

juxtaposed //

to put things that are not
similar next to each other

juXtaped

Digital Assimilation of the Arts and Culture



Editors | Terry Lucas, Karen Samy,

Wan Jamarul Imran Wan Abdullah Thani

& Qistina Donna Lee Abdullah

j u X t a p o s e d

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UNIVERSITI MALAYSIA SARAWAK

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**DESIGN IS NOT JUST
WHAT IT LOOKS LIKE
AND FEELS LIKE.
DESIGN IS HOW IT
WORKS.**

STEVE JOBS

PREFACE

It is exciting to articulate that the digital era has brought a new paradigm in all aspects of human life on this planet. The 21st-century generation has put digital technology into everything and become a culture or practice of their lives. The art and cultural contexts are not separated in this digital era, but it becomes increasingly complementary and symbiotic.

We are very inspired that demands of the digital era require a rethinking and reinterpretation of new and pertinent approaches. At the same time, it gave a unique experience to humankind. The philosophy and thinking concept of human has also changed based on challenges and opportunities in the digital era. This leads to a dynamic change in the scenario and landscape of human civilisation.

The chapters in this book discuss how arts and cultures could digitally assimilate and benefit from creative application and experimentation of new technologies. The diversity of technological advancement develops as artistic tools, and the medium has helped to broaden innovation and artistic creativity. This has indirectly created a new situation for humanity. It is highlighted through four main topics such as New Technologies Redefining Art, Creative Practices in the Digital Era, Digitalising and Sustaining Art and Cultural Heritage, and the Emerging Art and Design Practices.

We believe through the contribution of writings and thoughts expressed in this book "juXtaped: Digital Assimilation of the Arts and Culture" will give a meaningful inspiration and knowledge sharing to understand the digital assimilation of arts and culture.

The Editors

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Thank you.

The Editors

**DESIGN CREATES
CULTURE. CULTURE
SHAPES VALUES.
VALUES DETERMINE
THE FUTURE.**

ROBERT L. PETERS

**SCIENCE AND
TECHNOLOGY
REVOLUTIONIZE OUR
LIVES, BUT MEMORY,
TRADITION AND
MYTH FRAME OUR
RESPONSE.**

ARTHUR M. SCHLESINGER

juXtaped

**DIGITAL
ASSIMILATION OF
THE ARTS AND
CULTURE:
A JUXTAPOSED
INTRODUCTION**

Terry Lucas, Karen Samy,
Wan Jamarul Imran Wan Abdul Thani,
and Qistina Donna Lee Abdullah

Abstract:

The digital revolution, the Fourth Industrial Revolution (IR4.0) and globalisation bring many changes to society. One aspect of society affected is the arts and culture. This article introduces the concept behind the digital assimilation of the arts and culture. Several examples of the concept are briefly discussed regarding museums, STREAM (Science, Technology, Reading, Engineering, Arts, and Mathematics), and the creative economy. In addition, the articles in this collection that cover four central themes (i.e., New Technologies Redefining Art, Creative Practices in the Digital Era, Digitalizing and Sustaining Art and Cultural Heritage, and Emerging Art and Design Practices) are also discussed.

Keywords: Creative economy; digital media; museums; STREAM; the Fourth Industrial Revolution

Introduction

On 20th of July 2019, the world will commemorate the 50th anniversary of Neil Armstrong first setting foot on the moon. His famous quote, "One giant leap for mankind," said as he stepped on the moon, marks a technological achievement for space exploration. In addition, the 2nd of May 2019 will mark 500 years since the death of Leonardo da Vinci, the greatest polymath in history and artist known for futuristic and inspirational designs that were ahead of its time. Creative forms of art and literature can serve as great sources of inspiration for ideas. Many of Leonardo's design sketches inspire some of today's inventions. Some of these inventions are beginning to or have already materialised in the Fourth Industrial Revolution (IR4.0). Some examples of product designs that are related to the IR4.0 are powered clothing, augmented reality surgery, and driverless cars. This revolution can be exciting, but it also creates uncertainties and anxiety in many aspects.

