International Journal of Social Science and Human Research

ISSN (print): 2644-0679, ISSN (online): 2644-0695

Volume 07 Issue 08 August 2024

DOI: 10.47191/ijsshr/v7-i08-59**,** Impact factor- 7.876

Page No: 6303 - 6314

Use of Digital Platforms in Teaching Kindergarten Learners during the Covid-19 Pandemic

Ramil P. Manguilimotan[1], Bernadith O. Gabriel[2], Elsie F. Pontrivida[3], Ivy Mae T. Gajo[4], Gengen G. Padillo[5]

[1,2,3,4,5]Cebu Technological University-Main Campus.

[1]https://orcid.org/0000-0002-5237-5555

[5]https://orcid.org/0000-0002-3591-3059 scopus ID 57221751421

ABSTRACT: The continuity program of the education sector of the Philippines aims to continue learning despite all the pandemic restrictions. This research determined the use of digital platforms for the learning application of kindergarten learners during the COVID-19 pandemic to the identified private schools in the City of Naga Division using a mixed research method employing the quantitative and qualitative research design. Respondents answered an adapted survey questionnaire and an interview guide was used to gather the qualitative data. Gathered data were treated using frequency, percentage, weighted mean, chi-square, and thematic analysis. The study reveals that most teacher respondents aged above 26 years old were all females, all married, and attained the highest educational attainment up to the master's level. The teachers' perceptions of using digital platforms in the learning environment, classroom activities, learners' applications, and assessments revealed that these digital platforms were moderately useful. Moreover, no significant relationship exists between the respondents' profiles and the extent of the use of digital platforms in teaching kindergarten learners. Finally, the issues and concerns the respondents encountered in using digital platforms in teaching kindergarten learners during the COVID-19 pandemic gathered during the interview include slow internet connection, lack of ICT facilities in school, and lack of teacher training. Based on these findings, it is recommended that the action plans crafted for each school be implemented, with a focus on improving internet connectivity, providing ICT facilities, and enhancing teacher training.

KEYWORDS: Early Childhood Education, digital platforms, distance learning, mixed method, Cebu

1. INTRODUCTION

Education just took a massive turn towards distance learning. Parents and guardians are responsible for being integral to a child's learning environment (Gui et al., 2021; Pastore & Luder, 2021). Digital platforms offer learners the accessibility of time and place and allow them to attend classes from their homes or any location they like (Khlaif et al., 2021; Maity et al., 2021; Sarker et al., 2019).

In the new normal education, technology plays an important role in teaching and learning process (Haleem et al., 2022). Digital platforms, such as Google Classroom, Zoom, Edmodo, and others, are effective for online learning *(Halil, 2020; Lestari et al., 2020; Manguilimotan et al., 2024)* . Teachers use them as part of their instruction to make learning more exciting and interactive for learners. They also offer teachers an efficient way to deliver lessons to their learners.

Online learning programs are taking part in the creation of digital platforms. These are widely promoted to replace traditional face-to-face contact learning. According to *Barron et al. (2022)*, digital technology has the edge of proving its efficacy in enhancing teacher engagement with students in the virtual setting through improved access to content, network, and data. These are widely integrated into the regular education system, but challenges are considered with this remote and blended learning.

Despite the crisis produced by COVID-19 in the Philippines that brought new challenges and changes to our Department of Education (DepEd) in both private and public schools with the transition to distance learning, moving from face-to-face classes to a completely modular and digital learning environment changes established routines of everyone at home *(Cronje, 2022; Mpungose, 2020)*. The pandemic has forced the education system to find alternatives, resulting in the unprecedented use of these online learning platforms *(Chukwuemeka et al., 2021)*. The overwhelming consequences of the global crisis made way for an extraordinary time of learning diversely. Teachers enhanced their versatility in how they facilitate learning in these challenging times *(Kaarakainen & Saikkonen, 2021)*.

The challenges were that teachers and educators attended trainings and webinars to substantially fulfill the purpose of continuing education despite the adversities they were battling. From one day to the next, they have found themselves managing

virtual classrooms, communicating with their learners over digital platforms, and learning by doing as they provide education from a distance. The school administration faced difficulties in keeping teachers up-to-date with current technology development and, more importantly, in understanding how the teachers can use the technology innovatively that makes a difference in learners' interactions. It takes great passion, patience, and a sense of responsibility for teachers in kindergarten to teach their learners (Salehi Najafabadi, 2023). Teachers must guide them from the most basic and simple things in learning language, from letter recognition and phonic awareness to syllabic reading. They must find ways to attract and engage their `attention and interest in learning a language. In the study of Schaefer et al. (2020), the sudden shift to online learning has presented fresh opportunities and unexpected challenges to young students and their parents. Under such circumstances, it is necessary to examine the beliefs and attitudes toward the drastic shift in learning.

Numerous studies have been conducted about using digital platforms to teach kindergarten learners about distance learning during COVID-19. However, the scope is for a general perspective in education throughout other parts of the world. Naturally and expectedly, parents and teachers might have encountered difficulties and obstacles in this new learning scheme. Hence, this unique scenario provided time to understand the norms and beliefs around young children's online learning at home.

With the emergence of the pandemic, schools were forced to accelerate their adoption of distance learning. The private schools in the City of Naga choose to have an online class and use digital platforms for the benefit and safety of children and teachers. Using and implementing digital platforms with kindergarten learners is crucial to positively shaping children's educational prospects. Through digital platforms, teachers can use interactive activities to encourage learners to be interested in learning since technology makes learning more enjoyable and exciting (Ullah & Anwar, 2020). As an addition to what their children learn in class, parents can also investigate internet learning resources with their children. Digital platforms provide enjoyment for children and numerous benefits in developing a child's well-being (Mourlam et al., 2020). According to Akinyemi et al. (2022) and Rakha (2023), everyone benefits from the digitization of learning. This pandemic period helped teachers, parents, and pupils embrace the online training system.

Furthermore, this study aims to describe the kindergarten teachers' respective issues and concerns about using digital platforms for distance learning, propose an action plan to address all the concerns and give immediate solutions to these problems that may hinder effective learning in our kindergarten pupils.

