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Haze in Animation Upin and IPIN

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Abstract

Unmanageable anthropogenic activity able to cause haze. It is known that haze happened naturally. However, uncontrollable of these anthropogenic activities somehow may lead to the occurrence. Air pollution, farming, forest exploration and motor vehicle's smoke emission are among the causes and factors for severe haze. This writing analyses the factors, impacts and ways to overcome the effect of haze that is included in the animation series of Upin dan Ipin. The selected series from Upin dan Ipin is in Season 7 Episode 10 entitled 'Bahaya Jerebu'. This research is using text analysis method and research method that includes reference materials such as articles, journals, thesis and different writing articles. The findings of this research conclude that among the factors that lead to the occurrence of haze in Upin dan Ipin series are open burning and the smoke emission from motor vehicles. Haze manages to give impacts to health, psychology, economy and social matters. There are few suggestions and ways to overcome that has been suggested through this animation to minimize the hazardous haze such as wearing face masks, less outdoor activities and bury waste to avoid open burning. In conclusion, this children animation Upin dan Ipin manage to conveys countless significant messages and good results for the audience in general.

Keywords: Upin Dan Ipin Animation, Haze, Open Burning, Haze Effect, Disadvantages of Haze

Introduction

Upin dan Ipin is a children's animation series by Burhanudin Radzi, Ainon Arif, Mohd Nizam Abdul Razak and Mohd Safwan Abdul Karim (Mahmor & Hashim, 2015). This animation was published by Les' Copaque Production Sdn. Bhd., First aired on 14 September 2007 on TV9 and is targeted for viewing by children up to the age of 13. Initially, the animation contained eight episodes to be aired during the month of Ramadan. So, the first six episodes of the series raise the theme of Ramadan, fasting and Aidilfitri celebrations. The main purpose of this series at that time was to inspire the importance of the Islamic holy month among children (Ghani^a, 2006; Ghani^b, 2015; Darmawati, 2020; Yulianeta, 2021). Subsequent episodes began to show about Upin and Ipin's life with his family and friends (Mahmor & Hashim, 2015).

Upin and Ipin is a popular children's animated film in Asia (Wiki, 2021; Yulianeta, 2021). It is broadcast in several languages such as Malay, English, Arabic, Mandarin, Spanish, and Indonesian (limited to a few episodes only). This series is considered as one of the successful animated works of a television series using 3D computers in Malaysia (Ghani^b, 2015). In

Malaysia, the animation was shown on TV9 and Astro Ceria. Disney Channel Asia is the holder of broadcasting rights throughout Asia which contains various television programs in several countries such as Malaysia, Singapore, Indonesia, Brunei, Thailand, Philippines, Vietnam, Cambodia, Hong Kong, and South Korea. (Wiki, 2021; Yulianeta 2021). In Indonesia, the first animated series Upin and Ipin aired on TVRI, then MNCTV (formerly TPI) (Yulianeta, 2021). MNCTV became the largest broadcasting rights holder of the Upin and Ipin series, followed by Astro which grabbed the major broadcasting rights in 2018. In Turkey, Upin and Ipin aired HilalTV, MediaCorp Suria in Singapore, while in India it aired Hungama TV and Disney Channel India (Wiki, 2021; Yulianeta, 2021). Although the agreement between Les 'Copaque and Tsuburaya Production (a local Japanese television station) was not successfully signed in 2011, but this animation became the main medium of learning Malay in several schools in Japan. (Wiki, 2021).

Upin and Ipin's animation revolves around a pair of 5-year-old orphaned twins who were born on June 15, 1997. They live in the village of Durian Runtuh with Kak Ros and Opah. (Yulianeta, 2021). In this series, Upin is the older brother with a five -minute birth difference. He was more influential in a decision between them and was the mastermind behind all the mischief that took place. The rotation of the hair on the head distinguishes between the two. Ipin, on the other hand, came up with a calmer character, much obeyed and agreed with his brother's wishes, and really liked fried chicken. Ipin is better known for his dialogue "Betul, Betul, Betul," (Ghani^b, 2015; Yulianeta, 2021). Among the other characters in the series are Tok Dalang, Uncle Muthu, Rajoo, Ehsan, Fizi, Mei Mei, Mail, Jarjit, Cikgu Melati and Abang Salleh.

