

Development of Digital Media to Strengthen Family of Generation Alpha in the Thai Context

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ABSTRACT

The objective of this research is to develop and evaluate the effectiveness of digital media in strengthening the generation of alpha families in the Thai Context. The sample is parents of Generation Alpha children, 532 people, who were obtained from Stratified Random Sampling from all regions of Thailand. Data were collected from the questionnaire on 5 5-point rating scale. The level has a classification power value between .266 and .898 and has a coefficient Cronbach's alpha equal to .937. The data was analyzed using a needs assessment and a Priority Needs Index Modified (PNIm). The digital media performance assessment tool is the children's media development expert's performance assessment form from 3 people, and the satisfaction assessment for using digital media from 20 families with a generation of alpha children. The results showed that: 1) the reality of family strength in Generation Alpha in the Thai context is very high ($\bar{X} = 3.94$), the expected conditions of family strength in Generation Alpha in the Thai Context are at the highest level ($\bar{X} = 4.87$), and the necessary needs (Modified Priority Needs Index: PNImodified) of family strength of Generation Alpha in the Thai context is 0.21-0.26. The most urgent need is positive relationships within the family (0.26). This is followed by mental immunity and adaptation to technology and the digital world (0.25), roles and responsibilities of parents (0.23), and molding and enhancing good characteristics (0.21), respectively. The research results were digital media in the form of a Content Management System (CMS). The results of the effectiveness of digital media on the family strength of Generation Alpha in the Thai context, according to experts, are very high ($\bar{X}=4.39$) and the results of the assessment of satisfaction with the use of digital media to the family strength of Generation Alpha in the Thai context by families with Generation Alpha children are very high ($\bar{X}=4.37$). A total of 592 people visited the website between 22 December 2567 and 20 February 2568.

Keywords: Family Strengths, Generation Alpha, Digital Media, Design Thinking, Needs Assessment.

INTRODUCTION

Thailand stands at a pivotal moment, navigating rapid social transformation, technological innovation, and intensifying global competition. In pursuit of its vision to become a stable, prosperous, and sustainable First World nation by 2032, the country is guided by four foundational pillars: Economic Wealth, Social Well-Being, Human Wisdom, and Environmental Wellness. Central to this national transformation is the aspiration to cultivate Thai citizens as "complete individuals of the 21st century," aligned with the broader ambition of achieving "Thai 4.0 in the First World." This vision is anchored in the principle of Strength from Within, forming the bedrock of Thai Society 4.0—a future society rooted in hope, happiness, and harmony. As the world confronts widening technological divides, shifting economic dynamics, and urgent environmental challenges, human capital has

become a key strategic focus. Thailand's development path must not only keep pace with global change but also equip its people to succeed in an increasingly interconnected and rapidly evolving world (Ministry of Social Development and Human Security, 2023).

Families are the bedrock of every society. Recognizing this vital role, numerous public policies focus on strengthening families. The concept of family strength and the Sustainable Development Goals (SDGs) are not merely two separate ideas. While the SDGs don't mention family strengths, several SDGs goals directly relate to strengthening family units, especially SDGs 1, 3, and 4. Family strengths contribute to achieving poverty reduction, good health, and well-being, as well as quality education for children (United Nations, 2023). Family relationships between different generations of family members are lasting and important for the well-being, education, and income of younger generations (Thomas, Liu, and Umberson, 2017). Generation Alpha, comprising children born between 2010 and 2025, is growing up in an era of rapid technological advancement (McCrindle, 2015). Understanding this generation is essential, as they will play a pivotal role in shaping and driving society in the future (Nagy & Kölcsey, 2017). The quality development of children and youth relies on the strength of the family, which serves as a fundamental foundation for shaping individuals, enhancing family well-being, and fostering the ability to effectively manage and resolve challenges. This generation is entering the world with unique experiences and challenges compared to previous generations. Growing up with technology, Generation Alpha navigates a world of constant connectivity and information overload (Gunaratne, Baral, and Rand, 2020). While this offers incredible opportunities, it also presents challenges for family dynamics (Pattrawiwat and Tuntivivat, 2021).

