

# The Pandemic's Repercussions: Tales of Filipino Teachers Working in American Schools Amidst Covid-19

Lanah Rhee Millan<sup>1</sup>; Dr. Remigilda D. Gallardo<sup>2</sup>

<sup>1</sup>(Researcher); <sup>2</sup>(Co-Researcher)

Publication Date: 2025/03/21

**Abstract:** This study explores the personal experiences of Filipino teachers who worked in the United States during the pandemic, shedding light on their challenges, coping strategies, and valuable insights. The focus is on six primary school teachers from Carlsbad, a quaint city in Eddy County, New Mexico. Using a phenomenological approach, the research aims to capture the heartfelt stories of these educators, who were thoughtfully chosen to represent their colleagues across various grade levels within the same district. To gain a deeper understanding of their lived experiences, virtual in-depth interviews were conducted. During these conversations, several important themes surfaced. The teachers discussed the process of "Learning through Technology," as well as the "Technological Stress" they encountered while transitioning to online teaching. They also expressed feelings of being "More Challenged Teachers," highlighting the unique obstacles they faced during this time. Among the specific challenges were problems such as "Intermittent Internet Connections," which disrupted their lessons, as well as feelings of "Lack of Physical Activity and Interactions" and "Language Barriers Online," all of which contributed to their difficulties. To navigate these challenges, the teachers relied on various coping mechanisms. They highlighted the importance of "Considering Professional Development" to strengthen their skills and "Valuing Resilience and Change Management" to weather these unprecedented times. The insights shared by these teachers underscored the importance of "Social Connectedness" and the vital role of adaptation for thriving in the educational landscape. The findings suggest that educational institutions employing Filipino teachers could enhance their experience by assigning seasoned mentors who can offer meaningful support. This guidance could come through training programs or mentoring relationships that encompass academic, technological, cultural, and institutional knowledge, ultimately fostering a more nurturing environment for foreign educators.

**Keywords:** *Lived Experiences, Pandemic, Distance Learning, Filipino Teachers, America.*

**How to Cite:** Lanah Rhee Millan; Dr. Remigilda D. Gallardo (2025). The Pandemic's Repercussions: Tales of Filipino Teachers Working in American Schools Amidst Covid-19. *International Journal of Innovative Science and Research Technology*, 10(3), 3240-3244. <https://doi.org/10.38124/ijisrt/25mar1855>

## I. INTRODUCTION

The past year has certainly been unlike any other, touching every corner of our lives, especially in the realm of education. For Filipino teachers, working conditions were completely upended due to the COVID-19 pandemic. Regardless of their location, they faced immense challenges that increased anxiety about job security and their roles as educators.

Teachers have found themselves juggling not just their professional responsibilities but also the heavy emotional burden brought on by these trying times. With the pandemic's peak still looming, they've been shouldering a great deal of stress and fear, feeling the weight of a global crisis that has affected us all. The pressures of being away from home, combined with pandemic-related stressors, have amplified their struggles and uncertainties.

This study, titled "The Pandemic's Repercussions: Tales Of Filipino Teachers Working In American Schools Amidst Covid-19," aims to explore the heartfelt experiences of public elementary school teachers striving to teach during this chaotic period, specifically in Carlsbad, New Mexico. We want to uncover the challenges they encounter, how they cope with these difficulties, and the valuable insights they gain from their unique situations.

Taking a phenomenological approach, this qualitative research focuses on the authentic experiences of Filipino teachers in American schools, particularly in New Mexico. We're eager to understand how these educators see their realities and professional identities, and how this shapes their teaching journeys. Many dedicated teachers actively seek opportunities that meet both their professional ambitions and personal needs, which is why so many have chosen to work abroad despite the uncertainties that await them.

Ultimately, this study aspires to provide a deeper understanding of the challenges, coping mechanisms, and personal narratives of Filipino teachers navigating the COVID-19 pandemic in Carlsbad, New Mexico. By shining a light on their lived experiences, the research aims to offer insights into how the pandemic has transformed their professional lives and overall well-being, and how they adapt to the unique challenges of teaching in a foreign country. The findings will highlight the resilience and ingenuity of these teachers, revealing the rich complexities of their roles during this extraordinary time in history.