This animation raises the daily life of Upin and Ipin with family, friends, school and community. Although this animation also displays the mischief, innocence and intelligence of Upin and Ipin in their daily lives in a funny and relaxed way, however, this animation balances that nature through the advice, guidance and guidance of adult characters such as Opah and Tok Dalang. According to Mahmor & Hashim (2015), adults (such as Opah, Tok Dalang, Kak Ros and Cikgu Melati) are a source of reference and advice to educate children. They become a vehicle and a source of channeling pure values to the younger generation through the message delivered. The animation of Upin and Ipin can be an example to children to practice socialization and personality in the diversity of society that exists in the country. This indirectly cultivates the spirit of camaraderie, mutual understanding and respect, to finally be able to cultivate tolerance of every citizen for the sake of mutual harmony. The character of Kak Ros is formed as a fierce sister from the point of view of Upin and Ipin, but this character is actually very loving. All the needs of her brothers are provided by Kak Ros including frying chicken which is their favorite. Kak Ros's teasing is firm and serious, but the method is a method of harassing by a sister to control the mischief of the twins.

The positive value of the characters in this animation makes the Upin and Ipin series picked up by UNICEF as exemplary characters to children. Recognizing that children are said to be better motivated when they learn from their own experiences and the experiences of other children like them, hence UNICEF appointed Upin and Ipin as national ambassadors in 2013. The series is also thought to be able to help children use their imaginations constructively, improved social skills and learning to respect the cultural diversity in society (Yulianeta, 2021).

Since 2007, this animation has received many awards at the international, ASEAN and national levels. Internationally, Upin and Ipin's animations received various awards such as Global Emerging Innovative Entrepreneur Award 2009, World Brand Congress, India 2010

(Brand Leadership Award), International Quality ERA Award, Geneva 2013 (Emas), Brand Quality Leadership Award, Las Vegas 2014 (Best Quality Leadership Award), The International Achievement Award Italy 2018, Global Business Leadership Awards 2019, South East Asia Video Festival for Children 2019, Beijing Animation & Game Industry Awards 2019, Global Brand Award 2019, International Islamic Leadership Forum & Awards 2019, Made For The World Excellence Award 2020 dan Best Manager of the Year (Europe Business Assembly Oxford). At the Asian level, among the awards received are ASEAN Character Award 2015 (Grand Prize "Puteri"), HR Awards 2016 (Best Company To Work For In ASIA), Asian Pacific ICT Awards 2007 (Best Start-Up Company), Asia Pacific Entrepreneurship Awards (APEA) 2011 (Most Promising Entrepreneurship Award), SEA Prix Jeunesse Awards 2018 (Professional Category- Fiction), Asian Academy Creative Awards 2019, Asia Entrepreneur Award 2019. Only Indonesia recognized this animation through the awarding of the Liga Digital Indonesia Award 2015 (Upin Ipin Demi Metromillennium, Best Performance Game), Anugerah Komisi Penyiaran Indonesia 2016 (Winner of Foreign Animation Program Category -Pada Zaman Dahulu), Liga Digital Indonesia Award 2016 (Upin Ipin Demi Metromillennium, Best Division StartUp Game), Indonesia Lolipop Award XY Kids! 2010 (Animasi Favorit Upin & Ipin) and Anugerah Penyiaran Ramah Anak (Bagi, 2019, 2020). For the Mom & Kids Award (Upin & Ipin Kartun Kesayangan) this animation received awards for 2015, 2016, 2017, 2018, and 2020. In Malaysia, this animation has received various awards such as Power Brand Award 2017, Malaysia Top Achievers 2019, Malaysia Book of Records, SME Brand Excellence Award 2018, and so on, and even received recognition from government agencies such as the Ministry of Tourism (Malaysia Tourism Council, 2018 – Gold Award International Animation, Malaysia Tourism Gold Awards 2019 and Tourism Ambassador of Malaysia 2017), Jabatan Perpaduan Negara dan Integrasi Nasional (Anugerah Kalung Perpaduan 2010), Perbadanan Harta Intelek Malaysia- MyIPO (Intellectual Property Award, 2011), MSC (MSC Malaysia Asian Pacific ICT Awards 2007 dan 2008 (Best In Media & Entertainment), MSC Malaysia Kre8tif 2009 (Best Editor Animation/VFX Category), and MSC Malaysia Job Camp 2010 (Best Training Provider for 2009). NEF-Awani also presented Anugerah Khas Tun Mahathir (2010) in addition to a series of other awards (Mahmor & Hashim, 2015; Lescopaque, 2021).

Children love this Upin and Ipin animated series because the 3D dimensions used have been visually interestingly (Lingga, 2019; Ghani^b, 2015). According to Anuar (2006) and Noor Aida Mahmor & Nasihah Hashim (2015), pictorial media helps children to understand the content of a reading material. Children are happier and more entertained presented with interesting, concise and an easy-to-understand pictures. Pictorial media provide satisfaction and become a source of information that is more easily observed by children's minds. From the point of view of story filling, this animation has a storyline that is simple, interesting, easy to understand and digested by children's minds (Lingga, 2019). It is the story of the daily life of a five-year-old child in the culture of village life in Malaysia. The culture and patterns of daily life are highlighted in this animation covering matters related to clothing, celebrations, customs, current events, traditional games and so on. The uniqueness of the Malay language is also inserted in this animation to create a sense of fun and attraction among children. This interest is then translated in the form of the child's own behavior. The term "betul! betul! betul!" and "Dua seringgit! Dua seringgit!" for example, it is often spontaneously mentioned among children exposed to the animated series Upin and Ipin.

