

ART /
INNOVATION

PART II



eg
to that those mo
actors, political
individuals can h
ing or ensuring their own se
Anthony M., 2018). One of the m
global Non-Traditional Security risks is the
COVID-19 pandemic. This worldwide health crisis
has resulted in an unacceptably high number of deaths
and a significant economic impact.

Securitization theory, which is employed as a frame-
work analysis, is the basic theory that underpins the
analysis in this study. Securitization developed from
Copenhagen School (COPRI – Copenhagen Peace
Research Institute) of security studies pioneered by
Barry Buzan, Ole Weaver and Jean De Wilde (1998).

issue. The ins...
ing actors who play a role in declaring something
that is existentially threatened. The government,
represented by high-ranking officials, lobbyists, and
even pressure from a group are all examples of securi-
tizing actors. Next is the issue or threat that potential-
ly brings harmful effects towards peace and stability of
the country and lastly is the reference object or who

ARTe: Art & Expression
Presents

ART / *INNOVATION*

PART II



Volume 5
Published: September 2023

Published by:
©UiTM Perak Press

eISSN 2805-5071



UNIVERSITI
TEKNOLOGI
MARA

Cawangan Perak



galeri
al biruni



JABATAN SENI HALUS
FAKULTI SENI LUKIS & SENI REKA
UITM CAWANGAN PERAK

© Unit Penerbitan UiTM Perak, 2023

All rights reserved. No part of this publication may be reproduced, copied, stored in any retrieval system or transmitted in any form or by any means; electronic, mechanical, photocopying, recording or otherwise; without permission on writing from the director of Unit Penerbitan UiTM Perak, Universiti Teknologi MARA, Perak Branch, 32610 Seri Iskandar Perak, Malaysia.

Perpustakaan Negara Malaysia

Cataloguing in Publication Data

No eISSN: 2805-5071

Cover Design: Nur Muhammad Amin Bin Hashim Amir
Typesetting : Syed Alwi Bin Syed Abu Bakar (Dr.)¹
Aznan Bin Omar (Dr.)²



INTRODUCTION

ARTE: Art and Expression is a biannual book monograph series, published under the collaboration of the Program of Fine Arts, College of Creative Arts, UiTM Perak Branch with Galeri Al-Biruni under the supervision of Universiti Teknologi MARA, Malaysia. 'ARTE' is an amalgamation of the English word 'Art', and Malay word, specifically Perak slang 'Ate' which translate as conversation starter. 'ARTE' uses the concept of book chapter that platforms art enthusiasts to express their inner-creativity in the form of literal conjectures.

VISION

To promote art and expression as aspirations towards stylistic and artistic practices.

MISSION

- To enhance the culture of research and academic publication among academic and artists for international recognition.
- To promote intellectual, cultural and knowledge sharing through artistic expression.
- To celebrate the diversity and differences in arts practices thus, creating an intellectual platform for artist, to express their interest, in art

PUBLICATION FREQUENCY

Biannual Frequency: Two (2) books per year (March and September)

e-ISSN No.
2805-5071

COPYRIGHT NOTICE

Copyright © 2023 ARTE: Art and Expression. All rights reserved.
No portion of this book may be reproduced in any form without permission from the Publisher, except as permitted by the publisher themselves. For permission purpose contact:
arte@uitm.edu.my



© The Editor(s) (if applicable) and The Author(s) 2023
This book is an open access publication

Open Access: This book is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as appropriate credit is given to the original author(s) and the source, provide a link to the Creative Commons licence and indicate if changes were made.

DISCLAIMER

The authors, editors, and publisher will not accept any legal responsibility for any errors or exclusions that may have been made in this publication. The publisher makes no warranty, express or implied, with respect to the material contained herein.

SMART HIKING STICK DURING ENDEMIC FOR HEALTHY LIFESTYLE

a chapter by

NIK ROZILAINI BINTI WAN MOHAMED

Faculty of Hotel and Tourism Management, UiTM Cawangan Melaka, Kampus Bandaraya Melaka



Smart Hiking Stick for Healthy Lifestyle

After Covid-19 endemic in 2023, most Malaysians are into physical activities and more concerned with a healthy lifestyle (Bowler, 2010). A low cost fitness is affordable workout for people who wants a low impact activity, cheap and can be done almost anywhere at any time (Caspersen, et. al., 1985). Routine walking can result in several health benefits such as raised exercise aptitude, declined pressure of circulating blood, and improved glucose control (Chhetri, et. al. 2004). Walking can reduce stress level and stabilize emotional well-being. Walking improves cardiovascular but should be done without extreme injuries (Haseler et. al., 2009). The use of walking stick is recommended to avoid high impact on knees and feet. The walking stick is used by hikers to climb over rugged terrain, support the spine, increase balance, and minimize the impact on the body (Phelan, 2020). The walking stick is used as stabilization. The reflexes, strength, postural effects, and postural monitor are balanced in walking activities (Bowler, 2010). Walking exercises are becoming more demanding so walking stick was designed to assist balance and fitness after getting vaccines or boosters during the endemic (Den Breejeen, 2007). The hikers should apply a few techniques and walk naturally. The hikers' shoulders position should be relaxed and keep the stick closer to the body. A stick should be one foot and held at the opposite arm and swing backward as the leg moves forward (Kil, et. al., 2014). The use of a stick may reduce the risk of burden and injuries (Nordbo, et. al., (2014).

