



Design Code Research Conference 18'

BOOK OF ABSTRACTS

11th August 2018, Colombo, Sri Lanka

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Design Code Research Conference 18'
11th August 2018, Colombo, Sri Lanka

Proceedings of the Sri Lanka Design Code - Design Research Conference

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Chair, Sri Lanka Design Code - Research Conference 2018
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Conference Theme

'Future of Integration in Design'

With the aim of uplifting 'Design in Sri Lanka', the theme of Design Code Research Conference 2018 perceives to provide a platform towards the Future of Integration in Design. This also seeks to synchronize the importance of design knowledge and design practice to understand the connections between history, theory, craft, criticism and pedagogy.

Sub Themes

- ▷ Design Knowledge: Past, Present and Future
- ▷ Design Knowledge and its Futuristic Approach
- ▷ Design Methods and Tools
- ▷ Design Research Theory and Practice



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Message from Head of the Department

Department of Integrated Design of Faculty of Architecture, University of Moratuwa, is the pioneer of design education in Sri Lanka, contributing design professionals in the fields of Fashion and Lifestyle design, Media and Communication design and Product design, to the country's creative economy.

Sri Lanka as a country has immense potential to become the Global Hub of creative economy with its capacity of high intellectual human resources and strategically important location in the world map. To achieve this goal, intellectual capacity should be developed in academic, professional and strategical aspects.

Sri Lanka Design Code is an event organized to promote and develop creative intelligence in Sri Lanka and Design Research Conference, which is a part of Sri Lanka Design Code, focus on developing academic aspects of design professionals. It aims to create a platform for researchers and practitioners to share knowledge and create critical discussions for the advancement of design discipline.

I wish the conference organizing committee and conference speakers best of luck in their contribution to the design research and pedagogy.

Archt. Sithumini Rathnamalala

Head

Department of Integrated Design

University of Moratuwa



Editorial

The Department of Integrated Design at the University of Moratuwa is unique, being the only state-owned design education arm in Sri Lanka. This privilege has allowed us to be the leader of integrated teaching and research in the country over the last two decades. This Design Research Conference, which is organized in conjunction with the Design Code – Sri Lanka Design Week 2018, brings together students, academics and researchers who have worked on the idea of design from a variety of perspectives, disciplines and fields: mainly Fashion, Life Style, Media, Communication and Product design etc. Presented by the leading institute in Design education, the ‘Design Code Research Conference’ has become the premier Design Conference in Sri Lanka.

In keeping with the vision of the Department of Integrated Design, ‘to become the frontier of design related higher education at national level’, I believe, the ethos of the Department is reflected in the theme of the conference, ‘Future of Integration in Design’. This volume contains the extended abstracts of the conference proceedings which papers cover the various aspects of design related topics ranging from traditional product life cycles to present day digital technologies.

I would like to take this opportunity to thank the partners to this conference, guest speakers, colleagues, students and all others who supported in numerous ways to make this endeavor a success.

Arch. Sagara Jayasinghe
Department of Integrated Design
University of Moratuwa



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Programme

08.00 - 08.30	Registration
08.30 - 08:45	Arrival of Speakers & Guests
08.45 - 09.00	Welcome Speech by Archt. Sithumini Rathnamalala , Head, Dept. of Integrated Design, University of Moratuwa
	Introduction of the Conference Proceedings by Archt. Sagara Jayasinghe , Conference Chair, Dept. of Integrated Design, University of Moratuwa

Session 1

09.00 - 09.15	Keynote Speech 1 - Prof. Praveen Nahar , National Institute of Design, Ahmedabad
	Session Chair: Ms. Inoka Samarasekara
09:15 - 09:30	Presentation 1 - Traditional product knowledge for sustainable product life cycles
09:30 - 09:45	Presentation 2 - Hidden knowledge of product design in Sri Lanka
09:45 - 10:00	Presentation 3 - Traditional domestic cutting utensils in Sri Lanka
10:00 - 10:15	Presentation 4 - Application of systematic folding used in fashion
10:15 - 10:30	Presentation 5 - Design features on traditional temple door fittings in Sri Lanka

10:30 - 10:45	Tea Break
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Session 2

