

Knowledge And Awareness On Wildlife Among Primary School Students In Bintulu Sarawak

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Abstract—Lack of knowledge and awareness towards its wildlife diversity and importance could cause the demise of its biological treasures. Knowledge on wildlife and its importance should be developed from an early age. It is vital to allow children to be exposed to the natural environment, which can indirectly create awareness on wildlife conservation at a young age. A study was conducted to determine the knowledge and awareness of wildlife among Year 5 primary school students in Bintulu, Sarawak. A total of 638 respondents from 12 primary schools were involved, and their response was recorded through a survey using questionnaires. From the survey's result, most students have knowledge of the definition of wildlife (76%). Students obtained knowledge and information about wildlife mostly from television (79%), teacher (73%) and family (58%), while less knowledge and information about wildlife from natural habitat (0.5%). Demographic factors also seem to contribute to knowledge on wildlife. Wildlife is significant for people in Sarawak due to the highest food consumption (81%) is from wildlife. Most children had their first exposure to wildlife at the zoo (57%) and from television (32%). From the results, this could mean television, teachers, parents and zoo play important roles in developing the knowledge and awareness of wildlife among children. Nevertheless, exposure through environment educational programs and video documentaries must be blended either in school or home. The knowledge and exposure on wildlife should be nurtured since childhood so that awareness about the importance of wildlife can be raised among young generation.

Keywords—wildlife; primary students; knowledge; awareness; Sarawak

I. INTRODUCTION

Awareness and conservation of wildlife have become increasingly important in the 21st century. Destruction and loss of habitat, illegal use of wildlife, overexploitation of resources, and lack of conservation awareness can give a negative impact on biodiversity and ecosystems (Wilkinson 1997). Wildlife education is

critical to enable children to understand the importance of wildlife, including flora and fauna (Gattet al. 2008). Aware of this issue, research has been done to assess the level of knowledge and awareness of wildlife among primary school students in Bintulu, Sarawak.

II. METHODOLOGY

Twelve primary schools were selected in this survey. The selection is based on the location and acceptance of the study to be carried out by the schools. The study was carried out in three different types of school area categories; urban, rural and interior. A structured questionnaire in Malay language and English was used in collecting data. The questionnaires consisted of closed-ended and open-ended questions. The surveyed consists of three sections, Section A: Basic knowledge of wildlife, Section B: Awareness on the importance of wildlife and Section C: Socio-demography. A pilot study was carried out to ensure that the content of the questionnaire is easily understood by respondents and to obtain information on the content validity of the questions. It also reveals the time taken to complete the questionnaire. Ten respondents from Year 5 students were selected for the pilot survey, and each of the respondents took about 30 minutes to answer all the questions in the questionnaire. In this study, only descriptive statistics can be applied due to the small number of respondents from rural areas.

III. RESULTS AND DISCUSSION

A. Demographic Characteristics of Respondents

The survey was conducted among Year 5 students of 12 primary schools in Bintulu, Sarawak. A total of 638 respondents were involved from seven urban areas school (80.4%), two rural areas school (11.4%) and three interior areas school (8.2%). Respondents were 50.5% female and 49.5% were male, while 48.3% were Iban, 28.5% Malay, 11.9% Melanau, 3.0% Chinese, 2.5% Bidayuh, 1.4% Indian and 2.2% other indigenous ethnic groups. According to Salehuddin et al. (2011), Iban forms a large ethnic group, with about 30.1% of the total population in Sarawak.

In general, 60.2% of the students were from urban areas, 25.9% rural areas and 14.0% from interior areas. This survey also showed the percentage of respondent's father were employed in private sector (53.9%), government sectors (25.1%), self-employed (18.8%), none/died (1.4%) and retired (0.8%). Meanwhile, for the mothers, more than half were housewife (55.2%) followed by employed in private sectors (15.0%), and none/died (13.5%).

B. Basic Knowledge on Wildlife

Findings of this study show most of the Year 5 students in Bintulu, Sarawak have a pet at home (85.4%) which the cat is the most reported animal kept as a pet (Table 1). According to Prokop et al. (2008), Prokop and Tunnicliffe (2010) and Geerds et al. (2015), if children looked after pets, either vertebrates or invertebrates, children had a better understanding of animals. This can create feeling of love and sense of responsibility towards animals.

C. Definition and Sources of Knowledge and Information on Wildlife

Most of the students defined wildlife as animals or plants that live wildly in the forest (76.3%), while 14.4% of respondents defined wildlife as a pet at home (Figure 1). As a result, from the basic knowledge survey shows that most of the students getting knowledge about wildlife from two sources which are television (79.0%) and teacher (73.0%) followed by family (58.25), book or pamphlet (57.8%), school (52.0%), internet (44.0%), friends (40.0%), radio (37.6%), newspaper (32.8%) and in natural habitat (1.5%). Janeiro (2004) has shown that television is the dominant medium for young people and adults to obtain knowledge of contemporary animal characters in cartoon and film. Torkar and Mavrič (2016) reported Young Slovenian learners obtaining the most information about animals and plants from watching television, followed by reading magazines and books. Only the third most frequent answer was schools. Surprisingly, the internet is not a significant source of information about animals and nature. Similarly, Prokop and Tunnicliffe (2010) found that children's better knowledge of individual species is affected by personal experience, reading books, and watching documentaries. This shows the importance of media in influencing the children. A study by Gatt et al. (2008) reported in Malaysia; primary school students obtain information about animals directly from science learning, local studies in school, from teachers in class. Teachers/educators are seen as an effective individual in delivering knowledge or change agents (Habibah & Puniitha, 2012; van der Heijden et al. 2015).