Features of Smart Hiking Stick

The smart hiking stick's special feature is qibla compass. Most designs did not include the qibla compass. This model would assist Muslim hikers

to carry out prayers towards the qibla correctly. The spiritual prerequisite can be done through physical activities (Bowler, et., al, 2010). The smart hiking stick is designed to hold a flashlight at night, allowing one to put hands to better use. This design adds high-quality headlamps inside the hand holder. When backpacking, the hikers need to fit as many devices as possible to have a successful adventure, and in some situations the hikers had to wear a mask or respirator that offers greater protection in certain situations. The mask folder is inside the smart hiking stick to make it clean and dry. The emergency whistle is inside the smart stick to locate hikers.

The Prototype Smart Hiking Stick with Dismantle Features

The analysis on four requirements are: user-friendly interactive relations, useful functions, proper materials, and accessibility. The user experience was optimized, and the model was designed in line with Muslim needs. The general design concept focuses on healthy lifestyle, minimalism, and safety requirements. The length of the hiking stick was adjustable as per the user's stature. The size of the stick head was relatively larger, so it was convenient for holding LED light. The lower part of the stick head was designed as a slip-resistant groove to prevent it from slipping out of the hand; the icon design on the operational buttons was easily recognized. A front light source was added on the stick. When the hikers walk at night with the smart stick, they can switch on the low beam or high beam to reduce accident in dim places. The whistle draws the attention of other hikers. The stick automatically sends the location data to a third person using the GPS navigation system. The overall weight is light. The stick body uses metal to provide secure support and its foot pad has anti-slippery rubber

material to increase friction. The general model was simple and steady. It has classic black and silver/red colours to create a visual sense of reliability and safety.

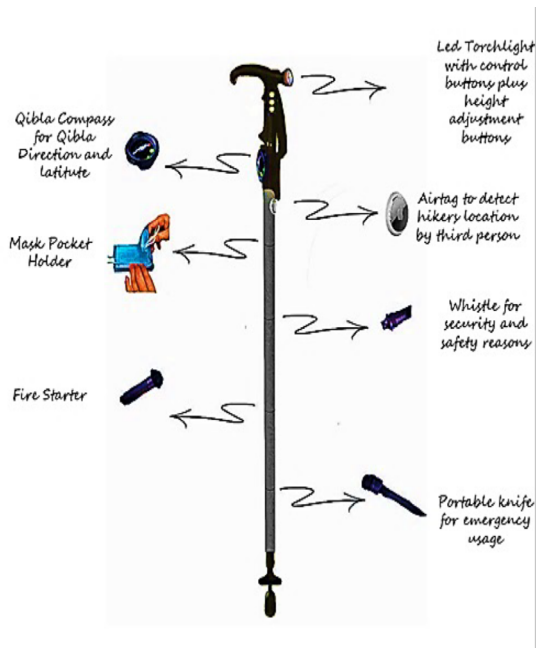


Figure 1: Prototype Smart Hiking Stick

Feedback from Hikers on Smart Hiking Stick Idea

Qualitative analysis is a research method used in the social sciences, humanities, and some natural sciences to study and understand the characteristics, behaviours, and motivations of individuals, groups, or phenomena. It involves collecting and analysing non-numerical data such as interview transcripts, focus group discussions, and open-ended survey responses to gain insight into complex topics and gain an in-depth understanding of human experiences and perspectives. Selective respondents were chosen to answer the interview questions. The 20 hikers ranging from 20 to 21 years old are mostly students from Universiti Teknologi MARA Melaka. Most of them are in second year Tourism Management degree. The data were examined through thematic approach using NVivo 12 software. Figure 2 shows word count for domain analysis. According to Miles et al., (1994), the finding would justify an understandable pattern of data including the symbol, references, and semantic relationship.