2. LITERATURE REVIEW

This study was anchored by the Constructivist Theory of Learning of John Dewey, Ivan Pavlov's Behaviorist Learning Theory, and George Siemens's connectivism. This study was also supported on legal bases such as Republic Act No. 10157, Kindergarten Educational Act of 2012, Republic Act No. 10533, Enhance Basic Education Act of 2013, and DepEd Order No. 12 Series of 2020 Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in the Light of the COVID-19 Public Health Emergency.

Constructivism Theory of Learning by John Dewey postulates that constructivism implies that learners are encouraged to construct their knowledge instead of copying it from an authority, be it a book or a teacher, in realistic situations instead of decontextualized, formal situations such as propagated in traditional textbooks, and together with others instead of on their own *(Arifah & Marzuki, 2021).*

Most students will prefer constructivist methods as the current trend is toward student-centered learning. Using constructivist approaches to introduce Digital Learning as a distance learning concept is best. Modern educational technology can promote successful practices through Digital Learning, which helps identify and apply it to the learning process. Educational technologies are developing rapidly, and this shift will bring about more beneficial results. Modern social practices require students to think, construct knowledge, and learn using technology from a constructivist perspective. Educational technology applied in distance learning must shift theoretical foundations from behaviorism to constructivism (Gunawardhana, 2020).

Due to the pandemic, online learning was being carried out by all levels of education through information technology. Learning is done online. Constructivism is also essential for understanding learning objectives and creating learning-supportive environments. The constructivist theory of learning holds that in order to forge a special connection while acquiring knowledge, people need to have a base in knowledge, experience, and interests. Both teachers and students contribute to the creation and facilitation of knowledge. In order to be accountable for their actions, students are urged to deepen their comprehension and articulate their viewpoints (Suhendi et al., 2021).

Another theory is Ivan Pavlov's Behaviorist Learning Theory. In the study of Baulo and Nabua (2019) behaviorist theorists contend that environmental factors intentionally mold behavior and that intended behavior can result from design. To put it another way, external factors—rather than our own free will—determine our actions. The behavioral learning theory is critical in understanding how to motivate and help students in the classroom. Teachers impart knowledge to students when they respond appropriately to stimuli. When it comes to behavioral learning, students are passive participants because teachers provide the knowledge as a component of stimulus-response. Behaviorism is a tool used by educators to model for children how to respond

to and react to specific stimuli (Clark, 2018). This must be done repetitively to remind students what behavior a teacher is looking for regularly.

George Siemens' Connectivism Learning Theory describes connectivism as a new theory of learning that adjusts to the Internet era and the information society (Herlo, 2017). The basic viewpoints of this theory are its concepts and cognition about knowledge, learning, curriculum, teachers, students, and interaction, which subvert traditional learning theories. The designed model takes it very seriously since student safety is paramount, especially in primary education. ICT and social media in general promote the creation and exchange of information, not just on the Internet (Homanova et al., 2018).

There are three commonly known learninThree commonly known learning theories g theories that emerged during the 20th century: constructivism, behaviorism, and connectivism. In constructivism, learning is an active process in which students create new notions or ideas. Behaviorism concentrates solely on the elements of learning that can be observed objectively.

Technology plays a fundamental role in integrating connectivism, where students will discover knowledge using strategies and skills to act or apply solutions to simulated or real cases, discovering, transforming, creating, or applying competencies. (Madzalan et al., 2021).

In response, DepEd issued an Order No. 12, s. 2020 of 19 June 2020, entitled "Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in Light of Public Health Emergency COVID-19," which presents the Department's Basic Education Learning Continuity Plan (BE-LCP), a package of educational interventions that will respond to primary education. This amendment states that the COVID-19 pandemic challenges various sectors, especially regarding fundamental rights. With physical distancing and community quarantine being among the measures to contain COVID-19, primary education is among the sectors profoundly affected as schools and community learning centers are closed for the physical conduct of classes. Since face-to-face classes are not yet allowed, the DepEd will implement Blended/Distance learning wherein the combination of the various distance learning modalities such as printed modules, offline digital modules, online, and TV and Radio-based instruction will be used by students and teachers when classes formally open.

Kindergarten education offers equitable opportunity for all children to receive obligatory kindergarten education, which effectively fosters the stimulation of physical, social, cognitive, and emotional abilities as well as the formation of values, so appropriately preparing five-year-old Filipino children for Grade One.This is stated in the Kindergarten Education Act of 2012, Republic Act No. 10157, K–12 law on the Enhanced Basic Education Act of 2013, or Republic Act No. 10533. Kindergarten education is vital to the development of the Filipino child, as it is the stage when the young learners absorptive capacity is at its sharpest according to the aforementioned legislation.

The K–12 Republic Act No. 10533, also known as the Enhanced Education Act of 2013, has been put into effect by the DepEd. It aims to enhance the Philippines' basic education system by making curricular improvements and increasing the length of basic education from 10 to twelve years. The K–12 programs, also known as the new curriculum, are a historic reform that puts the nation's basic education on pace with worldwide norms. Reexamined is the reform's history, along with its legal foundations, key components, pertinent directives, and consequences for postsecondary education.There are questions regarding how the reform will be implemented at first, and everyone involved is urged to make it work for Filipino students, especially the instructors who serve as the main agents of education.

The Enhanced Basic Education Act of 2013.The goals of Redillas' (2020) research are to increase student learning programs, enhance access to high-quality education, develop people who can give back to their communities, and increase the Filipino workforce's competitiveness abroad. Globalization-related challenges, such as poverty alleviation, sustainable development, and peaceful coexistence, have led to an increasing demand for relevant curricular modifications that prioritize a student-centered, culturally responsive, inclusive, and integrative approach. The Department of Education has issued curriculum guidelines that show how the younger Filipinos are expected to face the twenty-first century, even if it is unclear how these revisions would affect the cohort of students going through the full K–12 system.

