leaders should incorporate projects, simulations, and practical activities, creating an inclusive environment that values diverse perspectives (Quintero-Flores & Migone Rettig, 2020).



CHALLENGES AND OPPORTUNITIES IN THE NEW DIGITAL ENVIRONMENT

The new digital ecology that is emerging in this second decade of the new millennium has brought with it a series of challenges and opportunities for everyone, including centennials. It is important not to forget that while technology also opens up endless possibilities, it imposes certain limitations. However, the more people use it, the more they adapt to its form, structure, and function.

For Korzybski and Bateson, human beings are limited in their way of knowing by the structure of their nervous system and the structure of their languages. People, in general, experience the world indirectly through their abstractions of reality. This new generation must understand that communication technologies function as filters through which information passes. Depending on the filter they use, they will have a particular perception of the environment.

CHALLENGES AND OPPORTUNITIES IN THE NEW DIGITAL ENVIRONMENT

Douglas Rushkoff (2014), in his book "Present Shock: When Everything Happens Now", explores how contemporary technology and culture have altered our perception of time and the present. In this sense, he agrees with Baudrillard because, according to Rushkoff, we live in an era of "present shock", where the speed of information, constant interconnectedness, and data overload have disrupted our ability to process reality significantly. This emerging generation of "digital inhabitants" is strongly tied to the constant pursuit of immediacy, becoming trapped in a perpetual present. This dynamic hinders the ability to reflect, plan for the long term, and achieve deeper understanding. The culture of instantaneity, in Rushkoff's terminology, exerts a palpable impact across various domains, spanning from politics and economics to education and everyday life.

CONCLUSIONS

Covid-19 pandemic brought significant changes to education, especially for university students. The transition to online and hybrid learning has become a lasting shift, requiring students to adapt to new platforms.

Technology has become essential for accessing study materials and completing academic tasks. Teachers need to adapt by using digital tools effectively to facilitate student interaction.

Additionally, there is a growing need to educate students on online ethics, digital responsibility, and critical thinking in their consumption of information due to the increased reliance on virtual communication.

These new "digital inhabitants" display a wide variety of learning styles and preferences in terms of how they access and process information, demanding greater flexibility in teaching methods.

Second Part

CONCLUSIONS

Given the additional pressure that "digital inhabitants" may experience, teachers can play an important role in supporting the mental health and well-being of their students.

Teachers should strive to create an atmosphere of trust and support, even in virtual environments. This new generation is highly diverse in terms of culture, identity, and experiences. Teachers must be sensitive and adapt their approach to include and value this diversity.

The new digital ecology emerging in the second decade of the new millennium poses a series of challenges and opportunities for all individuals. The new technologies, which offer significant advantages for "digital inhabitants", also impose certain limitations. The more technology is used and relied upon, the greater the adaptation to its form, structure, and function, with all the repercussions that entails.

REFERENCES

Baudrillard, J. (1999), 'Internet crea un mundo invivible para el hombre'. [Internet creates an uninhabitable world for man]. El Mundo, September 28. Madrid. http://www.elmundo.es/navegante/99/septiembre/28/francia.html. Accessed 25 January 2024.

Bateson, G. (1979), Mind and nature: A necessary unity. New York: Dutton.

Bravo-Sanzana, M., Salvo, S., and Mieres-Chacaltana, M. (2015), 'La importancia de la salud emocional en la escuela, un factor a considerar para la mejora de la salud mental y los logros en el aprendizaje'. [The importance of emotional health in school, a factor to consider for the improvement of mental health and achievements in learning]. Salud Pública de México, 57(2), pp. 111-112. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342015000200001&lng=es&tlng=es. Accessed 25 January 2024.

Cadena, D. I., Macías, G. H., Muñoz, S. C., and Guzmán Macías, M. D. C. (2020), 'Millennials y centennials: nuevas tendencias de consumo'. [Millennials and centennials: New consumption trends]. Journal of Alternative Perspectives in the Social Sciences, 10(4), pp. 1225-1238.

Cabrera-Peña, K. I., and Jiménez-Cabarcas, C. A. (2021), 'La cultura de la cancelación en redes sociales: Un reproche peligroso e injusto a la luz de los principios del derecho penal'. [The Culture of Cancelation on Social Media: A Hazardous and Unjust Criticism in Light of Penal Law Principles]. Revista chilena de derecho y tecnología, 10(2), pp. 277-300. https://dx.doi.org/10.5354/0719-2584.2021.60421. Accessed 26 January 2024.

Carr, N. (2010), The shallows: What the Internet is doing to our brains. New YorK: WW Norton & Company.

