



**Jurnal Pendidikan Usia Dini**

<http://journal.unj.ac.id/unj/index.php/jpud>

Volume 17. Number 2. November 2023

e-ISSN (Online Media): 2503-0566

P-ISSN (Print Media): 1693-1602

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## Save-Child Application to Introduce Self-Protection to Children: Preliminary Study of Website-Based Learning Media

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DOI: <https://doi.org/10.21009/JPUD.172.11>

Accepted: June - October 2023; Published: November 30<sup>th</sup>, 2023

**ABSTRACT:** Digital transformation in the Society 5.0 era presents challenges for the world of education, especially teachers. The condition of early childhood education in Indonesia is worrying, data from the Online Women and Children Protection Information System (Simfoni-PPA) shows a significant increase in cases of sexual violence against children in 2019-2023. This research aims to collect and analyze product development needs from an early age, especially in introducing self-protection to young children. The Borg and Gall development model was used to develop the web-based Save-Child application. The results of this research only discuss the first stage of application development, namely needs analysis. The study presents a descriptive analysis regarding the development needs of the Save-Child application. This highlights that self-protection material has been taught but has not used modern digital-based media. The results of the study become the basis for designing application development that meets the needs and tendencies of teachers and children in early childhood education environments.

**Keywords:** learning media, save-child website, self-protection, early childhood

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## 1 INTRODUCTION

The progress from the 21st to the 22nd century is propelled by digital technology developments, particularly the fourth industrial revolution and societal reform 5.0. The manufacturing industry incorporates technologies such as Big Data (BD), the Internet of Things (IoT), artificial intelligence (AI), and robotics into their models. The transition from the 21st to the 22nd century has brought about a significant and organized revolution impacting various facets of life, such as economics, politics, military affairs, culture, education, and religious practices (Adel, 2022). In the period marked by Industry 4.0 and Society 5.0, education plays a crucial role in enhancing the level of human resources through learning. This transformation has positive impacts on various aspects of life, but also presents new challenges in the education world. Technology development provides significant opportunities to improve the quality of learning and address complex challenges, such as the rising instances of sexual violence in early childhood.

In the current digital age, there is a push towards online learning by government agencies and educational institutions resulting in a shift from traditional in-person courses to distance and online learning options (Aldhafeeri & Khan, 2016). The introduction of innovative technological advancements such as online learning has the potential to establish a varied and authentic learning atmosphere conducive to building teamwork and mutual trust amongst learners (Aldhafeeri & Khan, 2016). The rapid technological advancements have prompted researchers (Diane O'Doherty et al., 2018) to express concern regarding the quality of online learning. Significant challenges in developing online learning activities with high levels of attendance and social engagement have been emphasized.

The availability of pornographic content and complex online hazards on various social media platforms has rendered children more susceptible to sexual violence. Chinese parents typically hold an unfavorable opinion of online learning's worth and benefits in early childhood education and opt for traditional methods of learning due to negative consequences (Dong, 2020). In the ongoing discourse pertaining to children's exposure to digital media, educational technology experts concur that the main apprehension is not the duration of children's engagement with digital media but the nature of the content they come across. The surge in the accessibility and usage of mobile devices and applications has raised concerns regarding the quality of the app content. This multifaceted issue is increasingly becoming significant (Guernsey., 2013). Excessive screen time may significantly impair children's cognitive development, emphasizing the importance of providing guidance and interventions to parents and guardians on the actual effects of digital media (Papadakis, 2018).

Efforts to prevent child sexual abuse involve various stakeholders including the government, academia, and teachers. Early childhood significantly influences child development, making it imperative to address the growing incidence of child abuse and protect future generations. Preventing sexual violence requires the implementation of

primary and secondary prevention strategies, while preventing general violence necessitates primary prevention efforts at all levels. The latter should aim to equip all community members with skills to maintain and ensure the safety and protection of children. Secondary prevention interventions aim to provide early support for at-risk children and families. Tertiary prevention interventions focus on children in high-risk settings or those experiencing mistreatment (Das, 2023). Previous research supports the utilization of web-based learning media for promoting self-protection in children. Yulianti (2020) research presents GESIT EDUSEX learning media, a sex education resource developed through Google Sites. The feasibility of this media was evaluated through expert validation, showing a decent average score of 72% for material aspects and a similar score of 65% for media aspects. The feasibility of the developed media is also determined by student responses. The data gathered from student responses indicated an 86% average score, meeting the criteria for very high feasibility (Widayati et al., 2020).