## II. METHOD

In my study, I focused on some key philosophical assumptions to help me analyze and interpret the results. At its core, psychological research can be a powerful tool. It not only helps us explain and predict aspects of human experience but also deepens our understanding of the lives of diverse groups and even challenges the conditions we currently face (Lincoln, Lynham, & Guba, 2013). Creswell (2012) discusses the ontological issue, which has to do with understanding the nature of reality itself.

To explore this topic, I used a qualitative phenomenological research design, which involved asking open-ended questions. Phenomenological research is unique because it seeks to uncover the essence of how participants describe their experiences. To do this, I made a conscious effort to set aside my own experiences and truly listen to the participants (Creswell & Creswell, 2017).

In addition to interviews, I also observed participants through In-Depth Interviews (IDIs). This method, as outlined by Denzin & Lincoln (2000) and referenced by Lee (2007) in Pelobello (2015), combines various interviews, observations, and other forms of interaction to piece together a rich narrative of individual lives. It's a thoughtful inquiry into social or human problems, aiming to present a holistic view and capture detailed insights in a natural setting.

My study took place in the primary schools of Carlsbad, a city in the heart of Eddy County, New Mexico. According to the 2020 census, Carlsbad has a population of 32,238. Positioned at the crossroads of U.S. Routes 62/180 and 285, it's the main city of the Carlsbad-Artesia Micropolitan Statistical Area, which has around 55,435 residents. Carlsbad is beautifully situated along the Pecos River at the edge of the Guadalupe Mountains and serves as a hub for potash mining, petroleum production, and tourism.

I worked with six teacher participants who were crucial to the study. These individuals were purposefully selected because of their experience as Overseas Filipino Workers (OFWs) in education. Each had been teaching in the U.S. for at least a year. The purposive sampling technique I employed—also known as judgment sampling—enabled me to select participants based on specific qualities relevant to my research. Campbell et al. (2020) highlight how this sampling method enhances rigor and trustworthiness in

qualitative research. By carefully matching the sample to the study's aims, I aimed to improve its credibility.

Purposive sampling is particularly well illustrated through the use of key informants. These are individuals who are not only knowledgeable but also reflective and engaged members of the community. They provide valuable insights and have the willingness to share their experiences.

In summary, my study utilized a phenomenological research design to delve deeply into the experiences of Filipino teachers working in Carlsbad, New Mexico, especially during the challenges presented by the COVID-19 pandemic. Through qualitative inquiry, open-ended questions, and in-depth interviews, I sought to capture the essence of their experiences and insights. The purposive sampling approach also helped me identify reflective and knowledgeable key informants who contributed significantly to understanding the challenges they faced and the coping mechanisms they developed while teaching abroad.

## III. RESULTS AND DISCUSSIONS

The experiences of Filipino teachers in public American schools during the pandemic paint a vivid picture of both challenges and triumphs. These educators have shared a mix of positive and negative stories about their shift to distance learning. Many faced considerable hurdles, but in the process, they discovered invaluable lessons that inspire them to keep pushing forward in their teaching careers. While some countries have moved back to in-person classes, others are still figuring out how to return to a sense of normalcy in education. This uncertainty has prompted many schools to rethink how they can be better prepared for any future disruptions. Teachers who were primarily trained for traditional classroom settings found the transition to online teaching quite daunting but necessary to ensure their students continued learning. The pandemic accelerated the adoption of digital platforms, making it clear that attending physical classes is just one of many ways to receive an education in today's tech-savvy world.

Alongside their professional challenges, many teachers found solace in the coping mechanisms they adopted during this tumultuous time. The journey of self-development became crucial for these educators as they took time to reflect on their teaching practices, identifying strengths and areas that needed improvement. For those engaged in international assignments, navigating different educational landscapes demanded they step outside their comfort zones, pushing their personal and professional boundaries.