10:45 - 11:00

Keynote Speech 2 - Ms. Sonia Manchanda,
India Design Council

Session Chair: Ms. Ruwanadika Senanayake

11:00 - 11:15

Presentation 6 - Legibility of Sinhala fonts: Test
based on continuous reading

11:15 - 11:30

Presentation 7 - The Colombo Fort Railway Station:
its Signage and Wayfinding

11:30 - 11:45

Presentation 8 - The visual semiotic communication
to the urban television audience

11:45 - 12:00

Presentation 9 - Reading text and image: Required
book layout factors

12:00 - 12:15

Presentation 10 - An analysis on the cognitive factors
which affect the user experience design

12:15 - 12:20

Vote of Thanks by **Ms. Shanya Perera,**
Dept. of Integrated Design, University of Moratuwa



Keynote Speaker 1

Prof. Praveen Nahar

National Institute of Design,
Ahmedabad



Praveen Nahar is a Senior Faculty member in Industrial Design at National Institute of Design (NID), Ahmedabad. He is currently Activity Chairperson for International Programs, Discipline Lead for Product Design & Head of Design Vision Centre.

He studied Production Engineering at the undergraduate level, Industrial Design at the master's level from the Indian Institute of Technology (IIT) New Delhi, and postgraduate course in Sustainable Design from Delft University of Technology, Netherlands. Praveen has over 17 years of experience in design teaching, consultancy and research. Prior to NID, he was a lecturer in industrial design at IIT Bombay and a research associate in Transportation Research at IIT Delhi.

He has wide areas of academic and professional interests, including Design Thinking, Sustainable Design/Green Design, Design in the Public Domain, Rapid Product Development, Appropriate Technology, and Strategic Design. In recent years he has been actively involved with academic projects with students concerning Systems Thinking and Design which involves projects with complex issues/wicked problems ranging from healthcare to mobility.



Keynote Speaker 2

Ms. Sonia Manchanda

India Design Council



Sonia Manchanda is a design strategist, design thinker and a communication designer. A product of the National Institute of Design, she is a founding partner at Spread Design and Learning where she leads massive transformational projects. She is also the creator of Dream:in, a global open innovation and design thinking initiative that has been recognised as a global game changer. Sonia's work bridges the space between design and learning to successfully deploy design as a tool for socio-economic transformation.

For the last 20 years, she has led multiple interdisciplinary teams breezily through tough challenges - in the business design, branding, experience design and learning design spaces - converting practice into learning systems, blending practice and academics seamlessly.

She is an appointed member of the India Design Council, is on the CII Design Council and is a Governing Council Member of Forge.





01

Traditional product knowledge for sustainable product life cycles: A case of domestic products from traditional less exposed village communities in Sri Lanka.

W. Dulaj Shirantha Perera and W.M.N. Dilshani Ranasinghe
Department of Integrated Design, University of Moratuwa

Traditional knowledge treasured in Sri Lanka is fossilized between less exposed groups of the communities. The traditional products created with the experience are adapted to the Sri Lankan context perfectly. These products hold the significance of being sustainable through their product life cycle which allows to maximize their usage. From production to product depletion the lifecycle is an adapted serve the pre-defined purpose. This research attempts to explore how traditional people respond to ecological and development challenges and how their cultures and knowledge on product systems can contribute to the sustainable product design life cycles.

It explored the physiognomies of traditional product knowledge and at traditional peoples' notions of development to understand the concepts in which traditional knowledge is rooted. It analyzed the means of knowledge maintenance and transmission, with a particular focus on the importance of product design life cycles. It also explored the relationship between traditional product knowledge, sustainable design practices and product life cycles, looking at the domestic products of selected traditional village communities as well as at new alternative strategies for sustainable product life cycles implemented by those traditional communities. The paper will later look at the contribution of traditional product knowledge, functional adaptation by time of the product and material reduction.

The case study was undertaken to document traditional techniques of product development and sustainable potential of less exposed communities in Central valley, Sri Lanka. Surveys were conducted in selected four villages; Udugaldebokka, Galamuduna, Narangamuwa and Rambukkoluwa.



Figure 1. Research Interviews
(Source: By the author)

This research used qualitative and quantitative methods to gather factual data through dialogic interviews and video recordings of the same discussion and local literature sources. It was guided by the principles of community-based participatory research and was theoretically grounded by the methods of visual ethnography. The paper emphasizes that community-based participatory research is about creating a space for research participants to contribute ‘utilizing traditional ways of knowing’ and interpret data ‘within a cultural context’.