The problem of domestic violence is still a chronic and increasingly serious social problem in Thailand. Domestic violence incidents not only affect family relationships but also affect social and economic issues (Ministry of Social Development and Human Security, 2023). In 2021, there were 1,084 victims and 1,079 perpetrators recorded. The highest number of victims fell within the 18-30 age group, totaling 362 cases, or 33.39%. Similarly, this age group also had the highest number of perpetrators, with 342 cases, accounting for 31.70% (Social Development Department, 2021)

Siwapathomchai (2021) conducted a review of the relevant literature on children's use of new media in Thai families and provided an account of parental mediation strategies, describing how parents optimize their children's use of new media at home. The paper also provides the cultural background, such as forms of communication, values, and beliefs, within the context of the Thai family, as well as the discussion of how digital competence becomes an important factor resulting in reverse socialization within the Thai family. Kajornsi (2022) synthesized the main factors that influence Thai youth etiquette. It highlights the significance of each contributing factor, offering a broader perspective that can support proactive measures for prevention and resolution before situations escalate to a point where they become too difficult to manage. According to the synthesis, the shift in Thai youth manners is influenced by a range of common global factors, particularly the widespread impact of global culture and rapidly advancing technology. Thai youth have fully embraced these influences, leading to changes in their attitudes and values. Hence, the researchers are interested in developing digital media such as Content Management System (CMS) websites (Smith, J., & Johnson, A., 2023) to strengthen the Generation Alpha family in the Thai context.

Research Objectives

1. To explore the conditions and needs to strengthen the Generation Alpha family in the Thai context.
2. To develop digital media to strengthen the Generation Alpha family in the Thai context.
3. To evaluate the effectiveness of digital media in strengthening the Generation Alpha family in the Thai context.

Conceptual Framework

Development of digital media to strengthen generation alpha Families in the Thai context applied design-based research divided into 3 phases according to the concept of Plomp (2013) and Gravemeijer & Cobb (2006, as cited in Mckenney & Reeves, 2013) namely 1) Preliminary research phase is a period of study of the conditions and needs necessary to strengthen the generation alpha family in the Thai context. Together with the review of relevant research papers to determine the conceptual framework for research. 2) prototyping phase to develop a digital media prototype. and 3) assessment to evaluate the effectiveness of digital media, as illustrated in the figure 1