Chibás, F. and Novomisky, S (2022), 'Navegando en la infodemia con AMI'. [Navigating the Infodemic with MIL]. UNESCO y Defensoría del pueblo Argentina,

https://defensadelpublico.gob.ar/wp-content/uploads/2022/04/navegando-en-la-infodemia-web.pdf Accessed 25 January 2024.

De Chlarence, J. M., Shanmugam, R., and Rajeswari, P. S. (2022), 'Generation Z at Workplace'. NeuroQuantology, 20(5), pp. 3717-3729. https://neuroquantology.com/open-access/GENERATION+Z+AT+WORKPLACE_2895/ Accessed 24 January 2024.

Second Part

Esquivel-Méndez, L.A., Moreno-Moranchel, J., Robles-Huervo, V., Albor-Aguilera, M.L., González-Trujillo, M.A., and Tufiño-Velázquez, M. (2021), 'Impacto en la educación por la pandemia de COVID-19 en México'. [Impact on education due to the COVID-19 pandemic in Mexico]. Memorias de la Reunión Nacional Académica de Física y Matemáticas. [Impact on Education Due to the COVID-19 Pandemic in Mexico. Proceedings of the National Academic Meeting on Physics and Mathematics]. 26(26), pp. 282-287. https://www.esfm.ipn.mx/assets/files/esfm/docs/RNAFM/articulos-2021/XXVIRNAFM056.pdf. Accessed 25 January 2024.

Han, B.-C. (2015). La sociedad del cansancio. Barcelona: Herder.

Harari, Y. N. (2018). 21 Lessons for the 21st Century: 'Truly mind-expanding... Ultra-topical' London: Penguin Random House.

Housand, A. M. (2019). 'Centennials: The world is waiting!', in Nilles, K., Jolly, J.L., Inman, T.F., & Smutny, J.F. (Eds.). Success Strategies for Parenting Gifted Kids: Expert Advice From the National Association for Gifted Children (1st ed.). New York: Routledge. pp. 291-296.

Iriarte, M. (2020). 'Universitarios pandemials: una radiografía'. [Pandemic-Éra University Students: A Radiography]. November 2020 – January 2021. Nuestro Tiempo, (708). https://nuestrotiempo.unav.edu/es/grandes-temas/universitarios-pandemials-unaradiografia. Accessed 25 January 2024.

Korzybski, A. (1933). 'A non-Aristotelian system and its necessity for rigour in mathematics and physics'. Science and Sanity, 1933, pp. 747-761.

Lewis, H. R. (2007). Excellence without a soul: Does liberal education have a future? New York: PublicAffairs.

Luján-Alcaraz, J. (2021). 'Nuevas generaciones de universitarios. Los 'centennials''. [New Generations of University Students: The 'Centennials']. Nueva Revista. (179). pp. 130-141 https://reunir.unir.net/handle/123456789/15159. Accessed 25 January 2024.

Lukianoff, G., & Haidt, J. (2018). La mente mimada: Cómo las universidades y la cultura de la cancelación están criando una generación frágil. Barcelona: Editorial Planeta.

Mejía, J. (2023). 'La generación de cristal: una generación con voz'. [The Crystal Generation: A Generation with a Voice]. Revista de Ciencias Sociales, 29(1), pp. 1-12.

Third Part

Moreira, J. D. C., Macías, S. M., Macías, N. L. M., & Miranda, D. C. (2023). 'Los Millennials y Centennials: cómo se informan y consumen'. [Millennials and Centennials: How They Inform and Consume]. Journal of Science and Research: Revista Ciencia e Investigación, 8(1), pp. 146-158.

Nebrera, M. (2018). La generación de cristal: jóvenes en la era de la hiperconexión. Barcelona: Editorial Deusto.

Organización Panamericana de la Salud. (6 May 2023). 'Se acaba la emergencia por la pandemia, pero la COVID-19 continúa'. [The emergency due to the pandemic is ending, but COVID-19 continues]. PAHO. https://www.paho.org/es/noticias/6-5-2023-se-acaba-emergencia-por-pandemia-pero-covid-19-continua#:~:text=Por%20lo%20tanto%2C%20declaro%20con,amenaza%20para%20la%20salud%20mundial%E2%80%9D. Accessed 25 January 2024.

Pérez-Escoda, A., & Esteban, L. M. P. (2021). 'Retos del periodismo frente a las redes sociales, las fake news y la desconfianza de la generación Z'. [Challenges of Journalism in the Face of Social Media, Fake News, and Generation Z's Distrust]. Revista latina de comunicación social, (79), pp. 67-85.

Prensky, M. (2001). 'Digital natives, digital immigrants'. On the Horizon 9(5): pp. 1-6. http://www.scribd.com/doc/9799/Prensky-Digital-Natives-Digital-Immigrants-Part1 Accessed 24 January 2024.