Overall, Upin and Ipin's animation creates a new paradigm of learning done through the medium of entertainment. The diversity of ethnicities, cultures, festivals, and beliefs of the community have been blended into one beautiful color of Malaysian society. Upin and Ipin

symbolize the unity and special identity of the Malaysian community. Various different ethnicities, cultures and religious beliefs are linked to one children's animation (Ghani^b, 2015). The child characters featured in this animation are polite, respectful of the elderly, convey a moral message and are embroidered with a funny atmosphere due to children's mischief. (Ghani^b, 2015; Mahmor & Hashim, 2015). It is a reflection of societal harmony despite living in a diversity of races, ethnicities, religions and beliefs.

Research Methodology

This study analyzes the factors, effects and ways to reduce the impact of haze found in the animated series Upin and Ipin episode 10 of the seventh season entitled 'Bahaya Jerebu'. This study uses a qualitative method of text and literature analysis. Librarianship methods include the acquisition of information and studies through book references, journal articles, theses, conference papers and master's projects. It also involves finding information through the internet. The text analysis involved Upin and Ipin's animated series entitled "Bahaya Jerebu" as the main study text.

Previous Studies

Technology has developed rapidly around the world. This development opens up great potential in the field of animation in line with the development of the world of electronics and digital technology today. Malaysia also did not miss the opportunity to be seriously involved in the field of animation because of the great potential of economic generation. A study on the development of the field of animation in Malaysia conducted by Abdullah & Ishak (2010) has investigated the provision of animation education and training offered at Public Institutions of Higher Learning (IPTA).

In Malaysia, the animated series Upin and Ipin has become a favorite of all walks of life from various ages and races. It is seen to play a role in disseminating the ideology, concepts, symbolism, metaphor and culture of the diverse Malaysian society by combining various types of graphics, abstract forms, index photography, text and other visual materials (Buchan, 2010). This animation becomes a medium to convey complex ideas, dreams and emotions, in turn leaving a huge impact especially on children. Children are exposed to a wide range of cognitive skills in many aspects such as narrative, character, social interaction, art, entertainment and cultural visuals that are able to influence their knowledge and skills. (Amir et al., 2011; Wilson, 2010). Indirectly it is a reflection of a children's entertainment product that is educational (educate and entertain). The message is conveyed through narratives, characters, backgrounds, motifs or metaphors that clearly highlight the culture, society and unity of the country. Educational resources are not only obtained from a teacher in a school learning environment, but also through educational media such as print and electronic media. Informal methods like these are more easily understood by children (Mardianto & Harahap, 2020).

The animation of Upin and Ipin has a high educational value and benefits the community (Hamidy & Rasyid, 2017; Khodijah et al., 2019; Akhmad & Habibie, 2021; Hani & Triana, 2021). It is a source of inspiration and a medium of learning for children because they easily imitate the behavior they watch (Lingga, 2019; Satria, 2020; Deminito, 2020; Yulista, 2020; Anggia & Mahyuddin, 2020). Animated products are highly popular, influential and have their own role because children tend to mentally process what they have watched. Through these animations, children are developed their intellectual values appropriately in line with the intellectual development of children today. The use of simple, easy -to -understand language

and terminology helps the process. A study by Shuhaini et al (2017) found that the characters in this animation show a level and intellectual ability appropriate to the story and the age of the audience. According to Huston et al. (1992), children not only seek entertainment, but they watch television as a medium to learn something new. Media such as television become a social agent whose role is to provide a social environment suitable for the audience for the formation of attitudes in the future.

Many studies have been conducted by researchers from Indonesia to examine the influence of animation on character education. The study of Fauzi (2020); Pasrah et al (2020), Ramayanti (2020); Zhayoga et al (2020) found that there are many educational values applied in Upin and Ipin animation such as fostering patriotic spirit and character education. The character's education consists of religious values, responsibility, tolerance, friendship, creativity, love of the environment and so on. Disclosure of the positive values applied in each character will indirectly influence and educate the audience's behavior (Septyawan, 2018; Lingga, 2019).