Amidst the pandemic, one affected area is education worldwide, including the Philippines. It changed dramatically from faculty lecturing in a classroom setting that has been the backbone of traditional academic education to distance learning, where the students continue their education at home. In some research during this pandemic, many students have been facing problems such as internet connectivity, overload of lesson activities, financial-related issues, lack of resources for online classes, and mental health-related problems (Fulgencio et al., 2021).

During the COVID-19 epidemic, digital tools like Zoom, WhatsApp, Google Classroom, Schoology, and Edmodo have had a favorable and effective impact on the quality of online lectures. By choosing and combining digital platforms to minimize these barriers while keeping quality and decreasing the essence of online courses, it is possible to get over signal limits that are less consistent and wasteful of quotas during online lectures (Lestari, 2021). Several of the issues facing the crisis are seen to be solved by digital technologies.

Young children's daily life now involve smart mobile devices like tablets and their accompanying software (apps). Digital educational activities that are well-designed can be a powerful tool for successful and efficient kindergarten instruction. Through

activities that are relevant to their current interests and real-life scenarios in learning domains, these tools enable youngsters to effectively acquire new knowledge and make use of new learning platforms (Papadakis et al., 2021).

Google Classroom, WhatsApp, and Zoom have received positive feedback regarding content comprehension, enhancing the capacity to use a variety of digital learning platforms, providing more engaging instructional materials, ranking digital platforms according to English language proficiency, and impeding the use of digital platforms. Digital platform usage was found to be hampered by even slow internet connectivity and lengthy, ambiguous learning instructions (Meier, 2021).

With the foundation of learning theories and the support of legal bases, the researchers developed a study about using digital platforms in teaching kindergarten learners at the three identified schools in the City of Naga, Cebu.

3. PURPOSE OF THE STUDY

This research determined the use of digital platforms in teaching kindergarten learners in the identified private schools in the City of Naga Division during the COVID-19 pandemic as the basis for action plans. Specifically, it sought answers to questions about the profile of teacher respondents; the extent of the use of digital platforms among Kindergarten teachers in terms of learning environment, classroom activities, learner's application, and learner's assessment; the relationship between the respondents' profiles and extent of the use of digital platforms in teaching kindergarten learners during the COVID-19 pandemic; and the issues and concerns encountered by the kindergarten teachers in the use of digital platforms in teaching Kindergarten learners.

4. RESEARCH METHODOLOGY

This section presents the procedures observed in this study, including its research design, research flow, research environment, respondents involved, the instrument used, data gathering procedure, data treatment, and scoring procedure used to arrive at a reliable result.

4.1 Research Design

This study used a quantitative-qualitative design to determine the effectiveness of using digital platforms to teach Kindergarten learners during the COVID-19 pandemic in the three identified private schools.

Descriptive correlation is a statistical method to determine and describe the relationship between two or more variables. It does not imply causation but identifies whether and to what extent variables are related. Descriptive correlation aims to quantify the relationship between the respondents' profiles and the extent of the use of digital platforms in teaching kindergarten learners during the COVID-19 pandemic. The following statistical tools were used to obtain the quantitative data results: frequency, percentage, weighted mean, Chi-Square. Interview data were coded, transcribed, and analyzed through thematic analysis.

4.2 Research Respondents

The respondents were the Kindergarten Teachers of the Exceed Learning Center, Academia de San Pedro Calungsod, and Professional Academy of the Philippines during the academic year 2020-2021. A total of 35 teachers served as the respondents of this study, which was selected using universal sampling.

4.3 Research Instrument

An adapted survey questionnaire was utilized to gather the quantitative data. The instrument was composed of three parts. Part one was a set of questions that determined the profile of the respondents based on their age, marital status, highest educational attainment, and training experience. Part two was the questionnaires that they needed to rate based on the learning progress of their learners using digital platforms. Part three was the statements describing the challenges, problems, and issues they encountered in their school using digital platforms in teaching. An interview guide was used to gather data about kindergarten teachers' issues and concerns when using digital platforms to teach kindergarten learners.

4.4 Data Collection Procedure

First, the research instrument was prepared and submitted to the adviser for editing and approval. After the approval, the researchers asked permission from the principals of the three private schools through a letter request signed by the researchers, which the thesis adviser and the Dean of the College noted.

After the approval, the researchers distributed the survey questionnaire to the teachers from the three private schools in the City of Naga Division. They gave them a week to answer it. All information collected in this study will be treated confidentially and for research purposes only. An informal interview was conducted randomly with the selected respondents to validate the data gathered.

Ethical Considerations. All information collected in this study was treated confidentially. While school districts made results available, the respondents were guaranteed that neither they nor their school would be identified in any report of the study's results. Participation in this study is voluntary, and any individual may withdraw at any time.

Data Privacy. The National Privacy Commission's mandate to oversee and carry out the Data Privacy Act of 2012, as well as to keep an eye on and guarantee adherence to data protection regulations, was followed in this study.The researchers enforced the Data Privacy Act and adopted accepted international principles and standards for personal data protection. They safeguard every

individual's fundamental human right to privacy while ensuring the free flow of information for innovation, growth, and national development. Additionally, the researchers made sure that commercial and public sector information and communications technologies safeguard and secure personal data.

5. RESULTS AND DISCUSSION

This section presents and discusses the gathered data regarding the use of digital platforms in teaching Kindergarten learners in the identified schools in the City of Naga Division during the COVID-19 pandemic.

5.1. Profile of the Respondents

Table 1 presents the data on the profile of the respondents regarding their age, gender, civil status, and highest educational attainment.

Table 1. Profile of Respondents (n = 35)

	Frequency	Percentage
A. Age [in years]		
21 - 25	3	8.57
26 - 30	8	22.86
31 - 35	8	22.86
36 - 40	8	22.86
More than 40	8	22.86
Mean : 35.49		
StDev : 8.06		
B. Gender		
Female	35	100.00
C. Civil Status		
Single	14	40.00
Married	20	57.14
Widow	1	2.86
D. Highest Educational Attainment		
College Graduate	8	22.86
Masters Level	27	77.14

Age. The data in Table 1 shows that the teachers' age distribution was almost equally distributed: 26-30 (8,22.86%), 31-35 (8,22.86%), 36-40 (8,22.86%), and more than 40 (8,22.86%). The lowest number of teachers were teachers aged 21-25 (3,8.57%). On the other hand, the respondents were all females (35,100%).