School-based programs seem promising for child abuse prevention. Educational programs demonstrate positive effects, their effectiveness can be further improved by incorporating specific components and techniques, such as fostering children's social-emotional skills and integrating interactive elements like story or singing, highlighting that individual techniques alone may not ensure satisfactory and effective outcomes (Assink, 2021). In addition, education from parents, school teachers, and religious settings, and the media can be an effective intervention in children's learning to protect themselves against rape (Kandi et al., 2022). Based on previous research, it is crucial to address the urgency of self-protection in early childhood education in the digital age. This study identifies the challenges and requirements faced by teachers regarding early childhood violence and serves as a foundation for developing self-protection recognition media. The findings of this study propose further research to enhance child self-protection education in Indonesia by developing educational media that aligns with child development in the digital era.

## 2 THEORETICAL STUDY

### 2.1 *Early Childhood Sexual Abuse*

Child sexual abuse involves adults or children forcing sexual (Astuti & Lita Hadiati, 2018) acts on other children, encompassing commercial activities and audio-visual media (Freedoms et al., 2020). Types or forms of child sexual abuse include, fondling is fondling or caressing by the perpetrator to the victim, in the form of hugs, kisses, touches on the chest, buttocks, thighs. Intercourse / Penetration of the vagina or anus, using the genitals, fingers, or sex aids by the perpetrator to the victim or by the victim to the perpetrator at the request of the perpetrator. Stimulation of the genitals, either penis or vagina by using fingers, genitals or sexual aids is carried out by the perpetrator to the victim, or the victim to the perpetrator at the request of the perpetrator. Violence without physical contact, undressing, and showing genitals to children, showing pornographic videos to children, making phone calls or making sex calls to children (Putri, 2022).

The rising incidence of child sexual abuse is particularly alarming, as it has the potential to jeopardize the next generation's early years. The state of child protection in Indonesia is concerning, with alarming facts indicating an urgent need for action. Data from Simfoni-PPA, an online information system that protects women and children, illustrates a consistent escalation in reported cases of sexual violence against minors spanning from 2019 to 2023. As of September 2023, 12,285 cases were reported, with 17,641, 15,914, 12,412, and 12,285 cases reported in 2022, 2021, 2020, and 2019, respectively. The number of reported cases of violence against children between 2019 and 2023 totals to 76,382 (Kemenppa, 2023).

Kenny examines the factors that lead to child sexual abuse, such as limited religious education, insufficient parental attention, and lack of awareness in the surrounding community (Astuti, 2018). The prevention of child sexual abuse is crucial, and this study concentrates on the creation of a web-based learning application "Save-Child" to raise awareness in early childhood about self-protection. The presented statistics indicate a notable rise in cases of child sexual abuse. Multiple studies suggest that child sexual abuse is frequently caused by various factors, such as exploitation, poverty, stress, homelessness, unemployment, young parents, and a lack of confidence (Brown & De Cao, 2017). The immediate and long-term impacts of child sexual abuse are well documented. Researchers have identified various effects of sexual violence, including cognitive impacts (Barrera et al., 2013), mental health disorders such as depression, anxiety, post-traumatic stress disorder, and thoughts of suicide (Russell et al., 2020). Moreover, De Jong (2015) emphasizes the long-term ramifications of sexual violence on adult victims, including impaired employment, parenting, education, relationships, mental health, and overall well-being. Understanding the adjustment of child victims of sexual violence to adult roles is crucial (de Jong, 2015).