The fundamental principles of researching with traditional communities using a community-based participatory research was to recognize that members of the community studied are the experts. The work also followed an analysis of the impact on nature, strategies on new materials and product development methodologies and on the necessity of guaranteeing resource management to allow practitioners to fully realize the value of traditional product knowledge.



Figure 2. User Scenario Analysis
(Source: By the author)

According to the findings, research concluded with a reflection on the importance of having an integrated system of knowledge, in which traditional communities will have the opportunity not only to share their experiences to overcome future challenges in sustainable product life cycles, but also to become active agents of change by being involved in the modern day design activities. It also concludes that traditional and less exposed communities of the region are great knowledge holders of product and it has great potential and is an important resource to accelerate sustainable product design life cycle practices.

Hidden knowledge of product design in Sri Lanka: Special reference to traditional domestic 'Pittu' steamer

G.S.T. Madhushani and Sagara Jayasinghe

Department of Integrated Design, University of Moratuwa

Designs in the past were created to fulfil human wants and needs. Sri Lanka has inherited product design practices which developed from generation to generation. Tools and equipment with their experience and considering practicality were designed and made in the past by locals. Therefore utensils are one of the avenues of the product design knowledge that express indigenous expertise and food-based cultural development.

In Sri Lanka, the food-based culture consists of many food preparation practices inherited by our ancestors. Some such practices have also been influenced and integrated with foreign cultures during historic incidents as colonialization and Indian invasions. Food preparation is the process of combining ingredients, technologies and practices into preparing a meal to be consumed. This process varies from culture to culture, and therefore the food preparation equipment and devices are based necessities of the respective users. One such special equipment that can be found in the Sri Lankan traditional kitchen is the 'pittu steamer', specially prepared to make the Sri Lankan food 'pittu'.



Figure 1. Ingredients & Equipment used for 'Pittu' preparation (Source- By Author)

Objectives of the research is to identify the relationship between food preparation methodology, the structure of the preparation device and how it relates to the food quality, consumer convenience & preference. Although the major considerations when designing a food preparation device and attentiveness of its outcome were identified, the efficiency of villagers to create suitable functional devices and indigenous knowledge was also considered. The steam based 'pittu' preparation device in Sri Lanka was analysed and the need of the product as future replacement was further studied.

This history-based qualitative and quantitative approach aims at understanding why the traditional 'pittu' steamer evolved with minimal changes to its structural components since ancient times. The facts were collected mainly by conducting interviews, discussions and observing users. Primary and secondary data and experimental observations were analysed based on selected case studies, and selected samples were compared to identify structure based efficiencies of several domestic 'pittu' steamers.



Figure 2. Different types of 'pittu' steamers (Source- By Author)

'Pittu' based steaming devices get a special place in the society, because of the relationship between 'pittu' based food quality and the human mind-set inherited from our past. These inherited attitudes, visions, practices, acceptances and cooking processes have affected retain the structure of 'pittu' and the 'pittu' steamer.

Consumer convenience was found to depend mainly on structural composition and usability. Advancements and developments with timely needs in product were also among research findings. However, the traditional domestic 'Pittu' steamer was found to have retained most of these factors, since it was believed to maintain the preferred food qualities such as shape, taste, odor, nutrition than other 'pittu' steamers. By the end of this research a thorough understanding about the structure, system, function and customer preference based analysis of Sri Lankan 'pittu' steamers were achieved. The findings will help identify hidden indigenous technological and design knowledge and usage analysis will help when innovating new products suitable for the present.

03

Traditional domestic cutting utensils in Sri Lanka; Study of the form and function

P. D. Thirunika Nethmini Silva and Melanie Dissanayake
Department of Integrated Design, University of Moratuwa

This research attempts to understand the product design concepts and applications used in Sri Lankan domestic cutting utensils and how it helped to improve the quality and efficiency of the product. It is important to understand the procedure of changing the form along with the function and how it helps to improve the efficiency and functionality of the product. Even though the product is neither alive nor emotional, to facilitate maximum utility, the connection between man and the product should be strong and healthy. A well-designed product always contributes to build up a healthy interaction between the product and the user. As a product, cutting devices consist of vast range of qualities and values that is useful to humans. This research discusses the product design aspects such as form, function, hand ergonomics and product personality of ancient domestic cutting utensils in Sri Lanka which contribute to improve inherent values and qualities of the object.



