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The Use of Personal Digital Archiving For Effective Learning During Pandemic Covid-19

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ABSTRACT
The Covid 19 pandemic that ravaged the world, particularly Indonesia, had a negative impact on aspects of learning, particularly for children aged three to six years in early childhood education. The implementation of distance learning disrupted the face-to-face learning model, which was supposed to be the primary medium for increasing children's knowledge and interest. In this regard, the role of parents is critical in ensuring that learning at home is effective and enjoyable. This study explores the using personal digital archiving (PDA) conducted by parents for effective learning during pandemic covid-19. By using a case study, this qualitative research took the subject of one of the preschools in Surakarta, Indonesia. Data were collected by interview, observation, and documentation. The results of the study prove that personal digital library useful for effective children learning during pandemics. Parents use four things: Videos, PowerPoint, PDF, and Photos to support children learning by saving these things to their archive.

Keywords: Personal Digital Archive, Library, Effective Learning, Pandemic, Covid-19

INTRODUCTION

Libraries play an important role in disseminating various types of knowledge and information. Libraries are a great place to learn and get information (Rachman, 2019). The role of the library is so important that every educational institution from the primary to the secondary level makes the library an educational centre, which determines the success of the institution's knowledge delivery process (Mehta & Wang, 2020).

The existence of a library and the world of education are inextricably linked. Libraries are one of the factors that contribute to the faster transfer of knowledge (Rodin, 2021; Winata, Fadelina, & Basuki, 2021). Meanwhile, education is an effort to help humans develop their potential through the process of learning. This will aid in the implementation of Law No. 20 of 2003, concerning the national education system, under which the government is expected to be able to ensure equal distribution of educational opportunities, improve quality in terms of relevance, and improve the efficiency of education management to meet challenges in accordance with the changing demands of local, national, and global life (Winata et al., 2021).

As a result, libraries must be able to play a role, particularly in assisting students in achieving educational goals. To achieve this goal, the library must improve by preparing interesting and high-quality collections that will pique students' interest in using the library. It is hoped that by maximizing its role, the library will be able to contribute to the development

of reading habits in students, which will, in turn, make it easier for students to understand the subject matter in class. Furthermore, students can easily comprehend the meaning of information and knowledge and produce high-quality work. As a result, intelligence will be developed in students, making achievement relatively simple (Rachman, 2019).

Personal digital archiving (PDA) is the active preservation, management, and access to one's digital life (Ashenfelder, 2013). PDA entails a series of managed activities that are required to ensure ongoing access to digital materials for as long as they are required. These materials could be digitized versions of physical resources (such as books, photographs, and maps) or digital materials that have always existed (databases, websites, online reports) (Kusumawardhani & Masyithah, 2019). Personal Digital Archives can be as extensive or as limited as the user desires, for example, every email, tweet, receipt, and phone picture. Different types of content will have different meanings and will be treated differently (Rozhneva & Ostashova, 2019).

Personal digital archiving may include the following steps: Emails, Photographic materials (including those saved on mobile devices, desktop computers, or in social media), Tweets, Instagram posts, and Facebook pages are examples of social media, Receipts in Digital Form, Email or Correspondence via Email, Family Photographs Scanned, and Online Portfolio or Personal Website. Personal digital archives are how individuals manage and store their digital archives so that they can be used now and in the future. A well-managed personal archive can help individuals make more informed decisions about how their files will be used in daily life (Wicaksono, 2021).

When we refer to a personal collection of digital files as "archives," we are emphasizing the larger context in which those digital files exist. Digital files exist in relation to one another, much like incoming and outgoing letters in a correspondence or emails in a thread and derive additional meaning from the physical computing environment in which they were created (Brown, 2015). Taking good care of a personal digital archive entails paying attention to the location, volume, health, and well-being of individual digital files while also keeping the larger context in mind. The acquisition of a new computer (and subsequent transfer of files from an older machine), a hard disk crash, the theft of a computer or smartphone, a cross-country move, the transfer of email from one account to another, and the adoption of new types of software and services are all common challenges to organizing and managing one's own digital files (Redwine, 2015).

The digital world, like the physical world, can contain valuable and meaningful content that is worth preserving (for practical or sentimental reasons) and necessitates special considerations in order to make it long-term accessible. Digital content is dependent on

constantly changing technology in order for us to interact with it, share it, or access it over time. Parents who are familiar with PDAs and digital practices are better prepared to manage their children in order to solve the problem of learning while also creating effective learning environments (Zakiah, Suciati, & Wicaksono, 2020).

In the field of education, digitization is typically used to store archives or important documents. The process of digitizing archives can be divided into three major activities: *first*, scanning, which is the process of scanning documents in printed form and converting them to digital files, indexing, and searching. The output file can be in either jpg or pdf format. The *second* step is editing, which is the process of processing pdf files on a computer by adding passwords, footnotes, hyperlinks, and so on. *Third,* uploading is the process of entering metadata and uploading a document file into a digital archive (Kim, 2010).