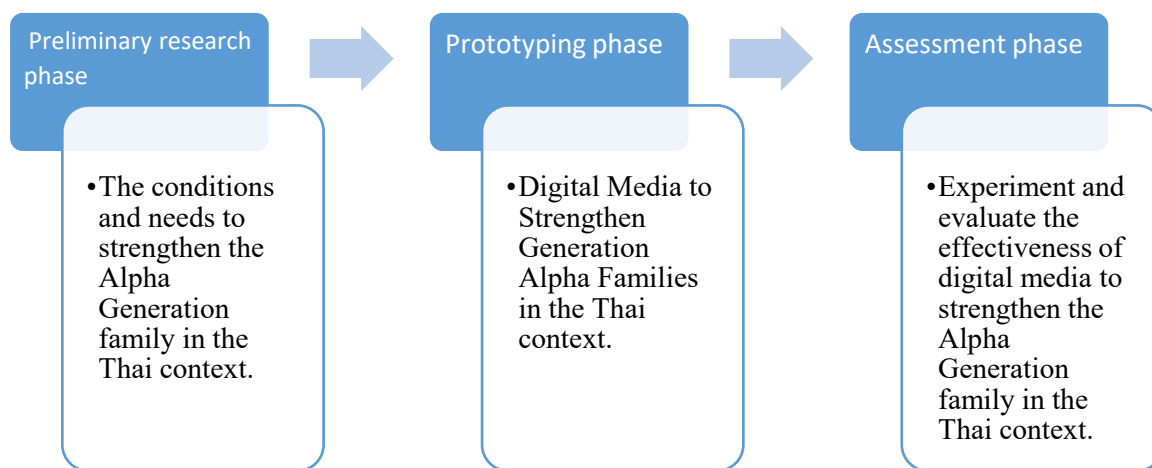


Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

This research uses design-based research based on the concepts of Plomp (2013) and Gravemeijer & Cobb (2006, as cited in Mckenney & Reeves, 2013). 1) The preliminary research phase is a period of study of the conditions and needs necessary to strengthen the Generation Alpha family in the Thai context. Together with the review of relevant research papers to determine the conceptual framework for research. 2) the Prototyping phase to develop innovation prototypes and 3) the Assessment phase to verify the results of innovation prototype development. In this study, the research was divided into 3 phases as follows

Phase 1) The Preliminary research phase aims to study the challenges and needs related to strengthening Generation Alpha families within the Thai context. The sample group consists of parents of Generation Alpha children. The minimum sample size, based on Taro Yamane's formula with a 5% margin of error, was determined to be 400 participants. However, to ensure regional representation, a stratified random sampling method was applied, selecting 100 parents from each region, totaling 500 participants. An additional 10% was included to account for potential invalid responses, bringing the final sample size to 532 participants. The research utilized a questionnaire with a five-point rating scale and a dual-response format. Each question assessed two aspects including the current state of family strength in the Thai context and the desired or expected state of family strength.

To ensure the validity and reliability of the questionnaire, the following steps were undertaken. 1) The questionnaire was reviewed by three experts to assess content validity.

2) The Index of Item-Objective Congruence (IOC) was calculated, and only items with an IOC score between 0.60 and 1.00 were retained. 3) The questionnaire was revised based on expert feedback before being tested in a pilot study. 4) A try-out was conducted with 50 parents of Generation Alpha children who were not part of the main sample. 5) Item discrimination was analyzed using the Item-Total Correlation method, yielding values between 0.266 and 0.898. 6) Reliability was tested using Cronbach's alpha, resulting in a reliability coefficient of 0.937, indicating a high level of internal consistency.

This process ensured that the research instrument was both valid and reliable for measuring the strength of Generation Alpha families in the Thai context. Data analysis of actual and expected conditions of family strength in Generation Alpha in the Thai Context. With mean and standard deviation using the mean interpretation criteria of Best (1981: 182) developed by Nonglak Wiratchai and Suvimol Vongvanich (2019) to control the size of the need to be within a range that is not too wide, and to provide a better comparative meaning than other methods.

Phase 2) Prototyping phase to develop digital media prototypes. The researcher studied the concept of creating media suitable for children. The following actions are taken:

1) The researcher studied the basic information about the problem conditions. Analyze the necessary needs together with a review of relevant research papers from the 1. Bring all the information to synthesize knowledge. Finding common conclusions in the preparation as a guide for determining the conceptual framework for design for the development of digital media.

2) Design a Content Management System (CMS) website with digital media with a content management system behind the scenes by choosing the WordPress platform, which is the most popular platform (Smith & Johnson, 2023), and the content within the website is digital media in the form of e-books or online books, and animations for the target audience to try reading.

3) Examine the design of digital media by having experts evaluate the quality of digital media.

The target group used in the research is 3 experts in children's media development and digital media with 10 years or more of experience.

Phase 3) The Assessment phase is a trial and evaluation of the effectiveness of digital media to strengthen the generation of the Alpha family in the Thai Context.

The researchers conducted a digital media trial with families with several Generation Alpha children. 20 Family, based on programmatic sample sizing. G* Power 3.0.10 (Faul, Erdfelder, Lang, & Büchner, 2007). The sample group was selected from publicity through various libraries or learning centers, such as the Early Childhood Library, the Lumpini Park Learning Library, the Library for Learning in Lumpini, the Classroom Library, and the Lumpini Park Learning Library. Huay Kwang Learning Library TK Park In order to reach a variety of target groups, we evaluated the effectiveness of digital media in strengthening the families of the generation in the Thai Context by asking about their satisfaction with the use.