Social changes, technological advancements, and insufficient public awareness of the importance of safeguarding children against sexual crimes are key contributing factors. Extensive research has shown that children who experience violence in their homes may suffer from both short and long-term harm (Øverlien & Holt, 2019). Sexual violence against children occurs frequently in Indonesia, with perpetrators being individuals in positions of trust, such as teachers and step-parents (Sari et al., 2021). The trauma triggered by sexual violence often causes lasting sensations of fear, sadness, and detachment in children. Furthermore, it may lead to tense family dynamics (Noble-Carr et al., 2020).

Early childhood educators' comprehension and awareness of child maltreatment and protection carry significant repercussions for children in early childhood environments, including childcare, kindergarten, and the initial school years. This is primarily due to the potential impact of complex traumatic experiences, such as child abuse, neglect, and exposure to family violence (collectively referred to as child maltreatment), on children's learning and development. Secondly, educators can play a vital role in identifying and addressing child abuse, safeguarding children, and intervening early to reduce the long-

term adverse consequences of neglect. Early childhood educators have a vital role in understanding the context and impact of child abuse on children's psychosocial development (Finklehor D, 1984). Educators should establish a reflective environment to comprehend the diverse nuances of touch, given its relevance in educational settings. Furthermore, it is crucial to acknowledge that touch within educational contexts encompasses more than just establishing guidelines for appropriate or inappropriate touching; it is a multifaceted phenomenon with multiple dimensions, as highlighted by Laukkanen et al., (2023).

The rights of children in Indonesia have been a priority for the government, evidenced by the implementation of Regulation No. 146 of 2014 by the Minister of Education and Culture. This regulation specifically pertains to the 2013 Early Childhood Education curriculum. This policy involves developing the Early Childhood curriculum while considering objective, evidence-based principles for holistic and integrated early childhood development, which include education, nutritional health, care, and child protection (Muhammad, 2022). Clear communication and precise terminology are prioritized, and conventional academic structure is maintained throughout. Additionally, the language is formally registers, using formal conventions, standard vocabulary, and grammatically correct sentence structure. Supported by government policies, child protection encompasses actions taken to safeguard children and their rights, ensuring they have the best possible quality of life, opportunities for growth and development, and can participate in society with dignity, while also shielding them from violence and discrimination.

## *2.2 Self-Concept Theory in Early Childhood*

The “self-concept” can be described as involving an objective part corresponding to permanent characteristics (age or gender) and a subjective part, the consciousness that each person must be himself or herself, in other words unique, and to be the same individual throughout life. The Self is both individual and collective, personal, and social. Identity construction, in which the Self is built, is a long-term process that involves several subprocesses (Valverde, 2012): an individuation or differentiation process involved mainly in the early years through which the child manages to see himself/herself as a differentiated being, an identification process by which the individual appropriates the characteristics of others, finds patterns, and feels solidarity with some communities, an attribution process leading to internalization of the images and the feedback that comes from others.

The external dimension of self-esteem is affected by the opinions and interactions of others and covers physical, moral-ethical, personal, family, and social aspects (Fits). Safety skills aim to safeguard children from sexual violence and contain three stages: Recognize, Resist, and Report (Bagley, 2004). Seven sexual education concepts, as identified by Darvis in Buckley (2007), protects children from sexual violence. These include body ownership, types of touch, assertiveness, the "No-Go-Tell" sequence, confidentiality, social support, and avoidance of victim blaming. To prevent sexual

violence in children, it is crucial to promote a good understanding of their self-concept. Therefore, the focus of this re-research is optimizing the role of teachers in imparting child self-protection (Buckley, 2007).

### *2.3 The Importance of Early Childhood Educators in Child Self-Protection*

Early childhood educators play a critical role in the education of young children. They must possess the skills to address children's issues, provide a secure environment, and shield them from harm, including violence (Maryatun, 2016). Child protection involves several aspects, such as ensuring the physical and emotional safety of children, educating them about personal boundaries, empowering them to protect themselves, fostering a safe and welcoming environment, and promptly resolving issues as they arise. In this context, the objective of the Save-Child application is to enhance the involvement of Early Childhood Education (ECE) teachers or educators in educating children about self-protection, so as to mitigate incidents of violence against them and ensure their protection rights are optimally fulfilled (Indonesian Ministry of Education and Culture, 2017).