PDA can also be used to aid student learning processes at all levels of education, from early childhood education to college. From primary to secondary school, parents' role in collecting files that support their children's learning becomes increasingly important. The files required can be in the form of photos, videos, or materials downloaded from the internet and archived. PDAs are more cost effective than establishing a personal library of printed books (Situmorang & Kustandi, 2013). Although, in some cases, books can also be downloaded in PDF format. PDAs can be used by parents for at least four reasons: *First*, there will be less need for printed books. *Second*, teach children how to use the internet responsibly. *Third*, teach children to regularly save their personal data. Fourth, become a valuable resource for children's learning (Chen & Chen, 2010).

During the current pandemic, parents can create a library as a learning tool for their children by utilizing the internet and other learning technologies, ensuring that learning effectiveness is maintained. Parents can help by creating digital archives that can be used as personal libraries (Karanikolas & Skourlas, 2014). One of the learning strategies that can be implemented in kindergarten learning during the covid-19 pandemic is the use of video and photo media stored in parents' personal archives.

Because the learning is not limited to improving academic abilities, but also prioritizes improving various aspects of child development and training children's independence from a young age. Religious and moral values, physical-motor, cognitive, language, social-emotional, and artistic development must all be considered in early childhood development. These six aspects must develop optimally so that children can progress to the next stage of development without missing a beat (Maymunah & Watini, 2021). The study focuses on: *first*, why are parents using personal digital archiving during pandemic Covid-19? and *second*, how does personal digital archiving advantages for effective learning?

LITERATURE REVIEW

Many scholars have conducted the study on personal digital archiving. Xiangjun (2018) stated that personal digital archiving is a set of activities for preserving personal digital information using any method or tool, with an emphasis on the subjectivity of personal preservation. The first type of personal information is owned by individuals and is used by them. The second type belongs to other people who maintain close relationships with individuals, such as hospitals who control one's health information. The third type is one's experience, which neither belongs to nor is saved by oneself, such as information on websites visited. Personal digital information is defined as information generated in social activities that is related to creators, the preservation rights of individuals that are stored in digital form and used for creators.

Krtalić, Marčetić, & Mičunović (2016) have different perspective on their research. They argued that personal digital information archiving has an impact on students' academic success, as well as how their habits and practices for managing and preserving digital information correspond to their learning habits and practices. It would be interesting to investigate the differences in managing and preserving digital data and collections among students from various disciplines. Storing documents as files on a computer, i.e., organizing documents in folders, is a dominant organizing practice among students, indicating the importance of promoting and encouraging the use of specific organizing techniques, such as bibliographic metadata, and specific organizing tools and document management systems, especially when they are free and simple to use.

Redwine (2015) on her report stated that Personal Digital Archiving delves into some of the major issues that people face when trying to manage and store their digital files. The importance of preserving personal files is emphasized in the report, particularly as personal archives expand to include a mix of physical, digitized, and born-digital materials. The report's problems and recommendations can help individual creators and users of personal digital archives, as well as curators who may be able to advise on what to keep and how to preserve it, in their efforts to preserve personal digital files for the long term.

A personal digital archive is essentially a personal service system and information objects that allow access to these information objects via digital devices. This service is expected to make it easier to search for information quickly, precisely, and accurately in a collection of digital information objects such as documents, images, files, videos, and databases as stated by Sembiring, Khairunnisa, & Kurnia (2019). The scope of the PDA collection extends beyond electronic documents in lieu of printed documents to include digital artifacts that cannot be replaced in printed form. Collections highlight the content of information and its

various forms, ranging from traditional documents to search results (Kelly & Rosenbloom, 2019).

Drosopoulou and Cox (2020) study revealed and analysed empirical data about academics' personal information management practices, which frequently included the use of bricolage as a tactic. Participants were pleased with their personal information management, but they were concerned about backups and irritated by the fragmentation of storage locations. Most surprising was the low value academics assigned to their digital collections. These practices are shaped by a combination of cultural and technical factors. In light of this, it is critical to recognize that personal information management and personal digital archiving are rarely considered in their broader social context. They are viewed as primarily pragmatic activities, but they are undoubtedly shaped by larger contexts such as the drive for academic evaluation, project-based funding, the pressures of academic work complexity, and the increasing alienation identified in many studies of academic life.

In level of education, the most essential thing in archives is management, so that all information and documents can be well organized, especially in an educational institution. As stated of Putra & Merliana (2021) in their research, the difficulties encountered during the learning process are caused by a lack of literacy and information sources that can be used to aid in the transfer of knowledge. However, many people have no attention to archives, both in educational and non-educational institutions. So far, an institution or organization has not paid much attention to archiving issues, even though the need for information sources is required to be fast and precise. Based on this, it is critical to prepare sources of information as knowledge, particularly in educational institutions, that students and educational staff can use. One of the primary goals of educational institutions or organizations is the implementation of a current learning process and the subsequent development of knowledge. To support this, digital archives in the form of digital preservation are required for the continuity of information, particularly in digital materials and the advancement of science.

METHOD

This present research employed a case study approach to look at the phenomenon of parents whom they were using personal digital archive during pandemic by using data collecting, taking meaning, gaining an understanding of the case (Denzin & Lincoln, 2005). This research aims to reveal whether personal digital archive is effective for learning or not according to parents in Preschool Intan Permata Aisyiyah, Surakarta, Indonesia. The collecting data was conducted through interview and observation on five parents.

There are two main types of data I used, including observation and interview. In this study, the data used in the form of interviews, where the data collection are carried out through in-depth interviews and participant observation to informants. This is applied because through this method the essence of the phenomenon is obtained from the point of view or those who experience it directly. This is to minimize data distortion that can eliminate the essence of research. Creswell (2007) believes the most important thing in phenomenological research is to describe the meaning of the small number of people who experience a phenomenon. So that any number of informants is not a measure, as long as it is able to provide sufficient information. I visit the parent's house during the January-February 2020 period and spend time in the complex from 08:00 to 10:00 am during their children learning time, observing their activities in using personal digital archive as well as interviewing them as respondents. Sometimes I stayed longer to 12 pm due to the parents' activities for looking out other archive for next meet of children learning.

RESEARCH FINDING

The parents I interviewed used smartphones as personal digital archiving media. They have their own folder with photos, videos, and study materials for their child. Only two of the five parents use additional tools, a laptop and flash disk that serves as secondary storage for the required learning files. According to Article 40: 2 of the National Education System Law No. 20 of 2003, educators and education personnel are required to create an educational environment that is meaningful, fun, creative, dynamic, and logical. Teachers cannot use the lecture method to implement what is written in the National Education System Law in learning.

This can cause students to become bored, and as a result, they may not understand what the teacher is saying. To address this, it is critical that media such as smartphones be used as a tool in the teaching and learning process. In general, the purpose of PDA stored in smartphones in learning is to facilitate interaction and aid the teaching and learning process between teachers and students, resulting in a more effective and efficient teaching, and learning process. The particular advantage of having a smartphone is that material delivery will be easily accepted by students and can improve students' ability to understand the material.

Learning Resources

The first respondent I interviewed used a smartphone to store various types of data. He created a special folder with his child's name on it, as well as a subfolder containing videos, photos, and readings that correspond to the Early Childhood learning materials. The first

digital archives are learning videos that parents downloaded with their children before and during the pandemic.

> *Before the pandemic, I used to spend a lot of time playing smartphones with my daughter. She enjoyed animal and farm animation when she was four years old. The video was made up of about 20 pieces that I had saved on my smartphone. In addition, I keep photos of my children in places like zoos and horse farms, as well as videos that I record as extra material.*
> *By using her videos and photos, my daughter tends to be motivated in studying during pandemic despite using another digital platform such as Zoom or Google Meet. At the beginning of her study, on the specific subject, for instance introducing animals, she always opened her experienced while visiting zoo or when she is riding horse in the field. The experience is truly helping her mind to deal with material learning delivered the teacher.*

Respondent statements indicate that learning sources from personal digital archive useful for effective learning. During the Covid-19 pandemic and under fast-paced conditions, parents must be able to guide their children in using digital devices that have a positive impact. One method for assisting children in understanding learning material is to teach them to save personal files. Personal document storage is also one way to establish good and effective communication in order to determine how long and when they can use them.

The second respondent approaches digital archives in a different way. He employs a laptop as a tool for storing the files he requires.

> *Typically, teachers provide learning modules for one week. One day before the learning activities begin, I always sit alone with my boy (sometimes with my wife's assistance) to search the internet for additional materials, which I then save in a personal folder. I found the material I was looking for and then asked the child if he was interested. If you're interested, I'll make a special folder with photos, videos, and some black-and-white images that can be printed in colour.*
> *On the day of the online learning, all I have to do is supplement the material presented by the teacher with additional material that my child and I were looking for the day before. This improves learning effectiveness because children grasp the material more quickly as a result of the stimulus from the archive that I keep on my laptop.*

The third respondent stores digital archives of their children's learning materials on a flash disk. He admitted that using flash to transfer data from one laptop to another is very flexible. Furthermore, due to the office where he works has Wi-Fi, it is not uncommon for him to download materials that are appropriate for children's learning needs.

