Educating the Public on Safer Roads through Arts: The MIROS@rt Initiative

Y Ghani[1]*, Z M Jawi[1], K A Abu Kassim[1], W R Wan Rusik[1], A A Ab Rashid[1], S A Syed Abdullah[1], M H Abdullah[1], S N Mohd Nor[1], A T Azizan[2] & R Semail[3]

Abstract

Malaysia has faced significant losses due to road crashes. To improve the situation, the government among others has established the Malaysian Institute of Road Safety Research (MIROS) with the mission "to foster the science and arts of road safety intervention". While many science-based interventions have been transformed into policies, the art component is lacking behind. MIROS@rt (read: MIROS art) intends to rectify the gap. Clutching on communication and social marketing theory, MIROS@rt has embarked on various programs – black-and-white photojournalism of crash victims, cartoon competition, sculpture, doodling, and digital artwork *inter alia*. A study on black-and-white photographs of crash victims proved that the medium is well-received and effective at promoting the idea of safer roads.

Keywords

Address for Correspondence:

* Yusof Ghani (yusofghani@miros.gov.my)
[1] Malaysian Institute of Road Safety Research (MIROS), 43000 Kajang, Selangor, Malaysia
[2] Faculty of Creative Technology and Heritage, Universiti Malaysia Kelantan, Kelantan, Malaysia
[3] Balai Kartun Rossem (BKR), Kampung Peringat, 16450 Ketereh, Kelantan

1. INTRODUCTION

Since the death of Bridget Driscoll, a Londoner who was struck by a car on 17 August 1896, millions of others fell into the same disaster (McFarlane, 2010). A century later, road crashes kill about 1.3 million people a year, mostly in low-and-middle-income countries (Skinner et. al., 1997). Road casualties is also a leading cause of death among Malaysians, particularly among young male and motorcyclists. Out of 6,000 – 7,000 annual deaths over the past couple of decades, some 4,000 or 60% - 70% of road deaths in Malaysia involved motorcyclists, with significant numbers of car drivers and passengers, pedestrians, and bicyclists (Manan & Várhelyi, 2012).

Realizing the losses from road deaths are equivalent to about 2-3% of Malaysia's Gross Domestic Product (GDP) compared to roughly only 0.5% in developed countries, the government has embarked on various efforts to reduce road casualties. The establishment of the Malaysian Institute of Road Safety Research (MIROS), for example, is to look for research evidence that could be made into national policies or interventions by other stakeholders involving traffic safety such as the Royal Malaysian Police, the Department of Road Transport, the Health Ministry, and the Education Ministry, to name a few.

As a research institute, MIROS focuses on three main areas in road safety that requires interventions: namely with regards to the road users' behavior, road engineering, and vehicle safety. Apart from publishing research reports and journals at the national and international levels, MIROS plays a crucial role in various research-based interventions and consultation works. The ASEAN New Car Assessment Program (ASEAN NCAP) which is set up under MIROS, for example, has been key to safer cars in Malaysian and Southeast Asian markets (Abu Kassim et al., 2017). Road safety education is now taught in schools due to efforts by MIROS (Hamid et al., 2017). Crash analyses, road safety audits, enforcement, and campaigns are among the routines carried out by MIROS, but the interventions seem to have no end as the battle for safer roads is an uphill task (e.g., Abu Kassim et al., 2017; Othman & Othman, 2021; Razelan et al., 2021).