Strategies to manage or primary care settings when sexual abuse is suspected in children. To prevent sexual abuse in children, several strategies are suggested. The first and most important suggested strategy is parents who should be vigilant and pay more attention to the behavioral symptoms of suspected sexual abuse in children (Kandi, 2022). In teaching self-protection skills to children, parents and teachers need to be open if incidents of violence occur against children and avoid being closed off (Schlichting, 2022). Maintaining a positive approach is recommended to create a sense of comfort in children towards themselves and those around them during self-protection skill training (Kenny, 2020). Effective media is crucial in introducing sexual education to children and promoting self-protection. Media can deliver information to children in an enjoyable and cost-effective manner.

Children can access various forms of media, particularly digital media, from different locations. Web-based educational interactive media uses compelling visuals that allow children to understand complex concepts. Illustrations, images, and animations can aid in presenting sensitive topics to children in a clear and captivating manner. Utilizing interactive media with engaging designs and clear usage and navigation instructions can enhance children's attentiveness and knowledge acquisition regarding child safety protocols (Nanang, 2020). The current research demonstrates that the Audio-Visual media program significantly improves children's competence in identifying self-protection skills and preventing sexual violence (Erdianti, 2020).

### *2.4 Development of Web-Based Digital Learning Media*

The web is a hypertext platform that can display multiple forms of data, including text, images, sound, animation, and other multimedia data. PHP, short for PHP Hypertext Preprocessor, is one of the commonly used server-side scripts on websites. Websites are categorized into two types: static and dynamic web, as stated by Andi (2006). Web 2.0 is

characterized as second-generation web technology, distinguishing it from web 1.0 technology. In Web 1.0, information is typically static and can be altered solely by administrators. Conversely, in Web 2.0, online collaboration is encouraged, enabling users to actively generate and distribute content. Furthermore, Web 2.0 technologies play a significant role in formal education settings as well as informal learning environments at home, according to Selwyn, (2006). Web 2.0 presents noteworthy potential opportunities for instilling child self-protection and sexual education (Stevenson, 2013).

Previous studies by Widayanti (2022), Nanang (2020), and Tiara (2022) indicated favorable outcomes in creating internet-based learning tools for instructing children about self-protection. The popularity of the internet among teenagers has caused a surge in the implementation of digital technology for educating children about sexual safety. Integrating technology into instruction presents various challenges such as the requirement of efficient preparation, management, and potential internet accessibility difficulties (Decker, 2021). Based on prior research findings, the author posits that Web 2.0 holds immense potential in providing self-protection resources for children but demands meticulous planning and management to optimize its advantages.

### 3 METHOD

This study uses research methods research and development consisting of qualitative and quantitative research. In this study focused on the stages of qualitative research. The research was conducted at three international schools located in Surakarta in May-June 2023. Qualitative research used descriptive research, data collection is done through observation, interviews, and documentation. The use of descriptive qualitative methods to facilitate understanding of the development of web-based media suitable for early childhood. In addition, the method accurately describes incidents of sexual violence that have occurred in schools and identifies patterns with appropriate language.

#### 3.1 *Sample*

The sampling technique in this study used purposive sampling technique. The reason the researcher chose the purposive sampling technique was because the selected sample functioned to obtain maximum information from the informant. The specific specifications determined by the researcher as informants should meet the criteria (See Table 1).

Table 1. Characteristics of Research Subjects

No	Characteristics of Research Subjects
1	Child-friendly Early Childhood Education (ECE) schools
2	Early childhood education (ECED) schools that have an active internet connection
3	Early childhood education schools that have implemented modern technology-based learning
4	Subject informants are stake holders in Early Childhood Education (ECED) schools, including principals, teachers and curriculum officers in ECED schools

### 3.2 Data Analyze

This research applies descriptive data analysis techniques, which produce a needs analysis as a guide for researchers in conducting further development research. The type of interview used in this research is using semi-structured interviews (Semi structured interview). Qualitative data analysis uses the Miles and Huberman model, namely data collection or data collection, data reduction or data reduction, data display or data presentation, and conclusion or verification (Miles, 2005).The detailed data analysis technique is presented in the illustration in Figure 1.