Prensky, M. (2001b). 'Digital natives, digital immigrants, part 2: Do they really think differently?' On the Horizon 9(6): 1-6. http://www.twitchspeed.com/site/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part2.htm. Accessed 24 January 2024.

Quintero-Flores, C. y Migone-Rettig, D. (2020). '¿Cómo aprende la Gen Z y qué esperan de la educación? Observatorio'. [How does Gen Z learn and what do they expect from education? Observatory]. Instituto para el Futuro de la Educación. https://observatorio.tec.mx/edu-bits-blog/generacion-z-expectativas-educacion/. Accessed 24 January 2024.

Ramírez-Noriega, A., Jiménez, S., Martínez-Ramírez, y., Juárez-Ramírez, R., & Solís Pollorena, J. C. (2022). 'El impacto de la pandemia en estudiantes de nivel secundaria en Sinaloa, México'. [The Impact of the Pandemic on High School Students in Sinaloa, Mexico]. RIDE. Revista Iberoamericana para la Investigación y el Desarrollo Educativo, 12(24), e027. Epub 23 de mayo de 2022. https://doi.org/10.23913/ride.v12i24.1166. Accessed 24 January 2024.

Fourth Part

Rivera-Betancur, J. (2020). 'El peligro de intentar reescribir la historia'. [The danger of attempting to rewrite history.] El Tiempo. https://blogs.eltiempo.com/el-tiempo-del-cine/2020/06/10/el-peligro-de-intentar-reescribir-la-historia/. Accessed 15 January 2024.

Rubio, J. B. M., y Duffaut, A. E. C. (2020). 'Percepción de la exposición en seguridad informática de los niños y adolescentes durante la pandemia COVID-19'. [Perception of Exposure in Cybersecurity of Children and Adolescents during the COVID-19 Pandemic]. Polo del Conocimiento: Revista científico-profesional, 5(1), pp. 37-51.

Rushkoff, D. (2014). Present shock: When everything happens now. New York: Penguin Group.

Sánchez-Espinoza, A. y Castro-Ricalde, D. (2013). 'Cerrando la brecha entre nativos e inmigrantes digitales a través de las competencias informáticas e informacionales'. [Closing the gap between digital natives and immigrants through digital and informational competencies]. Apertura 15(2). http://www.udgvirtual.udg.mx/apertura//index.php/apertura/article/view/413/334. Accessed 18 January 2024.

Sánchez-Riaño, V., Lozano, C. A. A., & Sojo-Gómez, J. R. (2022). 'Centennials: La búsqueda del ser en un universo digital'. [Centennials: The Search for the Self in a Digital Universe]. IROCAMM-International Review Of Communication And Marketing Mix, 5(1), pp. 9-20.

Scolari, C. (2022). 'Repensar las interfaces educativas en tiempos de pandemia'. [Rethinking Educational Interfaces in Times of Pandemic]. En Chibás-Ortiz, F. y Novomisky, S. (Ed). Navegando la infodemia con AMI: alfabetización mediática e informacional. UNESCO y Defensoría del Público. pp. 58-65 https://defensadelpublico.gob.ar/wp-content/uploads/2022/04/navegando-en-la-infodemia-web.pdf Accessed 25 January 2024.

Torralba, F. (2023). La tiranía de la inmediatez: El relativismo, la posverdad y la crisis de la razón. Barcelona: Herder.

Wang, Q.(E)., Myers, M.D. y Sundaram, D. (2013). 'Digital Natives and Digital Immigrants'. Bus Inf Syst Eng 5, pp. 409–419 https://doi.org/10.1007/s12599-013-0296-y

Yuste, B. (2015). 'Las nuevas formas de consumir información de los jóvenes'. [The New Forms of Information Consumption Among Young People]. Revista de estudios de juventud, (108), pp. 179-191. https://www.injuve.es/sites/default/files/2017/46/publicaciones/revista108_14-nuevas-formas-consumir-informacion.pdf. Accessed 18 January 2024.

Fifth Part

Zamora, S. V. (2023). 'El Rol de los Centennials en las Narrativas Transmedia creadas con Teléfonos Inteligentes'. [The Role of Centennials in Transmedia Narratives Created with Smartphones]. Cuadernos del Centro de Estudios en Diseño y Comunicación. Ensayos, (187), pp. 213-231.

Zavodna, L. S. (2022). 'La generación de cristal: ¿más sensibles o más resilientes?'. [The Crystal Generation: More Sensitive or More Resilient?]. Revista de Psicología, 30(1), pp. 1-10.