Like any other organization, MIROS's existence is backed by its mission statement 'to foster the science and arts of road safety intervention' (Figure 1). In other words, the evidence from research must be effectively used for road safety interventions either by applying a scientific or artistic approach. The scientific approach by far has been widely practiced in various fields of engineering undertaken by MIROS. Car safety biomechanics, motorcycle safety, and even road engineering and data analyses are science-based. Even when it comes to enforcement and education, various social science theories and models are applied in the design; hence, leaving arts in a vacuum.
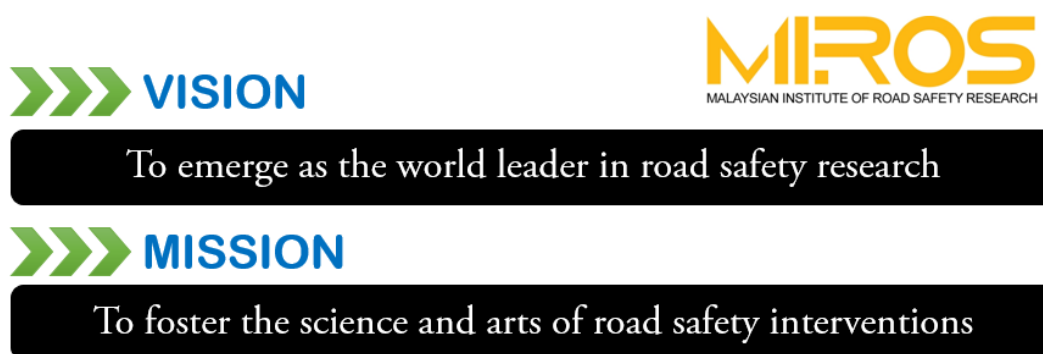

FIGURE 1 – The vision and mission of MIROS

Enter MIROS@rt (read: **MIROS Art**), the long overdue artistic approach to road safety intervention has now begun. Established in January 2020, the MIROS@rt has a mission of carrying out road safety intervention through the work of art in the area where science would not be the best solution or not even possible for it. This holds true in dealing with people where some soft approach with a lot of

creativity would become more effective. Despite its infancy, MIROS@rt has so far explored black-and-white silver print photographs, cartoons, poems, graphic design, sculpture, and doodles with plenty of events waiting to be executed.

2. CONCEPT OF "MIROS@rt"

Starting in 2020, MIROS reignited the "Research Cluster" project that was once introduced during the early days of MIROS but did not work as planned (Jawi et al., 2010). One of the objectives is to create another platform of leadership at MIROS other than the formal or managerial structure, i.e., knowledge leadership. This will inculcate the multi-center (from the MIROS perspective that has three research centers) and multi-discipline research among the researchers at MIROS (first level), and also invite contributions from the local community of academia and researchers (second level). Perhaps, in the future, there will be participants from international academia and researchers (third level).

On the other hand, MIROS@rt is branded as a special cluster by virtue of its uniqueness in terms of the knowledge that guided the activities. Except for the founding Director of Art, none of the volunteered members has any sort of academic background or professional experience related to arts, except pure passion. Therefore, to strengthen the cluster, MIROS@rt looks for art experts from academic institutions to be advisors. To date, an art Professor from University Malaysia Kelantan (UMK), who is also an expert in digital art has accepted the invitation to be the advisor. Since MIROS@rt produces tangible artwork that can be used in road safety promotional activities, MIROS@rt also roped in the Corporate Communication Unit so that it could further spread the messages via social media platforms.

MIROS@rt is best explained from the lens of the Communication Model, as well as the Social Marketing Model (Figure 2) (Stern, 1994; Lefebvre, 2011). Looking from the communication model, MIROS@rt – through the artwork – could well be checked into the 'message' box in the model. It is obvious that when the message is to be delivered, it requires the sender, which in this case is the promoter of road safety. The sender uses the 'message' (in the form of artwork) to be delivered through a channel. The channel can be any traditional or social media (e.g., television, exhibition, newspapers or Instagram, Facebook) that serves as a platform for message delivery. Through the channel, the message would be carried out to reach the audience. Any discrepancies (called 'noise' in the model), if available, would be sent back to the sender via feedback; hence, making it possible for the sender to improve its message or channels so that the real message could perfectly reach and be understood by the audience.
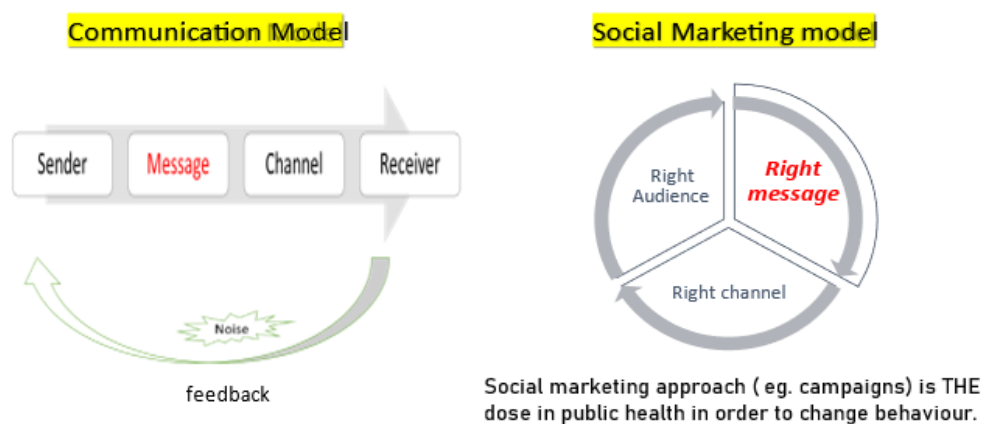