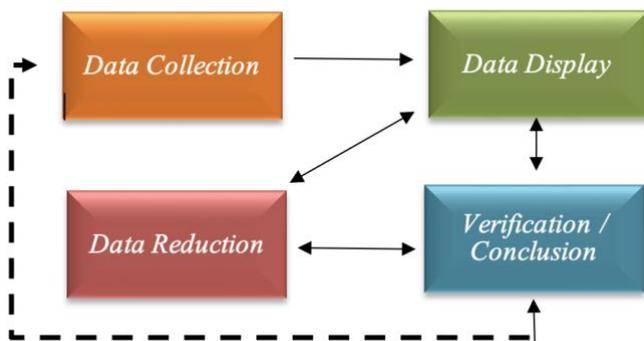


Figure 1: Stages of Data Analysis (Sources: Misselina, 2023)

### 3.3 Research Instruments

Table 2: Semi-structured interview questions

List of semi-structured interview questions	
Question Main Exploratory	<ol style="list-style-type: none"> <li>1. What do teachers or principals think about cases of sexual violence against children?</li> <li>2. Have cases of sexual violence ever occurred at school?</li> <li>3. How do teachers deal with cases of sexual violence that occur at school?</li> <li>4. Is sex education to strengthen self-protection in children important from an early age?</li> <li>5. How is child-friendly school implemented in this school?</li> <li>6. How has the method of introducing self-protection to children been developed so far?</li> <li>7. Have teachers been aware of web-based media such as google or educational websites?</li> <li>8. How do teachers think about web-based media development?</li> <li>9. What do teachers think about the introduction of self-protection in children through videos, educational articles, children's stories, through web-based media?</li> <li>10. What do teachers think about the concept of developing a save child application?</li> </ol>
Questions to clarify more information and clarify the concept	<ol style="list-style-type: none"> <li>1. What does it mean?*</li> <li>2. Can it be explained further?*</li> <li>3. Does what it says mean...?*</li> <li>4. Permission to restate what you have said, is my understanding correct...?*</li> <li>5. How did that happen?</li> <li>6. If important, how is the stimulation taught to the child...?*</li> <li>7. Is it appropriate...?*</li> <li>8. Why do you agree...?*</li> </ol>

## 4 RESULT AND DISCUSSION

### 4.1 Result

Based on data obtained from interviews with resource persons consisting of Early Childhood Education (ECE) teachers, Head of Early Childhood Education (ECE) curriculum, and school principals regarding the needs analysis of Save-Child Application protection media in introducing self-protection to early childhood in Early Childhood Education (ECE) schools. There are 11 categories of needs that have been identified, among others.

#### 4.1.1 Main Theme: Needs Analysis of Educators in Save-Child Application Development

The concept of a web 2.0-based Save-Child application has great potential in delivering self-protection material to children, but it needs careful planning and management to maximize its benefits. Based on the perspective of Early Childhood Education (ECE) educators, the needs analysis of the Save-Child application media development. Based on the perspective of educators, there are several categories of needs such as the addition of game features, children's stories and children's songs, the provision of Pancasila-based educational content on self-protection and including a guidebook for product use, the provision of interesting and complete media content. Table 3 shows Example of Document Transcripts, Codes, Fact Compaction, Interpretation, and themes from the needs analysis of educators' perspectives on the needs analysis of media needed in self-recognition in early childhood.

Table 3. Description Of the Data

Theme: Educator Needs Analysis in the Development of Save Child Application			
Document Transcripts	Code	Fact Compaction	Interpretations
Respondent (KS): It is better to include games, children's stories to make it interesting for children, in addition to songs and video features. Also explain the education of <i>adab</i> and <i>najis</i> , then add how to educate children who are raised by modern parents kissing is not allowed.	1	<ul style="list-style-type: none"><li>- Adding game features to make it interesting (1a)</li><li>- Addition of children's story features (1b)</li><li>- Addition of song and video features (1c)</li><li>- Addition of hygiene material (1d)</li><li>- Addition of material on the dangers of kissing (1e)</li></ul>	Addition of games, children's stories, songs, and shouting features
Respondent (WK): Make an application that is equipped with the theory and stages so that teachers can easily understand and introduce, the media created, make it for all religious people not focusing on one religion because Indonesia has cultural and religious diversity, make a guidebook on how to use it.	2	<ul style="list-style-type: none"><li>- Addition of theoretical material and stages of self-protection (2a)</li><li>- Media concept based on Pancasila and diversity (2b)</li><li>- Complete product usage manual (2c)</li></ul>	Providing Pancasila based educational content on self-protection and handing out product usage manuals.