The Digital Assimilation of Arts and Culture

The focal idea of *juXtaped* (with an emphasis on the 'X') symbolises the amalgamations of arts and cultural experiences, knowledge exchange, and the unknown. The unknown is an interesting concept as it can symbolise the many possibilities and opportunities to explore and experiment when art and technology converged. The digital synthesis of arts and culture can establish a new elevation to the field of applied and creative arts. Cultures should not be static. A society's culture is assumed to be changeable because it can influence

and be influenced by other worldviews and expressive forms (UNESCO, 2017). Therefore, as we are now living in the twenty-first century, it is high time to embrace the convergence of digital technologies and cultures which produces innovative and transformative ideas that can benefit society.

A good example to begin this conversation is by reinventing museums for the current generation: the Millennials. The Brooklyn Museum and the British Museum, according to Penn Museum Director Julian Siggers (K@W, 2018), aspire to present themselves as 'classrooms to the world'. The museum provides high-quality teaching resources such as lecture videos on YouTube and informative downloadable documents for virtual and physical visitors to access and learn. In order to achieve this, "The British Museum works in collaboration with an extensive partnership of organisations across the UK to ensure its collection and knowledge are shared with the broadest audience" (TBM, 2017). MORI Building Digital Art Museum, on the other hand, embraces and celebrates digital exhibits. The museum features immersive and interactive exhibits such as *Borderless World*, *the Athletics Forest*, *the Future Park*, *Forest of Lamps*, and more. It is hoped that the newly renovated Sarawak Museum can emulate the Brooklyn Museum (New York, USA), British Museum (England), and MORI Building Digital Art Museum (Japan) and strategize its programmes and activities in ways that consider the needs and interests of the Millennials so that the public educational space can be more enriching, fun, and informative. Therefore, one possible way is to collaborate with other museums, universities, and local communities and, at the same time, augment the collaboration by incorporating effective use of digital technologies.

Regarding the creative economy, Globalisation 4.0 has opened many doors for the creative industries to flourish. Global tech companies such as Amazon, Facebook, and Google are leaders in their respective markets. Besides, there is the proliferation of entertainment industry players such as Disney, Apple, and Netflix. For example, Disney has acquired rights to produce and release Marvel and Star Wars movies, and the company is actively churning out superhero movies annually. There are concerns of Western cultural dominance that comes with globalisation and digitalisation, which could result in the gradual homogenization of cultures. "While this phenomenon promotes the integration of societies, it may also bring with it a loss of uniqueness of local culture, which in turn can lead to loss of identity, exclusion, and even conflict" (UNESCO, 2017). Nevertheless, global culture can be influenced through various cultural identities and values via digital media. Korean artists who mainly sing in the Korean language such as Psy and BTS, and the Puerto Rican singer of the Spanish song Despacito (2017), Luis Fonsi, are good examples in this case. Furthermore, widely popular anime and manga such as Pokémon anime (1997 to present), Naruto manga (1999 to 2014), and One Piece manga (1997 to present) proudly instil Japanese cultural values and contents in their storytelling. By doing so, the popularity of these creative works helps preserve and introduce Japanese values and cultures on a global scale. In 2018, films that highlighted the growing acceptance of cultural diversity in Hollywood cinema, such as *The Black Panther* (2018) and *Crazy Rich Asians* (2018), featured a primarily African American and Asian casts respectively, and garnered recognition and box office success in the United States. These successes can serve as hopeful indicators that cultures from outside the United States can have a chance to flourish in the United States and global film market.

In Malaysia's 'Minister of Education 2019 Mandate' (Malik, 2019), there will be a more holistic and heartening shift in focus from Science, Technology, Engineering, and Mathematics (STEM) to Science, Technology, Reading, Engineering, Arts, and Mathematics (STREAM). This means the arts will be given more attention. According to Andria Zafirakou, the winner of the Global Teacher Prize 2018, the arts allow younger generations to explore artistic methods that help to nurture their problem-solving skills which are essential for the twenty-first century, by undertaking creative subjects and projects (Gray, 2019). There are new ways of learning and creative expressions that utilize new media, such as computer games, interactive apps, computer animations, digital videos, websites, interactive installations, augmented reality and virtual reality. This usage allows for a more diverse and immersive learning experience. With digital media, learners have more avenues to explore their topics of interest in the arts and culture.