Filipino teachers, in particular, gained significant insights from their experiences as foreign educators in the United States. The abrupt shift to remote learning tested their skills, attitudes, and knowledge in ways they hadn't anticipated. Skills that once seemed optional, like integrating technology into their teaching, quickly became essential tools for reaching their students. The traditional techniques they relied upon for classroom management fell short in a virtual environment, forcing educators to adapt and develop new

strategies as circumstances evolved week by week. This period underscored the importance of being ready for the unexpected, especially for those considering teaching in new countries. These educators invested considerable effort into planning and preparing themselves for their roles, demonstrating a commitment that goes beyond mere job responsibilities.

Throughout the pandemic, the lived experiences of Filipino teachers surfaced several key themes: Learning through Technology, Technological Stress, Increased Challenges, and Enhancing Online Educational Practices. The challenges they faced were significant, including struggling with poor internet connections, feeling a lack of physical activity and social interaction, and overcoming language barriers in digital settings. Nevertheless, these obstacles spurred teachers to adopt various coping strategies, emphasizing professional development, resilience, and adaptability. The emphasis on social connections became crucial during this time, highlighting its role in helping educators navigate uncertain times.

While the long-term effects of school closures and the transition to distance learning are still unfolding, the insights from these educators are invaluable. Emerging themes like Learning through Technology and the stress associated with it truly reflect the realities Filipino teachers faced during this unique period. Many have come to view technology as an essential element in the teaching and learning process. By providing more educational resources, they can help students keep pace with current learning demands and potentially improve their academic outcomes. However, it's also clear that the shift to online learning has brought significant challenges for teachers.

The difficulties faced by these educators can be neatly grouped into three main areas: inconsistent internet connectivity, limited opportunities for physical activity and social interaction, and obstacles in verbal communication in an online space. Teachers are navigating unprecedented challenges, with unreliable internet connections often impacting their ability to deliver lessons effectively. Their concerns about missed physical activity and social engagement contribute to academic gaps among students, highlighting just how these factors influence learning outcomes.

## REFERENCES

- [1]. Abdullah and Ismael, (2019) Al Lily, A. E., Ismail, A. F., Abunasser, F. M., and Alhajhoj, R. H. (2020). Distance education as a response to pandemics: Coronavirus and Arab culture. *Technol. Soc.* 63:101317. doi: 10.1016/j.techsoc.2020.101317
- [2]. Adopt A Classroom.org (2022). State of Teaching Statistics 2022, online article, 10 S 5th St Ste 835 Minneapolis, MN 55402, Published on April 12, 2022 by Devon Karbowski <https://www.adoptaclassroom.org/2022/04/12/state-of-teaching-statistics-2022/>
- [3]. Aperribai, (2020), Arias, W. L., Huamani, J. C., and Ceballos, K. D. (2019). Síndrome de Burnout en profesores de escuela y universidad: un análisis psicométrico y comparativo en la ciudad de Arequipa. *Propósitos Representaciones* 7, 72–91. doi: 10.20511/pyr2019.v7n3.390
- [4]. Baird, K. (2020, May 19). Caring for Educators is the First Step in Serving Students -. *THE Journal*. <https://thejournal.com/articles/2020/05/19/caring-for-educators-is-the-first-step-in-serving-students.aspx>
- [5]. Besser, A., Lotem, S., and Zeigler-Hill, V. (2020). Psychological Stress and Vocal Symptoms Among University Professors in Israel: Implications of the Shift to Online Synchronous Teaching During the COVID-19 Pandemic. *J. Voice Official J. Voice Foundat.* S0892-1997, 30190–30199. doi: 10.1016/j.jvoice.2020.05.028
- [6]. Bredo, E. (1994). Reconstructing educational psychology: Situated cognition and Deweyan pragmatism. *Educational Psychologist*, 29 (1), 23-35.
- [7]. Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- [8]. Bruner, J. (1985). Models of the Learner. *Educational Researcher*, 14(6), 5–8. <https://doi.org/10.3102/0013189X014006005>
- [9]. Bustos-Orosa, M. A. (2008). Inquiring into Filipino Teachers' Conceptions of Good Teaching: A Qualitative Research Study. *Asia-Pacific Education Researcher (De La Salle University Manila)*. Dec2008, Vol. 17 Issue 2, p157-171. 15p. Retrieved from <https://web.p.ebscohost.com/abstract>
- [10]. Cachón-Zagalaz, J., Sánchez-Zafra, M., Sanabrias-Moreno, D., González-Valero, G., Lara-Sánchez, A. J., and Zagalaz-Sánchez, M. L. (2020). Systematic review of the literature about the effects of the COVID-19 pandemic on the lives of school children. *Front.Psychol.* 11:2457.doi:10.3389/fpsyg.2020.569348
- [11]. Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661. <https://doi.org/10.1177/1744987120927206>
- [12]. Cavanaugh, C., K. J. Gillan, J. Kromrey, M. Hess, and R. Blomeyer (2019). The effects of distance education on K–12 student outcomes: A meta-analysis. Naperville, Ill.: Learning Point Associates. <http://www.ncrel.org/tech/distance/index.html>
- [13]. Chabbott, C., & Sinclair, M. (2020). SDG 4 and the COVID-19 emergency: Textbooks, tutoring, and teachers. PROSPECTS. <https://doi.org/10.1007/s11125-020-09485-y>
- [14]. Cullinane, C., & Montacute, R. (2020). COVID-19 and Social Mobility Impact Brief #1: School Shutdown. 11

