

# Socio-pleasure in Digital Storybook

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## ABSTRACT

This paper describes a study incorporating socio-pleasure elements in digital storybook. This paper aims at demonstrating the incorporation of the aspects of socio-pleasure as suggested by the THE Medium model into the digital storybook. First, the THE Medium model is adapted in determining the aspects of socio-pleasure. Having identified the aspects, a storybook was designed and developed. Then, users' reactions on the digital storybook were observed in their pre-school setting. It was found that the children were engaged with the digital storybook that incorporates the adapted aspects of socio-pleasure by the THE Medium model.

**Keywords:** Socio-pleasure, digital storybook.

## I INTRODUCTION

Beyond usability, interactive products should be pleasure. In particular, pleasure has been defined as the emotional, hedonic and practical benefits associated with products (Jordan, 2002). When any necessity is fulfilled, a human always seeks for some additional values. This is the reason justifying the needs for a product to go beyond its functionalities, to please users.

Hence, the relationship among functionality, usability, and pleasure has been proposed (Figure 1). It explains that the basic element for a product should be its functions. When the functions work without any error, it could support the users in terms of usability. So, when the functionality is high, it could support the usability aspects. Further, designers should ensure that the product is highly usable to ensure that users are pleased when using the product. This is the level of pleasure, which is supported by a high level of usability. It is important in supporting the relationship between the users and the product being used.

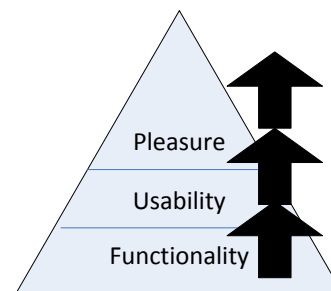


Figure 1. Relationship among functional, usability, and pleasure

In conjunction, the four classifications of pleasure by Tiger (1992), which are listed below are sufficient to refer to.

- a) **Physio-pleasure:** associated to the senses such as the touch, the taste, the hearing, and the vision, also including the factors related to the sensuality;
- b) **Socio-pleasure:** derived from the relationship among people mediated by products such as telephones, letters etc. They also come from the relationship among individuals who share similar thoughts. The products, in this case, are part of their social identity: for example, the Harley Davidson motorcycle. Other products may promote the conviviality and relationship among people, like the coffee machine in a company.
- c) **Psycho-pleasure:** refers to people's cognitive and emotional responses when using the product;
- d) **Ideo-pleasure:** taken from books, music and art, not in the sensorial way, but intellectually. It is the artistic value of a product

Considering the roles of pleasure in a product, and the classifications by Tiger (1992), we have to understand how to capitalize and use a digital storybook for *socio-pleasurable* purposes. In particular, the ways a digital storybook could facilitate fun and positive feelings (emotions), which could invoke productive actions (Fredrickson, 2003). In response to this, THE Medium model is proposed as a starting point for addressing these issues. The THE Medium model has been formulated based on studies in computer-supported collaborative work (CSCW), social and positive psychology, and in particular theories of on-line communities. Accordingly, factors that impact on social well-being and bonding were

generated (and are listed in Table 1), which comprise Time, Human, Environment, and Medium.

Table 1. Aspects in THE Medium model

Category	Factors that could affect socio-pleasure
TIME	Duration of story(s)
	History of interactions
	Synchronous/ Asynchronous (e.g., iChat/eMail)
	Positive moment in time (e.g., birthday)
HUMAN	Personal characteristics (e.g., Age, Gender, Personality, Physical attractiveness)
	Physical contact & expression
	Trust & Security (e.g., self- disclosure)
	Face-to-Face interaction (visibility)
	Person's cognitive state (e.g., attention)
	Person's Physical state (e.g., under exertion)
	Shared activity (e.g., play)
	Similarity (e.g., shared beliefs, interests)
	Reciprocity
	Person's mental state (e.g., persons' emotions)
	Negative/Positive emotion toward other(s)
	Familiarity
	Availability
	Expectation of interaction
ENVIRONMENT	Proximity (distance)
	Place & space
	Presence/Propinquity (=nearness in place)
	Culture
	Weather conditions
	Neg./ Pos. environmental impression
MEDIUM	Medium's characteristics (e.g., content, structure, behavior, aesthetics)
	Medium's perceived benefits
	embeds a motivational force
	embeds a 'socially transforming interface'
	embeds an escape mechanism
	is unusual, a novelty