Themes of the juXtaped Collection

In line with one of the World Economic Forum's (WEF, 2019) initiatives that focuses on the Arts and Culture (i.e., arts in education, rights of artists, cultural and creative industries, heritage protection and cultural sustainability, and inclusive cities), the collection of articles in this book covers four central themes: New Technologies Redefining Art, Creative Practices in the Digital Era, Digitalizing and Sustaining Art and Cultural Heritage, and Emerging Art and Design Practices. Taken as a whole, this collection deals with four themes that are imperative to the discussion of the digital assimilation of the arts and culture, as they touch on reinventing and transforming ways for artists, creative practitioners, art educators, and art students to adapt and incorporate their artistic endeavours in the digital era.

The first chapter in the "New Technologies Redefining Art" theme discusses the application of electronic technology in art practices can be both a tool for the process or a medium for expressing messages and meaning. Electronic technological devices such as motorised electronic mechanisms, electric lights, cameras and video cameras, and computer technology have become necessary art tools in electronic artwork practice. Recently, various electronic technological devices such as the computer and its systems, digital intelligent devices as well as scientific tools, have become artist's artwork. Electronic artists have been dealing directly with electronic technological devices as their artistic and aesthetic art forms or artworks. For instance, artwork created and produced by technological-based artists such as Erwin Redl and Kenneth Rinaldo's *Shanken* (2009). Redl through his *Shifting Very Slowly* (1999) and *Matrix IV* (2003) has included large-scale LEDs (light-emitting diodes) installation, which was controlled by computer programming. Additionally, Rinaldo in his *Autopoiesis* (2000) has made fifteen robotic arm-like sculptures, controlled by digital sensorial devices as his artistic art form. In this context, Wan Jamarul Imran Wan Abdullah Thani posits that the scientific/electronic technological construction or engineering become an artistic art form or artwork itself. Indirectly, artists have placed exploration and experimentation on the technological medium as their artwork. This endeavour has made electronic technology as a significant tool to deliver, assist, channel and express their creative idea for the purpose to create a

visual communication. The involvement of electronic technology also has assisted artists to reach their desires for artistic and aesthetic idealism. Moreover, the growth of electronic technology has encouraged the exploration and experimentation of electronic artwork in visual art practices.

In the following chapter, Auzani Zeda Mohamed Kassim reviews the augmentation of art performance using technology such as projection mapping. Notably, the author elaborates on two recent projection-mapped installations which are *Hakanai* (2013) by Andrien M and Claire B and *Fuji* (2013) by Joanie Lemercier. Several digital tools were used in combinations with live artistic performances to produce a mixed reality experience. The author describes *Hakanai* as the artists' attempt at having a conversation with light, music, and the dancer's physical body. The installation incorporated animated lights that produces various organic and geometrical shapes that in-synched with live sounds and the performer's movements. After the surreal performance, audiences are invited to enter the installation space and experience the mixed reality environment. *Fuji*, on the other hand, utilised huge in-door space to transport audiences into a different reality through optical illusion. Therefore, as the author states, projection-mapped installation expands the limits of the visual experience and allows shared and interactive experience among audiences. Finally, the author suggests that interested artists should consider garnering knowledge and expertise in interdisciplinary technical fields such as animation, video, audio, and computer programming to produce artworks such as *Hakanai* and *Fuji*.

Rounding up the "New Technologies Redefining Art" theme, theatre evolves enormously after the technology was incorporated into the field. Muhammad Azri Ali recounts the implementation of technology devices in delivering messages in live stage performance. The process explaining in this writing is mainly about the theatre performance, "Zero", which was performed at UNIMAS in 2018. "Zero" is a theatre performance about human immunodeficiency virus (HIV) in Malaysia. It started with a dance piece as a prologue of the story. The plot then moved to a session where the actor reading all the news about HIV happens throughout Malaysia. In this play, "Zero" was presented by a paper puppet suggested to everybody can be a victim to HIV. This play ended with a short monologue telling the audience to stop the stigma and started to give people who HIV positive a chance. During the play, various technological devices were used in delivering the message to the audience includes automated lighting, projection and live video camera recording. These three tools play a significant role in delivering a message to the audience throughout the play. Hence, the inclusion of technology became essential in theatre design.