According to Nadzria & Hassan (2013); Dahlan^b (2015), Upin and Ipin successfully introduced the cultural, artistic and ethnic diversity of Malaysians. It can be a strategy of strengthening unity through characters and issues from various ethnicities, cultures and religions (Alfiani, 2020; Mahdi et al., 2021). This animation is a platform for harmonious relations between diverse communities such as Malaysia. The use of iconic visual styles of Malaysian culture such as background, lifestyle, characters, messages and storytelling have been successfully lifted in this animation which depicts the reality of a multi-racial, multi-cultural and multi-religious society but is able to practice mutual tolerance. According to Parau (2020), social and religious tolerance is highlighted in each of these animated series covering matters related to respecting other religions, celebrating multi-religious festivals, visiting each other and exchanging food. This is a portrayal of a character that is "Malaysia" representing the identity of the Malaysian people themselves (Abidin, 2010). This is very important for a country that is diverse because of the importance of society to appreciate each other, cultivate the nature of togetherness and cultivate the spirit of love for the country without throwing away their ethnic, racial and cultural identities. Given that Upin and Ipin animation is also popular in some countries such as Indonesia and the Philippines, the advantages of animation from this angle, are worrying Lingga (2019); dan Darmawati (2020) because it is feared that the influence of "Malaysianness" will be absorbed among young people in Indonesia. This study found that children in Bali began to follow and be influenced by this animation by changing local terms and using Malaysian terms such as "Cikgu", "Opah", "Kak" and so on. They also often propose dialogues in the Malay language of Malaysia such as "Betul! Betul! Betul!". These concerns stem from researchers' concerns with the possibility that local cultures, languages and identities will sink little by little.

This animation of Upin and Ipin also applies high moral and religious values. Study of Rizki (2020); Iranada (2021) found that Upin and Ipin were able to convey the message of da'wah through the themes and characters featured. Although this animation greatly influenced their children, but parents were not upset to reveal the series to the children as there were many noble values, Islamic education, morals and religious tolerance applied. It will be a medium of pure value education for children. They are stimulated with positive values that will influence behavior in daily life (Mardianto & Harahap, 2020).

A study on the image of Malay women in the animation Upin and Ipin was done by Mahmor & Hashim (2015) by analyzing the female characters in this animation using the Feminism Approach. Feminism's approach states that most male artists portray the female

character in their work as someone who is humble, passive, surrendered to destiny, and has no future. However, this study found that the images of women portrayed in this animated series were different. The women in the animation Upin and Ipin are featured as women who adhere to oriental religions and morals in their daily lives. Gender issues caught the attention of Yulianeta (2021) who revealed current gender issues through the character of Salleh. This study found that the femininity of Salleh's character is a reflection of the current social society. Salleh is portrayed as a feminine male character, but at the same time he is an educated, technologically literate and involved as an entrepreneur. This character is an early exposure to children about the question and conflict of gender.

Since its introduction in 2007, Upin and Ipin animation has raised various themes that reflect the local culture and colors. This animation is an entertainment material that is able to educate children by highlighting various messages such as morality, religion, racial tolerance, unity, well-being, ethnic identity and identity, friendship, the spirit of helping, and so on. The environmental component is no exception when there are several of these animated series raising issues of air pollution such as haze, ecosystem cycles, environmental beauty and the intimacy of the relationship between humans and nature. Even so, until now there has been no study that analyzes the animation of Upin and Ipin using an environmental approach. Starting from that, then this study will analyze the haze pollution found in the animation of Upin and Ipin by making the 10th episode of the seventh season entitled 'Bahaya Jerebu' as the main study text.

Haze In Animation Upin and Ipin

Haze is an environmental pollution phenomenon when the air space is filled with smoke containing hazardous gases (Mu & Zhang, 2014). These conditions can occur naturally or be caused by human activities. Naturally occurring haze is caused by volcanic eruptions, monsoon changes, El Niño phenomena, dust storms in desert areas and the presence of bioaerosols in the air. Human activities that contribute to the occurrence of haze include open burning activities, exploration of land for agricultural activities, the rapidity of industrial activities and the increase in the number of motor vehicles, especially in urban areas (Nor et al., 2017).

Agricultural activities in Southeast Asia adopting the method of "cut and burn" has contributed to high air pollution (Latif, 2017; Ridzwan & Mahmud, 2021). This uncontrolled forest burning causes the atmospheric space to be saturated with pollutants such as suspended particles, gases, soot, and water vapor called haze that interfere with visibility. (Jeyaindran 2006; Ahmad & Shapien 2017; Latif et al., 2018; Ridzwan & Mahmud, 2021). The haze phenomenon is not limited to one country only, but is cross-border to nearby countries, especially influenced by wind and monsoon (Lee et al., 2016; Ridzwan & Mahmud, 2021). Forest and peatland fires in Kalimantan, Riau and North Sumatra (Indonesia), for example, cause haze to occur in Malaysia, Singapore, Brunei and several other ASEAN countries (Keyword et al., 2003; Othman et al., 2014). This phenomenon occurs every year from May to September due to the practice of clearing farms and new plantings that use the method of "cut and burn". The West Coast of Peninsular Malaysia is often affected by the haze that occurs in Indonesia depending on the speed and direction of the wind. In 2005, Kuala Selangor and the Klang Valley were declared a haze emergency due to very unhealthy API readings at the time (Mahmud & Hanifah, 2009). In 2015, Malaysia experienced the worst haze situation when there were fires in oil palm plantations in Sumatra, Jambi, Riau and Kalimantan. The hot and dry weather, high temperatures and monsoon winds caused the Malaysian airspace to

be severely affected with API readings exceeding 400 in Kuching and Klang. The declaration of a haze emergency was implemented nationwide after the current API readings were at danger levels (Che Azmi et al., 2021; Khan et al., 2016; Ridzwan & Mahmud, 2021). Widespread forest burning in Indonesia is found to be the dominant factor that contributes to the occurrence of haze in Malaysia every year.

The haze that happens every year seems to be a tradition that needs to be faced by most ASEAN countries even though the real cause is not entirely from the country itself. This problem will not be solved in a short period of time if the root cause of the haze is not addressed properly. Environmental education needs to be applied to young people so that they better appreciate the environment and adopt a sustainable way of life in the future. Animation can be used as a medium to foster awareness of environmental sustainability among the younger generation, especially children. The animation of Upin and Ipin was found to be very suitable for channeling information and conveying such messages due to its great influence in Malaysia and in Indonesia. The analysis of haze in this Upin and Ipin animation includes (1) the factors or causes of the haze (2) the haze effect and (3) methods of reducing the haze impact.

Synopsis of The Upin And Ipin Haze Episode

In this series, Kampung Durian Runtuh has been hit by a severe haze until the school is closed. Tok Dalang helps Mr. Dol put out the fire in his garden that was caused by the disposal of cigarette butts. Tok Dalang has also rebuked Roy, a villager who practices open burning, and advised him to plant all rubbish. The daily activities of the residents of Kampung Durian Runtuh began to be affected. Upin and Ipin could not continue their learning activities in the kindergarten because the school was closed. The unhealthy air quality has resulted in them not being able to play with friends, instead they are just confined indoors helping their sister, Kak Ros only. This causes them to start feeling bored and missing their school friends. The haze has also caused Muthu's stall to close. Many other daily activities such as hanging clothes and being outdoors are becoming increasingly limited. They need to wear a half -face mask when outdoors to reduce the impact of the haze. The downpour had eased a bit of the haze and they started going back to school. In the classroom, Cikgu Melati explained about the haze to her students. According to Cikgu Melati, the haze can be reduced through cloud seeding to produce artificial rain. Rain can reduce the haze problem because pollutant particles found in the air are deposited on the earth along with rainwater.

The Cause of The Haze in The Animation of Upin and Ipin

In the Upin and Ipin animation, the haze is caused by the burning of gardens or forests and peatlands, cigarette smoke, open burning and smoke emissions from motor vehicles. Forest fires can occur naturally and are caused by human activities such as logging and burning of forests for agricultural and logging purposes (Hashim & Ahmad, 2005). Uncontrolled forest fires will pollute the air, further contributing to the occurrence of haze. In the animation of Upin and Ipin, Cikgu Melati explains the factors that cause haze to her students as follows;

Cikgu Melati: Today we learn about ... H.A.Z.E!

Cikgu Melati: The haze is caused by smoke. Smoke is caused by open burning, forest burning, garbage, vehicle smoke and so on... plus the hot weather, our environment will be dusty and visibility will be less. One more thing, we like to get sick ... because the haze makes us cough, have a fever and have sore eyes. Like that lahhh!

(Upin dan Ipin, Haze; minutes 14.20)

Garden, bush and rubbish fires occur because of the irresponsible attitude of some individuals who burn openly and throw away cigarette butts that are still lit. Disposal of still-lit cigarette butts can also contribute to larger fires (Sari et al., 2021). In the study animation, Upin and Ipin reprimanded Ah Tong who smoked a cigar at Muthu's stall in the dialogue "*Uncle! Put it out, haze!*" (minutes 18:00). Cigarette smoke contributes to air pollution through the release of carbon monoxide found in tobacco. The fire in Mr. Dol's garden in this series was also caused by the disposal of cigarette butts that were still burning. Dry and hot weather makes it easier for fires to break out. This critique is presented as illustrated in the dialogue between Tok Dalang and Muthu as follows;

Tok Dalang: Muthu! One ice coffee!
 Muthu: Wokeh! Mmmmm always hot coffee, today you want something cold?
 Tok Dalang: I'm thirsty... I just helped Mr. Dol put out the fire. His farmland is on fire!
 Muthu: Ayoyo! Who burns?
 Tok Dalang: How do I know! There must be someone throwing away cigarette butts. Irresponsible right!
 Muthu: That's right Tok Dalang... it's peat soil, it's also burning soil ... it keeps everything burning!
 Tok Dalang: Luckily, the new fire can also be extinguished. Otherwise ...we have to call the fire department!

(Upin dan Ipin, Haze; minutes 0.53)

Doing burning in peatland areas is often associated with the preparation of doing replanting in agriculture and plantations. Local people in Indonesia use the method of burning when cleaning the farmland because of the smaller cost factor and save time even though there is often the use of less accurate fire so that there is a fire (Sari et al., 2021). Larger fires are difficult to extinguish because the flames are on the surface and in the underground (Harnawan et al., 2021). This activity is carried out during the dry season and there is a risk of large-scale fires in an uncontrolled manner. These large-scale fires produce a capacity of dust, smoke, dust and pollutants in saturated air. Wind gusts help fires spread faster and bring air pollution across borders. The cross-border haze phenomenon that has occurred in Malaysia since the 1990s is caused by hundreds of millions of hectares of uncontrolled forest fires in Sumatra and Kalimantan, Indonesia.

The method of "cut and burn" is a traditional way practiced for centuries in Indonesia due to cost and time saving factors (Sari et al., 2021; Kusnianti et al., 2021). During cross-border haze in 2013, 2014 and 2015, the API value in Malaysia exceeded the reading of 300. In Klang alone, air quality reached dangerous levels when the API value reached 495 (2013) and 358 (2014) (Ridzwan & Mahmud, 2021). In Upin and Ipin, Cikgu Melati describes that "*haze stems from smoke, smoke stems from open burning, garbage*" (minutes 4:16 dan 14:22). Tok Dalang, on the other hand, reprimanded Roy for open burning as follows;

Tok Dalang: Why are you burning the grass?
 Roy: Ek elehhhh, is it wrong to burn?
 Tok Dalang: Of course wrong! You're burning this, making this hazy situation worse.

Roy: Soooo, what else do I have to do?
 Tok Dalang: Plant it, it's good! It does not pollute the air.
 (Upin dan Ipin, Haze; minutes 5.25)

This conversation provided information that doing open burning was wrong and would exacerbate existing environmental problems. At the same time, the children were also exposed to the appropriate way to manage dry grass, namely by planting it. Although this waste management method is done traditionally, but the method is more practical, natural, sustainable and more environmentally friendly. In the final part of this scene, children are instilled with a love of the environment through Tok Dalang's messages such as dialogue "*Upin, Ipin ... please remember! We must take care of the environment, so that the air is clean. Don't do that kind of open burning,*" (minutes 6.00).

Haze also occurs due to smoke emissions from motor vehicles. Air pollution caused by fossil fuels such as petrol and diesel produces carbon monoxide, nitrous oxide and hydrocarbons. In this study, Tok Dalang tells Upin and Ipin that engine smoke is the cause of the haze (minutes 4:54). Cikgu Melati told her students that "the haze is caused by vehicle smoke". (minutes 14:26). In this animation, the haze caused by the smoke emissions of motor vehicles is not the main focus because of the village setting that underlies the story. Motor vehicles are a more significant cause of haze occurring in large urban areas that have a higher number of vehicles compared to rural areas.

The Haze Effect in Upin and Ipin Animation

In the animation of Upin and Ipin, the haze affects health, social and economic. During the haze, the space is very saturated with the content of dust and suspended particles. Continuous exposure to unhealthy air will increase the risk of various respiratory diseases, cardiovascular diseases and additional problems to existing patients (Ridzwan & Mahmud, 2021). The deterioration of public health causes many people to suffer from persistent coughs, lung diseases, respiratory infections, itchy skin, itchy eyes and asthma attacks (Wen, et al., 2016; Latif et al., 2018; Ridzwan & Mahmud, 2021). The elderly and children are more susceptible to this health problem.

An analysis of the animations of Upin and Ipin found that the question of deterioration in health due to haze was displayed through the character of Tok Dalang. Description Tok Dalang responds to inquiries from Upin, Ipin and his friends using simple, concise and well-understood sentences such as the following passages;

Tok Dalang: Don't play anymore ... go back. The weather is hot. Look at that ... haze!
 Fizi: Where, don't even see it?
 Upin: There is nothing, tok
 Tok Dalang: Can't you see that? That kind of smoke ... that's the haze.
 Fizi: If it's haze, why?
 Ehsan: Exactly! Why can't we play?
 Tok Dalang: Later fell ill. Haze can make us short of breath, sore eyes ... a danger to health... You have asthma, go back quickly!
 (Upin dan Ipin, Haze; minutes 2.31)

Tok Dalang explained that haze can worsen health problems for patients related to the respiratory system such as Ehsan. He advised Ehsan, who has asthma, to go back immediately

and not to play outside during the haze. This is supported by Cikgu Melati's statement in the verse *"What are you doing here? Haze ... it's not healthy to play outside. Enter the classroom now!"* (minutes 14.20).