Although, not in control of every factor, this model shows that developers have a wide spectrum of factors to consider when designing for socio-pleasure. These factors differ in importance at various social stages and in differing contexts. Also, this model does not necessarily show that digital storybooks can facilitate better socio-pleasurable reading than other technologies, but shows that digital storybooks has characteristics such as flexibility in time, human visibility and environment that could be capitalized on. To help build an understanding of this model and analyze current reading experiences, illustrations and examples that aim to encourage socio-pleasurable interaction are explored below.

**Time:** Time and its factors, including the *duration of story-reading(s)* are seen as influential in the design of socio-pleasurable interactions.

**Human:** *Similarity in interests and beliefs* has been identified as an important factor when reading stories.

**Environment:** This category is bridged by the *proximity* factor that permits human's *familiarity, availability and expectation of storylines*.

**Medium:** The medium is basically everything that conveys information and this is the form in which all the factors are framed and come together.

Based on the discussions in the previous paragraphs, this study designs and develops a digital storybook for the utilization of the children aged six and below, generally pre-school children. In adapting the aspects, the grayed aspects in Table 1 are not considered in this study. In conjunction, the aim of this paper is to demonstrate the values in THE Medium model incorporated in the developed storybook, and discuss how the children enjoy the digital storybook.

## II METHOD

This study involves activities as illustrated in Figure 2. Briefly, the design and development are crucial, which incorporates the elements in THE Medium model. Further, the digital storybook was used by children in a pre-school, particularly to observe their reactions towards the digital storybook.

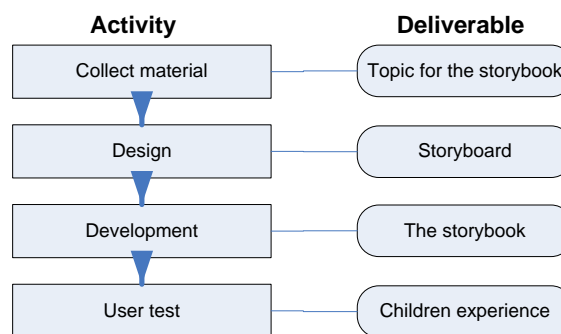


Figure 2. A Activities in the study

This study considers a collection of topics for the purpose of studying socio-pleasure of a digital storytelling. Hence, popular titles should be selected, to avoid biasness of the title. At the end, "*anak itik yang hodoh*" has been finalized, because most children prefer the title out of the books they have in the library. Besides, language also influences the children's joyful in reading, implicating that this study has to use Bahasa Melayu; similar language being used in their original context.

## III DESIGN AND DEVELOPMENT

The digital storybook was designed using a storyboard. It was useful, in supporting the understanding of the digital storybook to be

developed. Figures 3 and 4 visualize two samples of the storyboard.