Tools used to evaluate performance, namely 1) System performance assessment by experts, 2) User satisfaction assessment, are a family with 20 Generation Alpha children. There are 3 evaluation criteria: presentation content, design, and benefits and applications.

Data Analysis is obtained from the data collection. The researcher checked the completeness of the questionnaire and selected the complete data for analysis. As follows: 1) General data analysis with frequency and percentage. 2) An analysis of the results of the evaluation of the effectiveness of digital media to strengthen the generation of the alpha family in the Thai Context with mean and standard deviation.

Table 1: Summary of research and development of digital media to strengthen the Family of Generation Alpha in the Thai context

Stages	Research Objectives	Procedures	Sources	Data Analysis	Results
Phase 1 Preliminary research phase	To explore the conditions and needs to strengthen the Generation Alpha family in the Thai context.	1. Review of the literature on family strength 2. Create a questionnaire 3. Check the quality with Validity, Discrimination, and Reliability 4. Collect data 5. Expected conditions and necessary needs	Parents of 532 Generation Alpha children	Frequency, percentage, average, standard deviation, and Priority Needs Index Modified(PNI _m)	The basic information includes the conditions and needs to strengthen the Generation Alpha family in the Thai context.
Phase 2 Prototyping phase	2. To develop digital media to strengthen the Generation Alpha family in the Thai context.	1. Synthesize data from phase 1 and from the review. 2. Develop digital media 3. Evaluate the performance of digital media by experts	1) Data from Phase 1 and from the review 2) 3 experts	1) Synthesize data from Phase 1 and from the review. 2) Analyze the evaluation results with the average and standard deviation.	Digital Media to Strengthen the Generation Alpha Family in the Thai Context.
Phase 3 Assessment phase	3. To evaluate the effectiveness of digital media in strengthening the Generation Alpha family in the Thai context.	1. Experiment with the use of digital media 2. Evaluate the effectiveness of digital media 3.	20 Generation Alpha families	Analyze the evaluation results with the average and standard deviation.	Digital Media Evaluated and revised

The research ethics approval No. SWUEC-662035.

FINDINGS

The results of the research consist of 3 parts: 1) Analysis of the Conditions and Needs to Strengthen the Generation Alpha Family in the Thai Context, 2) Results of Digital Media Development in Strengthening

Generation Alpha Families in the Thai Context, and 3) Evaluation of the Effectiveness of Digital Media in Strengthening the Generation Alpha Family in the Thai Context

Part 1: Results of Analysis of the Conditions and Needs to Strengthen the Generation Alpha Family in the Thai Context. As shown in Table 2.

Table 2: Analysis of the Conditions and Needs to Strengthen Generation Alpha Family in the Thai Context

(n = 532)

Strengthening of the family	Realistic conditions			Expected conditions			PNI modified	order
	\bar{X}	S.D.	Interpretation	\bar{X}	S.D.	Interpretation		
1. Parental Roles	3.96	0.78	very	4.86	0.37	most	0.23	4
2. Positive relationships	3.93	0.71	very	4.93	0.26	most	0.26	1
3. Good Characteristics	4.09	0.67	very	4.96	0.19	most	0.21	5
4. Mental Immunity	3.79	0.73	very	4.74	0.61	most	0.25	2
5. Technology and Media Literacy	3.81	0.80	very	4.76	0.46	most	0.25	2
Overview	3.94	0.74	very	4.87	0.38	most	0.24	

Table 2 shows that the analysis of the conditions and needs to strengthen the Generation Alpha family in the Thai context is very high ($\bar{X} = 3.94$), where the side with the highest average value is the side of molding and reinforcing good characteristics ($\bar{X} = 4.09$) has a very high level of reality. Next is parental roles ($\bar{X} = 3.96$) has a very real condition. The lowest average value is the mental immunity ($\bar{X} = 3.79$)

Expected Conditions of Family Strength in Generation Alpha in the Thai Context are at the highest level ($\bar{X} = 4.87$). The highest value is good characteristics ($\bar{X} = 4.96$). The second is positive relationships ($\bar{X} = 4.93$). The lowest value is the mental immunity ($\bar{X} = 4.74$).

