

An Exploration of Flashcards Nature Used in the Teaching and Learning of Preschoolers by Preschool Teachers

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Abstract

The use of teaching aids plays an important role in the teaching and learning process, especially in preschool education. With recent technological advances, it is interesting to note the evolution in the use of teaching aids by preschool teachers for preschoolers, particularly flashcards. Hence, this research aims to explore the flashcards nature used by the preschool teachers in their teaching and learning of preschoolers. The qualitative research approach was used in this research by implementing the exploratory case study. It helped to explore the in-depth nature of the use of flashcards as teaching aids in the context of teaching and learning of preschoolers practiced by three preschool teachers from three different sectors, which are government preschool, private preschool, and children development centre. Data were obtained by the applications of triangulation technique through a combination method of interview, observation, and document analysis. The findings illustrate the flashcards nature by the perspective of characteristics from three main aspects: designs, functionality, and costs. It is suggested that flashcards are flexible in nature. In addition, the results also showed that preschool teachers still prefer printed paper-based flashcards to digital flashcards.

Keywords: Flashcards, Teaching and Learning, Preschoolers, Preschool Teachers, Teaching Aids.

Introduction

Typically, preschool education and teaching aids have a very significant relationship with each other. It is stated in the Preschool Guidelines by the Ministry of Education Malaysia (MOE), in which it outlines that it is a task and responsibility that teachers need to embrace in order to select and provide teaching aids and equipment, according to the suitability of children that include aspects of their needs, readiness, and development. Most teachers also agreed that the use of teaching aids in the teaching and learning have created a different experience and situation depending on the various circumstances (Sang, 1981). Generally, teaching aids are one of the alternative methods used by teachers to help them in their teaching and learning session. It is considered an important element in the teaching and learning process as this method is said to be able to convey knowledge or information more clearly and effectively.

Flashcards are one of the teaching aids that have created an evolutionary phenomenon in its use. It has been widely used in most of the teaching and learning education stages, especially at the preschool education level. Flashcards had become a well-known material among preschool teachers, and it is often believed that the teachers should use the appropriate flashcards specification when using them. Such a reason is to ensure that their teaching and learning goal can be achieved as planned. Further, its use is one of the simple and effective ways to apply in the teaching and learning process. It is seen in line with the principles of early childhood education practices, which involves the act of playing while learning. Several research studied stated that flashcards are able to make children to be more interested and enthusiastic in participating in the teaching and learning session conducted by the preschool teacher (Berliana et al., 2022).

Initially, this type of teaching aids is classified as non-technical graphic media that is made of cards, which presents knowledge or information through visual in the form of images, words, symbols, and numbers (Herlina & Dewi, 2017). However, over time, printed flashcards have been adapted to the modern technological environment known as digital flashcards. This is in relations with the exposure to the various types of media that has been given to today's children. Therefore, the use of flashcards as teaching aids in teaching and learning of preschoolers is expected to be in line with the interests of the 21st century children. According to Madar et al (2009), children are more interested in the teaching and learning session that involves the use of technology, such as multimedia-based teaching aids that combine the elements of visual, audio, and text, compared to the conventional methods. Digital flashcards essentially involved computer graphics, video, and animation (Aldrich, 2004). Thus, it is suggested to provide an opportunity for teachers to engage through a modern teaching and learning process with the preschoolers who are considered as 21st century children.

As a result, it raises concern among educators and researchers, especially those involved in preschool education and flashcards' users. They were curious about whether the preschool teachers had ever been encouraged or required to use the digital flashcards in the teaching and learning process. This is because the Malaysia Education Blueprint (*Pelan Pembangunan Pendidikan Malaysia*) 2013-2025 also strongly emphasizes the link between the implementation of technological advances in teaching aids and the effectiveness of teaching and learning. In this context, knowing and understanding the preferences for the characteristics of flashcards used by preschool teachers in their teaching and learning of preschoolers, including flashcards design, functionality, and cost, can inform the current development of flashcards' nature at the preschool education level. Eventually, currently, there is a paucity of evidence to inform the nature of flashcards used among preschool teachers and how they were implemented. There is no evidence outlining whether preschool teachers still use printed or digital flashcards in their teaching and learning sessions. In addition, no previous studies have examined the nature of flashcards in detail.