FIGURE 2 – MIROS@rt in Communication and Social Marketing Model

Meanwhile, the Social Marketing model explains that the right message must be delivered through the right channel to the right (or targeted) audience. Social marketing is the art of selling ideas that benefits the audience; a non-profit marketing activity that is widely used in the field of public health. The artwork produced or collected by MIROS@rt – be it photography, painting, sculpture, or even performances – must be targeted at the right audience. In carrying out the road safety promotional campaign, the audience depends on a particular intervention. For example, a campaign for safety seats for infants and children must be targeted at young mothers in urban areas while a campaign on motorcycle helmet usage is best targeted at men in rural areas. To make the social marketing campaign successful, these three elements, i.e., the message, the channel, and the audience must be perfectly considered before its implementation. Thus, to effectively deliver the message, the artwork must be the one that fit the selected audience and the channel of choice.

3. CURRENT AND FUTURE PROJECTS

MIROS@rt started with an individual project by the founding Director of Art whose background was as a photojournalist with local newspapers. The 'Crash Victims' project was his 20-photograph series that depicted the sufferings of the crash victims, as well as their family members, due to permanent disability. This is ongoing depending on the availability of the subject. Meanwhile, there have been other concurrent projects to obtain more artwork. Graphic design, cartoons, sculpture, doodling, and poems are among the project, but there are more projects in the pipeline. MIROS@rt has also planned to include the Malay traditional performing art such as Malaysia's popular 'wayang kulit' (shadow play) and 'dikir barat' (a group song performance in the Kelantanese Malay dialect). In addition, public murals on road safety would also be possible depending on the availability of the location and fund, and most importantly permission from the authorities.

3.1 Current Projects

3.1.1 Black & White (B&W) Photography

Black and white film photography and traditional darkroom print were chosen as a medium instead of digital photography, which has been popular for the past couple of decades. A dying art, this traditional photography technique was chosen due to the rarity and complexity of its technique in making photographs, as well as to keep the art alive. Besides, the chances of darkroom print photographs making it into galleries are so much higher compared to digital photographs.

Besides, the darkroom print process itself is an art that requires special skills that so few people can still do or have access to it (Trune et al., 1995). In Malaysia, the black-and-white darkroom print has basically been forgotten with the introduction of color printing machines in the 1980s, leaving the only newsroom, schools of art, and passionate darkroom printers to carry on with the techniques. In the 1990s, most of the newspaper photography departments in Malaysia shifted to color processing machines. Amplified by difficulties in getting supplies such as papers and chemicals – not to mention the various tools of the darkroom – even skilled darkroom workers would choose to abandon this technique and migrate to digital photography instead. For photo studios, the demand for black-and-white photography was quickly replaced by color photographs.

Initially, 30 subjects or crash victims were aimed for this project, but it was unfortunate that this personal darkroom (then located at a shop lot in Bandar Baru Bangi) was destroyed when the roof was lifted by the storm and heavy rain in July 2020 thus ended up with only twenty surviving photographs. Except for the mechanical darkroom equipment such as enlargers, grain focusers, timers, sinks, and trays, the more precious ones such as processed negatives, prints, and photographic papers were ruined by the storm.