Priority Needs Index Modified (PNImodified) of strengthening the family of Generation Alpha in the Thai context is 0.21-0.26. The most urgent need is positive relationships within the family (0.26). This is followed by mental immunity and technology and media literacy (0.25), parental roles (0.23), and good characteristics (0.21), respectively.

Part 2: Digital Media Development in Strengthening Generation Alpha Families in the Thai Context

The researchers used the findings from the first phase of the study to develop content tailored to the target audience—Generation Alpha children. The media was divided into four age groups: 0–3 years, 4–6 years, 7–9 years, and 10–12 years (Department of Children and Youth, 2020). The content focuses on the essential needs for strengthening Generation Alpha families in the Thai context, covering key themes such as positive family relationships, emotional resilience, adaptation to technology and the digital age, parental roles and responsibilities, and the cultivation of positive character traits. These topics were transformed into digital media in the form of E-Books or online books, each designed for a specific age group as follows.

1. Banana (for ages 0–3): A picture book with simple illustrations and short, easy-to-understand words. It emphasizes family love and warmth, using a minimalistic visual design.
2. Gift from the Sun (for ages 4–6): A picture book with moderately detailed illustrations and child-appropriate colors. The text consists of clear sentences, including both dialogue and narrative, suitable for early readers. The story focuses on developing skills, persistence, learning, and understanding parents.
3. The Crystal-Winged Butterfly (for ages 7–9): A picture book with more detailed illustrations of characters and scenes. The text includes dialogue and narration, similar to the 4–6 age group, but with more emotional depth and complexity in interpretation to match the developmental stage. The typography creatively reflects the theme of the butterfly's transparent wings.
4. The Milk Tooth Business of Tata and Titi (for ages 10–12): A chapter book designed for children beginning to read independently. It is divided into chapters with illustrations and focuses on technology—a topic of interest for this age group. The content aims to promote digital literacy and awareness of online safety, all within the context of loving and supportive families.

These four E-Books are examples of how research findings on strengthening Generation Alpha families have been applied to content creation. The researchers designed these modern, accessible books to appeal to both parents and children of Generation Alpha. Beyond being E-Books, some pages also incorporate animation to enhance engagement and are optimized for online viewing. Additionally, a curated list of age-appropriate printed picture books available in Thailand is provided for parents who wish to explore more content after reading the E-Books. All four E-Books are available for online access through the research project's digital platform.

The project website, Alphagen, can be accessed at <https://alphagen.hu.swu.ac.th/>. It was developed using a Content Management System (CMS), specifically WordPress, which is widely popular (Smith, J., & Johnson, A., 2023). The site is designed to be accessible on desktop, tablet, and mobile devices—matching the everyday tools that Generation Alpha parents use to access digital content with their children. The website structure includes 1) Homepage – An overview of the research project. 2) E-Book Section – The main feature, presenting the research-based E-Books categorized by age group, is intended for parents to read with their children. 3) Parenting Articles – General knowledge articles for parents of Generation Alpha children. 4) About the Project – Background, objectives, and benefits of the research, providing a clear summary for the general public.

In terms of design, the website features colorful but non-distracting graphics suited to modern Generation Alpha parents, while visually aligning with the illustrations in each E-Book. The design complements rather than competes with the E-Book visuals, helping maintain focus on the primary content intended for parents and children alike.



Figure 1: Digital Media to Strengthen Generation Alpha Families in the Thai Context (Sources: <https://alphagen.hu.swu.ac.th/>)

Part 3: Evaluation of the Effectiveness of Digital Media in Strengthening the Generation Alpha Family in the Thai Context

There are two processes for the evaluation: 1) evaluation of the system's effectiveness by 3 experts in children's media development and digital media, and 2) trial and evaluation of the system by users, i.e., 20 families with Generation Alpha children.