Opening the theme "Creative Practice in the Digital Era", Ang Tse Chwan, Mohd Fahmi Yahaya, Mohd Affendi Azizan, Mohd Sharizam Hamzah, Muhyiddin Mohammed, Noorhaslina Senin, Syaryfah Fazidawaty, and Yow Chong Lee introduce current usage of information and communication technologies in applied and creative arts practices ranging from creative art production, arts marketing, art management, and teaching and learning such as extended reality, artificial intelligence, big data, and cloud computing. The authors suggest that, with these new technologies, artists and designers tend to communicate through social media, instant messages, and video conferences. Such communication tools allow them to blend ideas, collaborate knowledge and

experiences to the success of their artistic projects. In the applied and creative arts education, technologies such as machine learning and artificial intelligence could make close predictions about our interests and suggests useful courses to learn based on our current subject of interests. Opportunities to learn and refine new artistic skills are within our fingertips from social media websites like YouTube and Vimeo. Art and design students can collect inspirations digitally from Instagram and Pinterest. Likewise, they could compile their body of work in the form of portfolio websites. In Arts Management, emerging technologies such as virtual reality (VR), augmented reality (AR), interactive mobile apps, and interactive websites can be utilised to create virtual museums and exhibits that can be accessed by global audiences. Despite having various tools at disposals, the authors caution that the effectiveness of such tools is highly dependent on the willingness and adaptability of the users of specific latest tools technologies. Art managers and practitioners who intensively use such technologies in their careers need to be ready to be adaptable to change and learn newer and more effective techniques to improve their job performance.

Based on their current observation in “West Malaysia and East Malaysia Students Learning Patterns in Performing A Narrative Play”, Abdul Walid Ali and Muhammad Qawiem Hamizan share a case study on how cultural differences between East Malaysian and West Malaysian student actors are reflected in the choices they make when performing the narrative play *Kuda Hitam*. Drawing on the authors’ research, which involved twenty-eight students in an Acting Styles and Techniques course, they analyse and compare the students’ interpretation of the play and observe their students’ learning processes with the class instructors’ use of creative teaching methods in a multicultural classroom setting. The creative teaching methods emphasise innovative approaches to teaching theatre acting, where students explore ideas and possibilities across the various stages of preparation for the final performance of *Kuda Hitam*, from script analysis, character development, rehearsal, right up to the play’s performance. The students are also instructed on different acting styles and techniques. The authors observed that their students’ input into elements such as character development, accent, the incorporation of music, and choice of acting styles in their interpretation of *Kuda Hitam* reflect the cultural background of the East and West Malaysian students. The authors found that their West Malaysian students prefer to present a ‘realistic’ performance of the play, while the East Malaysian students prefer to put on a more ‘experimental’ show.

From a creative perspective regarding leadership in the digital era, Qistina Donna Lee Abdullah and Khashini Devi R. Varatharajoo present the view that bridging art and leadership can benefit organizations that strive to adapt to the complex demands of the digital age. This approach considers the merits of ‘artistic leadership’, which incorporates the fundamental qualities and traits of an artist in leadership practice. Leaders who adopt artistic principles are articulate in communicating their vision and inspire innovation in today’s followers who do not respond to the traditional ‘command and control’ approach. The article’s authors cite the cognitive and emotional benefits of arts in leadership, such as enhanced critical thinking, self-awareness and mental strength in leaders. The creative leadership that results from employing an aesthetic sensibility

produces intuitive, open-minded and flexible leaders adept at formulating creative and effective solutions to complex problems in the digital era. This can inspire followers to adopt a similar artistic approach when exercising their judgment and improving their performance. Thus, bridging art and leadership in today’s complex management environment cultivates leaders who utilize an artistic sensibility to motivate and inspire creativity among their followers.

Leading into the “Digitalising and Sustaining Art and Cultural Heritage” theme, Faridah Sahari, Terry Lucas, and Rahah Hasan express the significance of digital database as the approach in digitising Sarawak material culture. In this 21st century, the digitalised database is considered a systematic way to document and cataloguing material culture for preservation and future generation references. By digitalising material culture, it becomes a mechanism to collect and document information regarding material culture’s significance values, function, and relation to culture customary. Besides that, the digital database serves as a system to compile and record the information on the technical specification of the material culture object. With this approach, it can provide efficient and reliable resources on Sarawak material culture for references as well as a systematic database for inventory.