Respondent (G): Make interesting media, which can facilitate children in protecting themselves, because it is very necessary for provision in later life, provide interesting children's stories that are easy for children to understand, add examples of introductory activities that can be done by early childhood education teachers.	3	- Media made interesting (3a) - There is interesting self-protection content (3b) - Addition of introductory activities that early childhood teachers can do (3c)	Provision of interesting and complete media content
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#### 4.1.2 Category 1: Addition of game features, children's stories, songs, and materials

The results of interviews with informant 1 stated that there is a need for media that introduces self-protection to children. Children's stories are needed in stimulating children's cognitive development which is integrated into fairy tale activities to introduce self-protection to children. Informant 1 suggested in the development of the application to introduce material related to unclean and holy, the introduction of self-limitation related to the dangers of kissing lips. This is due to the finding in school A that modern parents perceive kissing as a form of affection, which results in children imitating this act and applying it in their daily interactions. School A has taken the initiative to address this issue by introducing the limits of *aurat* in the morning recitation program. Collaboration with the sexual violence prevention community has also been done. Informant 1 emphasized that the concept of developing this application is tailored to the characteristics of early childhood, with the concept of playing while learning.

#### 4.1.3 Category 2: Provision of Pancasila-based educational content on self-protection and inclusion of product usage manuals

In School A, the implementation of the concept of safeguarding has been a key focus, with educators recognizing the importance of providing children with an understanding of self-protection. The school adopted a policy where toilet training assistance is only provided by female teachers, and parents who pick up their children are given pick-up coupons to prevent the risk of abduction that could result in sexual violence. To integrate sex education with children, teachers are provided with facilities to prepare teaching materials that include simple activities such as singing, watching story videos on YouTube, and playing with balloons to teach touch techniques. The challenges faced by teachers and schools include the lack of media that specifically introduces self-protection, as well as teachers' limited understanding of the stages of children's sexual development. Therefore, it is necessary to develop digital-based media equipped with appropriate theories and developmental stages to support this education effort.

#### 4.1.4 Category 3: Provision of interesting and complete media content

In the interview at School C with informant 3, the educator expressed concern about the rapid advancement of technology and the gap in children's understanding of self-

protection. Educators felt the urgency of introducing the concept of self-protection to children. The school has used technology-based resources such as YouTube, but there has been no effort to develop internal learning media. The implementation of safeguarding in the school has been done well, as evidenced by the strict guarding and CCTV. This has meant that no sexual violence has ever occurred in the school. Barriers and challenges faced by educators; respondents felt that children need to be equipped with an introduction to self-protection so that they can deal with negative influences in technological development. Informant 3 analyzed the media needs needed in this school, namely media equipped with interesting media content, which can stimulate teachers in introducing self-protection to children. Informant 3 emphasized that the media designed is expected to be an effort to prevent children from facing negative influences in technological development.

## 4.2 Discussion

### 4.2.1 Educator Needs Analysis in the Development of Learning Media "Save Child"

It is important for early childhood educators to understand the context and impact of sexual violence on children, because it has an impact on children's psychosocial development (Bright et al., 2022). The need for children to feel safe and loved and protected from all forms of harm, learning opportunities can be realized effectively. In contrast, maltreatment adversely affects learning, negatively affects children's behavior, and makes it difficult for young children to develop social relationships in the early years of school.