- [15]. Creswell, J. W. (2007). *Qualitative inquiry and research design*. Second Edition. California: Sage Publications
- [16]. Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications
- [17]. DeBord, K.S., Aruguete, S. & Muhlig, P. (2018). Are computer-assisted teaching methods effective? *Teaching of Psychology* 31 (1):65–68.
- [18]. De la Fuente, J., Peralta-Sánchez, F. J., Martínez-Vicente, J. M., Sander, P., Garzón-Umerenkova, A., and Zapata, L. (2020). Effects of Self-Regulation vs. External Regulation on the Factors and Symptoms of Academic Stress in Undergraduate Students. *Front .Psychol.* 11:1773. doi: 10.3389/fpsyg.2020.01773
- [19]. Dewey, J. (1938). *Experience and Education*. Free Press.
- [20]. DeWitt, P. (2020, April 26). 6 Reasons Students Aren't Showing Up for Virtual Learning. *Education Week - Peter DeWitt's Finding Common Ground*. [http://blogs.edweek.org/edweek/finding\\_common\\_ground/2020/04/6\\_reasons\\_students\\_arent\\_showing\\_up\\_for\\_virtual\\_learning.html?cmp=SOC-SHR-FB](http://blogs.edweek.org/edweek/finding_common_ground/2020/04/6_reasons_students_arent_showing_up_for_virtual_learning.html?cmp=SOC-SHR-FB)
- [21]. Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). COVID-19 and student learning in the United States: The hurt could last a lifetime. *McKinsey & Company*, 9.
- [22]. Eachempati, P., & Ramnarayan, K. (2020). Ten maxims for out of class learning to outclass the academic challenges of COVID-19. *MedEdPublish*, 9. <https://doi.org/10.15694/mep.2020.000089.1>
- [23]. Fagell, P. L. (2020). Career Confidential: Teacher wonders how to help students during coronavirus shutdown: Phi Delta Kappan. <https://doi.org/10.1177/0031721720923799>
- [24]. Fedynich, L. V. (2014). Teaching beyond the classroom walls: The pros and cons of cyber learning. *Journal of Instructional Pedagogies*, 13, 1. <https://www.aabri.com/manuscripts/131701.pdf>.
- [25]. Gewin, V. (2020). Five tips for moving teaching online as COVID-19 takes hold. *Nature*, 580(7802), 295–296. <https://doi.org/10.1038/d41586-020-00896-7>
- [26]. Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- [27]. Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *EDUCAUSE Quarterly*, 4. <https://er.educause.edu/articles/2008/11/asynchronous-and-synchronouslearning>.
- [28]. Jakubowski TD, Sitko-Dominik MM (2021) Teachers' mental health during the first two waves of the COVID-19 pandemic in Poland. *PLoS ONE* 16(9): e0257252. <https://doi.org/10.1371/journal.pone.0257252>
- [29]. Johnson, A. V., La Paro, J., & Crosby, D. A. (2017). Early practicum experiences: Preservice early childhood students' perceptions and sense of efficacy. *Early Childhood Education Journal*, 45, 229–236