Nevertheless, with the salvaged equipment in addition to acquiring new ones, a new darkroom was set up in MIROS (Figure 3). It is not too much to highlight that probably makes MIROS the only public institution that has a working darkroom facility for black-and-white film processing and printing. Thus, darkroom training and photography projects are in the pipeline; as efforts to marry traditional film photography with road safety, thus killing two birds with a stone. Furthermore, this would also help to keep the art of darkroom photography alive, while educating the public about road safety can go beyond the traditional way.

FIGURE 3 – Darkroom printing (left) and one of the motorcycle crash victim's documentary photos (right)

FIGURE 4 – A double-exposure photo made with a traditional darkroom technique

3.1.2 Cartoon

Little can be done due to the global Covid-19 lockdown in most of 2020 and 2021. However, this did not deter MIROS@rt to come up with the idea of organizing an international cartoon competition "Towards Safer Roads" as its theme (inspired by: Figure 5). Realizing that MIROS@rt had no capacity to carry out the competition on its own especially due to a lack of engagement in the cartoon community; MIROS@rt teamed up with Balai Kartun Rossem (BKR) (Figure 6-left). The Balai Kartun Rossem as its name implies, is owned, and operated by a veteran and internationally renowned cartoonist Rosedi Semail, or better known as 'Rossem'. With the help of Rossem in preparing for the contest terms and conditions, as well as its promotional activities, the cartoon competition received participation from 53 countries from all five continents. More than 300 cartoonists submitted a total of 800 artworks,

each depicting the message of road safety. From issues related drink driving to speeding to a safe pedestrian crossing and other aspects of traffic safety, the cartoonists would either make the audience laugh or cry with their funny yet cynical messages.

Selecting the winners among many impressive entries was quite a challenging job. Apart from the two judges from the organizer's side, an art professor and two international judges from Egypt and Iran were also tasked to choose the winners. The selection of the winners starts after only 100 entries were shortlisted by Rossem, then picking the best six – number 1, 2, and 3, and three consolation prizes. The final six were then presented to Malaysia's Secretary-General of the Ministry of Transportation who was honored to choose the winners (Figure 6-right). The selected works were compiled into an e-brochure and distributed to audiences.
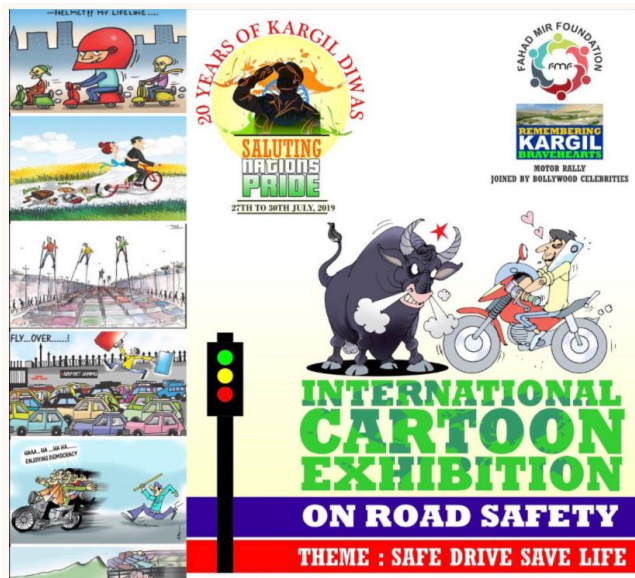
IV Open International Caricature Competition on Road Safety/Russia2021

FIGURE 5 – Cartoon competition and exhibition organized by India in 2019 (left), and Russia in 2021 (right)

FIGURE 6 – MIROS' ads for the cartoon competition (left), and the winning cartoon (first place) by Seyran Caferli from Azerbaijan (right)