The innovation of smart hiking stick on Spider Web Analysis

The thematic analysis started from generating the initial codes and pre conceptualizing the theoretical framework from emerged codes and grouping codes. Thematic analysis is a method used in qualitative research to identify, analyse, and report patterns (themes) within data. It is commonly used in the social sciences to analyse data from interviews, focus groups and

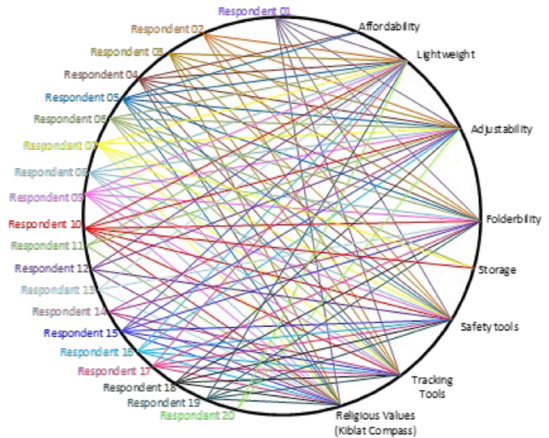


Figure 2: Thematic Code Result Spider Web

written texts. The process of thematic analysis involves breaking down the data into smaller units, identifying patterns and themes, and interpreting the meaning of those themes in relation to the research question. It is an iterative process and can involve coding, memo-writing, and constant comparison to identify themes and patterns. Below are the thematic variables mentioned by the respondents:

Table 1: Thematic Code Result % (N=20)

No	Thematic Coding	Frequency	Percentage
1	Tracking tools	16	13.7%
2	Adjustability	21	17.9%
3	Religious values	11	9.4%
4	Foldability	19	16.2%
5	Light weight	17	14.5%
6	Safety tools	16	13.7%
7	Storage	8	7.3%
8	Affordability	2	5%
Total		113	100%

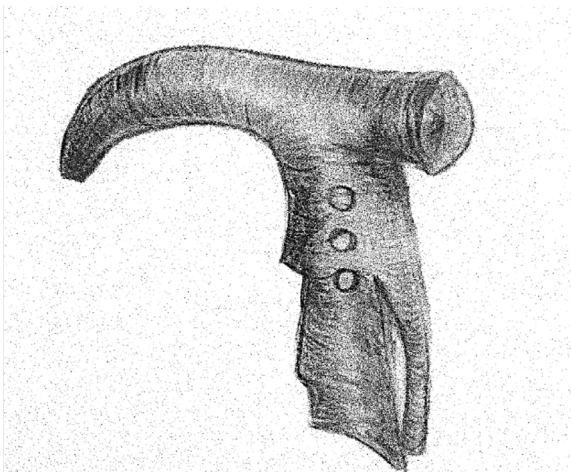


Figure 3: Adjustability

Theme 1: Adjustability: Adjusting the height of something refers to the ability to change the vertical distance between the base or foundation and the top of the item. When hiking, adjusting the height of a hiking stick can be important for comfort and safety. This can be done by loosening the adjustment mechanism, if the stick has one, and then adjusting the length to the desired height.

Theme 2: Foldability: refers to the ability of an object or device to be folded or collapsed into a smaller and more compact size. Foldability allows for easy storage and transportation and can be especially useful for people with limited space. This is particularly useful for backpackers and hikers who are traveling to remote or wilderness areas, as it allows them to conserve space in their pack without sacrificing the benefits of using a hiking stick.

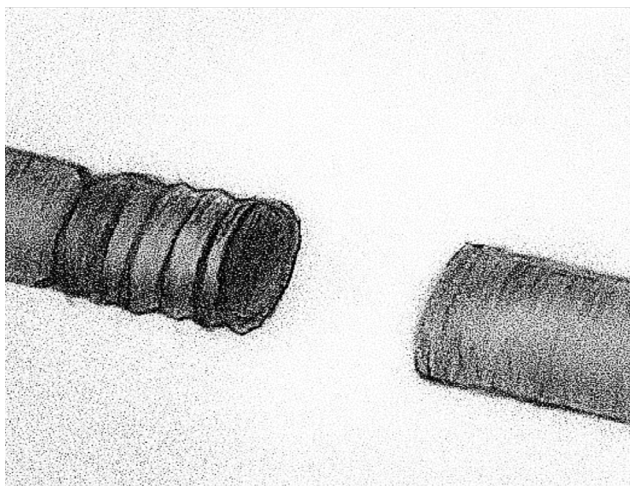


Figure 4: Dismantle Features

There are several types of compact hiking sticks available, each with their own design. Some hiking sticks can be folded in half and locked in place, while others can be broken down into multiple sections that can be screwed or snapped together. Some hiking sticks can be collapsed to a shorter size when not in use.