Due to their greater experience, older educators may have a plethora of pedagogical expertise and adept classroom management techniques.

However, their familiarity and comfort with digital platforms may vary. This demographic may require targeted professional development to enhance digital literacy and adaptability to new technologies. In other words, experienced teachers often deeply understand effective teaching methods. Integrating digital platforms can leverage their expertise to create innovative and engaging learning experiences for kindergarten students. Using technology effectively can lead to enhanced student motivation and learning outcomes *(Wekerle et al., 2022).*

Gender. Moreover, the gender composition of teachers can influence classroom dynamics and interactions. Having all female teachers may create a nurturing and friendly classroom that encourages open communication and cooperation among students. It can also influence how discipline and conflict resolution are approached within the classroom. (Boström et al., 2020)

According to Paula and Grinfelde (2018), older teachers can serve as valuable role models and mentors for younger colleagues regarding traditional and digital teaching practices. Their experience and leadership can support collaborative learning environments where teachers share best practices and support each other's professional growth.

Civil Status. The respondents were categorized as single, married, and widow. The majority of the respondents were married (20,57.14%), followed by singles (14,14.40%), and only very few were widowed (1,2.86%).

Married teachers can be positive role models for students, demonstrating healthy relationships, teamwork, and interpersonal skills. This can contribute to students' social and emotional development and understanding of positive adult relationships. Also, married teachers may have a deeper understanding of family dynamics (Umberson & Thomeer, 2020), which can influence their interactions

with students and families. They may be more empathetic towards students' familial situations and better equipped to support them academically and emotionally.

Highest Educational Attainment. Most respondents (27,77.14%) already had master's units, and only a few (8, 22.86%) completed their bachelor's degrees.

Teachers with master's units have pursued additional education beyond their bachelor's degree, indicating a commitment to professional development and a deeper understanding of their subject areas or specialization. This advanced knowledge can enhance their teaching effectiveness and instructional strategies. Pursuing master's units demonstrates a commitment to continuous learning and professional growth (Burns, 2020). It can provide opportunities for career advancement within the teaching profession, such as leadership roles, curriculum development, or specialized instructional positions.

5.2 Extent of the Use of the Digital Platforms Among the Kindergarten Teachers

Tables 2 and 6 present the results on the perceived extent of using the digital platform among the Kindergarten teachers. In this study, the extent of the use of the digital platform is categorized into a] Learning Environment, b] Classroom Activities, c] Learner's Application, and d] Learner's Assessment.

Table 2. Extent of the Use of the Digital Platform as Perceived by the Respondents as to the Learning Environment

	Indicators	Mean	Interpretation
A.	**Learning Environment**		
1.	Schools are spacious and have internet connection or complete digital platforms necessary for distance learning.	2.89	Moderately useful
2.	2. The digital materials that I prepared are based on the learning needs of the pupils in acquiring reading skills	3.20	Moderately useful
3.	3. I consider schematic aspects of the learner in preparing the digital learning resources	2.94	Moderately useful
4.	4. I consider the words used, terms or actions that are understandable by the learners in creating digital learning resources	3.00	Moderately useful
5.	The digital learning resources that I created could enhance the learning interest of early learners in the simplest yet effective way.	2.94	Moderately useful
	Aggregate Mean	**2.99**	**Moderately useful**

Range: 1.00-1.74 Not useful; 1.75-2.49 Less useful; 2.50-3.24 Moderately useful; 3.25-4.00 Very useful

Table 2 shows that the overall aggregate mean of the three identified private schools on the extent of use of digital platforms as perceived by the respondents as a learning environment was moderately used, with an aggregate mean of 2.99.

This could mean that learners might use technology more for social or entertainment purposes rather than for learning (Lai et al., 2018). On the one hand, Sarker et al., (2019) share the view that digital learners need help using technology effectively for learning. Also, Winter et al. (2021) contends that students might need to learn how to use technology for learning. Although they already possess a certain level of digital literacy, they should be able to learn to use technology for learning quickly. Since this is still new for our learners, they need careful guidance.

Table 3. Extent of the Use of the Digital Platform as Perceived by the Respondents As to Classroom Activities

	Indicators	Mean	Interpretation
B.	**Classroom Activities**		
1.	The digital learning activities I employ allow early learners to utilize their prior learning.	3.09	Moderately useful
2.	The digital learning activities that I employ allow learners to manifest their innate behavior.	3.17	Moderately useful
3.	The digital learning activities that I employ inculcate the essence of cooperation and socialization among early learners.	3.06	Moderately useful
4.	The digital learning activities that I employ are geared towards literacy and are appropriate for the age of the learners.	3.09	Moderately useful
5.	The digital learning activities that I employ allow self-expression of the early learners using the language that they are comfortable with.	3.09	Moderately useful
	Aggregate Mean	**3.10**	**Moderately useful**

Range: 1.00-1.74 Not useful; 1.75-2.49 Less useful; 2.50-3.24 Moderately useful; 3.25-4.00 Very useful

Table 3 shows that the overall aggregate mean of the three identified private schools on the extent of use of digital platforms as perceived by the respondents as to class activities was moderately used, with an aggregate mean of 3.10.