Table 3 Results of Evaluation of the Effectiveness of Digital Media in Strengthening the Generation Alpha Family in the Thai Context.

Performance Evaluation Criteria	Rating Level		
	\bar{X}	S.D.	meaning
Presentation content	4.61	0.50	most
1. The content is interesting.	5.00	0.00	most
2. The content is easy to understand.	4.33	0.58	very
3. Content is suitable for the target audience.	5.00	0.00	most
4. Content is related to strengthening the family.	4.67	0.58	most
5. Content meets the needs of the family.	4.67	0.58	most
6. Content is presented in a logical and clear sequence.	4.00	0.00	very
Design	4.11	0.75	very
1. The design is beautiful.	4.00	0.00	very
2. The layout is appropriate.	4.00	0.00	very
3. Categorization is easy to understand.	3.67	1.15	very
4. Animations are appropriate.	4.33	0.58	very
5. Illustrations are beautiful.	3.67	1.15	very
6. The font size is clear.	3.67	1.15	very
7. The text is correct.	4.00	0.00	very
8. Design is user-friendly	4.67	0.58	most
9. It displays information.	5.00	0.00	most
Benefits	4.67	0.49	most
1. Content is valuable.	4.33	0.58	very
2. Content can be applied.	5.00	0.00	most
3. Content can be a source of knowledge.	5.00	0.00	most
4. Content promotes social interaction.	4.33	0.58	very
Overview	4.39	0.67	very

Table 3, the results of the evaluation of the effectiveness of digital media to strengthen the Generation Alpha family in the Thai context by media development experts for children. In terms of usefulness and application, the highest evaluation result ($\bar{X}=4.67$) was at the highest level, followed by presentation content ($\bar{X}=4.61$) at a high level, and design ($\bar{X}=4.11$) at a high level.

Table 4 Results of User Satisfaction Assessment

User Satisfaction Assessment	Rating Level		
	\bar{X}	S.D.	meaning
Presentation content	4.36	0.70	very
1. The content is interesting.	4.25	0.64	very
2. The content is easy to understand.	4.45	0.60	very
3. Content is suitable for the target audience.	4.65	0.49	most
4. Content is related to strengthening the family.	4.35	0.75	very
5. Content meets the needs of the family.	4.25	0.91	very
6. Content is presented in a logical and clear sequence.	4.20	0.70	very
Design	4.38	0.73	very
1. The design is beautiful.	4.35	0.67	very
2. The layout is appropriate.	4.20	0.77	very
3. Categorization is easy to understand.	4.45	0.69	very
4. Animations are appropriate.	4.50	0.61	most
5. The illustrations are beautiful.	4.20	0.77	very
6. The font size is clear.	4.15	1.04	very
7. The text is correct.	4.50	0.61	most
8. Design is user-friendly	4.60	0.50	most
9. It displays information.	4.45	0.76	very
Benefits	4.36	0.73	very
1. Content is valuable.	4.45	0.69	very
2. Content can be applied.	4.50	0.75	most
3. Content can be a source of knowledge.	4.35	0.75	very
4. Content promotes social interaction.	4.25	0.79	very
Overview	4.37	0.72	very

Table 4, the results of the assessment of satisfaction with the use of digital media to strengthen the family of Generation Alpha in the Thai context by families with Generation Alpha children. In terms of design, there was the highest level of satisfaction ($\bar{X}=4.67$) at the highest level, followed by presentation content and usefulness, and application ($\bar{X}=4.36$).

DISCUSSION

The overall assessment of family strengths for Generation Alpha in Thailand is relatively high (Mean = 3.94), with the lowest mean score observed in mental immunity (Mean = 3.79). In terms of expectations for strengthening families within the Thai context, the overall mean reaches the highest level (Mean = 4.87). Among the key aspects, molding and reinforcing positive characteristics receive the highest average score (Mean = 4.96). The analysis of necessary needs using the Priority Needs Index Modified (PNImodified) highlights that the most urgent requirement for strengthening Generation Alpha families is fostering positive family relationships (PNImodified = 0.26). This is followed by mental immunity and adaptation to technology and the digital world (PNImodified = 0.25), the roles and responsibilities of parents (PNImodified = 0.23), and molding and enhancing good characteristics (PNImodified = 0.21), respectively.