Theme 3: Light: A hiking stick is a type of hiking equipment that is designed to be lightweight, yet durable, and provide support while hiking on rough terrain. These sticks are typically made from lightweight materials such as aluminium, carbon fibre or some type of composite material. Lightweight refers to something that is easy to carry or move because it is not very heavy. It can also refer to a material or object that is designed to be as lightweight as possible, such as a piece of equipment made from lightweight materials.

Theme 4: Safety tools: Safety tools refer to equipment or devices that are designed to protect individuals from injury or harm in various settings. These tools can include personal protective equipment (PPE) such as hard hats, safety goggles, and respirators, as well as safety devices such as smoke detectors, fire extinguishers, and emergency exit signs. Other examples of safety tools include lockout/tagout devices, fall protection equipment, and first aid kits. In general, safety tools are used to minimize risks and prevent accidents in the workplace, home, and other environments.

Theme 5: Tracking Tools: Tracking tools are software or devices that are used to track and monitor the movement or location of people, vehicles, or other assets. Some examples of tracking tools include GPS (Global Positioning System) trackers, which use satellite technology to determine the precise location of an object or person in real-time.

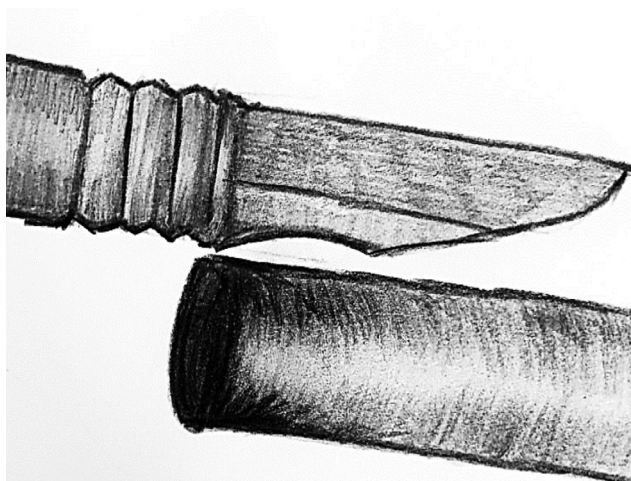


Figure 5: Safety Tool

Conclusions

Smart hiking stick is a hiking equipment that incorporates technology such as GPS, internet connectivity, and sensors. GPS tracking and navigation allows hikers to track their location and progress and navigate trails using real-time mapping and location data. Some smart hiking sticks come with Bluetooth connectivity to connect with a smartphone, which enables the user to track the data, and receive notifications or calls. These tools can help hikers navigate trails, stay safe, and track their progress, and make the hiking experience more enjoyable.

References

- Bowler, D. E., Buyung-Ali, L. M., Knight, T. M., & Pullin, A. S. (2010). A systematic review of evidence for the added benefits to health of exposure to natural environments. *BMC Public Health*, 10, page 456.
- Butler, R., Hall, C. M., & Jenkins, J. M. (1998). Introduction. In R. Butler, C. M. Hall, & J. M. Jenkins (Eds.), *Tourism and recreation in rural areas* (pp. 3-16). Chichester: Wiley
- Caspersen CJ, Powell KE, Christenson GM (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public Health Rep*, 126-31.
- Chhetri, P., Arrowsmith, C., & Jackson, M. (2004). Determining hiking experiences in nature-based tourist destinations. *Tourism Management*, 25, 31-43.
- D'Antonio, A., Monz, C., Newman, P., Lawson, S., & Taff, D. (2012). The effects of local ecological knowledge, minimum-impact knowledge, and prior experience on visitor perceptions of the ecological impacts of backcountry recreation. *Environmental Management*, 50, 542-544
- Haseler C, Crooke R, Haseler T. (2019). Promoting Physical Activity to Patients. *Health Journal*. 25, 32-43
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage Publications, Inc.
- Phelan D, Kim JH, Chung EH. A game plan for the resumption of sport and exercise after coronavirus disease 2019 (COVID-19) infection. *JAMA Cardiol* 2020; doi: 10.1001/jamacardio.2020.2136.
- Den Breejen, L. (2007). The experiences of long-distance walking: A case study of the west highland way in Scotland. *Tourism Management*, 28(6), 1417-1427.
- Kil, N., Stein, T. V., & Holland, S. M. (2014). Influences of wildland-urban interface and wildlife hiking areas on experiential recreation outcomes and environmental setting preferences. *Landscape and Urban Planning*, 127, 1-12.
- Nordbø, I., Engilbertsson, H. O., & Vale, S. (2014). Market myopia in the development of hiking destinations. The case of Norwegian DMOs. *Journal of Hospitality Marketing & Management*, 23(4), 380-405.

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak



Tuan,

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK
MELALUI REPOSITORI INSTITUSI UiTM (IR)**

Perkara di atas adalah dirujuk.

2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR