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THE 1ST INTERNATIONAL OF ART, DESIGN & CREATIVE TECHNOLOGY SYMPOSIUM AND COMPETITION 2025

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**THE 1ST INTERNATIONAL OF ART, DESIGN & CREATIVE TECHNOLOGY
SYMPOSIUM AND COMPETITION 2025**

8 – 9 September 2025

Editor

Junior Kimwah
Imelda Ann Achin
Susan Sim Chee Cheang

Organizer

Academy of Arts and Creative Technology (ASTIF)
Universiti Malaysia Sabah (UMS)

Co-Organizer

School of The Arts (SOTA)
Universiti Sains Malaysia (USM)

BUKU E-PROSIDING SIMPOSIUM DAN PERTANDINGAN SENI & TEKNOLOGI KREATIF ANTARABANGSA KE-1 2025

THE 1ST INTERNATIONAL OF ART, DESIGN & CREATIVE TECHNOLOGY SYMPOSIUM AND COMPETITION 2025

8 – 9 September 2025, Universiti Malaysia Sabah

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Penyunting

Junior Kimwah
Imelda Ann Achin
Susan Sim Chee Cheang

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PREFACE

The 1st International Creative Arts & Technology Symposium and Competition 2025 (I-ADCT25) is an innovation symposium and competition that brings together art and technology clusters, organized by the Academy of Creative Arts and Technology, Universiti Malaysia Sabah (UMS). I-ADCT25 is organized as the main platform and academic and professional platform that brings together scholars, researchers, designers, art activists, and industry stakeholders from within and outside the country to share findings, ideas, and innovations in various fields of art, design, and creative technology.

At this (I-ADCT25), the committee has successfully documented the contributions of research and innovation from 34 participants from within and outside the country. All the innovation works presented reflect a diversity of perspectives and expertise spanning eight main categories, namely *Sustainable and Eco-Friendly Design*, *Product Design Innovation*, *Open Innovation*, *Narrative and Multimedia Digital Design*, *Fashion and Apparel Design*, *Cultural Heritage and Design*, *User Experience (UX) Design*, and *Interactive Performing Arts*.

Each of these categories highlights the production of innovations that are not only creative and competitive but also demonstrate their importance to current global issues, such as environmental sustainability, the development of digital technologies, the strengthening of cultural identity, as well as the improvement of the user experience in the context of design and performing arts.

The editors believe that the publication of these proceedings will provide significant added value to academic discourse and professional practice in the fields of art, design, and creative technology. Apart from being a source of reference for researchers, the proceedings are also expected to serve as a platform to strengthen the network of cooperation between institutions, the academic community, and industry at the regional and international levels.

The highest appreciation is expressed to all parties involved directly or indirectly in the success of the I-ADCT25 organization, especially the participants, evaluation panel, coordinators, and organizing committee. Hopefully, this event will continue to serve as a catalyst for innovation and strengthen the field of art, design, and creative technology's position on the global stage.

Regards,

JUNIOR KIMWAH
IMELDA ANN ACHIN
SUSAN SIM CHEE CHEANG

31 August 2025



FOREWORD

Greetings.

First of all, I would like to congratulate you on organizing the **THE 1ST INTERNATIONAL ART, DESIGN & CREATIVE TECHNOLOGY SYMPOSIUM AND COMPETITION 2025 (I ADCT25)**, which is being held for the first time by the Academy of Arts and Creative Technology (ASTiF), University Malaysia Sabah, from 8th to 9th September 2025. Also, our highest appreciation goes to the I-ADCT25 jury for taking the time and sharing their expertise in evaluating the innovation results with utmost care and authority. With the expertise of the judges in their respective fields and the experience they possess, they will certainly be able to contribute to improving the quality of the innovative works produced.

The purpose of I-ADCT25 is to showcase innovative works in the fields of art, design, and creative technology, while also encouraging the exchange of ideas and collaboration among academics, industry professionals, and the global creative community. Indirectly, this effort can further sow and empower the culture of innovation and creativity in the future. A total of 34 entries from Malaysia and abroad participated in this innovation competition. I understand that I-ADCT25 this time brings together eight categories, including sustainable and eco-friendly design, product design innovation, open innovation, narrative and multimedia digital design, fashion and apparel design, cultural heritage and design, user experience (UX) design, and interactive performing arts.

Innovation not only serves as a creative step to solve problems but also acts as a catalyst for new ideas and innovative thinking that can propel the nation's performance to continue to advance, remain competitive, and stay relevant in the ever-changing tide of globalization. To all members of the I-ADCT25 organizing committee who have worked tirelessly to prepare for the realization of this innovation competition, I extend my highest congratulations and deepest gratitude. I am very proud of the commitment shown by all members of I-ADCT25 and the participants in their efforts to improve research quality and strengthen the culture of innovation through this participation.

Thank you.

Assoc. Prof. Dr. Zairul Anuar Md. Dawam
Dean
Academy of Arts and Creative Technology (ASTiF)
Universiti Malaysia Sabah



FOREWORD

Greetings.

Welcome to the 1st International Art, Design & Creative Technology Symposium and Competition, I-ADCT 2025. It is a great honor to have you here. This event represents a significant milestone in our shared endeavor to stretch the limits of innovation and creativity. The presence of our esteemed keynote speakers, presenters, participants, and honored guests from around the world today has truly made this a vibrant and international gathering.

This symposium was initiated by a straightforward yet impactful concept: that art, design, and technology are not distinct disciplines, but rather interconnected forces that influence our world. The importance of human creativity is greater than ever in an era of accelerated technological advancement. We are present to commemorate the interplay between the two—to observe how technology can function as a medium for artistic expression and how design thinking can humanize our technological environment.

In the upcoming two days, we will participate in a fruitful exchange of ideas. You will have the opportunity to observe groundbreaking projects, hear from leading experts who are at the forefront of their fields, and witness the extraordinary talent that is on exhibit in our competition. I urge you to capitalize on this opportunity to establish connections, exchange ideas, and establish new partnerships. The discussions we engage in here will certainly catalyze new ideas and facilitate the development of future innovations.

I would also like to express my gratitude to Universiti Sains Malaysia, our co-organizer, for their invaluable partnership and support in making this event a success. The tireless organizing committee has been the driving force behind this exceptional platform, thanks to their dedication and hard work.

In conclusion, we extend our gratitude to our sponsors and the numerous volunteers who have worked assiduously.

We should seize this chance to inspire, create, and learn. Thank you, and I hope that all of you have a successful and memorable symposium.

Thank you.

Dr. Victor B. Pangayan
Chairman
Academy of Arts and Creative Technology
Universiti Malaysia Sabah



ORGANISING COMMITTEE
THE 1ST INTERNATIONAL ART, DESIGN & CREATIVE TECHNOLOGY
SYMPOSIUM AND COMPETITION 2025 (I-ADCT25)

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PHOTOGRAPHER/VIDEO	ENCIK AK AB HASHIM BIN PG AB GHANI

KEYNOTE SPEAKER POSTER 1



The poster features a portrait of Martina Zwölfer, a woman with short grey hair and glasses, wearing a black jacket and a light-colored scarf. The background is a vibrant purple with abstract geometric shapes in blue, pink, and white, including circles, dots, and lines. At the top, the logos for UMS (Universiti Malaysia Sabah) and iADGT are displayed. The main title 'i-ADGT 25' is in large, colorful, stylized letters. Below it, the event is described as 'THE 1ST INTERNATIONAL OF ART, DESIGN & CREATIVE TECHNOLOGY SYMPOSIUM AND COMPETITION 2025' with the tagline 'INSPIRE. CREATE. INNOVATE.' Martina Zwölfer is identified as '12ER GLAS PORZELLAN KERAMIK WEITRA, AUSTRIA'. Her presentation title, 'FROM POTTERY WHEEL TO CODE: A CREATIVE JOURNEY OF CROSS DISCIPLINARY CERAMICS', is highlighted in a purple rounded rectangle. The dates '8-9 SEPTEMBER 2025' are in a pink box, and the venue 'AKADEMI SENI & TEKNOLOGI KREATIF UNIVERSITI MALAYSIA SABAH' is listed below. A pink box indicates the event is '(VIRTUAL)'. At the bottom, a white banner reads 'KEYNOTE SPEAKER'. The bottom right corner contains logos for UMS, APEX, seni (school of the arts), and a small rocket logo.

UMS UNIVERSITI MALAYSIA SABAH iADGT

i-ADGT 25

THE 1ST INTERNATIONAL OF ART,
DESIGN & CREATIVE TECHNOLOGY
SYMPOSIUM AND COMPETITION 2025

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MARTINA ZWÖLFER
12ER GLAS PORZELLAN KERAMIK
WEITRA, AUSTRIA

**FROM POTTERY WHEEL TO
CODE: A CREATIVE JOURNEY
OF CROSS DISCIPLINARY
CERAMICS**

8-9 SEPTEMBER 2025

AKADEMI SENI & TEKNOLOGI KREATIF
UNIVERSITI MALAYSIA SABAH

(VIRTUAL)

KEYNOTE SPEAKER

UMS APEX seni school of the arts

KEYNOTE SPEAKER POSTER 2



The poster features a portrait of Prof. Dr. Jidon @ Adrian Bin Janaun on the left, wearing a traditional Sabahan headdress and a patterned sash. The background is a vibrant purple with abstract geometric shapes in blue, pink, and white. The text is arranged in a clean, modern layout with various font weights and colors.

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i-ADGT 25

THE 1ST INTERNATIONAL OF ART,
DESIGN & CREATIVE TECHNOLOGY
SYMPOSIUM AND COMPETITION 2025

INSPIRE. CREATE. INNOVATE.

