

Interior Computer Graphic in Seating Facility Design with Concept Metaphor of Creativity Process with Narrative Approach

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Abstract. This study describes how the application of interior computer graphics can explain the concept of metaphor seating facility design with the narrative approach method based on the aspects of strength, beauty, and function compared to the narrative approach method based on the narrative only. The research is based on the results of UNIKOM students' work in the furniture class in 2021. The problem of this research is how to use interior graphic applications in explaining the work stages of students using the narrative approach method to create seating facility forms through the concept of metaphor and the factors of interior computer applications which can translate and convey the message of the narrative. This research uses a participatory method. Several student works became the object of research. The stages in the design process are making narratives with basic design ideas, elaborating narratives, translating narrative elements on design stools in metaphorical forms, working drawings and prototype designs, using the SketchUp application, and Auto Cad. The results of the study indicate that the use of interior computer graphics makes it easier to convey messages from three aspects of seating facility design, namely beauty, strength, and function as well as messages from methods that only use narrative. However, if the ability to use the interior graphic application is limited, the delivery of messages will be hampered.

1. Introduction

In "Poetics of Architecture, Theory of Design," Anthony C. Antoniades said that the use metaphor as a channel to architectural creativity has been architects throughout the century. It has been found to be a powerful channel, more useful to the creator than to user or critics." (Antoniades, 1992, P:30), " and also Antoniades mention in the same page "... metaphor can be helpful in achieving the "new" at many points in the building and the design/conceptual process [1]. According to the statement above that metaphor can create a new form. This research is based on 24 prototypes produced by students of UNIKOM's interior design study program who take Furniture I courses. The purpose of this course is to create simple sitting facilities that emphasize the exploration of forms and simple construction of a seating facility. This study aims to explain the design ability through narrative translation in seating facility design and also metaphoric capabilities in design. This matter becomes important because the basis of design is creativity and originality. The ability of metaphor is obtained from the narrative approach.

Yinzhu, Xiaochan Yin, Xiaoyong sho, explain about the Metaphora approach in designing furniture in Modern Era, there are two categories about the metaphor, metaphor of similarity of signifier and metaphor of signified. But the research that has been done is research that uses predetermined themes, Chinese song "Jixiangsanbao" (in English means the lucky family of three)

themes. So the prototype that has been produced is more limited. [2]. H. Casakin also explained the use of approaches to metaphor design in the studio compared to conventional methods. He wrote that Metaphor is a tool to solve design problems. He did not explain the metaphorical approach with the narrative approach.[3].

Same research as H. Casakin ; Richard Coyne, Adrian Snorgrad, David Martin, conclude that 1) There is a close relationship between design and metaphor that provides insights in to effective design education; (2) metaphor operates through privilege, directing concern and the identification on difference; and(3) design involves the generation of action within a collaborative environment in which there is the free play of enabling metaphors. They not mention about the design process with narrative approach [4]. Robert Tully explained about narrative imagination: design imperative. He mentioned that narrative imagination has to play in design education and in design in general and he said that it can intentioned to encourage the highest degree of creativity and innovation from our future generations of students and graduates we must begin to enable the narrative imagination to take them on previously un-imaginable journeys of discovery. He only describes that the narrative imagination can enhance creativity but he didn't explain about the metaphor in the narrative imagination. [5]

Previous studies on metaphor design and narrative design were carried out separately, but the studies explained that both were very important in the design creativity process and did not specifically address the design of sitting facilities. This study aims to look at the process of translating narratives into sitting facilities using the metaphor method. In addition, it also explains what forms students choose based on their story choices

The use of two-dimensional and three-dimensional design applications in the interior can make it easier to help translate the narrative in the design. This study is a review of how the use of computer applications for furniture design in a design process with the narrative method can be realized. Especially the translation of narrative elements which are a metaphor.

This study uses a simple participatory method, which is a method that directly involves students in designing seating facilities. The use of interior design computer application software becomes the next discussion in translating the metaphor approach to the narrative method.

2. Methods

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2.1. Methods

This research using literature study to explain about metaphors and narrative through definition terminology. The next step is observation stage process in making seating facility through narrative approach. In this stage, researchers help and assist student in making story and translate in to seating facility design. The next step is the use of computer applications in translating function, form and strength, which includes working drawings in wo-dimensional drawings, namely view and elevation drawing and three-dimensional images, namely perspective drawings

2.2. Sample

This research using 14 seating facility from class of DI-1 and DI-2, odd semester in academic year 2020-2021. The sample consists : 1) Pre-elemenary Design 2) working drawing 3) Prototype (three dimensional rendering)

3. Results and Discussion

2.3. Seating Facility Models Related to Purpose and Functionality, and Form, and Construction

According to Jerzy Smardzweski in Furniture Design (p.49) , in terms of purpose, the conditions and nature of use, furniture can be divided into three distinct groups. For furnishing:





- offices and public buildings (office furniture, school furniture, dorm furniture, hotel furniture, cinema furniture, hospital furniture, canteen furniture, common room furniture, etc.),
- residential rooms in multi-family and free-standing buildings (flat furniture, kitchen furniture, bathroom furniture, garden furniture) and
- transport (ship furniture, train furniture, aircraft furniture).




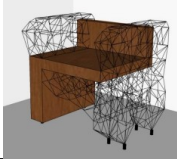



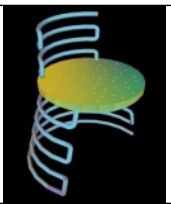
And also he describe that in terms of functionality, furniture can be divided into the following groups:

- for sitting and lounging,
- for reclining,
- for working and eating meals,
- for learning,
- for storage,
- multifunctional furniture and
- complementary furniture.