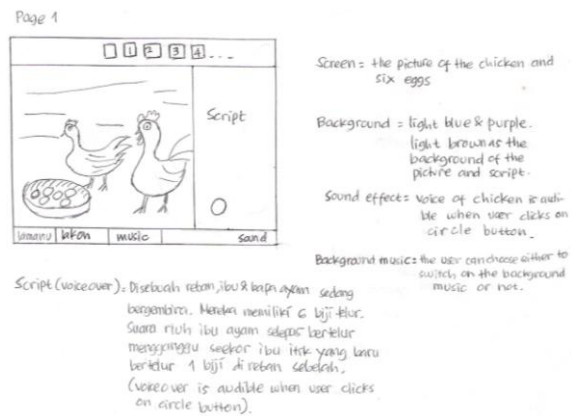


Figure 3. A sample of the digital storyboard

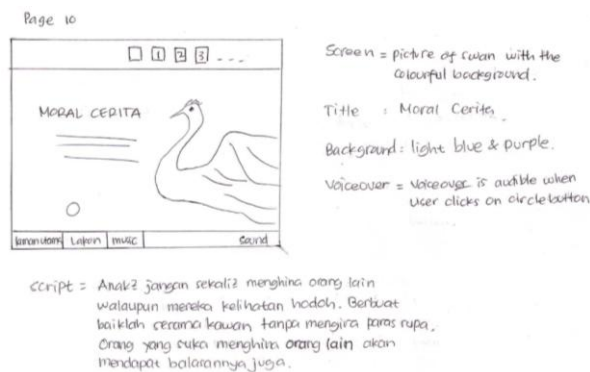


Figure 4. Each page is detailed in the storyboard

Having prepared the storyboard, the digital storybook was developed. This paper depicts the snapshots of the digital storybook in Figures 5, 6, 7, and 8.

The digital storybook is made available on CD, and could be played on a computer. This encourages everyone to be able to use it because those technologies are available everywhere (**medium characteristics; perceived benefits; embeds motivational force**). It also enables users to read and see pictures (with animated features), and listen to the narration at the same time. This is an added value, which strengthens the cognitive engagement (**is novelty**).

Applying the THE Medium model into a digital storybook requires certain aspects to be omitted, especially those regarding the networking issues. Besides, certain aspects need to be redefined, to meet the nature of the digital storybook, especially when used on a stand-alone system.

Figure 5 depicts a page with multiple elements in the THE Medium. Stories for children should not be long, to support the cognitive engagement (Nurulnadwan, Nur-Hazwani, & Ariffin, 2011).

Hence, this study provides only a 10-page story, with page number on each page. Additionally, children like graphics, in supporting the text (Nurulnadwan, Nur-Hazwani, Erratul-Shela, & Ariffin, 2011). Chicken and ducks are very typical for children. Hence, they are used as the main characters in the story, in supports of the culture aspect.

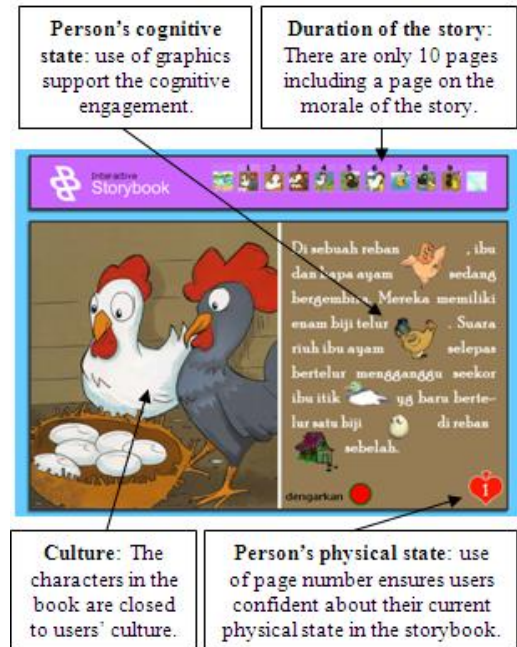


Figure 5. The pages in the developed digital storybook incorporate graphics and text

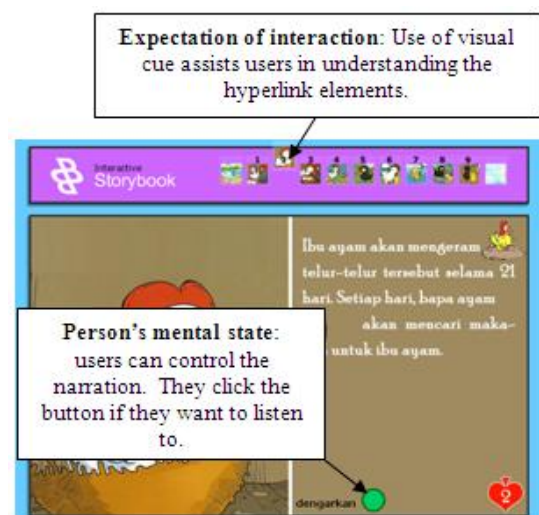


Figure 6. Pages contain visual cue

Figure 6 demonstrates that the expectation of interaction is applied through the always-available navigation buttons. Additionally, the buttons interact with user interaction, in providing visual

cue the the users. Additionally, users could decide whether to listen to narrations or not. This option is available in every page.

The use of appropriate metaphors are very important in supporting users experience when reading (Preece, Rogers, & Sharp, 2007). Hence, as seen in Figure 7, this study decides to incorporate elements closed to children nature. Books are always standardized. Hence, this study injects that principle, by ensuring the navigation buttons are always available. Hence, children could click then at any time (Schneiderman, 1998).

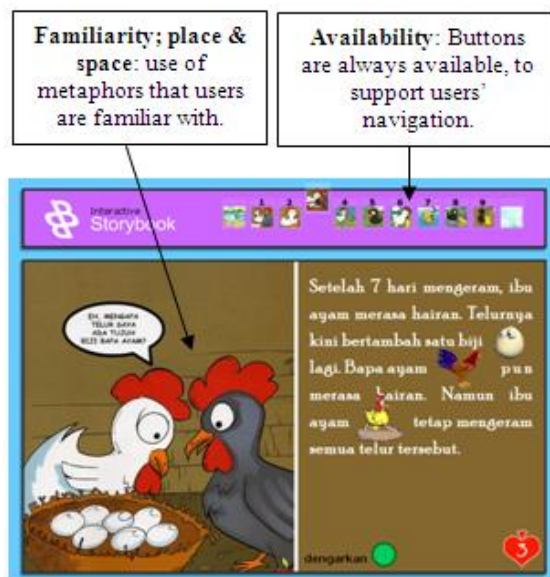


Figure 7. Dialogues are explicated

#### IV USER REACTION

Having developed the digital storybook, this study lets the users experience it. They were using it in their natural setting in their pre-school (Figures 8 and 9). Altogether, 20 children were involved, assisted by their teacher. Their reactions were observed, to understand how they deal with the digital storybook, which is incorporated with socio-pleasure aspects.



Figure 8. Children read in a group



Figure 9. ones is exploring, while the rest wait excitedly

The observation revealed that children were excited with the digital storybook. They read, listened to the voice and music, and participated in the story actively. Children who could read enjoyed reading the story, while children who were not able to read, they enjoyed listening to the narration. This supports multiple intelligence (Gardner, 1993; Cut, Ariffin, Nurulnadhan, & Rozana, 2011). They could answer to questions correctly, and sometimes elaborated more.

During the session, while one was experiencing the storybook, the others were excitedly waiting for their turn. Some children invited their friends to explore together, and chat while reading the story.

In short, this study found that the digital storybook was engaging the children's mental state. The experience was very lively, in which children continuously express their excitement. In fact, they asked this study to develop other topics for them, in supports of their learning activities in the pre-school.

#### V CONCLUSION

Storybooks should be pleasurable to the users. It is important because users read books partly as their

entertainment, especially storybook (Ariffin, 2010). Besides the storyline, in digital form, the user interface should support the pleasure aspects. Among many aspects of pleasure, this paper describes about the incorporation of socio-pleasure aspects into digital storybook.

The aspects of socio-pleasure recommended in the THE Medium model are proposed for interactive system. However, this study adapts them into a digital storybook. Accordingly, certain aspects in the THE Medium model are not incorporated in. In addition, the adaptation is always dynamic. Hence, this study believes that future authors may incorporate other aspects than those considered in this study.

Having tested the digital storybook with the users, it was found that the children's were very engaged mentally with the digital storybook. This initially explains that the proposed aspects in the THE Medium model are suitable for adaptation into a digital storybook, in supports of socio-pleasure.

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