Based on this background, this research aimed to explore the flashcards' nature used by the preschool teachers in their teaching and learning of preschoolers. The exploration depends on the research objective, which is to identify the characteristics of flashcards used in the teaching and learning of preschoolers by the preschool teachers. Hence, the flashcards characteristics identification will answer the research question, which concerns the flashcards characteristics used by the preschool teacher in the teaching and learning of preschoolers.

Literature Review

Preschool education is a phase where children are developed in various aspects to help prepare them for their future life. Preschoolers are children who are four to six years old. They can be enrolled by their guardians in the preschool program at any registered Early Childhood Education Centre. Children of this age have self-development tasks related to learning to distinguish between reality and fantasy; create comfort about personal identity; learn to make relationships around their circle; distinguish feelings, thoughts, and actions; and learn to solve problems with the concept of starting and creating something (New York State Office of Children and Family Services, 2015). Research conducted by Stacey and Myra (2016) also stated that there is strong evidence to support the influence and benefits of preschool education on children's development. In fact, preschool education can also help to meet the needs and growth of children.

When focusing on preschool teaching and learning, it involves various parties and matters, as well as attention should be given to the entire preschool education system. Referring to the Preschool Management Guidelines provided by the Ministry of Education Malaysia (2018), preschool teaching and learning is a duty and responsibility of preschool teachers. Preschool teachers play a role in helping preschoolers grow as expected. In this regard, it is important for teachers to take serious considerations of the needs of preschool children. This is because preschool teachers can develop an appropriate and effective teaching and learning strategy for preschoolers. Meaningful teaching and learning of preschoolers occur when there are interesting approaches that attract them including the help of teaching aids used.

Teaching aids are an alternative method used by teachers to assist them during the teaching and learning session (Norfarizah & Zazril, 2016). In fact, there are many studies that supported the claims of the positive effects of teaching aids in teaching and learning. According to the study by Unggang (2008), teaching aids can explain the goals that user wants to convey in the teaching and learning session, and maintaining student interest and their performance. Referring to a study conducted by Nurdiyana et al (2021), interactive teaching aids are seen as appropriate to be used in preschool education and preschoolers. There are numerous benefits that can be derived through its usage, such as the teaching and learning process are expected to be more effective, meaningful, and enjoyable. It is apparent that there is a need for preschool teachers to be innovative and creative in planning, using, and providing teaching aids of preschoolers.

Preschoolers are generally perceived as a suitable group for teaching and learning practices based on flashcards. Mohamad and Putu (2018) stated that the use of flashcards helps in developing children's cognitive abilities through a simple flashcards approach in teaching and learning; for example, the introduction of letters, animals, colours, and others. Flashcard is deemed to be a basic material in education, especially teaching and learning at the preschool level. This statement is supported by the use of flashcards since the 19th century to help the teaching and learning of children undertaken by Mortimer. Mortimer was the first educator who introduced the flashcards. It began with her desire to help children in her area to improve their capability of reading. Initially, the card uses only the concept of being in white coloured and made of paper in the form of small and large index cards (Maria & Tania, 2011). The production of syllable notes by Mortimer has been considered the first flashcards in the world.