According to a study by Lauricella et al. (2020), since kindergarten is still in a very early stage of education, it is more important than ever to support students' understanding of how to be safe, responsible, and cooperative digital media users. This is because technology access and use are growing in early childhood classrooms and at home. Digital technology has become an integrated part of education and is changing how today's students learn. (Collins & Halverson, 2018)

Table 4. Extent of the Use of the Digital Platform as Perceived by the Respondents As to the Learner's Application

	Indicators	Mean	Interpretation
C.	**Learner's Application**		
1.	My learners manifested their learnings based on the use of digital learning platforms.	3.00	Moderately useful
2.	My learners showed interest in learning through the digital platforms being used in teaching kindergarten.	2.86	Moderately useful
3.	My learners applied their learning in their daily online classes.	2.91	Moderately useful
4.	My learners applied their learnings to other subject interests such as reading, writing, numeracy, and short stories.	2.97	Moderately useful
5.	My learners actively participated during discussions with the use of digital learning platforms.	3.03	Moderately useful
	Aggregate Mean	**2.95**	**Moderately useful**

Range: 1.00-1.74 Not useful; 1.75-2.49 Less useful; 2.50-3.24 Moderately useful; 3.25-4.00 Very useful

Table 4 shows that the overall aggregate mean of the three identified private schools on the extent of use of digital platforms as perceived by the respondents as to learners' application was perceived as **moderately used** with an aggregate mean of 3.10.

According to Shalf (2020), digital technology includes a wide range of computing hardware and software, such as mobile devices, web tools, application software, communications and storage services, etc. According to Adanır et al. (2020), students utilize digital technology for various learning activities such reading and sending emails, using learning management systems, reading e-books or e-journals, taking online tests, and engaging in discussion forums.

Digital technology includes computing hardware and software, such as mobile devices, web tools, application software, communications, and storage services. (Alam, 2020). Students use digitdailyal technology for reading and sending emails, accessing learning management systems, reading e-journals or e-books, doing online quizzes, participating in discussion forums, and so on (Atas & Çelik, 2019). There are already websites online for kindergarten learners that help them digest all their learning easily so that they will eventually apply it on a daily basis and absorb all the necessary learning skills to be acquired in their learning stage.

Table 5. Extent of the Use of the Digital Platform as Perceived by the Respondents as to the Learner's Assessment

	Indicators	Mean	Interpretation
D.	**Learner's Assessment**		
1.	During their competency evaluation process, I consider my students' individual skills.	3.20	Moderately useful
2.	The evaluation tool that I have used with my students is consistent with their level of comprehension.	3.09	Moderately useful
3.	The approach I used to evaluate the learners is based on measurable abilities and not purely on pencil and paper assessments.	3.03	Moderately useful
4.	The evaluation system I used is based on the simplified skills recommended by the curriculum guide.	3.06	Moderately useful
5.	The evaluation of the learner I used is based on the humanistic method and systematic recommendation of the kindergarten department's education program supervisor.	3.06	Moderately useful
	Aggregate Mean	**3.09**	**Moderately useful**

Range: 1.00-1.74 Not useful; 1.75-2.49 Less useful; 2.50-3.24 Moderately useful; 3.25-4.00 Very useful

Table 5 shows that the overall aggregate mean of the three identified private schools on the extent of use of digital platforms as perceived by the respondents as to learners assessment were perceived as **moderately useful** with an aggregate mean of 3.09.

According to Gouëdard et al. (2020), effective assessment requires clarity of purpose, goals, standards, and criteria, achieved through alignment with an engaging and challenging curriculum. Effective pedagogy requires knowledge of where each

child is at in their learning and development to enable decisions about the best way forward to promote further learning and development.

Table 6. Summary Table on the Extent of the Use of the Digital Platform as Perceived by the Respondents

	Indicators	Mean	Interpretation
A.	Learning Environment	2.99	Moderately useful
B.	Classroom Activities	3.10	Moderately useful
C.	Learner's Application	2.95	Moderately useful
D.	Learner's Assessment	3.09	Moderately useful
	Overall Aggregate Mean	**3.03**	**Moderately useful**

Range: 1.00-1.74 Not useful; 1.75-2.49 Less useful; 2.50-3.24 Moderately useful; 3.25-4.00 Very useful

As presented in Table 6, the data revealed that the extent of the use of digital platforms as perceived by the respondents was **moderately useful**. These data can be broken down into learning environment (2.99), verbally described as moderately useful; classroom activities (3.10)) verbally described as moderately useful; learners' application (2.95)) verbally described as moderately useful; and learners assessment (3.09)) verbally described as moderately useful.

The result shows how digital platforms are considered essential or supplementary in the educational landscape. High-perceived integration suggests that educators recognize the transformative potential of technology in enhancing teaching effectiveness, fostering student engagement, and improving learning outcomes. Conversely, lower perceived integration may indicate barriers such as inadequate training, technical challenges, or skepticism about the benefits of digital tools.

The research of Blumberg et al. (2019) explores the role of digital play in promoting cognitive and social development among young children. It discusses how interactive digital platforms can support learning outcomes while respecting the developmental stages of early childhood.

5.3 Test of Significance of the Relationship Between the Profile of the Respondents and their Perceived Extent of the Use of the Digital Platforms

The study hypothesized that the profile of the respondents has no significant relationship with their perceived extent of the use of the digital platform. Table 7 presents the results.

Table 7. Relationship Between the Profile of the Respondents and their Perceived Extent of the Use of the Digital Platforms (alpha = 0.05)

Variables	Chi-Square	df	Critical Value	Significance	Result
A. Age					
Learning Environment	3.816	8	15.507	Not significant	Ho accepted
Classroom Activities	4.932	8	15.507	Not significant	Ho accepted
Learner's Application	2.005	8	15.507	Not significant	Ho accepted
Learner's Assessment	7.511	8	15.507	Not significant	Ho accepted
Overall Extent of the Use	1.827	8	15.507	Not significant	Ho accepted
B. Civil Status					
Learning Environment	0.713	4	9.488	Not significant	Ho accepted
Classroom Activities	2.151	4	9.488	Not significant	Ho accepted
Learner's Application	3.319	4	9.488	Not significant	Ho accepted
Learner's Assessment	1.983	4	9.488	Not significant	Ho accepted
Overall Extent of the Use	1.000	4	9.488	Not significant	Ho accepted
C. Educational Attainment					
Learning Environment	2.343	2	5.991	Not significant	Ho accepted
Classroom Activities	5.129	2	5.991	Not significant	Ho accepted
Learner's Application	4.753	2	5.991	Not significant	Ho accepted
Learner's Assessment	5.312	2	5.991	Not significant	Ho accepted
Overall Extent of the Use	3.679	2	5.991	Not significant	Ho accepted

Table 7 indicated the test of a significant relationship between the profile and the extent of the use of digital platforms using the significance level at 0.05 using chi-square. The data showed that the calculated chi-square statistics were following the enumerated

profile: age (χ^2 =1.827), civil status (χ^2 =1.000), and educational attainment (χ^2 =3.679) are greater than the p-value at the 0.05 significance level. This can mean there is insufficient evidence to reject the null hypothesis. The enumerated profile of the learners is statistically significant for using digital platforms. Hence, the null hypothesis was accepted.