- [30]. Kim, L. E., and Asbury, K. (2020). 'Like a rug had been pulled from under you': The impact of COVID-19 on teachers in England during the first six weeks of the UK lockdown. *Br. J. Educ. Psychol.* 90, 1062–1083. doi: 10.1111/bjep.12381
- [31]. Kaden, U. (2020). COVID-19 School Closure-Related Changes to the Professional Life of a K– 12 Teacher. *Education Sciences*, 10(6), 165. <https://doi.org/10.3390/educsci10060165>
- [32]. Korkmaz S.& Mirici, İ. H. (2021): Converting a conventional flipped class into a synchronous online flipped class during COVID-19: university students' self-regulation skills and anxiety, *Interactive Learning Environments*, DOI: 10.1080/10494820.2021.2018615
- [33]. Lavis, V. (2010). Multiple researcher identities: Highlighting tensions and implications for ethical practice in qualitative interviewing. *Qualitative Research in Psychology*, 7, 316– 331. doi:10.1080/14780880902929506
- [34]. Li, Q., Miao, Y., Zeng, X., Tarimo, C. S., Wu, C., and Wu, J. (2020). Prevalence and factors for anxiety during the coronavirus disease 2019 (COVID-19) epidemic among the teachers in China. *J. Affect. Dis.* 277, 153–158. doi: 10.1016/j.jad.2020.08.017
- [35]. Lincoln, Y. S. & Guba, E. G. (2005). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- [36]. Mala, D. (2020) <https://www.bangkokpost.com/thailand/general/1919728/filipinoteachersfeel-the-pinch>
- [37]. Manches, A., & Plowman, L. (2017). Computing education in children's early years: A call for debate. *British Journal of Educational Technology*, 48(1), 191–201.
- [38]. McPake, J., Plowman, L., & Stephen, C. (2013). Preschool children creating and communicating with digital technologies in the home. *British Journal of Educational Technology*, 44(3), 421–431.
- [39]. Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, 14(2), 129–135.
- [40]. Moran, D. (2010). *Introduction to Phenomenology*. London and New York: Routledge.
- [41]. Nadihan, M.B. & Cabauatan, L. I. (2021). Practically ingenious teaching: instructional behavior of teacher education faculty members in a Philippine public state university amidst Covid-19 pandemic. *International Journal of Education, Technology and Science*, 1(4), 102–118.
- [42]. National Association for the Education of Young Children (NAEYC). (2009). NAEYC standards for early childhood professional preparation, position statement. <https://www.naeyc.org/files/naeyc/file/positions/ProfPrepStandards09.pdf>.
- [43]. National Association for the Education of Young Children (NAEYC). (2012). *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth Through Age Washington DC*. [https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS\\_technology\\_WEB.pdf](https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_WEB.pdf)

