BAB I

INTRODUCTION

1.1 Background

The development of technology in daily life makes it easier for people to obtain information quickly and up-to-date (Marpaung, 2018). One of the most popular and widely used forms of technological innovation is gadgets. According to the KBBI, a gadget is defined as an electronic device that has a practical function. Digital devices such as gadgets are today not only used as a means of communication, but also as a means of entertainment and learning. This change affects children's growth and development patterns, interaction with digital media begins to occur from an early age. Children who previously did more physical activity and environmental exploration, with the development of technology today, have become increasingly familiar with gadgets in their daily lives.

In recent years, the phenomenon of early childhood who have used glasses has become more and more common in the community. This condition is a serious concern because the use of glasses in early childhood is generally related to visual impairments, especially refractive disorders such as myopia. According to the International Agency for the Prevention of Blindness (IAPB) in 2021, around 165 million children worldwide are nearsighted. This number is expected to continue to increase to 275 million children by 2050. This increase shows that vision impairment in children is a global health issue that needs to be addressed and acted upon. In Indonesia, as many as 3.6 million children are recorded to have refractive disorders and this number has the potential to continue to increase. Of these, it is estimated that about 3 out of 4 children with refractive disorders have not received vision correction in the form of glasses.

The phenomenon of increasing visual impairment in the eyes of early childhood is reinforced by data from the Ikatan Profesi Optometris Indonesia (IROPIN) quoted through the antaranews.com website. IROPIN stated that cases of visual impairment in school-age children have increased related to the high frequency of gadget use, especially since the Covid-19 pandemic. Based on provisional examination data in 2023, around

1,000 children were examined, as many as 350 to 400 children were indicated to have visual impairment due to refractive abnormalities that required the use of glasses. The percentage of visual impairment due to refractive abnormalities in school-age children reaches 35-40%. This figure shows a significant increase compared to the results of Riset Kesehatan Dasar (Riskesdas) in 2012 which recorded a rate of visual impairment of 24.7%.

Based on previous research, which was presented in the journal "Hubungan Penggunaan Gadget dengan Kejadian Miopia pada Anak Usia Sekolah". Research conducted at SD Negeri 5 Penatih showed that there were 10 students in grades V and VI who had used glasses. The results of the study showed a significant relationship between the use of gadgets and the incidence of myopia in school-age children. Risk factors that affect the occurrence of myopia are due to bad habits when reading books and using digital devices such as gadgets. This shows that the higher the intensity of gadget use in children, the higher the risk of eye disorders (Dwipayanti et al., 2020). In Indonesia, as many as 3.6 million children are recorded to have refractive disorders and this number has the potential to continue to increase. Early detection has been carried out in children in 13 schools in Lombok Regency, NTB Province. And as a result, as many as 496 children were examined, 112 of whom were positive for refractive abnormalities. This data was collected from the website (Kemenkes RI) and was reviewed by dr. Siti Nadia Tarmizi, M.Epid. in 2024.

Figure 1.1 Internet Level Growth in Indonesia in 2023-2025

(Source: Indonesian Internet Service Providers Association, 2025)

Based on data from the Asosiasi Penyelenggara Jasa Internet Indonesia (APJII) Survey, the level of internet users in Indonesia in 2023 has reached 78.19%, or equivalent to 215,626,156 people out of a total population of 275,773.90 people. This figure will increase to 79.50% in 2024, and continue to rise in 2025 with a percentage of 80.66%. This figure is an important concern regarding the use of gadgets in early childhood, especially in childcare patterns in the modern era and children's behavior that almost most early childhood children in Indonesia are used to using gadgets and accessing the internet in 2022. Kementrian Komunikasi dan Digital (KOMDIGI) revealed that the latest data from the Badan Pusat Statistik (BPS) 2024, stated that 39.71% of early childhood in Indonesia have used gadgets, while another 35.57% have accessed the internet. Based on the age group, there are 5.88 children under the age of 1 who already use gadgets and 4.33% of minors who access the internet in 2024. Then there are 37.02% of children aged 1-4 years and 58.25 children aged 5-6 years who use gadgets, while 33.80 children aged 1-4 years and 51.19 years old 5-9 years old have accessed the internet.