Early childhood education (ECED) teachers or educators play a crucial role in the early childhood education process, and they must have the ability to handle children's problems, be a safe place for children, and protect children from various forms of violence (Maryatun, 2016). Early childhood educators are in contact with children for longer periods of time than other professionals. While their primary purpose is to contribute to children's learning, development and well-being, this places early childhood educators in a unique position to also contribute to early identification and response when developmental needs are compromised due to maltreatment and/or trauma (McKee & Dillenburger, 2012). Younger children are at greater risk of family violence and more vulnerable to abuse and neglect when compared to older children or adolescents (McKee & Dillenburger, 2012).

Educators have a central role in teaching the concept of self-protection in early childhood. In this evolving era, their role is not only in conveying information, but also in creating a learning environment that is in line with the times. The interviews with various informants revealed several categories of needs that need to be considered in the development of the Save-Child application. There are challenges in integrating this technology into learning, including the need for good preparation and management and internet access issues (Decker, 2021). We assume based on the results of previous research that Web 2.0 has great potential in delivering self-protection materials to

children, but it needs careful planning and management to maximize its benefits. This is supported by the results of the needs analysis from the three informants, which presents an initial picture of the needs for the development of the Save-Child application and illustrates the diversity of approaches needed in the context of teaching self-protection in the participating Early Childhood Education (ECE) institutions.

Informant 1 underlined the importance of media that can introduce the concept of self-protection to young children. The informant assumed that children's stories can help stimulate children's cognitive development and suggested incorporating children's stories into storytelling activities related to self-protection. In the development of this application, it is important to integrate material related to the concepts of unclean and holy, as well as understanding the importance of self-boundaries related to the dangers of kissing lips. Especially, as parents' modern perception of kissing as a sign of affection has presented challenges that need to be addressed. Therefore, this app should be adapted to the characteristics of early childhood, with a play while learning approach.

According to a psychologist named Charlotte Reznick who is an author of the book "The Power Of Your Child's Imagination" assumes that the body parts of the mouth and lip area are private areas for children, the lips are sexually sensitive zones that can arouse sexual arousal (Charlotte , 2009). Charlotte (2009) assumes that children can be given affectionate touches such as kissing them on the forehead, cheeks, or hands, but it is not recommended to kiss the lip area because the lips are more nerve endings and more sensitive to stimulation. Apart from the biological side, it turns out that from the psychological side, a psychologist said the same thing that parents should not kiss their children on the lips. There are psychological impacts on children including children do not understand the boundaries of privacy. Saliva has the potential for dangerous infections because it enters their body through saliva. Children try to repeat the gesture of kissing the lips with others, without realizing the intimate implications of this gesture. Informant 2 highlighted the need for app content to include Pancasila values and not focus on one religion alone. With Indonesia's diverse cultures, ethnicities and religions, the app is also expected to encourage tolerance between religions and cultures. In addition, the informant emphasized the importance of a guidebook as a reference source for teachers in implementing this app in classroom activities.

The results of the interview with informant 3 showed educators' concerns about the rapid development of technology. They realized the importance of introducing the concept of self-protection to children to deal with the negative influence of technology. Informant 3 underlined the need for media equipped with interesting content that can stimulate educators in delivering self-protection materials. In addition, the successful implementation of safeguarding in this school, which involves heavy guarding and the use of CCTV, shows the importance of this application in supporting efforts to prevent sexual violence in the school environment. By understanding the central role of educators and the urgency of developing the Save-Child application with the needs that have been identified in these categories, the development of this application is expected to be more

effective in introducing the concept of self-protection in early childhood and in accordance with the changing times.

## 5 CONCLUSION

During the transition from the 21st to the 22nd century, education has become crucial in preparing human resources for the advancements in digital technology. However, a new challenge has emerged in the form of increasing cases of sexual violence against young children, thus necessitating measures to optimize child protection. Implementing the development of the Save-Child application is a crucial step towards monitoring and protecting children from the risks of sexual violence and online exploitation. This program utilizes digital technology for this purpose. By utilizing the Save-Child app, educational institutions can provide quality education while prioritizing the safety and protection of children, preparing them for the challenges of the 21st century. The results of this study will serve as a starting point for designing an app that meets the needs and preferences of teachers and children in the Early Childhood Education (ECE) education environment, as previously described.

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