The perception of moderate usefulness suggests that digital platforms are integrated to complement traditional teaching methods. This balance ensures that young children benefit from interactive digital content and hands-on, play-based learning experiences crucial for their development.

According to Oyugi (2020), one of the key elements in the effectiveness of technology-based teaching and learning is teachers' well-equipped preparation with ICT tools and facilities. Additionally, it was discovered that teacher professional development training programs are essential to improving the caliber of education that pupils get.

According to Dalimunthe et al. (2021), the impact of the COVID-19 pandemic on education globally has led to a temporary learning process carried out at home using digital learning tools. The limitations of digital learning tools, namely devices and Internet connectivity, cause learning and communication between teachers and students. The COVID-19 pandemic emergencies cannot be predicted when they will end. However, through college, elementary school students still have to carry out the learning process carried out by students at home.

5.4 Issues and Concerns Encountered by Kindergarten Teachers in the Use of Digital Platforms

This part presents data on issues and concerns based on kindergarten teachers' experience using digital platforms during the COVID-19 pandemic.

The first question asked to the research participants was: As a teacher, how do you adapt to the new normal of education?

According to participant 1:
It wasn't easy at first, but it is getting better now. Because the new normal is new to us, the best thing we can do is love it for the brighter future of our learners.

The participant added that:
In these situations, teachers must adapt to successfully deliver quality education. Adapting may involve adjusting lesson pacing to engage students better and minimize frustration.

Participant 2 replied that:
Everyone is adjusting, and so am I. But as educators, we must embrace whatever changes may happen for the sake of our learners. It’s not easy to adjust to this new normal, but because of the pandemic that we are facing right now, let's make impossible things possible.

The third question asked to the research participants was: If you have used a digital platform as a tool in your teaching process, what issues and problems have you encountered?
According to participant 1:
The Philippines has a poor internet connection.

Participant 2, replied that:
Some teachers, like me, lack ICT training and computers.

Given the significance of ICT in society and education going forward, figuring out the potential obstacles to implementing these technologies in the classroom would be a critical first step toward raising the standard of instruction.

Dei (2018) contends that despite the fact that educators seem to recognize the importance of ICT in the classroom, they still run into challenges when integrating these tools into their instruction.

Lawrence and Tar (2018),stressed the importance of instructors in enhancing ICT-based learning. Achieving meaningful use of computer technology in education

is largely dependent on the attitude of teachers toward its use in the teaching and learning process.

Furthermore, according to Li et al. (2019), teachers' views on technology use play a major role in how well it works in educational settings. Furthermore, according to Guillén-Gámez and Mayorga-Fernández

(2020), one of the main indicators of the adoption of new technology in classrooms is the attitudes of teachers. As a result, how people feel about computers can have a big impact on whether or not they embrace and use them.
According to Akram et al. (2022), teachers' attitudes regarding these tools during their adoption and integration are a major factor in how well technology is used in the classroom. Therefore, it follows that attitudes of educators directly affect how often and how much they use technology.

6. FINDINGS

The results were the basis for the findings of the study which were summarized as follows:

On the profile of the respondents, the results revealed that most of the teacher respondents age above 26 years old, all females, all married, and attained the highest educational attainment up to the master's level. Additionally, the teachers' perceptions of the use of digital platforms in the learning environment, classroom activities, learners' applications, and learners' assessments revealed moderate use. Moreover, the correlation between the respondents' profiles and the extent of the use of digital platforms in teaching kindergarten learners was found to be not significant. Finally, the issues and concerns that the respondents encountered in using digital platforms to teach kindergarten learners during the COVID-19 pandemic, which were gathered during the interview, include slow internet connection, lack of ICT facilities in school, and lack of teacher training about the use of these ICT tools in teaching.

7. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, it is concluded that teachers in the identified schools in the Division of City of Naga moderately used digital platforms to teach kindergarten learners. These results were attributed to their concerns about implementing the online learning modality. Hence, in remote learning, excellent preparation and full support from the administration are some of the factors that contribute to the better integration of technology, such as the digital platform, in the curriculum. Furthermore, it is recommended that the action plan for each school be considered for implementation to help address the teachers' issues and concerns and improve the teaching and learning experiences of both teachers and students.

8. STUDY LIMITATIONS AND FUTURE RESEARCH

The study was conducted during the COVID-19 pandemic, a unique period that may not accurately reflect the typical use of digital platforms in a non-pandemic context. The results may not be generalizable to post-pandemic educational settings. Future research should Conduct long-term studies to assess the sustained impact and effectiveness of digital platforms in kindergarten education beyond the pandemic context.

9. ACKNOWLEDGEMENT

The researchers conveyed their heartfelt thanksgiving to the teacher respondents, who were responsive to their questions, and to everyone involved who, in one way or another, contributed to the completion of this research work.

REFERENCES

1) Afacan Adanır, G., Muhametjanova, G., Çelikbağ, M. A., Omuraliev, A., & İsmailova, R. (2020). Learners' preferences for online resources, activities, and communication tools: A comparative study of Turkey and Kyrgyzstan. E-Learning and Digital Media, 17(2), 148–166. https://doi.org/10.1177/2042753019899713
2) Akinyemi, I. A., Amaechi, L. I., & Etoh, L. C. (2022). Digitalization of education in Nigerian secondary schools: Benefits & challenges. Journal of Education and Humanities Research (JEHR), University of Balochistan, Quetta, 13(1), 34–42.
3) Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. Frontiers in Psychology, 13, 920317.
4) Alam, T. (2020). Cloud computing and its role in information technology. IAIC Transactions on Sustainable Digital Innovation (ITSDI), 1(2), 108–115.
5) Arifah, R., & Marzuki, I. (2021). Constructivism theory of learning solutions during the Covid-19 pandemic in Indonesia. International Journal of Education, Information Technology, and Others, 4(1), 91–96.
6) Atas, A. H., & Çelik, B. (2019). Smartphone use of university students: Patterns, purposes, and situations. Malaysian Online Journal of Educational Technology, 7(2), 59–70.
7) Barron, T., Friend, M., Dieker, L., & Kohnke, S. (2022). Co-Teaching in Uncertain Times: Using Technology to Improve Student Learning and Manage Today's Complex Educational Landscape. Journal of Special Education Technology, 37(3), 439–446. https://doi.org/10.1177/01626434211033579
8) Baulo, J., & Nabua, E. (2019). Behaviourism: Its implication to education. Obtenido de Https://Www. Researchgate. Net/Publication/338158642_BEHAVIOURISM_I TS_IMPLICATION_TO_EDUCATION.
9) Blumberg, F. C., Deater-Deckard, K., Calvert, S. L., Flynn, R. M., Green, C. S., Arnold, D., & Brooks, P. J. (2019). Digital games as a context for children's cognitive development: Research Recommendations and Policy Considerations. Social Policy Report, 32(1), 1–33. https://doi.org/10.1002/sop2.3
10) Boström, M., Björklund, C., Bergström, G., Nybergh, L., Schäfer Elinder, L., Stigmar, K., Wåhlin, C., Jensen, I., & Kwak, L. (2020). Health and work environment among female and male Swedish elementary school teachers—A cross-sectional study. International Journal of Environmental Research and Public Health, 17(1), 227.
11) Burns, R. (2020). Adult Learner at Work: The challenges of lifelong education in the new millenium. Routledge. https://bit.ly/4bC6Xzj

12) Chukwuemeka, E. J., Dominic, S., Kareem, M. A., & Mailafia, I. A. (2021). Redesigning educational delivery systems: The needs and options for continuous learning during the coronavirus (COVID-19) pandemic in Nigeria. Contemporary Educational Technology, 13(1), ep292.
13) Clark, K. R. (2018). Learning theories: Behaviorism. In Radiologic technology (Vol. 90, Issue 2, pp. 172–175). Am Soc Radiol Tech. https://bit.ly/4cjIP5l
14) Collins, A., & Halverson, R. (2018). Rethinking education in the age of technology: The digital revolution and schooling in America. Teachers College Press. https://bit.ly/4cEoHLi
15) Cronje, J. (2022). From face-to-face to distance: Towards flexibility in five dimensions of blended learning: lessons learnt from the Covid-19 pandemic. Electronic Journal of E-Learning, 20(4), 436–450.
16) Dalimunthe, H. H. B., Sutisna, A., Zakiah, L., & Handayani, S. (2021). Transformative science education: Empowering self-regulated learners during pandemic COVID-19. AIP Conference Proceedings, 2331(1). https://pubs.aip.org/aip/acp/article-abstract/2331/1/050022/985999
17) Dei, D.-G. J. (2018). Assessing the use of information and communication technology in teaching and learning in secondary schools. Library Philosophy and Practice, 0_1.
18) Fulgencio, L., Baldado, K., Enriquez, C., Delos Santos, A., Plaza, R., & Tus, J. (2021). Amidst the online learning in the Philippines: The self-efficacy and academic motivation of the senior high school students from private schools. International Journal of Advance Research and Innovative Ideas in Education, 7(1), 2814–2826.
19) Gouëdard, P., Pont, B., Hyttinen, S., & Huang, P. (2020). Curriculum reform: A literature review to support effective implementation. https://www.oecd-ilibrary.org/content/paper/efe8a48c-en
20) Gui, X., Li, Y., & Wu, Y. (2021). Teacher-guardian collaboration for emergency remote learning in the covid-19 crisis. proceedings of the acm on human-computer interaction, 5(CSCW2), 1–26. https://doi.org/10.1145/3479543
21) Guillén-Gámez, F. D., & Mayorga-Fernández, M. J. (2020). Identification of variables that predict teachers' attitudes toward ICT in higher education for teaching and research: A study with regression. Sustainability, 12(4), 1312.
22) Gunawardhana, L. K. (2020). Review of e-learning as a platform for distance learning in Sri Lanka. Education Quarterly Reviews, 3(2). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3595432
23) Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. Sustainable Operations and Computers, 3, 275–285.
24) Halil, N. I. (2020). The effectiveness of using edmodo as an online learning platform in Covid-19. Jurnal Penelitian Dan Pengkajian Ilmu Pendidikan: E-Saintika, 4(3), 284–298.
25) Herlo, D. (2017). Connectivism, a new learning theory? European Proceedings of Social and Behavioural Sciences. https://bit.ly/4cdBZym
26) Homanova, Z., Prextova, T., & Klubal, L. (2018). Connectivism in elementary school instruction. ECEL 2018 17th European Conference on E-Learning. University of West Attica, 177–184. https://bit.ly/3VHzLQL
27) Kaarakainen, M., & Saikkonen, L. (2021). Multilevel analysis of the educational use of technology: Quantity and versatility of digital technology usage in Finnish basic education schools. Journal of Computer Assisted Learning, 37(4), 953–965. https://doi.org/10.1111/jcal.12534
28) Khlaif, Z. N., Salha, S., Affouneh, S., Rashed, H., & ElKimishy, L. A. (2021). The Covid-19 epidemic: Teachers' responses to school closure in developing countries. Technology, Pedagogy and Education, 30(1), 95–109. https://doi.org/10.1080/1475939X.2020.1851752
29) Lai, C., Hu, X., & Lyu, B. (2018). Understanding the nature of learners' out-of-class language learning experience with technology. Computer Assisted Language Learning, 31(1–2), 114–143. https://doi.org/10.1080/09588221.2017.1391293
30) Lauricella, A. R., Herdzina, J., & Robb, M. (2020). Early childhood educators' teaching of digital citizenship competencies. Computers & Education, 158, 103989.
31) Lawrence, J. E., & Tar, U. A. (2018). Factors that influence teachers' adoption and integration of ICT in teaching/learning process. Educational Media International, 55(1), 79–105. https://doi.org/10.1080/09523987.2018.1439712
32) Lestari, P. A. S., Gunawan, G., & Yulianci, S. (2020). Effectiveness of online lectures using digital platform during the pandemi COVID-19. Indonesian Journal of Applied Science and Technology, 1(3), 107–115.
33) Lestari, S. E. (2021). Protection of constitutional rights against Indonesian women workers. Linguistics and Culture Review, 5(S1), 710–725.
34) Li, Y., Garza, V., Keicher, A., & Popov, V. (2019). Predicting High School Teacher Use of Technology: Pedagogical Beliefs, Technological Beliefs and Attitudes, and Teacher Training. Technology, Knowledge and Learning, 24(3), 501–518. https://doi.org/10.1007/s10758-018-9355-2
35) Madzalan, J., Hamdan, N., Pisol, M. I. M., & Madzalan, S. F. (2021). Basic Needs in Online Teaching and Learning: An Outlook to Adaptation in Education. the moderating effects of gender and age on students'satisfaction and learning within an e-learning environment in Nigeria., 70.