The existence of gadgets has a huge influence both positive and negative impacts in daily life, especially on eye health. The eyes are important organs in the human body that act as a sense of vision and affect the quality of confidence in a person's life (Reyhan et al., n.d.). Given the important role of the eyes, maintaining eye health is a mandatory thing to do so that its function can remain optimal. Too long exposure to the screen on gadgets makes the eyes work harder, which can increase the risk of vision impairment (Sefianti et al., 2023). Based on the results of observations and information from the Puskesmas Porong, the cases of eye health complaints in early childhood have increased in recent years after the COVID-19 pandemic. The Puskesmas also said that most children who experience eye health complaints have a habit of using gadgets for a long duration, both for play and study. Eye fatigue can be interpreted as a condition when the eyes experience strain due to prolonged use. One of the main factors that trigger eye fatigue is the habit of staring at the screen of a gadget for a long time (Kurniawati et al., 2024).

This educational campaign is designed as a strategic effort to increase parents' knowledge and understanding of the importance of maintaining early childhood eye

health due to excessive use of gadgets. So far, information about the impact of using pre-existing gadgets is still mostly conveyed in conventional ways that are less attractive to children. Therefore, an approach that is more in line with their world is needed, namely through creative activities packaged in the form of interactive media. Interactive media is one of the means that can be used in the learning process. The use of interactive media can help children to more easily follow and understand the health messages conveyed (Ramadhani & Chidtian, 2023).

1.2 Problem Identification

1. Based on the results of the questionnaire distributed to 102 respondents, it was found that 95.1% of early childhood actively uses gadgets every day. With, 81.4% used gadgets for more than 4 hours. This data shows that most children have exceeded the limit of time for using gadgets recommended by the WHO, which is a maximum of 1 hour per day.
2. Questionnaire data showed that 44.1% of children complained of red eyes and tired eyes, 31.4% experienced stinging and watery eyes, and 7.8% experienced repeated blinking eyes. The data indicates that excessive use of gadgets begins to cause symptoms of eye health problems in children.
3. From the results of interviews with health workers at the Puskesmas Porong, there is an increase in cases of eye disorders in school-age children such as irritation and myopia caused by the habit of staring at gadget screens for too long. The counseling efforts carried out are still conventional and do not use visual media that is attractive to children and parents.
4. Based on the results of the questionnaire, 94.1% of respondents did not understand the impact of excessive use of gadgets can cause eye disorders in children. From the results of interviews with parents, they admitted that gadgets are often used as a medium to calm children when they are fussy or to make it easier to manage, without paying attention to the duration and long impact.
5. Based on previous research studies, most studies only focus on the impact of gadgets on children's development, but not many have discussed the role of creative activities as a medium in creating educational campaigns that are communicative, interactive, and in accordance with the character of early childhood.

1.3 Problem Formulation

Based on the above background and identification, the problem that can be identified is how to design an educational campaign through creative activities to reduce the negative impact of the use of gadgets on early childhood eye health?

1.4 Problem Statement

Problem statement are made so that the topics discussed in this design are directed and remain within one topic. Therefore, the limitations of the problem created are: The study subjects were limited to early childhood (5-10 years) and parents as the main companions. The focus of the problem is directed at eye health affected by excessive use of gadgets.

1.5 Objectives

In line with the formulation of the problem that has been determined, the purpose of this design is as follows:

a. Providing education to parents and early childhood about the importance of maintaining eye health in the use of gadgets in daily life.
b. Produce educational campaigns that are more interesting, interactive, and in line with children's world through creative activities.
c. Helps support parents to understand the risks of excessive use of gadgets and also provides alternative media in accompanying children.

1.6 Benefits of the Design

1. Academic Benefits

    a. It is a reference for similar research or design in the field of educational campaigns, especially those targeting early childhood children.
    b. It can be used as additional teaching materials in the academic environment, especially in courses related to campaign design, visual communication, and interactive media planning.

2. Practical Benefits

a. Providing alternative educational media that is interesting and easier to accept by children, making it easier for parents and teachers to provide an understanding of maintaining eye health from an early age.
b. To be a creative solution for Educational Institutions or Health Institutions in conveying health education messages in an interesting and fun way.

3. Benefits to the Community

a. Increasing public awareness about the importance of maintaining children's eye health from an early age, especially in the midst of the high use of gadgets in the current digital era.
b. Supporting the creation of wiser behavior patterns in the use of gadgets, both for children and parents.

1.7 Design Framework

This design framework aims to facilitate the development of a structured concept so that it can identify effective strategies in achieving goals optimally. The following is the framework for this planning:

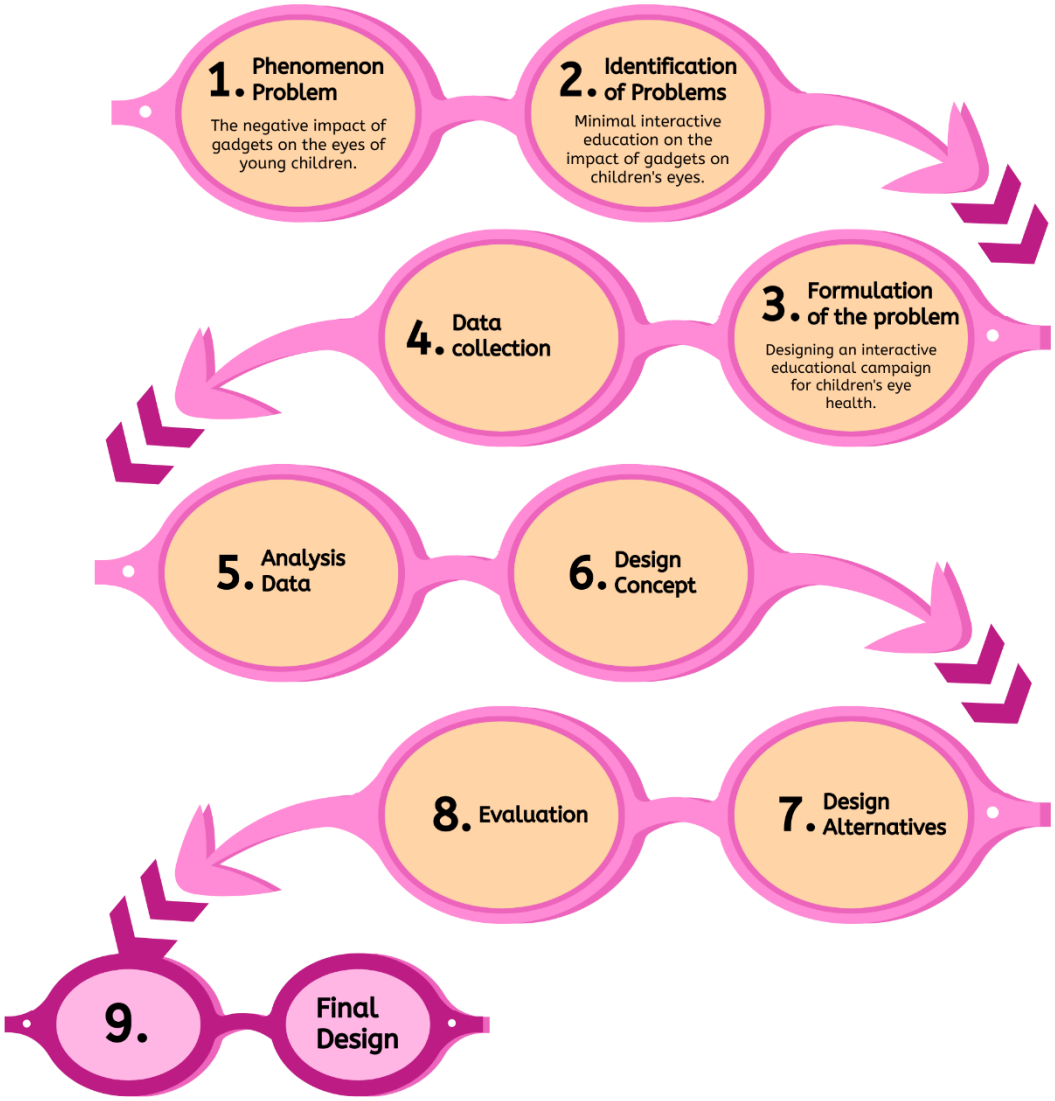

Figure 1.3 Planning Flow Scheme

(Source: Personal Documents, 2025)