3.1.2 Sculpture

To diversify the art collection on traffic safety, MIROS@rt acquired a sculpture by commissioning Malaysia's leading sculptor Prof. Dr. Baharuddin Arus. A trained sculptor with a Master of Fine Art from the USA and a Ph.D. from a Malaysian university, the artist was first briefed on the concept and the purpose of the artwork. MIROS@rt agrees with his view of sculpting a motorcycle rider on wood

with a message that the rider must protect himself with a helmet and proper attire. Wood was chosen as a medium for two philosophical reasons: (i) Wood would decay over time and so do our lives which would come to an end one day; and (ii) The frangipani wood was chosen because among the Muslim/Malay Malaysian culture, the frangipani trees are commonly planted on graveyards. The artist explained that either we die naturally (as when the sculpture's lifespan came to end) or die of a motorcycle crash, the tree frangipani tree would be planted at both ends of the graveyards after the burial. The sculpture is in abstract form instead of realism, thus explaining why the person is faceless – meaning that it can be anyone. The most important thing according to the sculptor is the helmet painted in bright red color to remind viewers that it is the most important safety feature when riding a motorcycle. In addition, a leather jacket and proper shoes are equally as important. The sculpture is also made with a bit of metal to give the sense of a motorcycle handle. This masterpiece is named 'obedient rider' (Figure 7).

FIGURE 7 – 'Obedient Rider' by Dr. Baharudin Arus

3.1.3 Doodle

A doodle competition was also held to attract youngsters to use their creative minds to think of road safety (Figure 8). Close to one hundred entries were received and MYR 1,000 was awarded to the grand prize winner. There were no second or third prizes awarded, but instead, 10 submissions were given consolation prizes of MYR 200 each. The reward scheme was designed presumably to attract a higher number of participations.

FIGURE 8 – Doodle competition targeting younger road users

3.1.4 Journalism, Traditional Media & Social Media

Media has evolved over time, but nothing beats the last decade with the advent of social media. The quick dominance of social media and the declining popularity of traditional media has resulted in complexity in reaching the intended audience. In the days of the traditional media, the media mixed comprised merely newspapers, television, radio, and billboard. But the situation changed when the internet and smartphones – which serves as a platform for social media – become accessible to everyone. Social media such as Facebook, Instagram, WhatsApp, and Twitter changed the media landscape when news no longer travels through print, television, or radio but the smartphone screens. Although social media could channel news, they are generally cluttered and people have different interests over the phone screen; thus, dissemination of information to the right audience becomes more complex (Ahmad et al., 2021). Therefore, MIROS@rt must look for the best possible way to reach the target audience (i.e., the most vulnerable group of road users) through both traditional and social, or a hybrid between the two. While MIROS@rt provides the content through the artwork, dissemination of the artwork is made physically such as through exhibitions but mainly via social media (Facebook, Instagram, Twitter, and WhatsApp). Apart from a dedicated Facebook page, the content is also distributed via WhatsApp and Twitter.

3.1.5 Digital Artwork

Digital artwork in the form of graphic art makes communication easier with the audience. Although MIROS@rt has no talent in graphic art (hired staff), outsourcing the creativity to a third party greatly helps. The information on traffic safety was obtained from various publications and summarized into a sentence in the form of facts and figures. The artist would then come up with relevant artwork that best represents the information available. The aim is to get the audience to be able to digest the information within the shortest time possible.

3.1.6 Empirical Study & Educational Discourse

Empirical study and educational discourse are two other things that fall into the realm of MIROS@rt. While empire study with regards to the artworks can be used to gauge its effectiveness in promoting the idea of safer roads, the materials and findings are also useful in an intellectual discourse that is meant to educate the stakeholders on safer roads.

The first research kicked off when a series of black and white photographs went for display at a road safety event organized by the ASEAN NCAP at the PC3 Crash Lab in Melaka, and later at Sekolah Kebangsaan Jalan Bukit 1 in Kajang (primary education). The audience was given a questionnaire with regards to the effectiveness of the black and white photographs of the crash victims as a tool for promoting safer roads. The survey indicated that black and white film photography was highly effective; and that the respondents were highly agreeable that similar exhibitions should be held frequently. The study also concluded that social media platforms should be used to reach a wider audience (Ghani et al., 2021).