The characteristics of form and construction of the furniture piece are determined on the basis of spatial rganization of form, interconnection of main structural components and architectural structure of the product. Depending on the spatial rganization of the form. Three basic schemes of furniture can be distinguished as a single-bodied, multi-bodied, universal for completion, on a frame and for hanging.

Tabel.1. Seating Facility Models Related to Purpose and Functionality, and Form, and Construction

No.	Chair Furniture	Narrative	Purpose and Functionality	Form and Construction		
				Spatial Organisation of The Form	Modular Design	
1.	Ghina/ Broccoli		Broccoli veggie fan at home	- Seating - Residential	with an open spatial structure	Single Bodied
2.	Andreas/ Patra Bali		Patra Samblung from the form of flora	- Seating - Residential	with an open spatial structure	Single Bodied
3.	Zahrah/ Roasted Peanuts		enjoy snacking peanuts in spare time	- Seating - Residential	with an open spatial structure	Single Bodied
4.	Ibnul/ Bandros		likes to buy traditional snacks bandros	- Seating Residential	with an open spatial structure	Single Bodied
5.	Tiara/ Black mamba		hobby of owning and caring for black	- Seating Residential	with an open spatial structure	Single Bodied

			mamba poisonous snakes and collecting jewelry			
6.	Yulia/Lotus Flower		The lotus flower symbolizes purity and happiness	- Seating - Residential	with an open spatial structure	Single Bodied
7.	Hendriyani /Rose and Pine		friendship of roses and pine trees	- Seating - Residential	with an open spatial structure	Single Bodied
8.	Nurasyifa/ scary cat		a mobster's pet cowardly cat	- Seating - Residential	with an open spatial structure	Single Bodied
9.	Nuzilla/spider web		very strong and unique spider house	- Seating - Residential	with an open spatial structure	Single Bodied
10.	Indry/ Jackfruit		jackfruit tree in the yard of a Java house	- Seating - Residential	with an open spatial structure	Single Bodied
11.	Adzkay/ Addicted		an addiction that will inspire enthusiasm to work	- Seating - Residential	with an open spatial structure	Single Bodied
12.	Pramoedya/ Teddy Bear		favorite teddy bear to play with	- Seating - Residential	with an open spatial structure	Single Bodied
13.	Fristy / Cup of coffee		a coffee cup for serving coffee drinks in a cafe	- Seating - Cafe	with an open spatial structure	Single Bodied
14	Salma/ Macaron		love to eat macaron cake from france	- Seating - Cafe	with an open spatial structure	Single Bodied
				-		

According to the table 1, the seating facility design model is in accordance with its function, sitting in the residential and public areas, while the form and construction are in the single bodied category and with an open spatial structure. This is because the category is in accordance with its function. Exploration of forms in the narrative method with a metaphor approach becomes more limited because they have to pay attention and consider the aspects of function, form, and construction. They must integrate these three aspects into one sitting facility

2.4. Seating facility models related to Interior Computer Graphic to provide Narrative Related to Purpose and functionality, and Form, and Construction

Tabel 2. The using of Interior Computer Graphic Related to Narrative

No.	Chair Furniture	Two Dimensional Drawing (Auto Cad)	Three Dimensional Drawing (3D Max & Sketchup)	Narrative Related to Functionality, Form and Construction
1.	Ghina/ Broccoli	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	Broccoli veggie fan at home
2.	Andreas/ Patra Bali	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	Patra Samblung from the form of flora
3.	Zahrah/ Beans	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	enjoy snacking peanuts in spare time
4.	Ibnul/ Bandros	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	likes to buy traditional snacks bandros
5.	Tiara/ Black mamba	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	hobby of owning and caring for black mamba poisonous snakes and collecting jewelry
6.	Yulia/ Lotus Flower	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	The lotus flower symbolizes purity and happiness
7.	Hendriyani /Rose and Pine	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	friendship of roses and pine trees
8.	Nurasyifa/ scary cat	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	a mobster's pet cowardly cat
9.	Nuzilla/ spider web	- Plan View - Elevation view - Section view	- Perspective View - Isometric	very strong and unique spider house

			view	
10.	Indry/ Jackfruit	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	jackfruit tree in the yard of a Java house
11.	Adzkay/ Addicted	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	an addiction that will inspire enthusiasm to work
12.	Pramoedya/ Teddy Bear	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	favourite teddy bear to play with
13.	Fristy / Cup of coffee	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	a coffee cup for serving coffee drinks in a cafe
14	Salma/ Macaron	- Plan View - Elevation view - Section view	- Perspective View - Isometric view	love to eat macaron cake from France

4. The use of interior design application software in the design of seating facilities is very helpful in translating narrative elements with a metaphorical approach, especially the use of three-dimensional application software. Many forms can be easily created by the interior design application software. However, there are also those who do not succeed, because of their ability to operate the application software. For working drawings, the use of application software can help with the accuracy of the dimensions of the sitting facility. They managed to make good and correct working drawings using the interior design software application.

5.4. Conclusions

Designing with a narrative approach with the metaphors method can be one of the strategies to solve design problems. The use of computer applications for furniture design in a design process with the narrative method can be realized, especially the translation of narrative elements which are a metaphor. Therefore, the selection of the narrative must be in accordance with the function and purpose of the seating facility and also the form and construction. Story concepts can be realized easily through computer applications. The use of two-dimensional and three-dimensional design applications in the interior can make it easier to help translate the metaphor of the narrative methods.

6.5. Acknowledgment

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