Strong, DeVault, Sayad, and Cohen (2001) found that the family is an institution that is constantly changing in terms of structure and behavior. The process, dynamics, and duties must always adjust to the concept of the family. These findings suggest that the rapid changes in Thailand's digital era—spanning economic, technological, and cultural dimensions—have significantly influenced lifestyles, contributing to various social challenges. This aligns with the National Strategy B.E. 2561–2580, which emphasizes human resource development as a key priority. The strategy aims to cultivate well-rounded individuals at all life stages by fostering their physical, mental, and intellectual growth. It also promotes civic responsibility, moral discipline, and essential 21st-century skills (Government Gazette, 2018). Similarly, the Ministry of Social Development and Human Security's 20-Year Strategy (B.E. 2561–2580) outlines the importance of strengthening individuals, families, and communities to ensure a high quality of life. The strategy focuses on equipping children and youth with the skills necessary for the modern world while promoting their active participation in social development at both local and national levels (Ministry of Social Development and Human Security, 2018).

This approach aligns with the Family Action Plan B.E. 2566–2570, which prioritizes strengthening family institutions by promoting quality, warmth, and lifelong learning within families. The plan highlights the role of parents and guardians in raising children according to their developmental needs while also ensuring economic security and reducing domestic violence to create a safer society (Ministry of Social Development and Human Security, 2023).

Moreover, Tipwan Surinya (2008) proclaimed that a strong family structure fosters positive relationships, serving as a shield that helps families navigate crises caused by internal and external factors. A resilient family environment provides children and youth with the necessary support to grow in the right direction and prevents various societal issues. Research by Sakon Kajonsilp (2022) further reinforces this notion, indicating that the structure of Thai families has shifted significantly from traditional extended families—where elders play an active role in raising children—to nuclear families, where economic pressures lead many parents to prioritize financial stability over close familial bonds. As a result, some children experience reduced parental warmth and intimacy, leading to weaker familial influences in their upbringing. The study highlights that a lack of warmth and strong family ties negatively affects children's etiquette and social development.

The Development of Digital Media to Strengthen Families of Generation Alpha in the Thai Context

The development of digital media to strengthen families of Generation Alpha in the Thai context stems from the findings of a study that explored the conditions and needs necessary to support and strengthen these families. This research employed the principles of Design-based Research (DBR), based on the concepts of Plomp (2013) and Gravemeijer & Cobb (2006, as cited in McKenney & Reeves, 2013), and was divided into three phases:

1) The Preliminary Research Phase involved studying the current conditions and needs of families with Generation Alpha children within the Thai social context, along with a literature review of relevant research, to inform the design process. 2) The Prototyping Phase focused on developing prototypes of digital media. 3) The Assessment Phase involved testing and evaluating the effectiveness of the digital media.

The study was thus structured into these three phases. In Phase 2, the results from the preliminary research were used to create media tailored for families with Generation Alpha children. The development began with an online book (E-book), divided into four volumes according to age groups of Generation Alpha: 0–3 years, 4–6 years, 7–9 years, and 10–12 years (Department of Children and Youth, 2020). Despite being from the same generation, each age group has different interests and media consumption patterns, aligned with their developmental stages (Janyawan Thepseemuang, 2017).

The content structure was developed based on key research themes: positive family relationships, psychological resilience, adaptation to technology, parenting roles, and cultivating good character traits. Illustrations were also designed to support the content. The media development process included scriptwriting, story writing, illustration drafts, final drawings, and layout using Adobe InDesign CC to create an animated digital book—a blended form of digital media. The technology and presentation were designed to match each age group, with language complexity, illustrations, and animation effects increasing progressively by age to suit the developmental stage of the child. The content was reviewed by experts in children's literature.

Simultaneously, a website was developed to serve as a platform to deliver the digital books online. This allows both Generation Alpha children and their parents to access the content easily. A website was chosen for its popularity and cross-device accessibility (computer, tablet, and smartphone). The site was designed to be user-friendly, clearly structured, colorful, and appealing to modern parents, while also promoting collaborative learning between parents and children within the Thai social context.

The researchers prioritized ease of use and high utility, aligning with the principles of Human-Computer Interaction (HCI)—a field that uses human factors engineering to design products and devices that are easy and safe for humans to use (Woralak Wongdoywang & Siricharoen, 2016). This aligns with Norman's (2013) concept of User-Centered Design (UCD). Moreover, the research supports the findings of Siwathamchai (2021), who studied the use of new media in Thai households and its impact on family communication and socialization. She highlighted how the rise of new media has enabled children to integrate media into their lives in diverse ways. As a result, families especially parents must learn and adapt to their children's media use. Parents need to be aware of both the benefits and risks of new technology. Digital literacy has become a crucial life skill that must be instilled in children for the future. Therefore, the family's role in guiding children's media use is essential. This includes proactive mediation, allowing children to participate in and express their views on media usage. Social media, in particular, has become inseparable from the lives of modern children.

Evaluation of the Effectiveness of Digital Media in Strengthening Families of Generation Alpha in the Thai Context

According to the principles of Design-Based Research, this step corresponds to the Assessment Phase, which involves testing and evaluating the effectiveness of the developed digital media. The researchers conducted the evaluation through an analysis of feedback from two groups. 1) Three subject matter experts consisting of professionals in children's literature and digital media, each with over 10 years of experience in producing media for children and digital platforms. 2) Twenty families with at least one child from Generation Alpha, represent real users of the digital media. The results indicated that the digital media developed for this study was rated as highly to very highly effective across all evaluated aspects, with strong consistency between the expert group and real user group.

The highest-rated and most consistent aspect across both groups was the appropriateness of the content for the target audience. Experts noted that the content was clearly aligned with children's developmental stages, reflecting the principles of Developmentally Appropriate Practice (DAP). This alignment allowed children to understand the content easily and promoted effective learning. Similarly, parents in the user group felt the media was highly appropriate—it successfully captured children's attention and motivated joint learning and reading within the family.

Another aspect that received top ratings from both groups was the ease of use of the design. Experts attributed this to the platform's implementation of User-Centered Design (UCD) principles, reflected in its simple, user-friendly layout, clear structure, and accessibility across various digital devices. Real users confirmed that the platform was easy to navigate, especially in accessing age-specific content. The website's menu structure and functions were clearly organized and easy to understand, making it convenient for parents to access and use the materials with their children.

The final aspect that was also rated as highly effective was the applicability of knowledge gained from the media to daily life. Both experts and users agreed that digital media effectively promoted: positive family interactions, children's psychological resilience, and the development of appropriate digital adaptation skills in children. This highlights the design's focus on authentic learning, enabling families to meaningfully apply the content in real-life situations.

Recommendations

1. Additional suggestions from the target group of the research received additional suggestions in the area of digital media development. On the website, a separate section should be added to the category of free books to read and recommended books to purchase. Along with adding book details in the synopsis section to support parents' decisions, as well as modifying the font on the website to make it easier to read and easier to read, as well as adding a video section from the article section because it is easier for parents to access. It should also be

introduced to the generation of information from the first part of the website. In the case of e-books, multimedia such as audio or animation should be added to the existing ones, and the number of narrative materials should be increased to be more diverse in the future. In addition, the expert group further suggested that additional content should be added to explain the differences in children's ages and the benefits of having parents read e-books with their children.

2. Additional Suggestions from the Authors The researcher may develop other types of media on the website other than the E-Book to include other types of media, such as online games for family strengthening, for parents and children to play together, or to add animation media, as well as to add e-books to be interactive media that can be played and interacted with the content in the e-book.

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