Figure 1. Kaththa



Figure 1. Manna

Importing any and every requirement could hinder economic development of a country. As a developing country, it is important that Sri Lanka finds its own strengths and capabilities in order to utilize them as an approach to achieve different goals in development. Development of innate values enhances the true authenticity of a country. By doing so, we can reach higher development standards. Not only the accumulation of monetary wealth but the preservation of traditional and cultural wealth too affects a country's development. Although the country has a great heritage of metal industry, we are still importing knives and other tools from other countries. It is high time that we understand the importance of our values. As a designer it is important to conduct a study that considers design principles and theories, technologies and materials used in ancient products. Such observations can be applied both practically and theoretically for modern day design practices to come up with appropriate solutions. The main drawback of Sri Lanka is that we have forgotten our roots and capabilities. Applying design knowledge of the past to the present-day experiments and give the best out of it to the future should be given a key importance in the mission of a designer. Therefore, in terms of creating a sustainable and well-adjusted country, we have to connect the past knowledge and wisdom with the future opportunities, not to fail but to sustain the country with our own values and capabilities.

04

Application of systematic folding used in fashion, as a multipurpose technique

Randika De Silva and Ruwani Rathnayaka

Department of Integrated design, University of Moratuwa

Systems are used in every disciplinary and academic practice to achieve related and predicted outcomes. In fashion the designing discipline such processes can be identified as systematic folding techniques. This includes fabric pleating, smoking and origami inspired fabric folding. these systematic manipulation methods have been applied in garments serving various functions related to functionality and structure. The folds are associated with formulating space as folds create a three dimensional structure starting from a flat surface. As garments follow a similar process of creating a structural cover for three dimensional bodies out of a flat fabric, folding methods are found to be in use widely in the fashion industry. These manipulation techniques are stereotyped based on their uses due to long term application and experience. Variations of the same systematic folding can create contrasting results when considering functionality and appearance. This research discuss the functional aspects of systematic folding used in garments and the relationships that the techniques holds with finished garment. Hence the functionality of each systematic folding technique is discussed comprehensively with selected case studies analyzing the multiple aspects of functionality.



Figure 1. Origami folded board used for the pleating of fabric
(Source: by the author)

The research broadens up the definition of purposes associated with systematic folding techniques. According to the research it defines purposes related to systematic folds in both tangible and intangible ways. While the materialistic qualities would serve a functional purpose, other intangible qualities would serve in a sensory purpose. The research suggests novel combinations of folding methods for purposeful use in future design.

Based on the hypothesis, that systematic folding techniques are composed with co-existing functions the research explored the related physical and intangible aspects of systematic folding considering the consciousness about the functions by the designer. Case studies and studio work which were done following a experimental framework were used in this research in analyzing how the multi-functionality can be achieved within a garment.

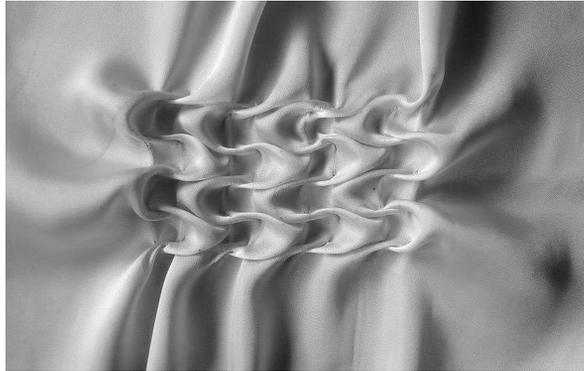


Figure 2. Smocking sample (Source: by the author)

The research was focused to illustrate the potential of using systematic folding techniques as multipurpose techniques in garments broadening the possibilities in the fashion design disciplinary. A guideline is built through the research which documents the purposes related application of systematic folding both consciously and unconsciously. The stage where such a purpose would come in to practice is considered as well which it could be prior to the design execution or after. Hence knowledge on purpose of systematic folding can be confined to a single situation. This knowledge which could be demonstrated with experiments is used in creating a guideline. The roles of a designer and the wearer of the garment in defining a purpose was in conclusion found by the research . Through this paper it discussed the design knowledge centered on the application of folding methods in garments and broadens up the futuristic approaches through the research knowledge on the subject matter.

05

Design features on traditional temple door fittings in Sri Lanka; its impact on the user experience

L. Omayya Pradeepani and Melanie Dissanayake

Department of Integrated Design, University of Moratuwa

With the acceptance of Buddhism in the 2nd Century BC, a huge social, cultural and architectural development occurred in the county. The establishment of Buddhism in Sri Lanka provided a new life to the local Architecture. New buildings were built for the clergy and royals and various requirements such as lighting, ventilation, capturing atmospheric views and conditions etc., were absorbed on to these. Openings like doors and windows were created to fulfill such requirements. With further development of architecture, such openings were created to be locked for the sake of security and privacy of the inhabitants. Later on many additional features like decorated joineries, nails, and fittings evolved to represent the sacredness or the grandeur of a building. These features were largely of metal. Although metal works are more durable than wood works, the traditional metal features are gradually dying out. Thereby it is very crucial to research and record information on them as they are of great social, cultural and historical value which would be beneficial to the contemporary creative industries. There is a vast potential to enhance contemporary creative industries as sustainable practices to uplift Sri Lankan traditional knowledge.



*Figure 2 - Door fittings of Mahawasala,
Kandy National Museum
Source: By the author*

'Fittings' generally stand for any item that is attached to a door, window, etc., to enhance its functionality or appearance. Categorizations under 'door fittings' consist of items such as hinges, locks, lock pads, keys, handles, knobs etc. Hence, 'door fittings' may vary not merely based on its material but also as to its functionality. Most modern door fitting installations does not reveal the detailed parts of a complete fitting. As to the requirements of the function oriented modern society, these fittings largely target the outer appearance of the product instead of its functional requirement. However, the Sri Lankan traditional temple door fittings are rich in their aesthetic form and surface details. This research observes the contribution of design features applied in traditional temple door fittings towards its user experience.



*Figure 2. Motif on a door handle - Gadaladeniya temple
(Source: By the author)*

As an initial step, a pilot study was conducted to identify information-rich cases from which five categories were selected. Two samples from each category were selected totaling to ten samples. These are analyzed to understand the relationship between their design features and user experience. As the aim of this study is to gain an understanding of the phenomenon, a qualitative approach of inquiry through interviewing and direct observation is applied.

06

Legibility of Sinhala fonts: Test based on continuous reading

L.S Eramudugolla and Sumanthri Samarawickrama
Faculty of Graduate Studies, University of Moratuwa

Legibility increases the speed of reading with less effort. It identifies the correct text and understands the letterform, its character when the eyes move fast through the text (Beier, 2012). This research investigates the legibility of three Sinhala fonts used commonly in print-based material. There are several methods to test legibility. Tinker itself talks of four methods. The search task test measures the reader's ability to search specific letter or words in the given text. The visual accuracy threshold test focuses on letter and word identification. Reader's preference test, examines the reader's experiences. While the continuous reading test, measures the reading speed. As for this research, the authors selected the later.

The experiment in this research was conducted in two stages: the first stage focused on the legibility testing and the second stage focused on the character of the Sinhala letterform based on the 'Pa' height. The legibility testing was focused on Tinker's 'Continuous reading - measure reading speed' test (Tinker cited in Beier, 2012) and the 'Pa' height testing was done as a visual analysis.



Figure 1. Experimenting in natural reading context (Source: By author)

The stage one test was conducted by comparing the sample texts using stimuli cards, and each card contained three different typefaces: FM Malithi, FM Abaya and DL Araliya. The composition of the stimuli card consisted of 12 lines and was extracted from the editorial section of a newspaper and was limited to 12pt font size, and 1.5pt line spacing. Each sample text was different from each other even though all of them were printed black on a white background. The continuous reading test, recorded two steps: one- on the number of errors when reading aloud, second- on the speed of reading based on the time taken to read.

Test 01: Twenty participants between 20-25 years of age with good eyesight who are non-spectacle users were selected for this test. The lighting condition and the environment were kept the same to each participant during the test. The participants were given a stimuli card and were asked to read aloud.

While participants read the reading speed was recorded. The same process was conducted among the 20 in the sample. The testing of errors made by the reader was piloted by comparing the number of errors made within a set time, and the results were compared, to understand which stimuli card gathered the greatest number of errors in the given time. Meanwhile, the reading speed recorded by timing was compared to the number of timings each reader took to read each stimuli card. As a result, we were able to identify the pattern of the number of errors and the timing taken to read each card.



Figure 2. Recording errors and measuring time (Source: By author)

Test O2: With results of test O1, visual analysis was done on the 'Pa' height of each font. Using the five reference lines each font was placed on the base line with the same font size of 21pt. While the base lines of all three samples fonts were aligned. As a result we were able to identify that certain fonts contained a larger pa height.

The results of test O1 and test O2 were compared. We understood that the font that had the largest number of errors when reading aloud, and took the most time to read was a font that has a smaller pa height. In this case FM Malithi font contained the highest pa height.



The Colombo Fort railway station: Its signage and wayfinding

Supun D. Gunawardhana and Sumanthri Samarawickrama
Department of Integrated Design, University of Moratuwa

Built environmental surroundings create different feeling in people, some may feel happy, confused, bewildered and distressed. Traveling without knowing directions and locations through an unfamiliar and often high-stressed setting would be a terrifying experience, especially without a helpful wayfinding system. The solution lies within the subject of signage and way finding system design within the discipline of environmental graphic design. A successful wayfinding system increases satisfaction, safety, productivity and reduces time and cost. It also fulfills the communicational function of informing, directing, identifying and enhancing aesthetic qualities of an environment. This research questioned the existing signage and the wayfinding system of a local public transport station: The Colombo Fort Railway Station. The research further questioned the following: What are the standard/ required signage and wayfinding factors? What are the characteristics of the existing wayfinding system in Colombo Fort railway station? How does public transport stations use standard/ required signage and wayfinding factors in the existing wayfinding system?

Sri Lankan railway system is a major transport service in the country providing services for nearly four million passengers daily. Colombo Fort railway station acts as the main hub with large number of trains travelling to various destinations around the island. The station consists of 10 platforms to cater to two million passengers daily. This system also interlinks with many other transport facilities such as taxi services and bus stations. The research studied the existing wayfinding system of the Colombo Fort railway station and its role in fulfilling the communicational functions of informing, directing, identifying and enhancing aesthetic qualities of the environment.

To identify the characteristics of the existing wayfinding system in Colombo fort railway station, data was collected using observation methods; the context, ambience, atmosphere, environment and physical characteristics of the existing system were observed. It questioned the role of the existing

systems; informs, direct, identifies and enhanced the aesthetic qualities of the environment. As a result the data collection was conducted in three steps. Firstly, all existing signage and way finding signs that convey information was visually recorded. Secondly, a questionnaire was done among a random sample group to find out the frequency of usage of the Fort railway station. Thirdly, the data was analyzed based on the route the passengers took in comparison to the use of the existing wayfinding system in Colombo fort railway station.



Figure 1. Colombo fort railway station (Source: By the author)

As a result, the research highlighted that the existing signage and way finding signs in the station. It was evident that certain signs hoisted among the crowds while most of the signage and wayfinding were rarely seen. The lack of uniformity among the signage and wayfinding as a system, the irrelevant placement of the signs, were several reasons for research findings. Habitual movement of the daily travelers were also analyzed in research. Yet, the importance of the system and the need for it with its efficiency in saving time was not understood by users. The data analysis through literature highlighted the void of Information on content, Graphic and Hardware which needed to be addressed on appropriate signage and wayfinding systems.

In conclusion, the research compiled a checklist of what was currently used at the Colombo, Fort Railway station and what is needed to make an informative system. The data could be shared with responsible personal at the Ministry of Transportation and Civil Aviation, environmental graphic designers and architects for further research.

The visual semiotic communication to the urban television audience through contemporary local teledrama.

Vikasitha Anumewan and Dilina Nawarathne

Department of Integrated Design, University of Moratuwa

Television is one of the most influential methods of communicating and interacting in the contemporary society. Within the daily telecasts, Tele dramas occupy a huge time space and plays a main role in the Sri Lankan Television industry. However, there are only a few contemporary Tele dramas that can be considered as shows which have pertained content, quality and richness. It is an evident fact that other than high budgeted productions, the quality of expressive creations such as Tele dramas can be drastically uplifted through applying effective semiotics. But most of the Tele dramas have resolved to stay hollow and to please the TV audience with everyday episodes running for years. It is questionable as to why having all the capabilities to produce rich semiotic content products lack this component. The notion that the 'audience' who lack interest in quality and capability to recognize semiotics in a TV drama results in such executions. Hence the goal of this research was to test and identify whether the contemporary TV audience of Sri Lanka attempts to read intentional semiotics in a Tele drama, and if they do, to understand what extent the semiotic communication happen.