The first webinar carried out by MIROS@rt was with regards to road crash reporting in Malaysian media in which speakers suggested that a constructive approach should be applied instead of the usual emotional and sensational approach which is currently practiced, especially among the Malay newspapers (Figure 9). The MIROS@rt Director, Yusof Ghani, a former journalist and journalist Shahrim Tamrin who specializes in traffic safety reporting spoke to an online audience who were made up of journalists and journalism lecturers, and students. The event received wide coverage from various media, echoing the idea that road safety reporting should be made constructive by applying solutions information to the news (e.g., Mohd Azman, 2021). This would make the audience realize that road crashes could have been prevented in the first place. Similar talks have been planned at the regional level as well.

FIGURE 9 – Webinar on journalism (left) and media coverage discussing the proposed fresh way to report road crashes (right; Mohd Azman, 2021)

3.2 Future Projects

MURAL – Malaysia's most prominent cartoonist Lat in his book "Town Book" had his art teacher, Mr. Lee, saying that "art can be anything" (Abd Rahman & Bahfen, 2014). This means that art has no limit in terms of its forms and messages; hence, it depends on creativity and will to produce artwork. MIROS@rt believes that the art form must be diversified so as to capture both active and passive audiences. The passive audience is people who do not specifically look for the art form – such as by visiting art galleries – but are exposed to the artwork by chance. Therefore, the idea of bringing art to the public through murals has been mooted (e.g., Figure 10). The canvas is readily available right in front of the Malaysian Institute of Road Safety Research (MIROS) building, literally at its doorstep. The façade of the ramp's retaining wall (estimated 150 meters long) would soon be filled with murals that carry road safety messages. However, this project requires crowdfunding and is projected to kick off in 2023. Though this may be an uphill task, the possibility is there because it is learned that businesses and corporations who sponsor money for the cause of art through their Corporate Social Responsibility (CSR) efforts would be given tax exemption.

FIGURE 10 – Murals by KFC Malaysia (left; Tan, 2020) and Kuala Lumpur City Hall (right; Rasid, 2020)

POETRY – The Malay culture in Malaysia is particularly rich in art, including poetry. From poem (*sajak*, a narrative poetic form) to *pantun* (a rhyming quatrain), *seloka*, *syair*, and *gurindam* (verses of moral instruction), the Malays are creative at using words, often with hidden meaning when conveying certain messages that may otherwise sound too harsh and might cause a backlash. These forms of art, particularly *sajak* and *pantun* are widely practiced; and therefore, could be used to promote road safety messages through competition and performances.

PERFORMING ARTS - Malaysia is also rich in traditional performing arts, particularly among the ethnic Malays. Apart from *Mak Yong* and *Main Puteri* which are gradually diminishing the scene, the wayang kulit is still being played in Kelantan. The *wayang kulit* (puppet shadow play) that uses characters (puppets) and stories adapted from the *Hikayat Seri Rama* and *Hikayat Maharaja Wana* can also be modified by the *'tok dalang'* (the puppet master) to include messages on traffic safety too. Thus, MIROS@rt would take the opportunity to get the *wayang kulit* performance in a planned event in Kelantan.

ART EDUCATION - As MIROS@rt is made up of a small team with limited resources, a smart partnership could offer a win-win solution to garner artwork. Collaboration with the Tunku Abdul Rahman University College (TARUC) has been established, particularly involving its journalism and media students. The collaboration allows MIROS@rt to use the artwork in form of videos or other forms of artwork produced by the students in their class assignment. The students were briefed and required to present their ideas and then helped with the contact to interview subject matter experts in various fields of road safety. The video was then shown to MIROS@rt for critiques and amended accordingly. The videos carry the logo of TARUC and MIROS and are used to promote road safety to the public. While the collaboration has been inked with TARUC, future collaboration would involve several other universities, including those from the school of art. Collaboration with higher learning institutions would also enable more empirical research to be carried out.

4. CONCLUSION

MIROS@rt serves as an opportunity to bring more attention to road safety in Malaysia. The positive feedback many parties have conveyed on the present works has catapulted the energy for better expansion to becoming more inclusive to various forms of arts, hence bringing various groups of road users on this journey of saving lives. MIROS@rt proves that the use of art in promoting the idea of road safety – which is part of public health promotion – is well-received and effective. Aesthetic aside, art is an effective tool of social marketing that paves a thought-provoking way to promote the idea of safer roads regardless of audience demographic background. Opportunity abounds and is wide open when it comes to promoting an idea through art as proven by the first year of MIROS@rt as long as the creative juice keeps flowing.

