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## A Qualitative Inquiry into Malaysian and Bruneian Youths' Knowledge of Orangutan and Digital Solutions for Their Conservation Efforts

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### ABSTRACT

Previous research on youth related conservation activities distinct that their attention is often focused toward viral and visually engaging content, regardless of the issue, posing a challenge for traditional conservation communication. This study investigates how Malaysian and Bruneian youth perceive Orangutan conservation, drawing on qualitative insights from focus group discussions with 13 participants, purposively sampled with criteria including interest in environmental issues and activities. Thematic analysis was used where it revealed that participants, aged between 20 and 22, were generally aware of the decline in Orangutan populations, however, they had limited knowledge of specific conservation initiatives. Many felt that current efforts still lack visibility, impact, and connection with young audiences. Participants also highlighted shortcomings in communication strategies, such as ineffectiveness of using digital platforms and social media, which they viewed as critical for effective outreach. They stressed the need for youth-focused, visually engaging content that aligns with their media habits and interests. Overall, the study shows the importance of integrating youth perspectives into conservation strategies and suggests that adopting more dynamic, technology-driven approaches could help close the awareness gap and encourage stronger youth participation in Orangutan conservation.

**Keywords:** wildlife conservation, digital communication, focus group interview, environmental communication theory, social media

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### 1.0 Introduction

The population of Orangutans in Malaysia has continued to decline at a concerning rate. As stated by Orangutan Conservancy (2024), the decrease in population is due to human activities such as deforestation, palm oil plantations, illegal hunting and the pet trade. It has been stated that laws take place to safeguard both Orangutans and their natural habitats, enforcement is still weak and inconsistent. Another factor that caused the decline of population is due to the limited public education about Orangutans, especially among younger generations. This has led to low awareness of their existence

and conservation needs. Therefore, immediate and more effective conservation initiatives are essential to prevent further significant decreases in Orangutan numbers.

The term “Orangutan” comes from the Malay term *orang hutan*, meaning “man of the forest” (Tourism Perak Malaysia, 2022). They are known for their slow reproductive cycles and rely heavily on social learning during early development, to obtain essential survival skills before weaning. Although they are generally semi-solitary, sociability differs across populations (Marzec, 2020).

The word conservation can be understood in diverse ways. This includes Sandbrook (2015) where the author explains that it involves actions that aim to establish, improve, or sustain positive relationships with the natural environment, ranging from strict protection to sustainable use. While Brunei does not currently execute an Orangutan-specific conservation center, the country has focused efforts on protecting proboscis monkeys. Knowledge of Orangutan conservation exists indirectly through initiatives undertaken by neighbouring Malaysia and Indonesia.

Youth involvement with Orangutans continues to be low despite the strategies that Orangutan conservation has conducted for the past several years. Past studies show that young people are heavily interested in digital media, drawing most of their information from platforms such as Instagram and TikTok (Walsh, 2025). Their algorithms are typically emphasising viral trends rather than environmental content, which has caused Orangutan-related issues to rarely appear in their feeds. It has made it challenging for conservationists to capture the attention of younger audiences who are more attracted to trending online topics. Additionally, many youths remain unaware of the urgent situation facing Orangutans. This raises concerns that indifference may remain if exposure to relevant information continues to be limited. Furthermore, existing literature on Orangutans has focused on biological and ecological research, with relatively little attention given to communication strategies that could foster long-term public involvement in conservation.

Thus, this study intends to examine youth awareness on Orangutan conservation efforts and to explore their perspectives on how Orangutan conservation messages can be communicated effectively to the public, particularly young people.

## 2.0 Literature Review

### 2.1 Orangutan Conservation

Orangutans are mostly found in the rainforests of Borneo and Sumatra, particularly in regions such as Kalimantan, Sabah, and northern Sumatra. Orangutans are known as endangered species that demand for the need of conservation due to their population rate that is decreasing drastically over the past years. Previous research on Orangutans has examined a wide range of themes, including conservation practices, behavioral ecology, and the influence of human activity on their survival (Chanvin et al., 2023; Ciążela & Gogacz, 2024; Harahap et al., 2022; Jonas et al., 2017; Kuswanda et al., 2021; Massingham et al., 2023; Maura et al., 2024; Musa & Darman, 2022; Santika et al., 2022; Sherman et al., 2020; Unwin et al., 2021). However, several gaps remain evident in the literature, especially in the areas of long-term monitoring of reintroduced Orangutans, evaluation of sustainable palm oil plantation, and strategies for raising public awareness and fostering behavioural change.

Public perception of Orangutans plays an important role in shaping perspectives toward conservation efforts. Harahap et al. (2022), Kuswanda et al. (2021), and Maura et al. (2024) discloses that negative perceptions are a common limitation to public support. For instance, many farmers view Orangutans as a threat that damages crops, especially durians (Kuswanda et al., 2021). Harahap et al. (2022) explain that while farmers may resent these losses, they are prohibited from harming Orangutans due to their ecological importance in sustaining rainforest health. On the other hand, Maura et al. (2024) emphasise that not all views are negative. Some communities considered Orangutans in a positive way, including recognising their human-like qualities, potential as a tourism attraction, and the importance of ensuring their protection.

Other than that, education has also played a role in shaping conservation perspectives. Unwin et al. (2021) showed that participant knowledge of Orangutans increased after conducting the conservation

programs. Similar results were demonstrated by Chanvin et al. (2023), in which children's knowledge and behaviour are improved after participating in educational initiatives. Additionally, findings also reveal that girls tend to have stronger pro-conservation attitudes and behaviours toward wildlife compared to boys.

Despite these challenges, current research indicates some reasons for optimism. Massingham et al. (2023) found that individual willingness to support Orangutans was based on their own wellbeing, including factors such as reduced stress, a sense of empowerment, and personal satisfaction. This suggests that improving quality of life may strengthen conservation engagement indirectly. Ciążela and Gogacz (2024) also noted that out of 466 respondents, only 52 could not name any endangered species. Orangutans were frequently mentioned, with nearly half of participants identifying social media as their main source of environmental knowledge, highlighting the growing role of digital platforms in raising awareness.

## **2.2 Young People and Orangutan Conservation**

There are a number of past research done on youth and Orangutan conservation which include on youth's public awareness and knowledge of Orangutan conservation efforts (Dalimunthe et al., 2021; Evita et al., 2024; Gilhooly et al., 2021; Jalil, 2024; Sayektiningsih et al., 2023; Septiarini et al., 2021; Wulandari & Daryanto, 2022). This evidence shows that the focused subject is about the impact of social media (Çınar, 2023; Wojdan et al., 2021). Some gaps that remain between prior research is that there are only small studies that focus on the long term in maintaining the youth's engagement in regard with Orangutan conservation efforts as past researchers only centred on short term conservation efforts for the youth.

Researchers such as Wojdan et al. (2021) and Çınar (2023) argue that youth engagement with social media is often limited to entertaining content, such as dance challenges rather than conservation-related material, which can have negative consequences. Wojdan et al. (2021) reported that excessive reliance on social media disrupted young people's sleep schedules, distracted them from household responsibilities, and reduced their focus in class. Çınar (2023) also found that young people's attitudes and behaviors were strongly shaped by the desire for social approval. In contrast, other researchers point to potential benefits of digital platforms. Wu et al. (2023) highlights that diverse forms of online media can positively influence perceptions of conservation, while Freund et al. (2021) showed that audiences were more engaged by videos of juvenile and adult Orangutans compared to infants. Their study also revealed that videos explicitly addressing threats to Orangutans tended to attract fewer negative comments than those that did not, suggesting the value of direct messaging in digital conservation communication.

A number of studies have examined public knowledge and awareness of Orangutans (Dalimunthe et al., 2021; Evita et al., 2024; Gilhooly et al., 2021; Jalil, 2024; Sayektiningsih et al., 2023; Septiarini et al., 2021; Wulandari & Daryanto, 2022). Dalimunthe et al. (2021) found that visiting zoos has not fully enhanced individual awareness of Orangutan conservation. This is due to the visitors viewing zoos as entertainment rather than educational places. Gilhooly et al. (2021) focusing on visitor interactions with macaques, where the authors observed that eye contact tended to trigger aggression, whereas taking photos reduced aggressive behaviour. Therefore, this shows that most tourists failed to adhere to responsible wildlife-viewing guidelines, resulting in a general lack of conservation-friendly practices.

More studies have analysed creative educational ways to improve youth engagement with Orangutan conservation. Jalil (2024) demonstrated that using animal costumes in a performance can enhance visual appeal, increase memorability, and strengthen learning outcomes for young audiences. Septiarini et al. (2021) stated that there are improvements in teenagers' knowledge of Orangutans after participating in conservation briefings of Orangutans. Furthermore, Evita et al. (2024) showed that presenting information of Orangutans in an engaging audiovisual format has effectively helped to raise awareness about Orangutans. A study by Wulandari and Daryanto (2022) that mainly focuses on picture books is also shown to be an effective way to introduce conservation efforts towards the children during their early childhood.

Ultimately, Sayektiningsih et al. (2023) revealed that younger audiences generally demonstrated higher levels of knowledge, perception, and practice (KPP) in regards to biodiversity protection, compared to older individuals that had little to no formal education that led to lower KPP levels than youths. This proposes that conservation education is particularly effective when introduced early and tailored to younger generations.

### **2.3 Challenges in Orangutan Conservation**

Although comprehensive conservation initiatives have been conducted, the survival of Orangutans continues to face difficulties. Past research have identified a wide range of social, cultural, environmental, and management-related challenges that threaten Orangutan populations (Adzan et al., 2024; Aprillyasari et al., 2024; Bockhaus, 2018; Freund et al., 2021; Massingham et al., 2023; Mutalib et al., 2024; Pandong et al., 2019; Preuschoft et al., 2021; Purwoko et al., 2022; Robinson et al., 2024; Scanes, 2018; Sherman et al., 2025). These studies focus on the urgency of addressing not only environmental declination but also social perceptions, operational weaknesses, and institutional constraints. This demonstrates the need for integrated, data-driven, community-based, and long-term strategies capable of responding to the complexity of Orangutan conservation.

The problematic role of social media in shaping public perceptions of Orangutans is one of the repeated themes found in the literature. Bockhaus (2018) argued that online posts showing primates as “cute” encouraged the exotic pet trade, leading to the harsh realities of isolation, malnutrition, and abusive training. Moreover, Freund et al. (2021) discovered that user comments that normalised the idea of primates as pets has spread misinformation towards the public. These findings have indicated that poorly framed digital content can unintentionally harm conservation efforts by promoting false perceptions.

There are more pressing challenges in Orangutan conservation rather than digital, which includes the environment. Studies consistently show that habitat destruction and unsustainable land use are the greatest threats to Orangutan survival (Adzan et al., 2024; Massingham et al., 2023; Mutalib et al., 2024; Pandong et al., 2019; Robinson et al., 2024; Scanes, 2018). Adzan et al. (2024) projected that without urgent intervention, Orangutan populations could decline by as much as 63% by 2050, primarily due to deforestation. Scanes (2018) also emphasised the severe impact of oil palm expansion, which has led to widespread rainforest clearance. Robinson et al. (2024) further noted that climate change compounds these pressures, rendering traditional conservation education insufficient on its own. Pandong et al. (2019) added that habitat degradation is increasingly linked to large-scale unsustainable land conversion, while cultural taboos against hunting are eroding, leaving Orangutans vulnerable to killing. Massingham et al. (2023) confirmed that hunting remains a significant threat, as evidence of conservation programs reducing such killings remains limited.

Besides environmental threats, management and operational issues in conservation centers are also one of the barriers. Sherman et al. (2025) warned that frequent relocation methods can harm both individual Orangutans and broader population stability, recommending instead a stronger focus on in situ protection, conflict mitigation, and long-term habitat preservation. Purwoko et al. (2022) identified that there is a decline of 62% in number of visitors due to management limitations in Sumatra. This includes, inadequate infrastructure, limited collaboration with stakeholders, overreliance on external support, and outdated management practices.

Additional studies highlight the financial and logistical strains of rehabilitation. Preuschoft et al. (2021) described the high costs and difficulties of raising orphaned Orangutans, particularly given their dependence on humans and slow acquisition of feeding skills. Aprillyasari et al. (2024) pointed to the difficulties of balancing ecotourism with wildlife protection in Indonesia, while Mutalib et al. (2024) reported that Malaysian conservation centres face internal staff-related constraints, including job insecurity, insufficient funding, and lack of recognition, all of which contribute to low motivation and disengagement among employees.

These findings have demonstrated that Orangutan conservation is constrained by public perceptions, ecological pressures, cultural shifts, and management ineffectiveness. Addressing these issues requires a comprehensive approach that goes beyond short-term solutions, focusing instead on systemic, sustainable, and community-inclusive strategies.

#### **2.4 Environmental Communication Theory**

ECT identifies the role of communication in shaping human relations with the natural world through perceptions, attitudes, and behaviours. Developed in the early 1980s largely within rhetorical and media studies, it has expanded to a comprehensive field (Littlejohn & Foss, 2009; Milstein & Mocatta, 2022). ECT also explores how language, symbols and discourse are used to construct “nature,” frame environmental issues, and mobilize conservation action.

Current academics define the theory in slightly different ways but emphasise its interdisciplinary character. Sowers (2024), for example, describes ECT as a field that investigates how mediated communication fosters public engagement with issues such as conservation and sustainability. Similarly, William (2022) views environmental communication as the practice of exchanging messages that shape one’s understanding of the environment, which in turn influences personal beliefs and behaviours. Together, these perspectives highlight that ECT is not only about transmitting environmental information but also about interpreting, negotiating, and mobilizing responses to ecological challenges.

Milstein and Mocatta (2022) further argue that ECT identifies two key assumptions. The first is that environmental communication is constitutive. This is the way people talk about the environment shapes how they perceive it, define their relationship to it, and ultimately act toward it. In this sense, communication does not merely reflect reality but actively constructs and normalises particular views of “nature.” The second assumption is that human representations of nature, whether through language, imagery, or social practices that are always mediated, whether in interpersonal settings or in the public sphere.

In practice, ECT provides a useful framework to analyse how conservation messages are produced, circulated, and interpreted. For instance, in the case of Orangutan conservation, communication strategies directed toward younger generations can raise awareness and build stewardship over time. ECT points out how discourse and media shape beliefs and behaviour. ECT also emphasises the importance of intentional, well-crafted messaging in addressing conservation challenges.

### **3.0 Methods**

A total of 13 respondents, aged between 20 and 22, were selected to voluntarily participate in focus group discussion in order to explore youth perspectives and awareness on Orangutan conservation efforts. Purposive sampling was used to identify respondents based on the following criteria: (i) interest in environmental issues, (ii) experience in conservation activities, and (iii) voluntary participation. By the time questions were asked to the fifth respondent from both countries, we found that similar patterns of answers had emerged. This indicated data saturation; therefore, only 13 respondents were included.

A total of two focus group discussions were conducted. One with seven (7) Malaysian youth and the other with six (6) Bruneian youth. Each group lasts about an hour. The consent forms were prepared for all the respondents to fill out before the sessions as part of the formal ethical process. Focus group discussions provide researchers with deeper insights into the perceptions, knowledge, involvement, and difficulties faced by the youth in identifying themes, patterns, and insights into Orangutan conservation (Byrne & Carthy, 2021). Focus group discussions were recorded and analysed thematically to analyse data and further use Nvivo software to obtain associations among the themes. In any published or written analysis derived from this study, confidentiality of participants and information they provided will be ensured. Their identities are kept confidential, since data are totally anonymous and used only for research. Every Malaysian respondent is labeled M1–M7, whereas the Bruneian respondents are labeled R1–R6 to ensure anonymity.

#### 4.0 Results & Discussion

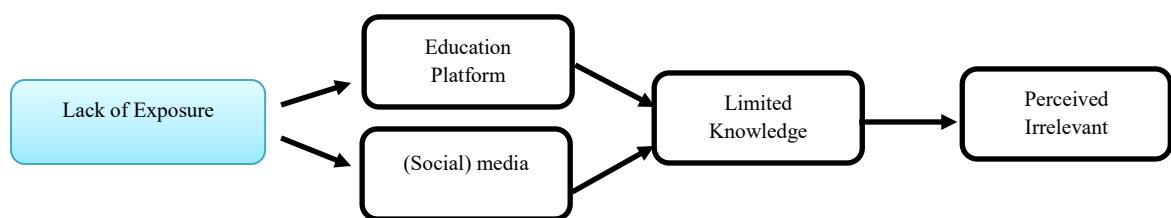
The results and discussion are organized according to the two objectives and divided into two groups (Malaysia and Brunei) for better understanding. The first objective is as below.

##### 4.1 To explore youth knowledge on Orangutan conservation effort

Findings reveal that young respondents have limited knowledge about Orangutans and conservation efforts, primarily due to a lack of exposure, whether at university or through the media. As a result, they perceived conservation efforts as irrelevant to them. This finding is unique because, instead of identifying multiple themes, the study revealed a single main theme (lack of exposure) with several related sub-themes that follow a linear progression as in Figure 1 below.

**Figure 1**

*Knowledge and Construction of Youth Perspectives on Orangutan Conservation Efforts*



The majority of respondents from both groups stated that they had only limited knowledge about Orangutan and its conservation efforts in Malaysia because of lack of exposure. This suggests a disconnect between youth knowledge and Orangutan conservation efforts. Five out of seven Malaysian respondents said they had heard about one Orangutan conservation centre located in Bukit Merah, Perak from their lecturers. Some are quoted:

*...I've heard about a special place for Orangutans in Taiping, Perak...Bukit Merah, but I heard about it from my lecturer, as she was conducting research on Orangutan conservation. So, I came to know about the place through what she shared with us in class (M6).*

*To be honest, I've never heard about this centre [in Taiping, Perak]... not even on social media (M1).*

*I've never heard of it at all (M5).*

*Same with my other friends...I only heard about it from the lecturer, that's all (M3).*

Both groups had not been fully exposed to information with regard to Orangutans and their conservation efforts which led to both groups perceived it to be irrelevant to them. This has resulted in poor perceptions of these initiatives and uncertainty on how to be involved with conservation. According to the Malaysian respondents, most information concerning Orangutans was obtained from their lecturers, but there was no correlation between what was learned and what actions could be taken.

On the other hand, responses from Brunei stated that all participants were aware of Orangutan conservation centres in Malaysia, although having limited knowledge about Orangutan conservation efforts. Participants also mentioned that Brunei mainly focuses on forest protection rather than Orangutan conservation. Respondents from Brunei include:

*I did read about the conservation centre in Bukit Merah in Malaysia, Perak. I think the centre mostly rehabilitates the Orangutan. And try to give educational programs to visitors...they also offer school programs...maybe also within Brunei, I think we [Brunei] should have a conservation centre. It doesn't necessarily mean that we need to only protect the Orangutan (B2).*

*...basically, it's the same thing I heard about Bukit Merah, Perak...it educates the public, especially young people about Orangutan conservation. And Brunei needs to maybe follow a bit, not create another conservation place, but just try to get inspiration from the Malaysia conservation centre (B5).*

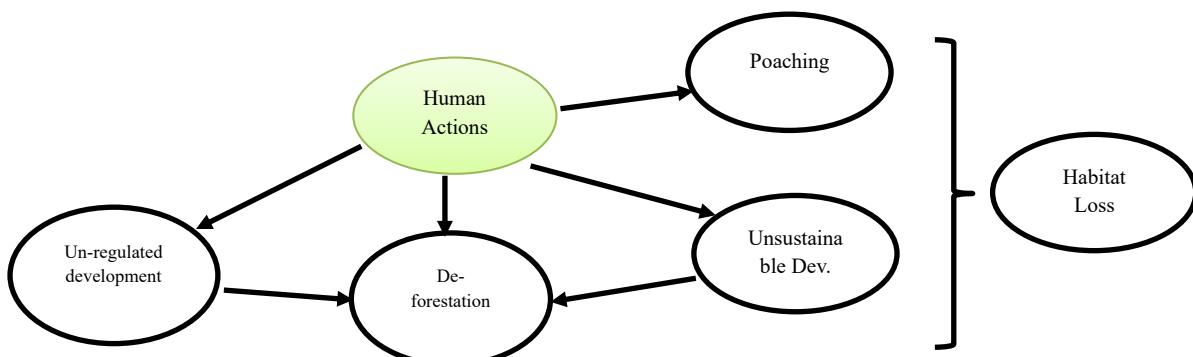
*In Brunei, we don't really have conservation when it comes to Orangutans...but we do protect our rainforests and forests very well. So, one way that might be part of the conservation. But again, when we talk about having a conservation centre in Brunei. We don't really have it (B4).*

To further investigate the nature of respondents' limited knowledge, they were asked the following question: *Based on the limited knowledge you have, how do you understand Orangutans and their conservation?*

Respondents' understanding of the endangered species of the Orangutan is mainly based on the threats suggested to the primate by human actions, where most information has been obtained from social media. Continuous exposure to negative news about Orangutans could affect the way an individual perceives conservation efforts. For example, negative news typically leads to feelings of overload or emotional numbness, ultimately decreasing their inspiration to take meaningful action or participation. Four themes related to these human actions are: (i) deforestation, (ii) poaching, (iii) unregulated and unsustainable development, and (iv) loss of habitat. Some of the themes are interrelated and their associations are illustrated below.

**Figure 2**

*Associations among themes related to young respondents' knowledge about Orangutans*



Based on the four themes, it can be concluded that the young respondents' knowledge about Orangutans is mostly focused on negative aspects, particularly the impacts and threats to the primate. Four out of seven Malaysian respondents stated human activities lead to Orangutan threat. One Malaysian respondent mentioned:

*For me, what causes Orangutans to become endangered is [unsustainable] development, as their habitats are being cleared for urban expansion, housing areas, or shopping centres. This leads to the loss of their natural habitat. That's my opinion (M1).*

Another two respondents supported this view and elaborated as below:

*Yes, I agree... because the main challenge is that Orangutans are losing their habitat. I think that's one of the key challenges (M2)*

*I agree, basically, deforestation (M4).*

Besides the above themes, another theme revealed was the smuggling/trafficking activity of Orangutans that must be taken into serious action, the Malaysian respondents feel. One of them is quoting by saying:

*What I know about Orangutan challenges, I think one thing is that, humans, when they see an Orangutan, they just want to hold it. Like, they want to smuggle it, and bring it somewhere, where they think it is safer. But I don't think that actually helps the Orangutans (M5).*

Similarly, all Bruneian respondents mentioned that human activities such as trafficking/poaching, deforestation and habitat loss were the incidents that shaped their knowledge about Orangutans. The majority of respondents from Brunei believe that the main threat is Orangutan trafficking/smuggling. They are quoted as below:

*There's just one case where I saw on social media where the Orangutan was being trafficked by an illegal organisation (B1).*

*I also would like to add, possibly similar to animal trafficking would be illegal hunting or poaching (B3).*

*My points are basically the same. I would just like to add on, there are some poaching cases, I think they shot a male Orangutan with a rifle. That's one of the cases (B5).*

Besides, deforestation and habitat loss are perceived as closely related elements that cause the decline of the Orangutan population. Another two Bruneian respondents said:

*I think one known threat is deforestation because like their habitats, like industrial buildings, that's one of the threats that Orangutans face where they lose their habitat (B5).*

*I don't really have any more to add because I feel like Respondent 1, 3, 5 already mentioned everything. I think the main threat that Orangutans face is deforestation, which leads to their habitat being lost (B4).*

In conclusion, the analysis of participants' knowledge about Orangutans indicates that youths are aware of the key factors contributing to the decline of the Orangutans population over the years. Their responses show human activities, such as deforestation, illegal hunting, poaching, and infrastructure development, as the main drivers threatening Orangutan survival. Particularly, deforestation leads to habitat loss and fragmentation, while hunting and poaching further endanger the population. These findings align with previous studies (Adzan et al., 2024; Massingham et al., 2023; Pandong et al., 2019), which similarly emphasize that the greatest threats to Orangutans are rooted in unsustainable human activities. The knowledge patterns of the participants are further illustrated in Figure 2.

#### **4.2 To examine digital communication strategies for engaging youth in Orangutan conservation efforts**

There are 2 themes grounded which are (i) strengthening of digital engagement and (ii) visual appeal.

Communication strategies are crucial in the success of conservation efforts, including those focused on Orangutans. Lacking effective communication will lead to limited public awareness, particularly among youth. Members of both groups strongly agree that the use of social media should be expanded to reach larger groups and create more interest in conservation initiatives. They highlighted that audience participation is important in any context, including capturing in the interest of young people, with one Malaysian respondent noting:

*I think they [conservation centres/conservationists] can try going into social media. Because if you remember, there was this animal research in Thailand called Moo Deng. So, it kind of like, in a way, raises awareness for that animal, right? So, for Orangutans as well, I think they can do something similar (M5)*

Correspondingly, other Malaysian respondents suggested that the role of social media is not only to raise awareness among youth but also to provide them with new information about Orangutans. This knowledge can help reduce their perception that the issue is irrelevant.

*I feel like the conservation centre should use platforms like TikTok, Instagram...to show basically what they do, to spread awareness and maybe make interactive content to the younger generation (M2)*

*I think using social media to promote the Orangutan conservation centre can attract young people to learn new knowledge about Orangutan (M6)*

As discussed in previous studies about young people's tendency to focus on viral news, the next suggestion also aligns with that viral context. One respondent suggested using well-known individuals, such as social media influencers, to attract young people's interest in conservation initiatives.

*I think artists, influencers, and social media play an important role in convincing or influencing youth to learn more about Orangutans. If artists or influencers can participate and share their stories, I think it can influence more youth about this issue (M3)*

These findings are also supported by the previous of Wojdan et al. (2021) and Çınar (2023), who claimed that the youth only focus on engaging content on social media. In this study, the youth also stated their preferences on how conservation centres should reconnect with them through social media, particularly regarding Orangutan conservation.

Social media is a platform that young people commonly use in their daily lives. By aligning with their preferences, conservation messages can more effectively convince them of the importance of Orangutans. Since youth often share content they find interesting during their social media exploration, this can increase engagement and help spread awareness, as more people become aware of the account. Therefore, Orangutan conservation centres should become more active on social media, especially on TikTok, as it can play a key role in raising awareness among the younger generation.

Visual appeal must be considered in all conservation initiatives to engage youth. This was another suggestion made by the majority of respondents. Two respondents from Brunei stated:

*Start with devastating facts and also, when it comes to making social media posts for Gen Z and future Gen Alpha's, there are certain, like, we have to make it very colourful and also, we don't really like to scroll too many pictures at once in one post. So, try to make it like one page and everything is inside that one poster (B4).*

*Yeah, storytelling, inspiring stories, short films, those things will definitely catch the eye of the audience. This generation is very attracted to fun quirky genres, something eye-catching (B3).*

Three other Malaysian respondents expanded on the idea of visual engagement. They said:

*The video shouldn't be too long...maybe a maximum of 30 seconds...but it should include all the elements of Orangutan conservation efforts in one short and concise video, as long as the message reaches social media users about the conservation efforts (M1).*

*...they could add some animation (R7)*

*I thought of one example—maybe a local cartoon like Upin & Ipin. That's the kind of content people enjoy watching, both now and during our childhood. People still know about Upin & Ipin, and I think incorporating something like that into media would be a great idea (R6)*

Researcher Jalil (2024) has supported these findings where he revealed that costumes significantly enhanced both the visual appeal and educational impacts towards the youth. Not only that, this would also agree with the results reported by Wulandari and Daryanto (2022) where they concluded that children's picture books are a strong learning approach to introduce conservation education in the early years. This has highlighted that youth are highly interested in captivating images, videos, as well as other visual aids because it helps them to remember information better. Subsequently, the use of visuals

in social media posts can allow youth to connect ideas effectively. Therefore, Orangutan conservation centres should not only be active in their social media platforms but instead focusing to step up their social media engagement using visual aids content such as interesting narrative, storytelling, informative yet engaging content, animation, and incorporation with cartoon so that it can help youth to be more aware of Orangutan.

Based on the responses above, it is evident that youth prefer engaging and visually appealing content when it comes to Orangutan conservation efforts. These range from the use of short videos, animations and familiar local media such as *Upin & Ipin*. This indicates it reflects youth desires content that is relatable, concise, and entertaining. These insights demonstrate how conservation communication needs to be aligned with youth preferences, particularly through creative visual strategies on social media to enhance awareness and foster participation.

This study posits that normalising Orangutan conservation actions through social media can form how youth understand its importance, as discussed by Milstein and Mocatta (2022). In order to make youth participate in conservation efforts, social media plays an important platform to connect them together. However, the way messages are produced and circulated must be properly structured to ensure they are effectively interpreted by youth. If this process is integrated as suggested by Environmental Communication Theory (ECT), youths' perceptions and actions can be more effectively aligned.

## **5.0 Conclusion**

The purpose of this study is to explore youths' knowledge and awareness of Orangutan conservation efforts, and how these initiatives can be communicated effectively to the public through social media, particularly young people. Focus group discussions are a suitable method for quickly obtaining collective views on a particular issue (Byrne & Carthy, 2021); thus, this study helps capture youth perspectives on conservation efforts.

The findings reveal that whilst youth demonstrate strong support for the suggestions of implementing educational programs, their actual knowledge and exposure remain limited. Participants are aware of the threats faced by Orangutans, which have led to a decline in their population. These threats include human activities such as deforestation, killing, and hunting. However, they are not well-informed about the specific details of conservation initiatives, for example, the environmental organisations that are actively carrying out these efforts. Majority of the respondents also believe that self-education is the top priority when it comes to saving Orangutans as it can help an individual, specifically youth, to be aware of the issue concerning Orangutan population. From the perspective of youth, investing funds in Orangutan rehabilitation centres can help to assist Orangutan wellbeing which can help to protect the population of Orangutan from vanishing.

In order to engage young people in conservation initiatives, their perceptions of Orangutans play a crucial role in Orangutan conservation. This includes viewing Orangutans as ordinary monkeys, assuming that their extinction has no impact on human life, and lacking exposure to knowledge about Orangutans. These perceptions indicate that an individual's willingness to participate in conservation efforts is essential in addressing the issue. This study shows the need for more engaging, interactive, and youth related communication strategies to promote awareness about Orangutan conservation.

Both groups of young people remain unaware of Orangutan conservation initiatives due to a lack of digital and visual engagement that effectively captures their attention, particularly in the social media posts of conservation organizations, which often appear unengaging and unappealing to youth. The study emphasises the need for communication strategies that are interactive, engaging, and specifically youth related. These strategies are important for closing current gaps in awareness and ensuring that the next generation is both well-informed and inspired to actively contribute to the protection of Orangutans.

In terms of implications for Environmental Communication theory, this research argues that while the exchange of communication through social media can disseminate news about Orangutan conservation efforts to the public, it does not necessarily create an engagement in which the young can participate. Therefore, any effective conservation efforts require not only an exchange of information but also

strategies that would engage the audience. According to the suggestions of the respondents, it is possible to make the news viral or to involve well known social media individuals to raise awareness and attract the participation of the youth in conservation activities. Within these strategies, the use of visual appeal is considered a strong tool for attracting attention, evoking emotional responses, and improve retention among a young audience.

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### **Conflict of Interest**

The authors have declared that no competing interests exist.

### **Author Contribution Statement**

NSSS: Conceptualization, Methodology, Validation, Writing – Original Draft Preparation. NNNH: Project Administration, Conceptualization, Writing – Review & Editing; Methodology, Validation, Supervision. NMH: Conceptualization, Methodology, Validation

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### **Ethics Statement**

The study did not gather personal or sensitive data, with participant information anonymized. All procedures performed in this study involving human participants were conducted ethically according to the ethical standards of the institution in accordance with the 1964 Helsinki Declaration. Informed consent was obtained from all individual participants included in the study.

### **Data Access Statement:**

Research data supporting this publication are available upon request to the corresponding author.

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