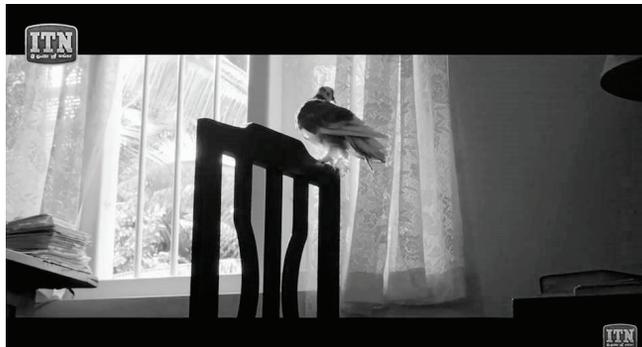


Figure 1. Symbols in Sri Lankan teledrama (Source: ITN Sri Lanka Youtube)

To test the scenario, the directors, of contemporary Tele Dramas (which are considered to be rich in semiotic content) were met by the researcher. A sample of clips from the Tele Drama episodes, selected and guaranteed to consist of intentional semiotics were asked to be reviewed by the directors. These clips were shown to a sample audience and was tested to make an attempt to see if they understood semiotics and to which extent. Later, the answers given to a questionnaire with the director's readings were compared. The discussions with the directors paved the way to reveal the mindset of the Directors and show their willingness to improve Sri Lankan Tele Drama revealing the director's perspective on the television audience. Through the questionnaires, the researcher encountered comments from the audience regarding contemporary tele drama. Subsequently the reasons to include specific semiotics at different scenes were identified. These readings were accorded with the responses from the audience and were studied to identify if the semiotics were projected weak strong or at an average.



Figure 2. Research Interviews (Source: By the author)

The readings by directors were not the only opinion. Researchers kept the middle ground by collecting readings from undergraduate students in Film Studies, hence not entirely being biased to the director's readings.

This research contributed to the literature on the situation of Sri Lankan Tele drama. It investigated the Semiotic communication through Tele drama and provided readings on Sri Lankan Semiotic Literacy. The findings will assist contemporary creatives to create quality content by getting to know in depth about the audience and push themselves towards applying effective semiotics in the local Tele drama production in the future.



Reading text and image: Required book layout factors for a 5-6 year old

Rashandi Porambage and Sumanthri Samarawickrama
Department of Integrated Design, University of Moratuwa

The layout of a book can reinforce the reading experience or make it boring to the reader, specially, a five years old child. A book layout varies based on the play of image and text. Nevertheless, what is visualized in the book layout should convey messages to the reader's brain. This research focused on the triangular link between child psychology, expected reading outcomes and linguistic developments of a five year old child, with special reference to the grade one Sinhala Reading Book, published by the National Institute of Education (NIE), Sri Lanka in the year 2015.

Even though visual media have changed drastically in the last two decades, the layout of the above stated book contains images and text similar to its previously published book layout, which was printed a decade ago. Therefore, the research question how the layout of the book fulfill the requirements of child's psychology. To examine this the research was conducted in three stages. First stage inspected on child psychology, the reaction to images and text. Second stage examined the reason for this book to be published and thirdly it investigates the practicality.

Inspection on book layout verses child psychology was conducted by gathering information through a series of interviews by experts in the field of child psychology. What a child reads should be visualized in a child's brain. The visualization may occur as an image or text. Since the user is at a stage where he/she is developing reading skills, the book should work as a guide to help this process. Therefore, it was suggested that the images should always be dynamic and colourful. The images should relate to the child's everyday activities or behavioral patterns and relate to a story or message. For example, when an image of a human is used, that it should always be active and not passive. Whenever the use of text, it is advisable to use minimal text and in large size. This would build a relationship between the user and the book.



Figure 1. Grade 1 Sinhala reading text book layout (Source: NIE)

Interviewing relevant personal from the NIE, helped understand that the book fulfilled certain learning outcomes. Nevertheless, the book was created to be used as a guide to the users as a picture or storybook. The lessons were not designed to work chronologically but to be used as an activity book. Among the suggested activities were letter recognition by the user and asking the user to find similar letters in the book. It was also stated that the book could be used as a creative tool for teachers.