REFERENCES

Abd Rahman, Z. A., & Bahfen, N. (2014). Imagining Kampung: The rural and urban icons of Malaysia in the Cartoons of Lat. Jurnal Pengajian Media Malaysia, 16(1), 63-74.

Abu Kassim, K. A. A., Abidin, A. N. S. Z., Muhammad, S. A., Zulkipli, Z. H., Jawi, Z. M., & Ahmad, Y. (2018). MIROS's role in establishing the Electronic Stability Control (ESC) regulation in Malaysia. Journal of Science & Technology (JSET), 4(02).

Abu Kassim, K. A., Jawi, Z. M., & Isa, M. M. (2017). ASEAN NCAP's contribution to Malaysia's automotive ecosystem. Journal of the Society of Automotive Engineers Malaysia, 1(1).

Ahmad, S. S., Muhammad, M., Jawi, Z. M., Kasmuri, E., & Zulkarnain, N. Z. (2021). Public awareness of traffic safety based on data and text analytics. Journal of the Society of Automotive Engineers Malaysia, 5(1), 103-116.

Ghani, Y., Jawi, Z. M., Kassim, K. A., Zakaria, M. H., Radzuan, M. D., & Azizan, A. T. (2021). Photo documentary on motorcycle crash victims: A preliminary study on road users' response. Journal of the Society of Automotive Engineers Malaysia, 5(4), 89-100.

Hamid, H., Fin, L. S., Hua, L. T., Sheng, T. K., Nor, N. A. A. M., Ghani, A. H. A., ... & Voon, W. S. (2017). Establishing baseline for the 2017 revised road safety education module for primary school through context, input, process and product (CIPP) model. MIROS Research Report.

Jawi, Z. M., Isa, M. H. M., Sarani, R., & Wong, S. V. (2010). An exploration of weather threats to road safety in tropical country. In 4th International Conference–Expert Symposium on Accident Research (ESAR) 2010.

Lefebvre, R. C. (2011). An integrative model for social marketing. Journal of Social Marketing.

Manan, M. M. A., & Várhelyi, A. (2012). Motorcycle fatalities in Malaysia. IATSS Research, 36(1), 30–39.

McFarlane, A. (2010). How the UK's first fatal car accident unfolded. Retrieved from https://www.bbc.com/news/magazine-10987606

Mohd Azman, M. Z. (2021). Cara pelaporan berita nahas jalan raya perlu diubah. Retrieved from https://m.sinarharian.com.my/mobile-article?articleid=205161

Othman, N., & Othman, I. (2021). Review of motorcycle commuting safety support program–phase 1: A qualitative study. International Journal of Road Safety, 2(1), 39–44.

Rasid, A. (2020). Murals by street artists beautify Kuala Lumpur. Retrieved from https://www.thesundaily.my/local/murals-by-street-artists-beautify-kuala-lumpur-YJ5830100

Razelan, I. S. M., Ismail, A., Rahman, R. A., Sadullah, A. F. M., Ali, N. F. M., & Jawi, Z. M. (2021). Community engagements in road safety: Experiences from My Safe Road Programme in Malaysia. International Journal of Road Safety, 2(2), 99–108.

Skinner, D., Skinner, D. V., Swain, A., Robertson, C., & Peyton, J. R. (Eds.). (1997). Cambridge textbook of accident and emergency medicine. Cambridge University Press.

Stern, B. B. (1994). A revised communication model for advertising: Multiple dimensions of the source, the message, and the recipient. Journal of Advertising, 23(2), 5–15.

Tan, J. (2020). KFC turns love for nation into murals ahead of Malaysia Day. Retrieved from https://www.marketing-interactive.com/kfc-turns-love-for-nation-into-murals-ahead-of-malaysia-day

Trune, D. R., Berg, D. M., & DeGagne, J. M. (1995). Computerized digital photography in auditory research: A comparison of publication-quality digital printers with traditional darkroom methods. Hearing Research, 86(1-2), 163–170.