PROF. DR. JIDON @ ADRIAN BIN JANAUN
UNIVERSITI MALAYSIA SABAH

**“FROM INSPIRATION TO
IMPACT: DRIVING
INNOVATION AT THE
NEXUS OF ART, DESIGN, &
CREATIVITY TECHNOLOGY”**

8-9 SEPTEMBER 2025

AKADEMI SENI & TEKNOLOGI KREATIF
UNIVERSITI MALAYSIA SABAH

(VIRTUAL)

KEYNOTE SPEAKER

KEYNOTE SPEAKER POSTER 3



The poster features a portrait of Assoc. Prof. Dr. Zairul Anwar Bin Md. Dawam on the left. The background is a vibrant purple with abstract geometric shapes in blue, pink, and white, including a large blue circle and a pink star. Logos for UMS, iADGT, and other partners are at the top and bottom. The main title 'i-ADGT 25' is in large, colorful, stylized letters. Below it, the event name 'THE 1ST INTERNATIONAL OF ART, DESIGN & CREATIVE TECHNOLOGY SYMPOSIUM AND COMPETITION 2025' is written in white. The tagline 'INSPIRE. CREATE. INNOVATE.' is in blue. The speaker's name and affiliation are listed in white. A quote box contains the topic 'ARTIFICIAL INTELLIGENT: OPPORTUNITIES, CHALLENGES, AND RESEARCH DIRECTIONS'. The dates '8-9 SEPTEMBER 2025' are in a pink box, and the location 'AKADEMI SENI & TEKNOLOGI KREATIF UNIVERSITI MALAYSIA SABAH' is in white. A pink box indicates '(VIRTUAL)'. The bottom left has 'KEYNOTE SPEAKER' in large white letters, and the bottom right shows logos for UMS, APEX, and seni.

 **UMS**
UNIVERSITI MALAYSIA SABAH



i-ADGT 25

THE 1ST INTERNATIONAL OF ART,
DESIGN & CREATIVE TECHNOLOGY
SYMPOSIUM AND COMPETITION 2025

INSPIRE. CREATE. INNOVATE.

ASSOC. PROF. DR. ZAIRUL ANWAR BIN MD. DAWAM
UNIVERSITI MALAYSIA SABAH

**“ARTIFICIAL INTELLIGENT:
OPPORTUNITIES,
CHALLENGES, AND RESEARCH
DIRECTIONS”**

8-9 SEPTEMBER 2025

AKADEMI SENI & TEKNOLOGI KREATIF
UNIVERSITI MALAYSIA SABAH

(VIRTUAL)

KEYNOTE SPEAKER

KEYNOTE SPEAKER POSTER 4

The poster features a vibrant purple and blue background with abstract geometric shapes and patterns. On the left, a photograph of Dr. Mohd Asyiek Mat Desa, a man with a beard and glasses wearing a black blazer over a white t-shirt, is shown. The top left corner displays the UMS (Universiti Malaysia Sabah) logo and the i-ADGT logo. The main title 'i-ADGT 25' is prominently displayed in a large, stylized font. Below it, the event's full name and the tagline 'INSPIRE. CREATE. INNOVATE.' are listed. The speaker's name and affiliation are provided, along with his keynote topic. The dates '8-9 SEPTEMBER 2025' and the venue 'AKADEMI SENI & TEKNOLOGI KREATIF UNIVERSITI MALAYSIA SABAH (VIRTUAL)' are clearly stated. The bottom left corner identifies him as the 'KEYNOTE SPEAKER'. The bottom right corner includes logos for UMS, APEX, and the Ministry of Education Malaysia.

UMS UNIVERSITI MALAYSIA SABAH i-ADGT

i-ADGT 25

THE 1ST INTERNATIONAL OF ART, DESIGN & CREATIVE TECHNOLOGY SYMPOSIUM AND COMPETITION 2025

INSPIRE. CREATE. INNOVATE.

DR. MOHD ASYIEK MAT DESA
UNIVERSITI SAINS MALAYSIA

“WHEN CREATIVITY BECOMES A CODE: THRIVING AT THE HOME-MACHINE INTERSECTION”

8-9 SEPTEMBER 2025

AKADEMI SENI & TEKNOLOGI KREATIF
UNIVERSITI MALAYSIA SABAH
(VIRTUAL)

KEYNOTE SPEAKER

UMS APEX seni

KEYNOTE SPEAKER POSTER 5



The poster features a woman, Dr. Lilian Lee Shiau Gee, standing with her arms crossed, wearing a beige blazer over a black top with a silver necklace. The background is a vibrant purple with abstract geometric shapes in blue, pink, and white, including circles, dots, and lines.

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i-ADGT 25

THE 1ST INTERNATIONAL OF ART,
DESIGN & CREATIVE TECHNOLOGY
SYMPOSIUM AND COMPETITION 2025

INSPIRE. CREATE. INNOVATE.

DR. LILIAN LEE SHIAU GEE
UNIVERSITI MALAYSIA SABAH

• FROM PLASTIC WASTE TO
• CRAFT: INNOVATION,
• CREATIVE PRACTICES AND
• WOMEN EMPOWERMENT.

8-9 SEPTEMBER 2025

AKADEMI SENI & TEKNOLOGI KREATIF
UNIVERSITI MALAYSIA SABAH

(VIRTUAL)

KEYNOTE SPEAKER



HONORARY JUDGE



PROFESSOR DR. MUSDI BIN HAJI SHANAT

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Sarawak, Malaysia



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Universiti Utara Malaysia
Kedah, Malaysia



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Selangor, Malaysia



DR. WANDAH WIBAWANTO

Universitas Negeri Semarang
Indonesia



DR. JINKY JANE C SIMEON

Universiti Malaysia Sabah
Sabah, Malaysia

Cultural Heritage and Design

Warisan dan Reka Bentuk Budaya

TERATAK MELAYU SMART ARCHIVE (TERAS) : A DIGITAL RESPOSITORY FOR SUSTAINABLE DESIGN

**Daeng Haliza Daeng Jamal^{1*}, Mohammad Syukran Kamal Ruzzaman², Tenh Hock Kuan³,
Suraya Sukri⁴ & Nordiana Ab. Jabar⁵**

Faculty of Creative Technology and Heritage
University Malaysia Kelantan

**haliza.j@umk.edu.my*

ABSTRACT

Traditional architecture in the Malay world represents cultural identity, environmental adaptation, and inherited craftsmanship. Using locally sourced natural materials such as wood, palm leaves and bamboo, Malay traditional houses are usually built with vernacular, modular, and climate-responsive elements. These components are incorporated with traditional building expertise transmitted through generations. Although preserving historical artefacts and customs has long been the main goal of heritage preservation, heritage is frequently not fully integrated in tackling modern issues such as sustainability, low-carbon building, and cultural continuity. Instead of static history, heritage should be viewed as a living system that can inspire creative, ecologically sound, and culturally appropriate design. Thus, this project aims to highlight eco-friendly materials and modular Malay-made components that could be helpful in modern constructed environments. Hence, based on qualitative approach, this project proposes the development of a virtual repository-TERAS, that preserves traditional and vernacular architectural forms from various cultural contexts. In order to enable low-carbon, climate-responsive building, the platform will give architects, designers, and planners an immersive exploration of the materials, design references, and spatial solutions that have been influenced by the record. By merging digital technology with our ancestors intelligence in architecture, this invention also contributes to cultural continuity and promote climate-adaptive design principles. Thus, this project is expected to align well with the United Nations Sustainable Development Goals (SDGs), specifically SDG 11: Sustainable Cities and Communities, and SDG 13: Climate Action.

Keywords: Malay heritage; sustainable design; architecture; archive and digital repository.

REVIVING JAWI LITERACY THROUGH “HILYAH LUGHAWI”: CULTURAL TRANSMISSION AND COGNITIVE ENGAGEMENT VIA IBN HAZM’S THEORY OF KNOWLEDGE

Iman Subor¹ & Rosyida Mohd Rozlan^{2*}

¹Faculty of Fine Art, Akademi Seni, Budaya dan Warisan Kebangsaan (ASWARA), Malaysia

² Department of Art & Design, Faculty of Art, Sustainability and Creative Industry, Universiti Pendidikan Sultan Idris, Malaysia

**rosyida@fskik.upsi.edu.my*

ABSTRACT

This paper explores the revitalization of Jawi language literacy through “Hilyah Lughawi,” an interactive cultural-linguistic model grounded in Malay-Islamic heritage. Drawing upon Ibn Hazm’s theory of the levels of knowledge—from sensory perception to intellectual certainty—the study conceptualizes Jawi literacy as both a pedagogical and cultural act of preservation. Utilizing a qualitative design, the research engaged educators and students through a series of interactive artworks, including calligraphy installations, script-mapping, and game design. Findings reveal that participants showed improved conceptual understanding of Jawi script, stronger cultural identity resonance, and increased motivation to engage with heritage texts. The visual and experiential nature of the artworks enabled learners to internalize linguistic structures while forming emotional connections to their cultural roots. This study positions “Hilyah Lughawi” not merely as a tool for literacy but as a living medium of cultural transmission, reinforcing the relevance of Islamic epistemology in contemporary heritage education.

Keywords: Jawi literacy; Hilyah Lughawi; Ibn Hazm; Islamic education; cultural transmission; interactive learning; heritage language pedagogy; game-based learning

SHOWCASING TRADITIONAL MALAYSIAN ATTIRE: THE NYONYA KEBAYA

Nur Zaidi Azraai^{1*} & Izzati Alia binti Aziz²

New Media Design and Technology Department, School of the Arts,
Universiti Sains Malaysia

nurzaidi@usm.my

ABSTRACT

Endangered species are threatened by habitat loss, poaching, and climate change all around the world. Malaysia, one of the countries that boast of rich biodiversity, hosts a number of endangered species, of which Malayan tiger is critically endangered. This study explores the use of 3D animation as an educational and emotional tool to raise awareness about endangered species among Malaysian undergraduates. A quantitative approach, surveys, and feedback forms have therefore been utilised for the purpose of assessing awareness, preferences of media types, and their impact on raising empathy and conservation efforts. The results generally show that undergraduates lack a proper emotional engagement with the topic and are only superficially aware. From the study, semi-realistic 3D animation media, especially those in passive forms, were considered ideal for engagement. It ends with the creation of a three-dimensional animation based on the moving tale of a Malayan tiger and her cub, which aims to evoke feelings and motivate conservation efforts. The results pointed out that 3D animation is a very powerful medium that can bridge awareness into actionable conservation, and as such, lessons can be given to conservation organisations for reaching the young audience effectively.

Keywords: 3D animation, Malayan tiger, endangered species, educational and emotional tool, awareness campaign.

MEMMELIHARA SENI BINA WARISAN NEGARA DI MALAYSIA MENGGUNAKAN KAEDAH PENDIGITALAN

Nur Zaidi Azraai & Siti Nur Mariah binti Abdullah

New Media Design and Technology Department, School of the Arts,
Universiti Sains Malaysia

nurzaidi@usm.my

ABSTRAK

Sejarah seni bina warisan Melayu termasuk seni bina Melayu tradisional, yang direka dan dibina dengan kemahiran dan kepakaran yang tinggi. Terdapat banyak kajian telah dilakukan terhadap rumah tradisional Melayu dari sudut reka bentuk seni binanya. Rata-rata rumah di Malaysia hari ini telah diubah suai, serta menghalang masyarakat daripada membiasakan diri dengan rumah tradisional Melayu. Rumah tradisional Melayu harus dibangunkan, didigitalkan, dan dicapai secara maya, sebagai hasil daripada kemajuan teknologi. Matlamat utama platform ini adalah untuk memulihkan dan memelihara secara maya seni bina warisan tradisional Melayu. Matlamat projek ini adalah untuk memelihara rumah tradisional Melayu secara digital seperti Rumah Tok Su yang terletak di Bandar Alor Setar, Kedah. Ini akan membolehkan penjelajahan menggunakan teknik perayauan maya seni bina warisan tradisional Melayu serta menguji kebolegunaan model konseptual. Metodologi projek dibahagikan kepada empat fasa: analisis keperluan pengguna, reka bentuk model konseptual, penciptaan lawatan maya dan ujian fungsi. Signifikasi kajian ini adalah teknologi perayauan maya yang membolehkan pengguna menjiwai pengalaman melalui rumah tradisional Melayu iaitu Rumah Tok Su.

Kata kunci: perayauan maya, walkthrough, model 3D, rumah tradisional Melayu, Rumah Tok Su

APLIKASI PIRAK 2.0: MENJULANG SUGU TINGGI DAN MEMELIHARA BUDAYA IBAN

**Patricia Ganing^{1*}, Nor Sahara Mesman², Diana Jumadi³, Nur Hidayah Rashidi⁴,
Muhammad Fawiz Bakri⁵ & Muhammad Zamzini Mohd Zamani⁶**

Fakulti Bahasa Dan Komunikasi,
Universiti Pendidikan Sultan Idris

**patricia.ganing@fbk.upsi.edu.my*

ABSTRAK

Masyarakat Iban mengangkat status wanita Iban dengan memperlihatkan kecantikan menerusi pemakaian Ngepan Indu. Pemakaian ini akan dilengkapi dengan perhiasan yang dipanggil Sugu Tinggi. Penghasilan secara tradisional Sugu Tinggi memerlukan penelitian serta mementingkan pemaknaan disebalik pemilihan corak dan motif. Oleh itu, untuk memudahkan penghasilan perhiasan ini, sebuah aplikasi yang diberi nama 'Aplikasi Pirak' dibangunkan untuk merevolusi penghasilan Sugu Tinggi. Aplikasi ini dapat membantu pengguna di semua lapisan peringkat meningkatkan daya kreativiti mengikut formula yang disediakan oleh Aplikasi Pirak. Berpandukan kepada Model Instruksional ADDIE, Aplikasi Pirak menyediakan peluang kepada masyarakat di semua peringkat untuk melibatkan diri dalam menghasilkan Sugu Tinggi mengikut acuan dan citarasa tersendiri. Sehubungan itu, revolusi aplikasi Pirak ini diharapkan memberi inisiatif kepada masyarakat untuk menghasilkan Sugu Tinggi dengan lebih menarik dan dapat mengekalkan warisan pemakaian perhiasan masyarakat Iban.

Kata kunci: Sugu Tinggi, Ngepan Indu, Masyarakat Iban, Warisan Budaya, Aplikasi Pirak, Inovasi Digital, Rekaan Tradisional, Model ADDIE

BRIDGING TRADITIONS AND MODERNITY: THE ARTISTIC AND EDUCATIONAL LEGACY OF JIN SHANGYI

Peng Yaxin

Academy of Art and Creative Technology
University Malaysia Sabah

ABSTRACT

This paper explores the inheritance and innovation in Jin Shangyi's oil painting art and educational philosophy, emphasizing the intersection of cultural heritage and contemporary design thinking. As a pivotal figure in modern Chinese realist painting, Jin developed a unique artistic language that synthesizes Western classical techniques with traditional Chinese aesthetics. He also pioneered a pedagogical model that bridges classical foundations with modern sensibilities, shaping generations of artists and educators in China. In recent years, discussions surrounding cultural identity, heritage preservation, and the relevance of traditional artistic practices in contemporary contexts have intensified within the global art and design community. Jin Shangyi's work offers a compelling case study in how traditional techniques and philosophical values can be recontextualized to address modern creative challenges. Through a visual semiotic and qualitative analysis of Jin's representative works and teaching practices, this study examines how his approach contributes to the reinterpretation of cultural identity within the broader framework of art and design education. It argues that Jin's integration of classical realism with the Chinese humanistic spirit offers a model for both cultural continuity and artistic innovation. Furthermore, this research discusses how such heritage-based methodologies can inform contemporary design strategies, fostering creative practices that are historically grounded, culturally resonant, and globally relevant. The findings contribute to ongoing academic dialogues on the role of cultural memory in shaping aesthetic values and design methodologies in the 21st century.

Keywords: Jin Shangyi; Classical Realism; Humanistic Aesthetics; Cultural Identity; Artistic Inheritance

DIGITIZING LINGUISTIC HERITAGE: DEVELOPMENT OF THE KEDAH DIALECT WEBSITE AS AN INTERACTIVE CULTURAL PRESERVATION TOOL

Ruzinoor Che Mat & Puteri Miza

Universiti Utara Malaysia

ABSTRACT

The rapid advancement of digital technology has transformed the way knowledge is preserved and disseminated. In the context of linguistic heritage, particularly dialects that are orally transmitted, digitization offers a lifeline to prevent extinction. This study details the design and development of an interactive website dedicated to the Kedah dialect, a regional variation of the Malay language with significant cultural value in northern Malaysia. Through the integration of multimedia, interactive components, and responsive design, the website serves as both a learning platform and an archival repository. Using a user-centered design approach, the development process included content curation from native speakers, incorporation of cultural media like the "Mak Cun" television series, and the use of platforms such as Wix for deployment. Evaluation through user testing demonstrated high usability and engagement, particularly among university students. The project underscores the role of digital tools in preserving intangible cultural assets while enhancing community awareness and participation.

Fashion and Apparel Design

Reka Bentuk Fesyen dan Pakaian

INNOVATIVE TRANSFORMATION OF WENSHAN ZHUANG NATIONALITY MODERN DESIGN: RECONSTRUCTION OF TRADITIONAL CRAFTSMANSHIP BASED ON WEARABLE ART

Qiu Qilu¹, Lilian Lee Shiau Gee², Victor B. Pangayan³, Li Bo⁴ & Fan Shuyu⁵

^{1,4,5}*Yunnan Light and Textile Industry Vocational College, Yunnan*

^{2,3}*Academy of Arts and Creative Technology, Universiti Malaysia Sabah, Sabah, Malaysia*

¹ *qiluqiu@qq.com*

ABSTRACT

Currently, under the dual influence of multicultural collision and fast fashion industry, the traditional costumes of the Sha subgroup Buyi (沙支系:布依) of the Wenshan Zhuang ethnic group in Yunnan, a cultural repository of ecological wisdom and ethnic memory faces new challenges in sustainable perpetuation. This study employs interdisciplinary field investigation and design practice to deeply deconstruct its historical and cultural evolution, symbol system, and technological characteristics. Research has found that the terraced layered structure, silver embellishment patterns, and ceremonial cutting techniques of Buyi clothing collectively constitute a knowledge system of the "ethnic cultural topology". Its modernization transformation requires breaking through the level of symbol appropriation and shifting towards the reconstruction of the "ontology of craftsmanship". To bridge tradition and innovation, the study focuses on three-dimensional paths: 1) Modular reconstruction of clothing structure and functional transformation of volumetric cutting, constructing wearable cultural interface with dual practical; 2) Collaborative development of three-dimensional pattern printing technology to create a sustainable development open design language; 3) Optimization of craftsmanship, integrate the inheritance of Buyi intangible cultural heritage (ICH) skills and manufacturing resource tool chain. Research has shown that the innovation of Zhuang clothing is essentially a process of "cultural entropy resistance" in the context of globalization, reconstructs the national cultural genes and material politics through practice, It not only achieves the integration of traditional beliefs and modern elements, but also provides a theoretical framework and innovative practical methods driven by the dual axis of "technological innovation and cultural identity" for the dynamic inheritance of Zhuang clothing.

Keywords: Wenshan Zhuang ethnic clothing; cultural element inheritance; craft ontology; modular innovation design transformation

BOUQUET” DRESS: FUTURISTIC FASHION INSPIRED BY BOUQUET WRAPPING

**Saniah Ahmad^{1*}, Nurul Anis Safiah binti Aziz², Nur Syafizah binti Syachruddin³,
Siti Noramirah binti Jaudi⁴ & Fleryeanty Lisa @ Lawai⁵**

Creative Arts Program, Academy of Arts and Creative Technology, University Malaysia Sabah

**saniah@ums.edu.my*

ABSTRACT

The “*Bouquet Dress*” is a conceptual fashion innovation that reinterprets futuristic design through the aesthetic of floral bouquet wrapping. This design proposes a new trajectory in fashion by fusing advanced styling with nature-inspired symbolism. While conventional futuristic fashion typically prioritizes technological-inspired elements, this creation adopts a softer and more poetic approach by addressing the femininity within the genre. It aims to produce a garment that is minimalist, elegant, and forward-thinking, using geometric pattern manipulation as its structural foundation. The design features a heavyweight fabric overlaid with lightweight organza, selected for its ability to replicate the tactile and visual qualities of bouquet wrapping paper. A red satin belt is applied to metaphorically represent the ribbon used to secure floral arrangements. The chromatic palette of light grey, silver, and red was intentionally curated to evoke notions of balance, boldness, and purity. The design process encompassed thematic concept formulation, sketching, pattern drafting, material selection, accessory detailing, and garment making. This design promotes innovative use of geometric construction for minimalist silhouettes. Hence, exemplifies synergy between material selection and symbolic colour theory presents a strong potential for extension into experimental couture for curated exhibitions.

Keywords: Futuristic Fashion, Experimental Couture, Geometric Pattern, Bouquet Inspiration, Symbolic Colour

Interactive Performing Arts

Seni Persembahan Interaktif

THE TRANSFORMATION OF AUDIENCE ROLES AND AESTHETIC PARADIGMS UNDER THE INFLUENCE OF INTERACTIVE PERFORMANCE TECHNOLOGIES

Chen Tianran

Universiti Malaysia Sabah

1318389687@qq.com

ABSTRACT

Interactive performance art is undergoing a paradigmatic shift, driven by the integration of digital media, virtual reality, and immersive technological systems. These developments fundamentally reconfigure the conventional performer–audience dynamic. This study investigates the conceptual framework of interactive performance, delineates its historical evolution, and articulates its departure from traditional performative models. Through critical analysis of representative case studies, the research demonstrates how technologically mediated interactivity—manifested in real-time feedback, corporeal engagement, and multisensory stimulation—transforms the audience from passive observers into active co-creators. This reconstitution engenders a dynamic, immersive experiential field that redefines spatial configuration, temporal structure, and narrative logic, while cultivating a distinct aesthetic mode characterized by co-presence. The broader significance of interactive performance lies not merely in its expansion of artistic modalities, but in its capacity to instigate a fundamental reorientation of aesthetic experience. The emergence of an “aesthetic resonance mechanism” reconfigures modes of perception and participation, functioning as a critical vector for deeper cultural negotiation and dialogic exchange among audiences, artists, and the sociocultural milieu.

Keywords: Interactive Performance ; Audience Transformation ; Digital Media ; Immersive Techno

VIRTUAL REALITY (VR) & 360° VIDEO AS INNOVATIVE TOOLS FOR REMOTE THEATRE REHEARSALS

Normiha Suraya binti Ibrahim¹, Fatimah binti Muhd Shukri², Ratna Fazlinda anak Jelly³ & Rosdeen bin Suboh⁴

^{1,2,3}Faculty of Creative Technology and Heritage, University Malaysia Kelantan, Bachok, Kelantan

⁴Faculty of Creative Arts, University of Malaya, Kuala Lumpur

¹*normiha.i@umk.edu.my*, ²*fatimah.s@umk.edu.my*, ³*fazlinda.aj@umk.edu.my*,
⁴*kudin@um.edu.my*

ABSTRACT

Theatre is a collaborative art form that traditionally requires actors to rehearse together in a shared physical space. However, geographical distance, time constraints and financial costs often hinder the rehearsal process. This project explores the use of Virtual Reality (VR) and 360° video technology as innovative tools to facilitate remote rehearsals. In this project, the focus is on two actors from miles apart; Actor A from University of Malaya, Kuala Lumpur and Actor B from University Malaysia Kelantan, which are separated by 439.5 KM and approximately six hours of travel. To address this issue, we proposed a hybrid approach of VR technology for a real-time interaction and 360° video recordings for asynchronous rehearsals. The VR environment allows actors to engage in immersive rehearsals despite the distances, while pre-recorded 360° videos, uploaded to YouTube, provide a flexible alternative for actors to rehearse their blocking, movement and scene coordination at their convenience. This method reduces time travel, rehearsal costs and scheduling conflict while maintaining effective rehearsals. Using the qualitative research approach with a case study method, this project aims to examine the impact of VR and 360° video in enhancing theatre rehearsals. The findings suggest that this innovation bridges spatial gaps, improving accessibility and optimising the efficiency of remote rehearsals. By integrating these technologies, theatre practitioners can redefine traditional rehearsal methods, making them more adaptable and sustainable in the digital era.

Keywords : Virtual Reality; Rehearsals; Performance; Theatre; Technology

KAJIAN TARIAN ZAPIN BELITUK-LITUK SUKU KAUM TIDUNG MENGGUNAKAN WADAH MOTION CAPTURE: SEBUAH PENDEKATAN INOVATIF DALAM MELESTARIKAN BUDAYA LOKAL

Sharip Zainal Bin Sagkif Shek, Rosli Sareya, M Fazmi Hisham, Borhan Abdullah & Norain Abdul Razak

Akademi Seni dan Teknologi Kreatif
Universiti Malaysia Sabah

sharip@ums.edu.my

ABSTRAK

Motion capture adalah teknologi yang membolehkan pengumpulan data gerakan manusia secara *real-time* dalam bentuk tiga dimensi. Teknologi ini telah digunakan dalam pelbagai bidang seperti filem animasi, permainan video, sains sukan dan kedokteran. Dalam bidang seni dan budaya, *motion capture* juga dapat digunakan untuk merekod tarian gerakan tradisional seperti Zapin, tarian tradisional Melayu yang popular di Malaysia. Kajian gerak zapin dengan menggunakan *motion capture* memberikan peluang untuk mempelajari gerakan yang lebih tepat lagi dan memudahkan dalam merekod dan mengkaji setiap dari gerakan. Kajian ini memberi manfaat seperti melindungi, melestarikan dan mengajarkan warisan budaya tempatan kepada masyarakat dari generasi ke generasi serta memberikan bahan kajian yang lebih mendalam untuk seniman dan para penari. *Motion capture* juga memberikan kemampuan untuk merekod dan memperbaiki tahap gerakan, sehingga pemain atau penari dapat memahami setiap gerakan dan mengalami lebih banyak perubahan dalam proses pembelajaran dan latihan tata gerakan. Dalam kesimpulannya, teknologi motion capture memiliki potensi besar dalam kajian gerak seni dan budaya seperti Zapin, dan dapat meningkatkan pemahaman tentang seni tradisional dan memastikan warisan budaya itu dikekalkan dan diwarisi ke generasi akan datang.

Keywords: Motion Capture, Zapin, Gerak Tari, Teknologi, Evolusi

KEUNIKAN PERPADUAN VIDEO TARIAN KONTEMPORARI DENGAN BACKGROUND GREEN SCREEN

Sri Ningsih Sukirman¹ & Vanessa William²

Akademi Seni dan Teknologi Kreatif
Universiti Malaysia Sabah

¹ningsih@ums.edu.my, ²vanessaquezon98@gmail.com

ABSTRAK

Tarian kontemporari adalah genre tarian yang menggunakan gaya improvisasi dan mempunyai kebebasan dalam berekspresi. Kertas kerja ini bertujuan memperlihatkan karya tari kontemporari apabila disokong dengan elemen artistik, iaitu latar belakang digital akan lebih menonjol nilai artistiknya. Data kajian tarian Kontemporari ini diperolehi berdasarkan kerja temubual dengan orang yang arif dalam editing Video yang terlibat dalam persembahan karya tari kontemporari. Data karya tari kontemporari pula diperolehi melalui sumber kedua serta pemerhatian video persembahan kontemporari yang lepas. Jenis elemen penyokong seperti jenis pentas, kostum, muzik, pencahayaan dan latarbelakang juga dianalisis. Hasil analisis ini mendapati karya tarian kontemporari ini memiliki ciri artistik yang indah dalam video yang dihasilkan. Dapatan kajian ini dapat menunjukkan karya tari kontemporari apabila digabungkan dengan latar belakang yang estetik akan menjadikan karya tari itu lebih menyerlah.

Kata kunci: Tarian Kontemporari, improvisasi, elemen penyokong, latar belakang.

***Narrative and
Multimedia
Digital Design
Reka Bentuk Digital Naratif dan
Multimedia***

JEJAK: TRANSFORMASI DIGITAL NARATIF SEJARAH DAN MITOS TEMPATAN MELALUI PETA INTERAKTIF, DOKUMENTARI PENDEK DAN KECERDASAN BUATAN (AI)

**Addley Bromeo Bianus, Imelda Ann Achin, Zairul Anuar Md Dawam, Rosli Sareya,
Junior Kimwah, & Salbiah Kindoyop**

Akademi Seni dan Teknologi Kreatif
Universiti Malaysia Sabah

addley@ums.edu.my

ABSTRAK

Kisah-kisah sejarah dan mitos tempatan di Sabah merupakan sebahagian daripada khazanah warisan budaya yang bernilai tinggi, namun semakin terhakis akibat ketandusan pendekatan dokumentasi yang sesuai dengan generasi digital masa kini. Kekangan dari segi visualisasi, akses teknologi dan keterbatasan bahasa telah menyebabkan naratif tempatan yang dahulunya ditutur secara lisan dalam komuniti semakin terpinggir. Projek JEJAK diperkenalkan sebagai satu inovasi digital yang menggabungkan dokumentari pendek berasaskan lokasi sebenar dengan teknologi peta interaktif dan disokong oleh visual terjana AI dan suara naratif AI. Fasa awal projek ini memberi tumpuan kepada lima daerah utama di Sabah iaitu Tambunan, Kota Belud, Kundasang, Semporna dan Lahad Datu yang masing-masing menyimpan kisah legenda, tapak sejarah dan mitos komuniti yang signifikan. JEJAK bukan sekadar medium penceritaan tetapi sebuah platform pendidikan dan pelestarian warisan yang inklusif dan lestari. Melalui integrasi teknologi GPS, paparan multimedia dan kecerdasan buatan, JEJAK menghidupkan semula naratif warisan agar terus relevan dan bermakna dalam era digital global.

Kata kunci: Dokumentari Interaktif, Sejarah dan Mitos Tempatan, Peta Digital, Kecerdasan Buatan (AI), Pelestarian Warisan Budaya

INOVASI PENGAJARAN BAHASA DAN SASTERA DALAM CERITA RAKYAT SABAH MELALUI INTEGRASI APLIKASI MOODLE, PADLET DAN CANVA

Mohd Juhar Harun , Jasman Bandar & Sharifah Rahama Amirul

Borneo Institute for Indigenous Studies (BorIIS), Universiti Malaysia Sabah
Pusat Penataran Ilmu dan Bhasa (PPIB), Universiti Malaysia Sabah
Fakulti Perniagaan, Ekonomi dan Perakaunan (FPEP), Universiti Malaysia Sabah

mohdjuharharun@ums.edu.my

Transformasi digital yang semakin pesat telah mengubah landskap sosial dan pendidikan, menjadikan proses pengajaran dan pembelajaran lebih kompleks serta menuntut pendekatan yang lebih kreatif dan berkesan. Dalam konteks pendidikan bahasa dan sastera, terdapat keperluan untuk membina model pengajaran yang mampu mengintegrasikan teknologi secara bermakna, khususnya dalam usaha memelihara dan mempopularkan cerita rakyat Sabah sebagai khazanah budaya tempatan. Sehubungan itu, satu idea cadangan pembangunan smodel pengajaran dan pembelajaran interaktif berasaskan cerita rakyat Sabah dengan menggunakan gabungan platform Moodle, Padlet dan Canva. Pendekatan ini bertujuan mewujudkan dimensi pembelajaran yang menarik, fleksibel dan bersifat sendiri, iaitu pelajar dapat mengakses bahan pembelajaran secara digital, menyumbang refleksi dan hasil kreatif, serta berinteraksi secara aktif dengan kandungan sastera tempatan. Reka bentuk model ini akan menggunakan kerangka ADDIE sebagai asas pembangunan modul, merangkumi fasa analisis, reka bentuk, pembangunan, pelaksanaan dan penilaian. Melalui cadangan ini, diharapkan satu ekosistem pembelajaran yang sistematik dan inklusif dapat diwujudkan, sekali gus memperkukuh usaha pemuliharaan warisan budaya melalui pendekatan pedagogi digital yang relevan dan berimpak tinggi.

Kata kunci: Transformasi digital, pengajaran interaktif, cerita rakyat Sabah, platform aplikasi, Model ADDIE

SAMPLE LABFLOW: VISUAL LEARNING FOR CLINICAL MICROBIOLOGY LABORATORY WORKFLOW

Lia Natasha Amit

Department of Pathology and Microbiology
Faculty of Medicine and Health Sciences
Universiti Malaysia Sabah

ABSTRACT

Sample Labflow is an interactive learning project that transforms the intricacies of routine diagnostic procedures into a visual learning experience. It maps the journey of a clinical sample, from collection, transport, and receipt to test selection and result reporting using infographics and digital design. This innovation bridges the gap between theoretical knowledge and practical application by enhancing students' understanding of laboratory processes through engaging visual flows. The primary target audience consists of medical students and allied health professionals, with potential for integration into Learning Management System (LMS) modules, and adaptation into mobile applications or augmented reality platforms. This innovative approach combines **elements** of medical science, user-centered design, and visual interaction to foster immersive learning.

Keywords: microbiology, clinical sample, diagnostic workflow, visual learning, creative design

3D ANIMATION: RAISING AWARENESS OF ENDANGERED ANIMALS AMONG UNDERGRADUATES

Naimah Musa@Zakaria & Darrick Tan Chia Wei

New Media Design and Technology Department
School of the Arts
Universiti Sains Malaysia

naimah.musa@usm.my

ABSTRACT

Endangered species are threatened by habitat loss, poaching, and climate change all around the world. Malaysia, one of the countries that boast of rich biodiversity, hosts a number of endangered species, of which Malayan tiger is critically endangered. This study explores the use of 3D animation as an educational and emotional tool to raise awareness about endangered species among Malaysian undergraduates. A quantitative approach, surveys, and feedback forms have therefore been utilised for the purpose of assessing awareness, preferences of media types, and their impact on raising empathy and conservation efforts. The results generally show that undergraduates lack a proper emotional engagement with the topic and are only superficially aware. From the study, semi-realistic 3D animation media, especially those in passive forms, were considered ideal for engagement. It ends with the creation of a three-dimensional animation based on the moving tale of a Malayan tiger and her cub, which aims to evoke feelings and motivate conservation efforts. The results pointed out that 3D animation is a very powerful medium that can bridge awareness into actionable conservation, and as such, lessons can be given to conservation organizations for reaching the young audience effectively

Keywords: 3D animation, Malayan tiger, endangered species, educational and emotional tool, awareness campaign.

A 2D GAME-BASED APPROACH TO DELIVERING FUNDAMENTAL CAT CARE KNOWLEDGE TO CAT OWNERS

Norfarizah Mohd Bakhir & Ho Wen Yi

New Media Design and Technology Department
School of the Arts
Universiti Sains Malaysia

farizah@usm.my

ABSTRACT

Cats are one of the most popular pets to own, however, there have been cases and issues where cats have not been given optimal care to ensure that cats can express their normal behaviour and reduce their stress levels. Owners lacking the rudimentary knowledge about cat care is common and has been a constant reason for the relinquishment and euthanasia of pet cats. The lack of knowledge in optimal cat care is a risk of causing stress in cats as well as the belief of misconceptions about cat care. Through this game project, the rudimentary knowledge about cat care can be increased among cat owners and people who are interested in cats instead of through watching awareness videos and attending talks at shelters. There are three objectives of this study: to explore how games can educate people on the basic needs required by cats to express their normal behaviour and reduce their stress levels, to analyse an informative, interactive way to provide education to correct the misconceptions and beliefs about cat care, and to develop a game to provide rudimentary knowledge about optimal pet care to cat owners and people who are interested in cats, increase awareness, and to better understand the basic needs of cats. In conclusion, this game project can help to increase awareness and provide the rudimentary knowledge required to properly take care of cats among cat owners and people who are interested in cats.

Keywords: 2D animation, game design, cats, educational tool.

MENGINTEGRASI ELEMEN NARATIF DALAM PENGAJARAN SENI UNTUK MEMBANGUN PEMIKIRAN KRITIS MURID TAHAP 2 : SATU EKSPERIMEN MULTIMEDIA INTERAKTIF

Sri Mastika Yunus

Akademi Seni dan Teknologi Kreatif
Universiti Malaysia Sabah

ABSTRAK

Dalam era pendidikan abad ke-21 yang menuntut murid memiliki keupayaan berfikir secara kritikal, pengajaran seni perlu dikembangkan melepasi batas ekspresi estetik semata-mata kepada medium yang menyuburkan naratif, refleksi dan kognisi aras tinggi. Kajian ini bertujuan meneroka keberkesanan integrasi elemen naratif melalui pendekatan multimedia interaktif dalam pengajaran seni terhadap pembangunan Kemahiran Berfikir Secara Kritikal (KBK) murid Tahap 2 sekolah rendah di Daerah Lawas, Sabah. Kajian ini menggunakan reka bentuk kuasi-eksperimen bercampur kaedah kualitatif, melibatkan dua kumpulan murid (eksperimen dan kawalan) dari latar bandar dan luar bandar, dengan jumlah keseluruhan 60 peserta. Kumpulan eksperimen didedahkan kepada bahan pengajaran seni berasaskan naratif digital interaktif yang dibangunkan berteraskan teori konstruktivisme sosial dan pendekatan penyelidikan naratif. Dapatan kajian menunjukkan peningkatan yang signifikan dalam prestasi KBK murid kumpulan eksperimen berbanding kumpulan kawalan, berdasarkan analisis statistik pra dan pasca ujian serta sokongan dari dapatan kualitatif melalui temu bual, refleksi visual murid dan pemerhatian berstruktur. Elemen naratif seperti watak, konflik, perwatakan visual dan penyelesaian cerita telah dikenal pasti sebagai pemangkin kepada aktiviti berfikir aras tinggi seperti penilaian, inferens dan pembentukan hujah. Dapatan ini memberikan implikasi penting terhadap reka bentuk pedagogi seni visual dan kurikulum sekolah rendah khususnya dalam usaha memperkukuh pembelajaran holistik, menyokong kebolehcapai murid luar bandar, serta memartabatkan pendidikan seni sebagai wahana pemikiran reflektif dan bermakna. Kajian ini menyumbang kepada diskursus pendidikan seni melalui cadangan model pedagogi naratif-interaktif yang boleh disesuaikan dalam konteks tempatan dan merentas budaya. Ia turut mencadangkan bahawa naratif digital, apabila disepadukan secara kreatif dengan unsur visual dan suara murid, mampu menjadi strategi pedagogi yang memperkasa suara dan pemikiran murid di bilik darjah seni masa depan.

Kata kunci: pengajaran seni, naratif digital, multimedia interaktif, kemahiran berfikir kritikal, murid tahap 2, pendidikan luar bandar, pendidikan seni abad ke-21.

Open Innovation

Inovasi Terbuka

SAMPAH TO SOMETHING (s2s)

Alexander Jiran^{1*}, Syarifah Hanum Ali² & Puteri Mahirah Mustapa³

¹Politeknik Kota Kinabalu, ^{2,3} Universiti Malaysia Sabah

**alexander@polikk.edu.my*

ABSTRACT

Waste pollution is a growing environmental concern, mainly due to the increasing amount of unmanaged solid waste produced by communities. Despite various awareness campaigns, the public's understanding and adoption of sustainable practices—such as the 5R principles (Refuse, Reduce, Reuse, Repurpose, and Recycle)—remain low. This lack of awareness results in excessive disposal of potentially reusable materials, leading to environmental degradation and missed opportunities for innovation. "Sampah to Something" refers to the concept of transforming discarded or unwanted items into something of value or utility. It involves recycling, repurposing, or creatively reusing materials that would otherwise be thrown away. This idea promotes sustainability by reducing waste and encouraging people to find new uses for items that might be considered rubbish, often turning them into art, functional objects, or decorative pieces. The methodology steps involved in the S2S project include conducting initial awareness observation on the importance of the 5R principles and waste reuse among the public, identifying suitable discarded materials that can be repurposed into functional products, collecting necessary tools and materials such as resin epoxy for product creation, designing and producing prototypes of souvenirs, keychains, and decorations based on creative sketches, gathering feedback through surveys involving vendors, students, and tourists to refine the product. With these methods, the project can be implemented in a structured and meaningful way, promoting both innovation and environmental sustainability through creative upcycling. The S2S deserves high ratings due to its concept, which focuses on "Go Green" and "Think before you thrash" to help with environmental conservation. We believe that the use of this innovation will not only have a significant impact on reducing waste on the beaches around Kota Kinabalu but also on the tourism industry and handicraft sector.

Keywords: Rubbish (*Sampah*), 5R principles.

SERONOK BERMAIN, BIJAK MENILAI: PERMAINAN PAPAN LANGKAH GEMILANG

Imelda Ann binti Achin^{1*}, Anjilin binti Ilibu@Ribu², Eldrin bin Achin³, Addley Bromeo bin Bianus⁴ & Junior Kimwah⁵

^{1,4,5}Akademi Seni dan Teknologi Kreatif, University Malaysia Sabah
²Sekolah Rendah Pekan Tamparuli, ³Hospital Queen Elizabeth II Sabah

**imelda_ann@ums.edu.my*

ABSTRAK

Inovasi Langkah Gemilang merupakan satu pendekatan pedagogi berasaskan permainan papan interaktif yang dibangunkan bagi meningkatkan penguasaan nilai moral dalam kalangan murid sekolah rendah dalam mata pelajaran Pendidikan Moral. Kajian ini bertitik tolak daripada isu utama iaitu kurangnya tumpuan dan minat murid terhadap pengajaran nilai moral di dalam kelas, selain kesukaran mereka untuk memberikan contoh aplikasi nilai dalam konteks kehidupan harian. Permainan papan interaktif Langkah Gemilang direka bentuk sebagai permainan yang menggabungkan elemen kuiz dan naratif harian yang dekat dengan dunia kanak-kanak. Pelaksanaan inovasi ini telah dijalankan melalui kaedah tindakan secara kitaran bersama guru di sekolah rendah terpilih. Dapatan menunjukkan peningkatan ketara dalam minat, penglibatan aktif murid semasa pembelajaran, dan kefahaman terhadap aplikasi nilai seperti hormat-menghormati, tolong-menolong, dan tanggungjawab. Inovasi ini bukan sahaja membantu guru menyampaikan kandungan dengan lebih menyeronokkan dan bermakna, malah turut merangsang kemahiran insaniah serta komunikasi murid secara tidak langsung. Justeru, permainan papan Langkah Gemilang terbukti sebagai satu alat bantu mengajar yang efektif, mudah dilaksanakan dan berpotensi diperluas penggunaannya dalam konteks pendidikan nilai secara lebih meluas.

Kata Kunci : Inovasi Langkah Gemilang, permainan papan, mata pelajaran Pendidikan Moral, sekolah rendah

DRAMA THERAPY AS A FORM OF INTERVENTION FOR IMPROVED SOCIAL AWARENESS OF AUTISTIC CHILDREN

Lin Ke Chen^{1*}, Sim Chee Cheang² & Sharifuddin Zainal³

¹ Guangxi Special Children Care Service Center, Guangxi, China ,

^{2,3} Academy of Arts & Creative Technology, Universiti Malaysia Sabah

ABSTRACT

This research looks into the effect of drama therapy as a form of intervention to improve social awareness of children with autism from between the ages of 3-6 years old at the Guangxi Special Children Care Service Center in Guangxi China. Using an experimental methodology, 5 autistic children are chosen based on a specific level of support for ASD disorder from DSM-1 to DSM-5. A 6-month drama treatment intervention experiment is carried out where SRS Scale for Autism, Emotional Recognition Test for Autism, Development-Based Behavioral Assessment System for Children with Autism was used to record the changes before and after the intervention. The experiment involves interviewing the parents of these autistic children through in-depth interviews as well as experts' observation of the changes that form the data for this research. There are 3 phases of observation that are pre, progressive and post-tests after drama therapy where the data are coded and triangulated with expert's as well as parental observations to be coded in themes and sub-themes within an Interpretive Phenomenological Analysis (IPA) framework of qualitative research to explore the effect of drama therapy. This paper however, will focus only on social awareness in children with autism. The findings of this data hope to promote a new innovative method to successfully educate and improve social awareness in children with autism.

Keywords: Drama Therapy, Autism, China, Interpretive Phenomenological Analysis

MENEROKA GAYA INOVATIF DALAM PENYUNTINGAN VIDEO UNTUK PENDIDIKAN INTERAKTIF

Rosli Sareya^{1*}, Salbiah Kindoyop², Addley Bromeo Bianus³, Sharip Zainal Sagkif Shek⁴ & Jinky Jane Semeon⁵

Akademi Seni dan Teknologi Kreatif, Universiti Malaysia Sabah

** rosli80@ums.edu.my*

ABSTRAK

Penyuntingan video bukan sekadar proses teknikal, tetapi kini berkembang sebagai satu medium interaktif yang menyokong pembelajaran aktif. Melalui kemajuan teknologi digital seperti kecerdasan buatan, realiti terimbuh, dan perisian berasaskan awan, proses penyuntingan video dapat direka bentuk untuk meningkatkan penglibatan pelajar/murid, dalam mempercepatkan pemahaman, serta menyokong kepelbagaian gaya pembelajaran. Kajian ini menggunakan pendekatan kualitatif berbentuk kajian kes untuk meneroka gaya inovatif dalam penyuntingan video bagi tujuan pendidikan interaktif. Data diperoleh melalui temu bual separa berstruktur bersama guru yang berpengalaman dalam penghasilan video pendidikan serta analisis kandungan terhadap video yang telah disunting secara inovatif. Dapatan kajian menunjukkan bahawa penggunaan teknik penyuntingan video yang menekankan elemen interaktif seperti kuiz dalam video, grafik animasi serta penggunaan suara latar AI dapat meningkatkan minat dan penglibatan pelajar/murid. Selain itu, penyuntingan yang sistematik dan berstruktur memudahkan pemahaman pelajar/murid terhadap topik yang kompleks, manakala penggunaan muzik latar dan trasisi visual turut menyumbang kepada Kesan emosi yang positif. Guru juga melaporkan bahawa video yang disunting secara inovatif membantu pelajar mengulang kaji Pelajaran secara sendiri. Justeru, dapatan mengesahkan bahawa pendekatan ini bukan Sahaja meningkatkan keberkesanan penyampaian kandungan malah meyokong pembelajaran sendiri dalam kalangan pelajar/murid. Artikel ini juga turut membincangkan berkaitan teknologi, cabaran serta implikasi terhadap pengajaran dan pembelajaran abad ke-21.

Kata kunci: penyuntingan video, pendidikan interaktif, inovasi digital, kecerdasan buatan, teknologi pendidikan, kaedah kualitatif

PENCIPTAAN AUDIOBOOK BERASASKAN KECERDASAN BUATAN (AI): PENDEKATAN INOVATIF DALAM PENGHASILAN KANDUNGAN AUDIO KREATIF

Zairul Anuar Md. Dawam¹, Fatin Najla Omar², Addley Bromeo Bianus³ Rosli Sareya⁴ & Imelda Ann Achin⁵

Akademi Seni dan Teknologi Kreatif, University Malaysia Sabah

¹zanuar@ums.edu.my, ²Fatinnajla@ums.edu.my ³addley@ums.edu.my,

⁴rosli80@ums.edu.my & ⁵imelda_ann@ums.edu.my

ABSTRAK

Penyampaian naratif melalui format audiobook semakin mendapat tempat dalam kalangan pendengar digital, khususnya menerusi platform seperti Spotify dan YouTube. Walau bagaimanapun, proses konvensional penciptaan audiobook memerlukan masa antara empat hingga dua belas minggu serta kos yang tinggi, mencecah RM8000.00 hingga RM20,000.00 atau sekitar USD2,000 hingga USD5,000, bergantung kepada kadar narator, penyuntingan dan studio (Scribe Media, 2023; Bestseller Publishing, 2023; Travsonic, 2023). Kajian ini memperkenalkan pendekatan alternatif yang inovatif menggunakan teknologi kecerdasan buatan (AI) dalam menghasilkan audiobook secara lebih efisien dan kos efektif. Projek ini menggunakan teks cerpen bertulis sebagai bahan asas, yang kemudiannya ditukar menjadi skrip audio dengan bantuan AI ChatGPT. Rakaman suara dihasilkan menggunakan DupDub AI yang menawarkan pelbagai pilihan nada dan kualiti suara yang realistik. Sound effect diperoleh daripada sumber terbuka seperti Pixabay Sound Archive, manakala proses penyuntingan dilakukan menggunakan CapCut. Produk akhir diterbitkan ke platform digital dalam masa hanya tiga hari. Penemuan ini menunjukkan bahawa penggunaan AI bukan sahaja mempercepatkan proses produksi, tetapi juga mampu mengurangkan kos secara signifikan, sekali gus membuka peluang baharu dalam penerbitan kandungan kreatif digital secara lebih inklusif, mampu milik dan ekspresif.

Kata kunci: audiobook, kecerdasan buatan, naratif digital, AI voice, penerbitan kreatif, ChatGPT

INOVASI SABUN DAUN GEMBIRANG

Zuraidah Minen^{1*}, Arlene Olivia J. Samin², Jayssy Sauti³, Julia Ghani⁴ & Stella Dumat⁵

Sekolah Rendah Kebangsaan (SRK) Don Bosco,
Peti Surat 352, 89300 Ranau, Sabah.

ABSTRAK

Inovasi *Sabun Daun Gembirang* merupakan satu inisiatif yang dihasilkan bagi membantu murid di SRK Don Bosco yang mengalami masalah kulit sensitif ketika menggunakan media kering seperti *oil pastel* dalam sesi Pengajaran dan Pembelajaran (PdP) di dalam kelas. Objektif utama inovasi ini adalah untuk meredakan kegatalan dan iritasi kulit yang timbul akibat sentuhan langsung dengan bahan tersebut. Sabun ini diformulasi berasaskan bahan semula jadi iaitu daun gembirang (*Mikania micrantha*), yang dikenali mempunyai sifat antibakteria. Daun ini berupaya menghalang pertumbuhan *Staphylococcus aureus*, sejenis bakteria yang lazimnya hidup pada permukaan kulit dan saluran hidung individu sihat tetapi boleh menyebabkan jangkitan kulit, dan dalam kes tertentu, jangkitan serius seperti radang paru-paru, jangkitan darah dan jangkitan tulang, khususnya dalam kalangan individu dengan sistem imun yang lemah. Keberkesanan sabun ini dalam melegakan masalah kulit gatal telah mendapat maklum balas positif daripada ibu bapa dan guru-guru di sekolah. Selain berasaskan bahan semula jadi, *Sabun Daun Gembirang* juga bersifat kos efektif kerana menggunakan bahan-bahan tempatan yang mudah diperolehi. Inovasi ini bukan sahaja praktikal untuk digunakan dalam persekitaran sekolah, tetapi juga berpotensi dikembangkan sebagai produk penjagaan kulit alternatif yang selamat dan mesra alam.

Kata kunci : Inovasi, *oil pastel*, alam semula jadi, Sabun Daun Gembirang.

Product Design Innovation

Inovasi Reka Bentuk Produk

BORNEO FLOWER JEWELRY

Junior Kimwah^{1*}, Addley Bromeo Bianus², Imelda Ann Achin³ & Wong Yik Ying⁴

Akademi Seni dan Teknologi Kreatif, Universiti Malaysia Sabah

**juniorkimwah@ums.edu.my*

ABSTRACT

This study investigates the synergistic relationship between Bornean flora and contemporary jewelry design, positioning the unique botanical attributes of these flowers as a primary source of creative inspiration. Beyond their conventional use as a decorative motif, Bornean flowers serve as a foundational element for developing innovative biomorphic jewelry concepts. The research methodology employs a rigorous design analysis, systematically deconstructing the aesthetic and structural elements of the flowers—including petal geometry, surface textures, and organic curves. This process translates these natural forms into artistic abstractions suitable for application in jewelry. The core of this transformative process lies in the creative interpretation and fusion of botanical characteristics with modern jewelry fabrication techniques. This led to the conceptualization of the ‘self-jewelry’ collection, which prioritizes the seamless integration of distinctive design with functional wearability. A hallmark of this collection is the application of the intricate gold loop knot technique and a refined finishing that incorporates white pearls and cubic zirconia (CZ) gemstones. The resulting collection, comprising necklaces, bracelets, earrings, hairpins, and brooches, showcases a synthesis of premium materials and innovative craftsmanship. This deliberate material selection not only enhances the visual elegance but also elevates the perceived value and artistic integrity of each piece. Ultimately, this study exemplifies a pioneering approach to design innovation by manifesting the inherent beauty and structural complexity of Bornean flora into aesthetically compelling and highly functional jewelry. The successful registration of this design with MyIPO (the Intellectual Property Corporation of Malaysia) underscores its originality, commercial viability, and the strategic protection of its unique intellectual property.

Keywords: Accessories, Borneo, design, flowers, jewelry

INOVASI REKA BENTUK PERIUK KERA MENGGUNAKAN BAHAN KULIT KAYU (*KOBOG*)

Salbiah Kindoyop^{1*}, Junior Kimwah², Nor Asmidayu binti Muhamad Fauzi³ &
Norsuhaila binti Sulaiman⁴

Akademi Seni dan Teknologi Kreatif, Universiti Malaysia Sabah

*salbiah.bea@ums.edu.my

ABSTRAK

Inovasi reka bentuk periuk kera menggunakan *kobog* adalah satu inisiatif pengkaji dalam memperkasakan hasil kraf tangan berasaskan kulit kayu daripada pokok timbagan (*artocarpus Tamarin*). Sifat kulit pokok timbagan yang tebal dan mudah dipisahkan dengan batangnya amat sesuai dijadikan *kobog*. *Kobog* adalah nama panggilan kepada hasil kulit kayu yang telah diproses. Kearifan dan pemikiran kreatif masyarakat Dusun Tindal di daerah Kota Belud yang arif dalam menghasilkan *kobog* telah menghasilkan beberapa produk kraf yang berasaskan kulit kayu. Pada awalnya, tukang kraf berusaha untuk menghasilkan beberapa jenis produk yang boleh digunakan untuk keperluan harian seperti pakaian, bekas penyimpanan barang dan topi. Oleh kerana keperluan dan permintaan meningkat terhadap produk kraf tempatan maka tukang kraf *kobog* cuba menghasilkan produk yang lebih kecil seperti tangkai kunci. Terdapat juga beberapa variasi produk kraf *kobog* yang dihasilkan seperti dompet dan beg tangan. Bagi menambah hasil produk kraf berasaskan *kobog*, pengkaji telah mengambil salah satu ikon Borneo yang terkenal iaitu periuk kera. Tumbuhan periuk kera tumbuh liar di kawasan pergunungan dan mempunyai pelbagai bentuk yang menarik. Pengkaji telah menginovasikan reka bentuk periuk kera dengan mengaplikasikan *kobog* sebagai bahan utama penghasilan. Semoga inovasi reka bentuk ini dapat dijadikan sebagai salah satu produk kraf Sabah yang menarik dan boleh dijual dalam pasaran kraf tangan.

Kata kunci: Inovasi, reka bentuk, periuk kera, kulit kayu, *kobog*

Sustainable and Eco-Friendly Design

**Reka bentuk yang mampan dan mesra
alam**

PLASTIC TO PICNIC: SUSTAINABLE RELAXATION WITH PLASTIC-WASTE BEACH MATS IN LABUAN

Chia Yee-Ee^{1*} & Lilian Shiau-Gee Lee²

¹Labuan Faculty of International Finance, Universiti Malaysia Sabah, Malaysia,

²Academy of Arts & Creative Technology, Universiti Malaysia Sabah, Malaysia

**chiayeeee@ums.edu.my*

ABSTRACT

Plastic waste remains one of the most pressing environmental challenges globally, particularly in island regions like Labuan, where improper disposal threatens marine ecosystems and beach environments, which discourages tourists from visiting. In Malaysia, more than 1 million tons of post-consumer plastic waste were generated due to ineffective collection and recycling infrastructure. In 2025, the report from World Population Review showed that the mismanaged waste index in 2023 is very high at 76.4%, which contributes to plastic pollution in the ocean. This project aims to identify an innovative and practical solution by transforming plastic waste into sustainable beach mats for recreational use. By upcycling discarded plastics, we focus on the collection, cleaning, and repurposing of various plastic materials, especially polyethylene terephthalate (PET), into durable, lightweight, and waterproof mats designed while promoting eco-friendly leisure activities. This initiative aligns with the circular economy framework: reduce, reuse, and recycle by giving waste materials a new life as valuable products. Additionally, the production of plastic-waste beach mats serves as a model for integrating environmental responsibility with social and economic development. However, this innovation project not only addresses environmental problems but also fosters a culture of sustainable lifestyles in Labuan. This is to align Sustainable Development Goal (SDG) 12: Responsible Consumption and Production in order to achieve SDG 12.5 target – by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

Keywords: Plastic Waste; Upcycling; Circular Economy; Sustainable Development

FROM FARM TO PHONE

Emily Yapp Hon Tshin & Soon Kok Leong

Fakulti Kewangan Antarabangsa Labuan, Universiti Malaysia Sabah
Cendawan Cerah Sdn Bhd.

emilyyht@ums.edu.my

ABSTRACT

This innovation introduces an eco-friendly and interactive labelling system for grey oyster mushrooms by embedding a Quick Response (QR) code on product packaging. Unlike traditional printed labels that provide limited and static information, this QR code offers consumers immediate access to detailed data, including product origin, farm profile, nutritional values, and suggested recipes. By integrating agriculture with digital technology, the solution improves transparency, builds consumer trust, and supports informed purchasing decisions. The system also promotes sustainability by reducing the need for excessive printed material, thus lowering paper and ink waste. This innovation has commercial potential for mushroom producers, agri-entrepreneurs, and retailers, providing a dynamic platform that can be updated without additional printing costs. Its uniqueness lies in combining traceability, consumer engagement, and sustainable practices in a single, scalable model, making it adaptable to other fresh produce. The proposed solution not only strengthens local agricultural branding but also promotes digital literacy and smart shopping habits, delivering tangible benefits to society and the environment.

RE'MADE: BORNEO ARTISTRY TILES

***¹Lilian Lee Shiau Gee, ²Saila Saidie, ³Asrafuddin Bin Ismail, ⁴Allwie Romzi**

^{1,3}Academy of Arts and Creative Technology, Universiti Malaysia Sabah, Sabah, Malaysia

²LJD Corporation, Sabah, Malaysia

⁴Institut Penyelidikan Marin Borneo, Universiti Malaysia Sabah, Sabah, Malaysia

lilian@ums.edu.my

ABSTRACT

This research proposes an innovation project called "Re'Made" that is centred on the utilisation of recycled plastic waste for the creation of Borneo crafts tiles. This project is in response to the growing environmental challenges posed by plastic waste and the need to preserve and innovate Borneo's rich handicraft traditions. "Re'Made" is an acronym for "recycled made." This craft item is the result of several small micro bricks being organised into a Borneo motif design. The craft product in concern is a manifestation of little mini blocks that have been meticulously organised into a Borneo motif. This creation has multiple purposes, including serving as a decorative item, an art and for traditional engagement for the consumer. The primary objective of this initiative is to advance sustainability efforts, mitigate the accumulation of plastic waste, safeguard cultural heritage, and empower local craftspeople using waste materials. This project, which aims to solve the growing problem of plastic waste, also serves to promote a sustainable future for communities, the environment, and economies. In the context of this project, an application for a design patent will be made. This patent is a valuable tool that serves the purpose of protecting the artistic originality of the designer, particularly the block design and the method of arranging the blocks in such a way as to create a distinctive visual motif.

Keywords: Plastic waste, Recycle materials, Crafts, Borneo, tile design

BORNEO LUXE EMBLEM: SUSTAINABILITY AND ECO-FRIENDLY LOCAL HANDICRAFT

Weena Samanggang¹, Lilian Lee Shiau Gee², Saila Saide³, Victor B. Pangayan⁴ & Chia Yee Ee⁵

^{1,2,4}Akademi Seni dan Teknologi, Kreatif Universiti Malaysia Sabah,

³LJD Corporation,

⁵FKAL, Universiti Malaysia Sabah

¹*weenas25@ums.edu.my*, ²*lilian@ums.edu.my*, ³*sailasaidie@ljdoofficial.com*,

⁴*victorpangayan@ums.edu.my*, ⁵*chiayeeee@ums.edu.my*

ABSTRACT

The Borneo Luxe Emblem project explores the integration of sustainable design, digital fabrication, and cultural heritage through the creation of 3D-printed keychains inspired by Borneo's indigenous communities. Using recycled filament, the project emphasizes environmentally conscious production while incorporating traditional motifs and symbols that reflect the region's diverse cultural identity. These accessories serve as both functional objects and narrative carriers, representing the resilience, artistry, and stories of Borneo's native peoples. By combining traditional aesthetics with emerging fabrication technologies, the project offers a model for culturally grounded and sustainable product design. It addresses the growing demand for ethical, meaningful consumer goods while positioning design as a tool for cultural preservation and innovation. Borneo Luxe Emblem contributes to contemporary discourse in art and design by demonstrating how heritage, sustainability, and technology can coexist to create products that are both impactful and socially relevant.

User Experience (UX) Design

*Reka Bentuk Pengalaman Pengguna
(UX)*

IMPROVING UNIVERSITY CAMPUS NAVIGATION EXPERIENCES AMONG 1st YEAR STUDENTS USING MOBILE AUGMENTED REALITY

Jasni Dolah^{1*} & Choo Yun Mann²

New Media Design and Technology Department, School of the Arts
Universiti Sains Malaysia

ABSTRACT

The Indoor Navigation within large university campuses often brings a challenge for students, staff, and visitors, it also leads to confusion and wasted time. This project introduces an indoor navigation app designed especially for Universiti Sains Malaysia; the purpose is to improve campus navigation efficiency. The app employs indoor mapping technology with mobile Augmented Reality (AR) to provide real-time, step-by-step directions to users. By streamlining campus navigation, the app significantly enhances accessibility for all users, making it easier to find classrooms, offices, and amenities. Personalized features like a smart route planner are included in the app to ease the arrangement of the user with their university event schedule and classes, and to further enhance the user experience.

Keywords: Indoor Navigation, Mobile Augmented Reality, Smart Route Planner

DEVELOPING A MOBILE APPLICATION ON ORAL HYGIENE FOR THE DENTAL UNIT OF UNIVERSITI SAINS MALAYSIA

Julina Ismail@Kamal^{1*} & Au Jin Min²

New Media Design and Technology Department, School of the Arts
Universiti Sains Malaysia

ABSTRACT

Good oral hygiene is essential for children's overall health, yet many young individuals struggle with maintaining proper dental care due to a lack of awareness and motivation. This research aims to develop a mobile application specifically designed for the children of Universiti Sains Malaysia (USM) staff who visit Unit Pergigian USM. The application will effectively deliver oral hygiene content while integrating interactive features to engage and motivate users. By applying app design principles and user-centered design, the mobile application seeks to empower children to adopt and sustain good oral hygiene habits consistently. The study explores the most effective ways to present oral health information, the role of interactive features in encouraging positive dental behaviors, and how app design can optimize oral hygiene practices among young users. The primary objectives are: (1) to identify oral hygiene content that aligns with effective app design principles, (2) to explore interactive features that positively influence and motivate children towards maintaining oral hygiene, and (3) to design app features that effectively promote and sustain positive dental behaviors. By leveraging digital tools and interactive learning, this application aims to enhance oral health awareness, reduce the prevalence of oral diseases, and improve the overall well-being of the USM community.

Keywords: Oral Hygiene, Mobile Application, Children's Dental Health, Interactive Learning, Universiti Sains Malaysia

PASSENGER SAFETY IN AVIATION: EXPLORING THE EFFICACY OF INTERACTIVE HOLOGRAPHIC DISPLAYS IN PENANG AIRPORT

Mohd Asyiek Mat Desa^{1*} & Muhammad Anaqi bin Rosli²

New Media Design and Technology Department, School of the Arts
Universiti Sains Malaysia

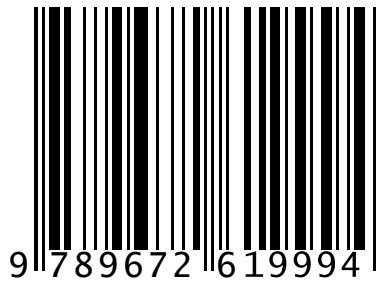
ABSTRACT

This project looks into how interactive holographic displays can improve passenger safety at Penang Airport by making safety instructions more engaging and easier to understand. Traditional methods like printed cards and in-flight videos often fail to grab attention or cater to passengers with different languages, literacy levels, or familiarity with technology. To tackle these issues, this study explores a more modern and interactive approach. Using a mix of surveys, interviews, and hands-on testing with passengers and airport staff, we gathered feedback on how effective holographic displays are at delivering important safety info. A working prototype was designed, featuring 3D visuals and touch or gesture-based interactions, and was tested in simulated airport scenarios. The results showed that passengers found the holographic instructions more interesting and easier to follow, with better recall and quicker responses during emergency simulations. Many also appreciated the multi-language options and accessibility features. From a technical side, the system fits well with current airport environments, though the initial setup cost may be high. Still, the long-term impact—like better passenger preparedness and potentially fewer safety risks—makes it a promising upgrade. Overall, this study proves that blending technology with safety communication not only modernizes the experience but also makes it more effective, inclusive, and future-ready for the aviation industry.

Keywords: Interactive Holographic Displays, Penang Airport, Safety Instructions, 3D Visuals, Gesture-Based Interactions.

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