Therefore, the third investigation was on the practical usage of the book. A series of interviews were conducted, with a sample group was from Government schools who teach Grade one. As an outcome, it was understood that they follow the instructions of the NIE and use the book as a creative tool. They use the book as a storybook and the teacher reads out certain lessons. A suggestion by the teachers who used the book was that it would be more helpful if the images were larger and attractive and to use text in a more expressive manner, as to convey the sounds in words. . The font used in this book is aid to be completely different to what is taught in class which results in confusing the child on the Sinhala letter structure. An activity such as word search becomes unsuccessful due to the structure being confusing.

In conclusion, this research revealed that book had several objectives, yet it was highlighted that more attention to text and image on content than child psychology resulted in a questionable position. However, as suggestions the book could be compiled into sections; as story book with the play of text, as a picture book and activity book.

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An analysis on the cognitive factors which affect the user experience design in multi-user, multi-touch digital interactive walls

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For a human to communicate with a machine, a two-way communication method is needed and a proper interface should be presented for both parties to be understood mutually. This study of interaction between human and the machine is called “Human Computer Interaction” and User Experience Design is a sub category under this topic. This research focused on the study of user experience design converging on a multi-user multi-touch interface used in a public setting.

The main theme of this research is aimed on the problem of not having multi-user friendly interactive touch surfaces such as digital interactive touchscreen walls usable by several users simultaneously. Most of the touchscreen devices we use today are focused into a single user (E.g. mobile touchscreen, KIOSK etc.). Yet touchscreens have a much larger potential. Natural interfaces are one such type of unconventional interface where the user could interact naturally without any prior learning of the interface. It makes interaction with the screen much easier and simple, making the technological part almost invisible. A simple environment with more interactions could be implemented which is an impossible task with personal touch screen devices by adopting natural interfaces.



Figure 1. Interaction touchscreen wall installation at Gallery One: Cleveland Museum of Art

This research examined the cognitive factors that motivate groups of users to interact with a touch screen on a large surface area. It further, researched on what motivates or demotivates users to interact with each other when using these kinds of digital touch screens. 15 factors under user experience design was considered in analyzing the human factors which guided this nature of behavior. It includes the 11 important human characteristics such as perception and memory along with 4 human considerations in design such as computer literacy. Most importantly, how these factors affect the multi-user interaction was analyzed within a cognitive basis.

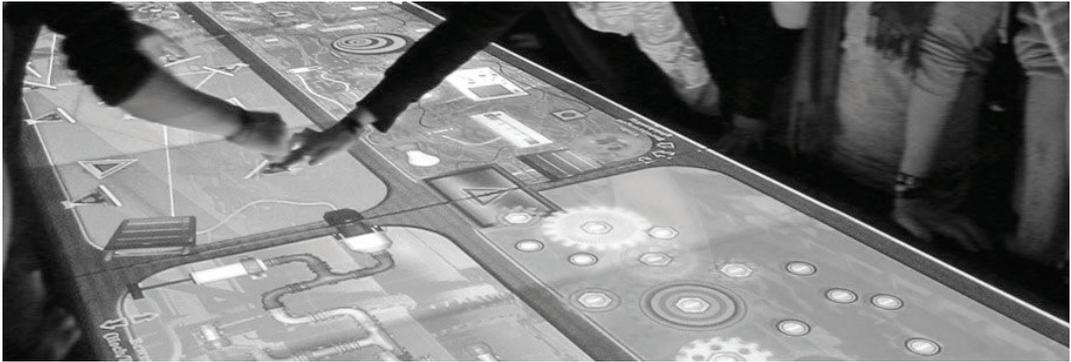


Figure 2. Gaming Application by EyeFactive Interactive Systems

It was found that alteration of the above-mentioned factors could be achieved through the design and user experience changes to the design. These alterations affected the above human factors in both negative and positive ways. The handling of these human factors was not always theoretical and real-life results varied according to the context. The user experience was always designed to guide the users towards a multi user interaction between themselves and the touch screen interface. This resulted in identifying which characteristics should be brought into this type of interface to promote collaborative user behavior. However, the ideal conditions for a perfect execution is yet to be identified and it will be intended-to, in future research. These finding would be of immense value in future user interface designs of interactive touchscreen walls promoting multi user involvement in its usage.



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