Jessica and Tania (2011) interpreted that flashcards are sets of cards that contain information, such as images, words, or numbers placed on one or both sides of the card. They also stated that the flashcards can contain vocabulary, date, formula, and various things depending on

the theme or topic the user in question wants to use. Also recognized by Roberto (1964), in his work, that the flashcards are sets of cards with words or phrases on one side, while its meaning is on the other side. Based on these statements, it can be summarized that flashcards are a medium with a set of cards containing several cards with a specific topic used for the purpose of delivering knowledge or information in a simple and easy context for users and recipients. They also come in various sizes and consist of two sides, the front and the back. Referring to the specifications recommendation of flashcards by Glenn Doman, quality flashcards are made up of large cards of one and a half piece of A4 paper, using a white card background, containing only images or texts, applying quality and bright images, has minimal text, using large-sized text as well as red or black, have a description at the back of the card for user reference, and are organized (Madeleine, 2010). In fact, the development of the flashcards in the teaching and learning processes can also be seen through the flashcards digitization. Digital flashcards are one of the current approaches in education. Based on the research done by Tim and Baynard (2020), the digital flashcards are designed to mimic traditional printed paper-based flashcards. However, digital flashcards provide an electronic experience to its users including access to flashcards materials, its usage, and printing practices.

Today, flashcards are available in a various form, shapes, sizes, colours, and covers a range of themes or topics. These characteristics are the remarks that belong to and associate with them, which makes them recognizable. The characteristics of flashcards bearing variety of aspects are worth to look into as it portrays the current flashcards nature. With in-depth research of it, clear insights related to flashcards use can be gained thoroughly, which it can be the best reference for many parties in the foreseeable future. Thus, this research is expected to provide support for this research subject.

Methodology

Research Design

This research uses a qualitative approach, specifically an exploratory case study. Technically, the qualitative research approach will help in understanding the related elements and in exploring various perspectives related to the phenomenon (Creswell, 2014). While, the exploratory case study is a holistic study, which is a comprehensive study with the aim of providing an in-depth explanation of the phenomenon (Chua, 2021). To avoid a baseless interpretation when exploring flashcards nature, the researcher had applied a combination of research techniques, which involved interview, observation, and document analysis. This combination is also known as triangulation, a research technique that uses two or more data collection methods (Cohen et al., 2004). The triangulation technique is believable to reflect on various perspectives of the research (Patton, 2002) and is a way to confirm qualitative research (Trent, 2006).

Participants

The participants in this research comprise of three preschool teachers from three different sectors, which are government preschool, private preschool, and child enrichment centre. They were selected using purposive sampling through the criteria set by the researcher that included preschool teachers who have five years and above of teaching experiences in government, private, or child enrichment centre; knowledgeable in early childhood education, especially in teaching aids which is flashcards; and are willing to volunteer to become research participants. The selection is based on the researcher's existing knowledge,

as well as the recommendations from the respective Early Childhood Education Centre. Research participants were labelled as CIKGU, TEACHER, and SENSEI to represent the research findings. Table 1 summarizes the demographic profile of the research participants.

Table 1

Research participants' demographic profile

| Participants | CIKGU | TEACHER | SENSEI |
|--|----------------------|-------------------|---|
| Sex | Female | Female | Female |
| Category of Early Childhood Education Centre | Government preschool | Private preschool | Child enrichment centre – Right Brain Education |
| Early Childhood Education Centre Location | Bangi, Selangor | Kajang, Selangor | Kuala Lumpur |
| Position | Classroom teacher | Classroom teacher | Manager of the Teaching and Learning Department |
| Teaching Experience | 15 | 7 | 12 |

Data Collection Methods and Data Analysis

This research attempts to explore the central phenomenon, which is the nature of flashcards used in the teaching and learning of preschoolers by preschool teachers. To identify the nature of flashcards, the researcher focuses on the analysis from the characteristics which include three main aspects, flashcards design, functionality, and cost. This focus is solely based on the research objective, also with reference to the research question and literature review.

The data collected through the triangulation technique is divided into two types of sources, which are primary and secondary sources. The primary source is data from interviews, while secondary data is data from observations and documents, such as the teacher's teaching planner, flashcards production, and used flashcards records.

Concerning the interview, interview questions are form based on the research objective, which is to identify the characteristics of flashcards used in the teaching and learning by preschool teachers. The questions used in the interview is open-ended and semi-structure questions. The use of these types of questions is appropriate for research with an exploratory nature (Aberbach & Rockman, 2002). Through this, the researcher will be able to explore in-depth on the nature of flashcards in teaching and learning of preschoolers from the targeted research participants. The interview is conducted in a separate setting, which is at their respective centres, and it is a one-to-one interview. By using such a setting, the researcher will have an active connection with the participants. The interviews are recorded with permission from the centres' authority and later transcribed into text for analysis. Thematic analysis is applied to the interview data. This type of analysis helps to provide a description and understanding of the data.

Next, observations are conducted with the help of the research participants. With reference to the above-mentioned primary items, the participants assisted, shared, and explained about the flashcards that are typically used at their respective centres. For document analysis, the researcher has used data collection tools, such as relevant documents from the research location records. The interpretation data analysis is used to analyze the findings from the observations conducted on the three research locations along with the relevant documents referred to.

Findings

This research findings are focuses on the research question, which revolves around the flashcards characteristics used by the preschool teacher in the teaching and learning of preschoolers. The results are generally based on the understanding, knowledge, and experience of the research participants related to the specific flashcards characteristics used in their duties as a preschool teacher at their respective Early Childhood Education Centres. Besides, it comprises the analysis of the collected data from the perception of participants, researcher's observations, and documents for the three main items, which are flashcards design, functionality, and cost.

Flashcards Design

Based on the research conducted at the research locations, the researcher found that all three preschool teachers still use printed paper-based flashcards design in their teaching and learning process. The findings also identified few elements related to the flashcards design. The elements included the card's size, card's image selection, and card's appearance style.

Card's size

From the findings, it was found that the card's size used by each research participant was different and varied with each other. It showed that there was no standard or fixed size for flashcards used in preschool's teaching and learning. Both the teacher and the centre are allowed to decide the size of the card to be used. Anyhow, according to SENSEI from her interviews, this card's size was determined by considering the needs and suitability of the teaching and learning content that will be delivered to the preschoolers.

Table 2

Research findings for card's size

| Participants | Data |
|--------------|--|
| CIKGU | <i>"... The size that we use has two, A4, which the ministry provides for our preschool, while the one that we bought is mostly in A5 size..."</i> |



Figure 1 Flashcards provided by MOE to CIKGU



Figure 2 Flashcards used by CIKGU

"... Here is the size of the flashcards that this preschool used, some of them are in A6, some bigger than that..."

TEACHER



Figure 3 Flashcards used by TEACHER

“...For flashcards, it comes in three different sizes: big card, medium card, and small card. All these have different measurement. The big one is 11.18 x 11.8 inches, the size of the medium is 7.8 x 10.75 inches, and the small one is 4.9 x 7.25 inches...”

SENSEI

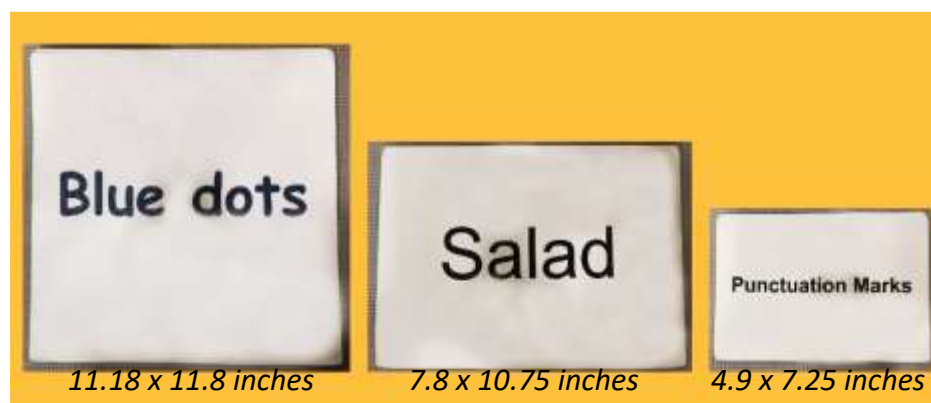


Figure 4 Flashcards used by SENSEI

“...And for these three cards, there are also different topics; there will be a specific topic that uses a particular size. For example, the big card is used if we want to input quantity. We will use the big card because the quantity will come in big numbers, that’s why we use a big card. For standard pictures, images, we will use medium card because the size of the picture is the suitable size for kids to see. Small cards are more focused on the symbols, for example, if you want to teach punctuation symbol, flag; roughly, it will be the same size with the small cards, and it’s enough for the kids to absorb the information...”

Card’s image selection

The findings show that all the participants emphasized on the selection and use of clear, interesting, and actual images for the flashcards design. The card's image selection element was stressed by the three participants as they considered the preschoolers as the recipient of the knowledge in the teaching and learning session. This element is believed to be capable of helping the teachers to attract their preschoolers' attention. Therefore, the goal of the teaching and learning delivered by the teachers can be achieved and effective session also will be developed with a positive effect on preschoolers, such as easy to accept and understand the knowledge. It is further detailed by SENSEI that stating one of the positive effects of flashcards is to train preschoolers' photography memory ability. Their explanation is as follows

Table 3

Research findings for card's image selection

| Participants | Data |
|--------------|--|
| CIKGU | <i>"... clear picture is important when using flashcards ... And the children will also be clear about it. So, children can know and recognize the picture..."</i> |
| TEACHER | <i>"... we have to concerns about the picture, the shape, and colour used on the flashcards ... Because children are more interested in colour at preschool level. The most important is colour, they will quickly recognize things when they see the colour, because the shape is sometimes confusing for them..."</i> |
| SENSEI | <i>"...We try to avoid clipart. We will focus on the real picture, actual picture. Clipart means the cartoon image...For flashcards, most people don't realize that we learn through photographic memory, because whatever we observe, we are actually capturing it like a camera. The image will store in the brain, when we want to store something in our brain, the ideal size should not be cramp, or the image is not so crowded. It needs to be straightforward..."</i> |

Card's appearance style

The findings of the interview found that this element was recognized by the three research participants. They acknowledged that both parts of the flashcards, the front and back of the card, can be used for the contents, either images or writing, or both. Their explanation is as follows, along with an example of flashcards used:

Table 4

Research findings for card's appearance style

| Participants | Data |
|--------------|---|
| CIKGU | <i>"... We can used both, front and back of the flashcards. It has two types, there are some flashcards that have images and writing, and also those with one more image or writing only ..."</i> |



Figure 5 Front (card on the left) and back (card on the right) of CIKGU's flashcards

"... Then, the front and the back are different. There are two sides. Behind, it is the writing, while the front has the images. Or there may also have writing only... "

TEACHER



Figure 6 Front (card at the top) and back (card at the bottom) of TEACHER's flashcards

SENSEI

"...When we prepare the flashcards, we will use both sides. Behind, it will be the words, and the front will have the picture. All our flashcards will be two sided. Behind, it will have the information that we are delivering to the kids. So that's how we input information to the kids..."



Figure 5 Front (card at the top) and back (card at the bottom) of SENSEI's flashcards

Flashcards Functionality

Data collected suggest that each participant believes that the flashcards have its own function. Hence, the functions stated by them differ from one another. CIKGU stated that the main function of flashcards is to expose a knowledge or things to preschoolers at the beginning or the introduction of a teaching and learning session. Meanwhile, according to TEACHER, flashcards serve as a material that helps to diversify the teaching. Generally, teachers are encouraged to use teaching aids, and there are various teaching aids that can be used in a teaching and learning session. The flashcards are one of the teaching aids that can be used for a variety of teaching and learning content and through various approaches and methods. In fact, the flashcards can also be used with other teaching aids. TEACHER also stated that the flashcards work to enhance the imagination of preschoolers. Flashcards usually contain images and writing. The display of images and writing on the flashcards help give an idea of what the teacher wants to convey. It makes preschoolers easier to imagine the content of the teaching and learning. While for SENSEI, she mentioned the specific functions of the flashcards used in her workplace, Heguru Malaysia. According to her, flashcards function as a medium used to convey information in large quantities; used for a variety of topics; and a visual stimulation, in which the right brain can be activated, where instant memory can be developed, in addition to the integration of right and left-brain functions occurs, and photography memory can be trained.