36) Maity, S., Sahu, T. N., & Sen, N. (2021). Panoramic view of digital education in COVID-19: A new explored avenue. Review of Education, 9(2), 405–423. https://doi.org/10.1002/rev3.3250
37) Meier, E. B. (2021). Designing and using digital platforms for 21st century learning. Educational Technology Research and Development, 69(1), 217–220. https://doi.org/10.1007/s11423-020-09880-4
38) Mourlam, D. J., DeCino, D. A., Newland, L. A., & Strouse, G. A. (2020). "It's fun!" using students' voices to understand the impact of school digital technology integration on their well-being. Computers & Education, 159, 104003.
39) Mpungose, C. B. (2020). Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic. Humanities and Social Sciences Communications, 7(1), 1–9.
40) Oyugi, G. A. (2020). evaluation of the teacher factors on the integration of information communication technology into teaching and learning in public primary schools in Nairobi County, Kenya [PhD Thesis]. http://ir-library.mmarau.ac.ke:8080/handle/123456789/10709
41) Manguilimotan, R., Sato, T., Restauro, N. A., Castro, G., & Padillo, G. (2024). Zoom as an Instructional Tool in Teaching Reading Among Kindergarten Learners During the Covid-19 Pandemic. International Journal of Economics, Business and Management Research, 08(07), 78–93. https://doi.org/10.51505/IJEBMR.2024.8706
42) Papadakis, S., Vaiopoulou, J., Sifaki, E., Stamovlasis, D., & Kalogiannakis, M. (2021). Attitudes towards the use of educational robotics: Exploring pre-service and in-service early childhood teacher profiles. Education Sciences, 11(5), 204.
43) Pastore, G., & Luder, R. (2021). Teacher-student-relationship quality in inclusive secondary schools: Theory and measurement of emotional aspects of teaching. Frontiers in Education, 6, 643617. https://www.frontiersin.org/articles/10.3389/feduc.2021.643617/full?ref=thellamasfamily.com
44) Paula, L., & Grinfelde, A. (2018). The role of mentoring in professional socialization of novice teachers. Problems of education in the 21st century, 76(3), 364–379.
45) Rakha, N. A. (2023). Revolution in learning through digitization: How technology is changing the landscape of education. International Journal of Cyber Law, 1(3). https://irshadjournals.com/index.php/ijcl/article/view/38
46) Redillas, S. (2020). Filipino teachers' identity: Framed by community engagements, challenges for citizenship education. In A. Peterson, G. Stahl, & H. Soong (Eds.), The Palgrave Handbook of Citizenship and Education (pp. 275–295). Springer International Publishing. https://doi.org/10.1007/978-3-319-67828-3_11
47) Salehi Najafabadi, M. (2023). Navigating layers of care and attention in education: A comparative analysis of noddings and weil in" The kindergarten Teacher" Sara Colangelo's Film (2018). https://www.diva-portal.org/smash/record.jsf?pid=diva2:1800224
48) Sarker, M. N. I., Wu, M., Cao, Q., Alam, G. M., & Li, D. (2019). Leveraging digital technology for better learning and education: A systematic literature review. International Journal of Information and Education Technology, 9(7), 453–461.
49) Schaefer, M. B., Abrams, S. S., Kurpis, M., Abrams, M., & Abrams, C. (2020). " Making the unusual usual:" Students' perspectives and experiences of learning at home during the covid-19 pandemic. Middle Grades Review, 6(2), n2.
50) Shalf, J. (2020). The future of computing beyond Moore's Law. Philosophical transactions of the royal society A: Mathematical, Physical and Engineering Sciences, 378(2166), 20190061. https://doi.org/10.1098/rsta.2019.0061
51) Suhendi, A., Purwarno, P., & Chairani, S. (2021). Constructivism-based teaching and learning in Indonesian education. KnE Social Sciences, 76–89.
52) Ullah, A., & Anwar, S. (2020). The effective use of information technology and interactive activities to improve learner engagement. Education Sciences, 10(12), 349.
53) Umberson, D., & Thomeer, M. B. (2020). Family Matters: Research on Family Ties and Health, 2010 to 2020. Journal of Marriage and Family, 82(1), 404–419. https://doi.org/10.1111/jomf.12640
54) Wekerle, C., Daumiller, M., & Kollar, I. (2022). Using digital technology to promote higher education learning: The importance of different learning activities and their relations to learning outcomes. Journal of Research on Technology in Education, 54(1), 1–17. https://doi.org/10.1080/15391523.2020.1799455
55) Winter, E., Costello, A., O'Brien, M., & Hickey, G. (2021). Teachers' use of technology and the impact of Covid-19. Irish Educational Studies, 40(2), 235–246. https://doi.org/10.1080/03323315.2021.1916559