Haze and hot weather cause the body to dehydrate and result in health problems especially to children and the elderly (Latif et al., 2018). To prevent her grandchildren from having a fever, Opah reminded her grandchildren to always drink enough water through dialogue *"Upin, Ipin ... must remember! This haze time we have to drink a lot of water so that our throats are not dry. Fear of fever later"* (minutes 8:55). Haze also causes psychological stress when all economic and social activities are restricted. Constraints of outdoor activities in the long run have a psychological impact (Wen et al., 2016). Upin and Ipin began to feel bored of being locked up in the house and longed to go to school and play with their friends. When the school is closed they have to help Kak Ros do various housework. This stifled their joy of enjoying the school holidays as complained of in the dialogue *"Like this.. It's good to go to school, can play with friends"* and *"... miss playing with friends"*.

The haze also leaves a social impact as daily routines become increasingly limited. Several series of severe haze have occurred in the years 1997, 1998, 2009, 2015 and 2019 due to forest fires and plantation areas causing the effects of the haze to spread as far as Southern Thailand. In 2019, fires also struck Northern Thailand (Schweithelm & Barber, 2000; Kusniati, Permatasari & Rapik, 2021). In 2019 as well, Malaysia has declared a state of emergency due to very unhealthy air quality (Ridzwan & Mahmud, 2021). The event was illustrated through the display of a news broadcast on a television screen announcing the school's closure (minutes 7:22). The increase in the Air Pollution Index (API) reaching more than 300 caused many outdoor activities to be restricted. When the API reading exceeds 400, people need to stay indoors and only go out when necessary (Jeyalndran, 2016). Almost all sectors of the economy suffered losses (Latif et al., 2018). The animation of the study highlights this through the closure of Muthu stalls, limiting daily outdoor activities such as hanging clothes, exercising and planting trees. This can be seen through the conversation between Kak Ros and Abang Salleh, namely;

Opah: Ros, pick up the cloth outside ... hurry!

Kak Ros: All right Opah

Salleh: Do you dry clothes during the haze season? Later, there must be a smell of smoke ... my car doesn't look like a car either. Full of dust!

(Upin dan Ipin, Haze; minutes 10.45)

Hanging clothes outside the house during the haze as Kak Ros did is like trying to absorb air pollution using clothes. Not only will the dust stick to the wet clothes that are soaked but also absorb the burning smell that is in the air. Excessively high air saturation index with dust, soot and dust can be seen with the naked eye as happened to Abang Salleh car which was covered in thick dust. The severe haze in 2019 also affected the economy when Klang and Kuching were declared emergency. This also affected economic activities (Ridzwan & Mahmud, 2021). In this animation, Muthu is forced to close his stall due to haze like Salleh's dialogue; *"He (Muthu) wants to close the shop because of the haze, there are no customers"* (minutes 11.12). The closure of Muthu's stall caused Muthu to get tired of spending time at home. Muthu filled his free time by inviting Salleh to go out with him.

Methods of reducing the impact of haze in Upin and Ipin Animation

Haze is a danger to public health. Upin and Ipin's animation suggested several measures to reduce the impact of haze, namely planting rubbish to prevent open burning, limiting motor vehicles, limiting outdoor activities, wearing face masks, closing all doors and windows and cloud seeding to produce artificial rain.

Tok Dalang suggested planting grass and dry leaves instead of burning them openly (minutes 5.27) and limiting motor vehicles (minutes t 4.57). According to Tok Dalang, the smoke from motor vehicles will worsen the existing haze. He suggested that they walk alone to get to the store as the dialogue follows;

Upin: Atuk, where are you going?

Tok Dalang: Want to go to the store ... buy a face mask like you're wearing.

Upin: Atuk, we ride a motorbike..vrom vrommmm hurry up. This haze is not good for us to stay outside for a long time.

Ipin: That's right! That's right! That's right!

Tok Dalang: Because it's haze, we have to walk ... motorcycle smoke is also the cause of the haze. Do you know?

Ipin: Good Atuk ... nature lover ... like Cikgu Melati said.

(Upin dan Ipin, Haze; minutes 4.26- 5.00)

When Ipin said the dialogue "*Good Atuk ... nature lover ... like Cikgu Melati said*", the audience (the main target is children) is being reinforced the application of awareness to preserve the sustainability of nature as done by Tok Dalang. An understanding of haze has also been applied in Upin's dialogue "*We saved Uncle Muthu's stall (from burning) ... and reduced the haze*" (minutes 7.02). This dialogue illustrates these twins already understand that the impact of haze needs to be addressed from its original source (fire) before it can occur. So, the haze problem can be avoided, even if it happens it will certainly not worsen and leave a big impact. These precautionary measures taken earlier are able to prevent larger incidents.