- [44]. Ormston, R., Spencer, L., Barnard, M., & Snape, D. (2014). The foundations of qualitative research. In J. Ritchie, J. Lewis, C. M. Nicholls, & R. Ormston (Eds.), *Qualitative research practice: A guide for social science students & researchers* (2nd ed., pp. 1-26). Los Angeles, CA: Sage.
- [45]. Plowman, L., & McPake, J. (2013). Seven myths about young children and technology. *Childhood Education*, 89(1), 27–33.
- [46]. Polito, Theodora. (2005). Educational theory as theory of culture: A Vichian perspective on the educational theories of John Dewey and Kieran Egan. *Educational Philosophy and Theory*, 37(4).
- [47]. Prado-Gascó, V., Gómez-Domínguez, M. T., Soto-Rubio, A., Díaz-Rodríguez, L., and Navarro-Mateu, D. (2020). Stay at Home and Teach: A Comparative Study of Psychosocial Risks Between Spain and Mexico During the Pandemic. *Front. Psychol.* 11:566900. doi: 10.3389/fpsyg.2020.566900
- [48]. Reich, J., Buttner, C. J., Fang, A., Hillaire, G., Hirsch, K., Larke, L., Littenberg-Tobias, J., Moussapour, R. M., Napier, A., Thompson, M., & Slama, R. (2020). Remote Learning Guidance From State Education Agencies During the COVID-19 Pandemic: A First Look. EdArXiv. <https://doi.org/10.35542/osf.io/437e2>
- [49]. Riel, M. & L. Polin (2019). Online communities: Common ground and critical differences in designing technical environments. In *Designing for virtual communities in the service of learning*, ed. S. A. Barab, R. Kling, and J. H. Gray, 16–50. Cambridge, Mass.: Cambridge University Press.
- [50]. Ryan, R. (2018). The effects of Web-based social networks on student achievement and perception of collaboration at the middle school level. PhD diss., Touro University International, City, Calif.
- [51]. Schafer, K. (2020). Impact of COVID-19 on public psychological state and also the buffering effect of a way of coherence. <https://www.karger.com/Article/FullText/510752>
- [52]. Schroeder, V. M., & Kelley, M. L. (2010). Family environment and parent-child relationships as related to executive functioning in children. *Early Child Development and Care*, 180(1), 1285–1298.
- [53]. Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature reviews of definitions of online learning (1988–2018). *American Journal of Distance Education*, 33(4), 289–306.
- [54]. Smith, D. W. (2013). An extensive introductory discussion of the principal works of the classical phenomenologists and several other broadly phenomenological thinkers. London and New York: Routledge.
- [55]. Stephen, C., & Plowman, L. (2008). Enhancing learning with information and communication technologies in pre-school. *Early Child Development and Care*, 178(6), 637–654.
- [56]. Van Lancker, W., & Parolin, Z. (2020). COVID-19, school closures, and child poverty: A social crisis in the making. *The Lancet Public Health*, 5(5), e243–e244. [https://doi.org/10.1016/S2468-2667\(20\)30084-0](https://doi.org/10.1016/S2468-2667(20)30084-0)
- [57]. Vu, C.-T., Hoang, A.-D., Than, V.-Q., Nguyen, M.-T., Dinh, V.-H., Le, Q.-A. T., Le, T.-T. T., Pham, H.-H., & Nguyen, Y.-C. (2020). Dataset of Vietnamese teachers' perspectives and perceived support during the COVID-19 pandemic. *Data in Brief*, 31, 105788. <https://doi.org/10.1016/j.dib.2020.105788>
- [58]. Walters, A. (2020). Inequities in access to education: Lessons from the COVID-19 pandemic. *The Brown University Child and Adolescent Behavior Letter*, 36(8), 8–8. <https://doi.org/10.1002/cbl.30483>
- [59]. Wang, G., Zhang, Y., Zhao, J., Zhang, J., & Jiang, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet*, 395(10228), 945–947. [https://doi.org/10.1016/S0140-6736\(20\)30547-X](https://doi.org/10.1016/S0140-6736(20)30547-X)
- [60]. Wedenoja, L. (2020). What to expect when you weren't expecting online classes. *USA Today Magazine*, 148(2900), 20–22.
- [61]. Yilmaz, A. B. (2019). Distance and face-to-face students' perceptions towards distance education: A comparative metaphorical study. *Turkish Online Journal of Distance Education-TOJDE*, 20(1), 1302–6488. <https://files.eric.ed.gov/fulltext/EJ1201959.pdf>.
- [62]. Yurt, Ö., & Cevher-Kalburan, N. (2011). Early childhood teachers' thoughts and practices about the use of computers in early childhood education. *Procedia Computer Science*, 3, 1562–1570.