There are three main folders in the flash that I always carry that contain personal files for children's learning materials, namely photo, video, and PowerPoint folders. Although I have a laptop at home that is always used for children's learning activities, I prefer to back it up on a flash drive for storage. My child occasionally connects the flash drive to the smartphone using USB On-The-Go (OTG). Children's learning is quite good, based on my experience during this pandemic.

One of the functions of the personal digital archive is that children dare to retell their experiences, and then parents try to discuss what they have seen and reinforce what they have learned by making it appropriate for children's daily activities. With their children's insight and knowledge, parents can collaborate with learning materials obtained from the digital platform they use.

The Role of Personal Digital Archives in Learning During Pandemic

The fourth respondent provides an overview of the role of personal digital assistants (PDAs) in distance learning at home. According to him, digital archives can help children manage their information and materials. If children can ask teachers questions about things they don't understand at school, during a pandemic, the archives stored by parents on electronic devices such as smartphones and laptops can be used to motivate students to learn.

In visual forms, such as photos and pictures, my child always associates learning materials with his own experiences or the people around him. He can tell stories and relate the material presented by the teacher because he sees the two of them. This is very interesting to me because he was able to retell the events that happened to him at the age of six.
In this regard, the personal digital archive serves as a form of encouragement and influences my child's desire to learn even when he is not in the classroom.

In terms of reducing boredom during study time, the role of personal digital archives is very effective in measuring students' seriousness in participating in the teaching and learning process. This was expressed by fifth respondent who believed that having an archive of personal learning materials reduced the amount of time their children spent learning while still ensuring adequate understanding.

Children's personal files are never used in a learning context during face-to-face learning. However, during the pandemic, these files greatly aided my child in quickly grasping the learning material. The use of videos and personal photos related to the material has a positive impact on preventing children from becoming bored while studying at home.

Parents must also accompany any files that can be saved in order to support their child's learning process. This assistance is also one of the most effective ways to interact with children while they are using digital media.

DISCUSSION

Personal digital archives have at least three advantages, *first,* ease of archival management and access. The main advantage of personal digital archives is that they make archive management and management easier. Parents can save and access an infinite number of learning resources, including images, sounds, and videos. This demonstrates that digitizing archives makes it easier to manage and access a large number of archives. *Second,* assurance of safety (Sinn, Kim, & Syn, 2017). Digitizing archives has undoubtedly made life easier for users. Furthermore, digital archives will be safer from situations and conditions that could harm the archive owner or digital archive user. For example, if archives are not properly managed, physical archives are at risk of being damaged or lost. Furthermore, the human error factor, which occurs frequently, can pose a risk of future harm. *Third*, document searching service. Technological advancements provide features that make it simple to locate countless archives. For example, if a parent needs to access a document that was archived several years ago, they can simply type the title of the document or keywords related to the archived document. Another advantage is the speed with which archived documents are searched and search keywords are presented.

Archives are defined as information created, received, and maintained as evidence and information for organizations or individuals for legal or business purposes Read and Ginn (2011). Quible (2002) defines archives as documents that contain information in both paper and electronic formats and are used for a variety of activity functions. Because archives are information that is created, received, and stored in various forms and media by individuals and organizations, they cannot be separated from information. An archive must be properly managed because the value and level of importance differ for legal purposes, historical evidence, and business transaction interests. By the two definitions above, what parents did on children during pandemic Covid-19 is appropriate to make the learning is easier and more flexible.

When it comes to course materials, using digital archives to store them has several advantages, including safety, security, accessibility, and dependability. Personal digital archives serve at least three functions in education. For starters, they serve a practical purpose by sharing costly resources. Second, archives play a cultural role in the preservation and organization of artifacts and ideas. Third, archives serve social and intellectual functions by

bringing together people and ideas. Although digital archives have the potential to significantly alter fundamental aspects of the classroom in ways that can have a huge impact on teaching and learning, new pedagogical methods should be used in combination with digital archives as an emerging technology for education in order to achieve the goals of formal education. Most importantly, to provide a meaningful connection between learning activities and resources, digital archives and virtual learning environments must be linked.

CONCLUSION

The use of digital personal archiving is extremely beneficial in implementing early childhood learning in Intan Permata Aisyiyah, Surakarta, Indonesia. Personal Digital Archiving has a very positive impact on helping parents find the right learning resources based on their children's personal experiences, which are documented in photos and videos, in terms of material readiness. The integration of the teacher's knowledge and the student's experience provides a positive circumstance in unravelling the cognitive and affective aspects of students, allowing them to capture learning material quickly.

Personal Digital Archiving provides very important information for parent and student to describe their experiences and relate them to material from the teacher in terms of the effectiveness of learning activities during a pandemic. Because the experiences of everyday life appear in aspects of the material presented by the teacher, student learning becomes easier and more effective.

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