To reduce the impact of haze, the use of face masks is highly recommended. In this animation, Tok Dalang, Opah and Kak Ros always remind Upin and Ipin to wear face masks when they are outside the house. Take a look at Kak Ros' dialogue, "*Well, wear this ... (hand over the face mask), aren't you smelling haze smoke. Then come back quickly, don't you people go play around*" (minutes 3.56). This dialogue takes place when Kak Ros asks Upin and Ipin to buy salt at a nearby shop, but Ipin gives the excuse of the hazy situation outside the house. So, they should not be outside the house let alone go to the store. However, Kak Ros handed over the face mask to wear to allow her twin brother to go out to buy the salt. On the way to the store, they came across Tok Dalang who also wanted to buy a face mask. Opah, on the other hand, advised her grandchildren by saying "*When you go to school tomorrow, don't forget to wear a face mask.*" (minutes 5.00).

During severe haze, schools were temporarily closed to reduce public exposure to hazy environments. During the closure of the school, Upin and Ipin just sat at home and helped Kak Ros with daily work. Opah, on the other hand, has closed all the doors and windows so that the contaminants in the haze do not enter (minutes 8.41). Upin and Ipin animations also suggest cloud seeding to produce artificial rain (minutes 15.36) as an alternative reducing the thickness of the haze. This suggestion is expressed through the character of Cikgu Melati, as follows

Fizi: Eeeee it's not healthy! So how to get rid of haze?
Cikgu Melati: When it rains, the haze disappears!
Upin: If it's not raining?
Jarjit: I know! I know! Tell the frog to call for rain! Frog oh frog why do you have to call the rain? How can I not call ... a snake wants to eat me! Ohhh! Wrong ... this haze is something!
Cikgu Melati: If there is no rain, we make artificial rain by seeding clouds.
Upin: Cloud seeding?
Cikgu Melati: But ... if there are no clouds, it can't be either!
Ehsan: When it's not raining! So ... until when it will be haze!
Cikgu Melati: Iyaaa! That is why we have to take care of the environment. Prevention is better than cure ... please remember!
(Upin dan Ipin, Haze; minutes 15.00)

The excerpt of the conversation above is a learning session in school. Cikgu Melati explained to her students about the haze, including ways to deal with it. Currently, they are exposed to environmental terms such as “artificial rain” and “cloud seeding”. These terms are unfamiliar to children their age. According to Ilani (2019), cloud seeding to produce artificial rain to reduce haze is a temporary solution only because the main factor of the haze problem needs to be addressed right down in depth. This method is also costly. The best solution to solve the problem of air pollution such as haze is through environmental education methods. Those directly involved with open burning, land exploration, and plantation activities need to be educated about the importance of the environment. These people need to be exposed to environmental sustainability from the beginning and nurtured to adopt a more environmentally friendly way of life.

Conclusion

Upin and Ipin animations can be used in various levels of education system because of their exhilarating nature, having a high moral message, elevating local colors as a big part of the theme, being a link towards love for the country and so on. So many moral values applied in this animation are able to cultivate the attitude and identity of the nation in the future.

Based on the analysis of the Upin and Ipin animation series titled “Haze”, this animation presents a very heavy theme to be understood by five-year-olds. Nevertheless, this animation was successful in revealing about the factors of haze occurrence, the impact of haze and how to reduce the impact of haze on society in a simple way. In this animation, the haze is caused by open burning, forest and peatland fires, and motor vehicle smoke emissions. The effects of haze can be seen from health, psychological, economic and social perspectives. Based on the analysis of Upin and Ipin animations, it is also found that there are several methods that can be implemented to reduce the impact of haze, namely by reducing open burning, avoiding forest fires, wearing face masks and cloud seeding to obtain artificial rain.

Positive educational values have been applied in Upin and Ipin animations making this animation suitable for use as a learning aid. Exposure to these positive values will indirectly influence and educate the behavior of the audience. Children tend to understand and easily follow what they watch. So, this animation is able to be the most suitable intermediary to apply environmental education towards increasing environmental awareness among the younger generation. The combination of graphic elements, pictures, visuals and messages raised in the form of animation is able to expose children to the feeling of love for the

environment. The "fun learning" method using media such as animation helps children to understand more easily because it is easier to perceive by children's thoughts. Learning using this method is also able to attract children's interest because of its relaxed, entertaining and fun nature. At the same time, it becomes a source of inspiration and a learning medium.

Overall, the animation of Upin and Ipin is able to convey various messages such as friendship, camaraderie, the spirit of nationalism, and so on. The positive messages and values applied in each of these animated series indirectly affect the children. So, it is not surprising that the animation of Upin and Ipin received a lot of recognition at the national, Asean and international levels as this animation became a catalyst towards the formation of the young generation of the future.

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