Likewise, Sydney Thomas Sibangan, Teo Miaw Lee, Thia Sock Siang, Qistina Donna Lee Abdullah, and Aliffazraie Jali’s exposition of “The Emergence of Sabahan Telemovies and Cultural Representation” aims to illustrate how digital film technology contributed to the rise of low-budget filmmaking in Sabah in the early 2000s. The advent of digital technology made telemovie production and distribution more accessible and affordable for a new breed of independent filmmakers in Sabah, as it reduced the need for a large budget and a large film crew with superior technical skills, which were necessary for traditional film production. Digital technology also made film storage easier and paved the way for the increased participation of Sabahan filmmakers, who were determined to tell their stories by crafting narratives that incorporated cultural elements unique to Sabah and its people. The authors’ focus is the telemovie *Pendatang Tanpa Izin* (PTI) a Sabahan production released in 2004 and directed by Abu Bakar Ellah. They examine how cultural elements such as location, language, the traditional longhouse, traditional dance, costume, musical instrument and traditional occupations of the ethnic communities featured in the telemovie all lend authenticity to the film’s depiction of the complicated romance of an interracial couple - a local Rungus woman and a Bajau man from the Philippines. The filmmakers’ treatment of the delicate topic of interracial love emphasises the harmonious relations among the various ethnic groups in Sabah. The fact that digital technology has enabled Sabahan narratives to be told in the filmmakers’ terms, who strive to maintain cultural authenticity through the incorporation of indigenous cultural elements in their films, shows the technology’s role and potential as a platform that gives voice to underrepresented communities in mainstream media and culture.

The fourth theme of the book, “Emerging Art and Design Practices”, begins with the intriguing title “Watch Out! Smombies Ahead!”, Salmiah Abdul Hamid, Qistina Donna Lee Abdullah, Teo Miaw Lee, and Aliffazraie Jali examine the interesting scenario regarding the impact of smartphones on human behaviour. Interestingly, there is a new term called ‘smombies’, which coined from ‘smartphones/

social media users and zombies' as to associate the addictive use of a smartphone by the user while walking on the streets. This phenomenon will abet unsafe situations and hazards to the public. The 'smombies' situation calls for a new policy made on street signs and signals. In this digital era, this new policy was made to incorporate with the advancement of digital technology as to support street users. Smartphone applications were invented and linked to smart street signs and signal. Several countries already have prepared the needs to implement the smart street signs and signals as to adapt to the new way of street users. This situation describes the change in human behaviour in public that needs to be aligned with the global digital trend.

Finishing off the collection, with the flourishing production of interactive apps for mobile devices such as smartphones and tablets, Noorhaslina Senin, Siti Shahida Kamel, and Maizatul Nurhuda Saadon conducted a study focusing on the interface design of free running apps available on Apple's Apps Store. Notably, they focus on the perception and functions of visual elements to convey the sophisticated health data into meaningful and appealing statistical data visualisation or infographics to the users of the running apps. Analysing from the perspective of graphical user interface design, Noorhaslina Senin, Maizatul Nurhuda Saadon, and Siti Shahida Kamel investigate the visual identity, colour, texture, layout, typography, imagery, and graphics. The authors scrutinise data from graphical user interface design at the beginning, during, and end points of the users' running phases. Based on the findings, the authors offer readers several guidelines that can be incorporated in designing similar kinds of health apps.

Conclusion

On that note and throughout the discussion in this collection, creative workers, industry players and policy makers in the creative industries are encouraged to adapt and embrace the digital revolution to improve the society they live in. Overall, new technologies make it possible to enhance and produce new forms of artistic expressions, provide novel user experiences, assist in preserving cultural heritage, and increase participation in and appreciation of the value of arts and culture in Malaysia and the rest of the world. It would benefit the field of applied and creative arts to embrace the digital revolution and thus, strive to create a world that is inclusive, sustainable, and humanistic. Although this collection is not exhaustive, we hope that it can serve as a stepping stones for the various fields in the applied and creative art to more exciting and intriguing conversations on the digital assimilation of the arts and culture.

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**ANY SUFFICIENTLY
ADVANCED
TECHNOLOGY IS
EQUIVALENT TO
MAGIC.**

SIR ARTHUR C. CLARKE

**PART A
NEW
TECHNOLOGIES
REDEFINING ART**

**ELECTRONIC
TECHNOLOGY
AS A TOOL FOR
CONNECTING THE
ARTISTIC IDEA**

Wan Jamarul Imran Wan Abdullah Thani

Abstract

In the early twentieth century, electronic technological media began to be adopted by artists in their art practices. Along the rapid development in electronic technology, it has increased opportunities for artists to link to their idea. Therefore, as accessibility and understanding of electronic technological media grow, it becomes widespread and increasingly helpful in the latest developments in contemporary art practices. The application of electronic technological medium becomes a common art tool and medium in their art practices. It considers a mediator for bridging between artists and their conceptual idea. This paper will discuss the situation on the application of electronic technology as a tool for connecting the artistic idea. It indirectly emphasises on the function and purpose, which emerges from the situation. The study also will outline the significant factor carried out from the application of electronic technology in art practices.

Keywords: Electronic artwork; art and electronic technology; mediator; creativeness and innovativeness; expansion of media

Introduction

Art, by its very nature, is understood as communicating through the language of representation, which assisted by the medium used. It is stated by Frank and Preble (2014, p. 2) that:

“A medium is any material from which art is made. When a material – or medium – is used in such a way that the work contributes to our understanding or enjoyment of life, we experience the work of art.”

In this context, the medium of application is essential to the artist's practice. It functions as a mediator in bridging, connecting and interrelating between an artist and his or her grand idea. For centuries, artists have used several mediums or materials as a tool for connecting themselves with their idea. However, in the early twentieth century, electronic media such as light and electronic motor, video and computer begins adopted by artists in their art practices.

Electronic technology is considered as a flexible medium and offers a significant number of approaches for artists to deliver their ideas to the viewers or audiences (DeWitte, Larmann, & Shields, 2015). It is considered as a potential medium for connecting between artist and idea. The employment of electronic technology as an artistic medium implies that the artwork exclusively uses the

electronic platform in its creation. Artists are seeking new forms of electronic technology, which are more user-friendly and ecologically friendly (Quaranta, 2013). This phenomenon can be considered as an expansion in the application of the medium.

Generally, the application of electronic technological media in the visual arts is related to the context of art tools, which are required for procedures in the creative process and technical implementation. However, Walker and Chaplin (1997, p. 202) argued that the “electronic technology in visual art is not just for the creative process, it also becomes artist's focus in conveying meaning or content; whether celebrating, exploring, critiquing or subverting available means”. This claim is also supported by Lovejoy (2004, p. 278):

“Most tools such as camcorders and computers can also be thought of as mediums in their own right. When artists use the tool their final production is a complete system integrating production with statement.”

In this context, the application of electronic technology in art practices can be both a tool for the process or a medium for expressing messages and meaning. It also depends on an artist's approach and practices towards electronic technological media. Paul (2015) has distinguished work that uses technology as a tool to produce forms and work that uses technology as a medium to create new types of art. It seems that both contexts are also relevant to each other.

Developing Art Creativity in Technology

Rush (2005, p. 215) emphasises that the growing accessibility of personal computers brought with it a growth in computer-based art, which included a broad range of computer graphics, animation, digitised images, cybernetic sculptures, laser shows, kinetic and telecommunication events and all manner of interactive art. These seem that computer technology nowadays contributes a lot to the development of the world's visual arts. Computer technology has been used in many ways merely to achieve the purpose of the arts itself.

The expansion of media in the arts becomes one of the many approaches and practices for Malaysian artists, especially for the younger generation artists. Some artists who were very serious began to explore the media beyond their limits. Through the expansion of media, this allowed the artist to expand their ideologies and flourish their creativity. Nevertheless, the development of new media arts must be handled wisely. Due to this situation, the study on new media arts as expanded media becomes part of the implementation in the visual arts learning process at local arts institutions. Robertson (1998, p. 143) claimed that art would not be locked into technologies that were inherited from earlier centuries.

The late Piyadasa (2000) in his write-up in *Rupa Malaysia* emphasises that the wisdom of local values is essential in the effort to develop Malaysian art. According to him, Ismail Zain had successfully displayed his credibility and intellectuality in understanding the rationale of the