Table 5

Research findings for flashcards functionality

| Participants | Data |
|--------------|---|
| CIKGU | <i>"... It acts as an induction for children to see it before bringing them to the real world. Let's say the title is food, before preparing the food, we can let them see through the card first..."</i> |
| TEACHER | <i>"... To me, I can diversify the lessons, it is not possible for the teacher to ask the students to write, so the teacher can use flashcards to play with the students. The teacher shows the flashcards first, and then the teacher asks about the picture. I use this method a lot for games... we use flashcards to play with students..."</i> |
| | <i>"... For me, not all students have a high level of imagination. Examples like question I asked, "do you know what a yacht is?" Not everyone can describe it, so we show the yacht through the card..."</i> |
| | <i>"...by using flashcards, we are able to input large information to the kids... we try to cover the information as much as we can...so all the information that has been store in their brain, it's as if there is a library in their brain..."</i> |
| SENSEI | <i>"...For other subjects, we cover like world heritage, time, input clock... for mathematics topic, like multiplication, dot program, which mostly teach them about addition and subtraction using dots...We have few topics for the song cards, like we teach them about manner and knowledge. For knowledge, we have quite a big range of knowledge song, example like Japanese food. For example, we want to teach the kids about countries and capitals... flashcards have helped the children in their life, we got plenty of students here that learn a lot of things in here and implement them... and at least they can relate to their daily life..."</i> |
| | <i>".... Flashcards will let them learn through the image that the teacher show. The eyes like a camera for them and the brain is like a hard disk. Whatever the image they capture through their eyes, it will be stored in their brain. When it comes to the output session, where we are done with the flashcard, for four to six years old, what we'd do is going through an activity. So, all the information that has been stored in their brain, they will select it, recall it, it is like they have folder in their brain, and they will start to see the images. This is how it works..."</i> |

Flashcards Cost

The analysis shows that flashcards are cost-effective teaching aids. This is because flashcards can be reused. They also have a specific budget for flashcards. This budget proves that most of the Early Childhood Education Centres has an awareness of the importance of using the flashcards in their teaching and learning of preschoolers. As per researcher's observation, flashcards are made of cards and only involve the search for the topics along with content and its production, which include printing aspect. Teachers can use it repeatedly and only need to develop the teaching techniques or strategies. The maintenance is also relatively easy

and inexpensive, where they also need to ensure the content of the topic's relevancy and the cards' quality.

Table 6

Research findings for flashcards cost

| Participants | Data |
|--------------|---|
| CIKGU | "... Then, we'd use it repeatedly ..." |
| TEACHER | "... To me, flashcards can be recycled. For example, if we can use it for the next year, we'd keep it..." |
| SENSEI | "...we do repeat the cards...we used it back, but we have a planner for it..." |

Discussion

Notably, flashcards are teaching aids that belong to the visual media category which is made of paper, particularly thick papers or cards (Febiola & Yulsyofriend, 2020). Now and then, flashcards have undergone their development, especially from the aspect of characteristics, which comprises of its design, functionality, and cost. The idea within such development shows that flashcards have a flexible characteristic. This flexibility is found tailored to the needs, growth, and development of preschoolers. It indirectly symbolizes the nature of flashcards used in the teaching and learning of preschoolers by preschool teachers. Furthermore, the results show that preschool teachers still use printed flashcards in their teaching and learning sessions. Generally, early childhood education, specifically the preschool level is a fundamental phase for every child. It is an effort to help them unleash and optimize their potential. This is to ensure that they acquire skills that enable them to actively and creatively interact, explore, and make a sense of their world. Then, it is crucial for the teachers who serve as an early childhood educator to consider the appropriate flashcards characteristics used to facilitate their teaching and learning of preschoolers. In this description, the teacher's choice of flashcards is clearly explained.

In the beginning of flashcards foundation by Mortimer in the 19th century, it has been introduced in the form of indexed cards of various sizes. According to Arsyad (2011), the size of the flashcards used in teaching and learning is usually 8 x 12 cm, or its size depends on the number of children in a classroom. In fact, some stated that the best measurement for flashcards is 25 x 30 cm (Riyana, 2009). This variety of sizes is also recognized through the findings of this research. The flashcards size used by the teachers ranged from A6 to A4, as well as other specific measurements. It also displays a clear, interesting, and actual images. In addition, the design features either images or writing, or both, printed or handmade work, at one or both sides of the card. This proves that the flashcards can be produced in various designs according to its use as a teaching aid at the preschool education level (Susanto, 2017). It means that the flashcards design is adjustable. Flexibility in the flashcards design makes it become an attractive material for teachers to use. Teachers are given the opportunity to work and experiment with flashcards, in line with the *Pembelajaran Abad Ke-21 (PAK21)*, which was proposed by the Ministry of Education Malaysia (MOE). Besides that, the design of the cards, including size, image selection, and appearance style, is excellent for speedy and stimulating teaching and learning experiences (Hamera & Rohimajaya, 2018). This flashcards

design concept has proven to be an effective aid for preschool teachers in teaching and for preschoolers in learning and understanding.

Based on the functions that has been identified, flashcards are generally act as a teaching aid that works to deliver knowledge or information from a teacher as a user and sender, to preschoolers as recipients, which can stimulate the senses, thoughts, attention, and interest until a teaching and learning process takes place (Fadlillah, 2019). As discussed in the literature review, flashcards hold a various function in teaching and learning. Its users are given the advantage of determining the desired function in its use. These advantages are related to the flashcards' flexibility characteristic. This flexibility makes it hold an unlimited function. It indirectly allows the flashcards can be widely used. The comprehensive functions that hold by the flashcards also is in line with (Suyanto's study, 2008). According to Suyanto, the use of flashcards in the teaching and learning process is intended to help teachers: 1) be consistent with the language concept; 2) be familiar and stable with numbers; 3) be constant with few and many concepts; 4) capture students' attention through pictures with appropriate vocabulary and colours; and 5) add variety to the teaching and learning session. It is indirectly implied that flashcards can make it easier for teachers to teach the material to students and for students to understand the material because flashcards are an interesting approach.

In terms of costs, the findings of the research have shown that the use of the flashcards save costs. This occurs because flashcards can be reused and used for an extensive period. Its production also involves cards as the main material. In fact, flashcards can be used repeatedly. Users only need to ensure the quality of the flashcards are in a good condition for continuous use. This is an advantage of the flashcards (Susilana & Riyana, 2009).

Overall, the flexibility of flashcards refers to the diversity and development of the teachers on the stated aspects. Teachers are allowed to diversify and develop the flashcards according to the planned teaching and learning. In this regard, the credibility of a preschool teacher can be brought out and identified clearly.

Conclusion

While flashcards have a long history, they have been flexible in their nature since its origin. The qualitative responses identified numerous information related to the flashcards characteristics which helps to define the flashcards nature. The research design has resulted in different and variety perceptions related to the research aspects. To a great degree, the findings shown that flashcards have a flexible characteristic in terms of design aspects, which consist of various card sizes; functionality, which is free from any fixed settings; and are cost-effective in nature. On top of that, this research proves that flashcards are still active as one of the teaching aids and used by the teachers in their teaching and learning that complement the needs, growth, and development of preschoolers. It indicates that flashcards are still in use, relevance, and used physically at the Early Childhood Education Centres. Despite the numerous types of digital flashcards available now, the teachers still consider using printed flashcards as they reckon the potential benefits that it will bring to the preschoolers are significant. Furthermore, it has been found that the teachers understand and are familiar with this type of teaching aids. The understanding, knowledge, and experience of teachers on the characteristics of flashcards that are being used as teaching aids at the preschool education level helps provide a comprehensive picture of the central phenomenon. Nevertheless, the researcher hopes that this research exploration will be one of the best references for any further research related to flashcards.

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