Family background, culture and living areas could also be factors influencing the students in term of hunting activities experience. Most of the respondents interviewed live in the interior areas, and have experience going hunting with their family member. Historically, most of them are from Iban ethnicity in

Sarawak who tend to practice shifting agriculture as their primary economic source besides fishing and hunting activities for their livelihood (Tateh et al. 2014).

D. First Exposure to Wildlife

Most children first exposure with wildlife is at the zoo (57.4%) and followed by television (32.0%), books or magazines (3.9%), internet and live (2.0%), in natural habitat (2.0%), newspaper (1.6%) and from the video (1.0%).

More than 90% of students have experience in visiting the zoo or wildlife conservation center, while about 8.6% have never been to zoo or wildlife conservation center and most come from urban areas and interior areas (3.6%) and rural areas (1.4%). The three school categories in the survey overall show a high percentage for the first time seeing wildlife during a visit to a zoo or wildlife center. According to Patricia et al. (2007), Carr and Cohen (2011), Moss and Esson (2013) and Mellish et al. (2019), one of the functions of the zoo is research and education program. More than 50% of respondents obtain knowledge about wildlife in zoos or wildlife center indirectly.

TABLE I. DISTRIBUTION OF PETS AT HOME BY TYPE

No.	Type of pet	Frequency (n)	Percentage (%)
1	Cat	370	58.0
2	Dog	100	15.7
3	Fish	84	13.2
4	Tortoise	38	6.0
5	Bird	23	3.6
6	Chicken	22	3.4
7	Rabbit	17	2.7
8	Hamster	17	2.7
9	Duck	4	0.6
10	Pig	2	0.3
11	Squirrel	2	0.3

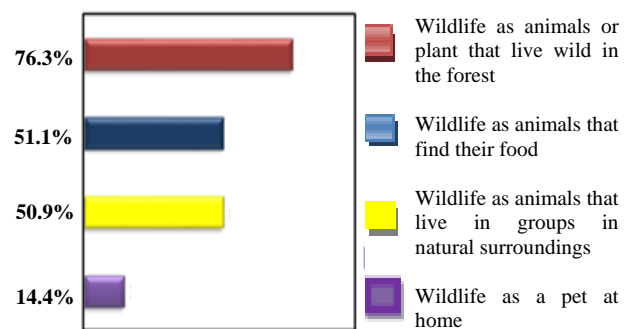


Fig. 1. Percentage of respondents based on their definition of wildlife.

The present study also found that from all animal names given to be chosen as wildlife (Orangutan, rafflesia, dog and cat), most of the students have selected the Orangutan and rafflesia (88.2% and 62.5% respectively) compared to dog and cat (18.8%

and 13.3% respectively). Students who answered dog and cat as wildlife were mostly from urban areas (12.5%, 10.2% respectively), rural areas (3.1% and 1.1% respectively) and interior (3.1 and 2.0% respectively).

Based on the question on wildlife which animal they have seen, the tiger is the most seen (72.6%) followed by wild boar (70.2%), pitcher plant (48.0%), rafflesia (27.4%) and 1.6% of the respondents from the urban area have never seen all the wildlife stated. Students who live in rural areas were more exposed to natural habitat compared to the students who live in urban areas.

E. Awareness on the conservation of Wildlife

Results showed 86.2% of respondents agreed wildlife need to be protected (urban, 68.7%; rural 9.9%; Interior 7.7% respectively). There were 76.6% of respondents who suggested that wildlife needs to be protected at the zoo or natural forest. The rest suggested that it was not necessary to be protected (13.8%), let it be protected at home (7.5%), farms (1.6%) and barn (0.5%).

Respondents acknowledged the importance of wildlife as a food source (81.2%), medicine (46.6%), pet (27.1%), research (43.9%) and refugees (0.9%). Nearly 30% of respondents answered wildlife could be hunted as food resources (16.9%) as the main reason followed by wild and dangerous (3.3%), for sale and other reason (0.3%). Wildlife has been used for medicinal purposes and also food by some ethnic groups in Sarawak (Mohd-Azlan & Muhammad Faisal 2006).

A positive result of the survey is obtained when 71.2% of respondent chose wildlife cannot be hunted because they do not want it to become extinct (39.8%), keeps wildlife in their natural habitat (6.4%), preserve the animals from being threatened (4.7%), love for wildlife (2.2%), and less than 1 % answered attraction for tourist to come to Malaysia, for next generation to see, hurting the wildlife is a crime and many benefits can be obtained from the wildlife respectively. Overall findings showed 91.2% of respondents wanted wildlife to be conserved and well cared. According to Bennett and Robinson (2000) and Meinzen-Dick (2017), proper management from natural resources inter-relationships between wildlife with humans is essential for the social, economic and well-being of humans. However, 28.8% of respondents answered that wildlife could be hunted because it is a type of food resources. Findings by Melinda and Mohd-Azlan (2018) also expressed that wildlife hunting activities in the rural area are for food resources. The rest of the results in the current survey shows wildlife can be hunted due to their wild and dangerous nature, for decoration, for sale, for research, for human benefit, for not disturbing human, for not killing other animal and human.

The deer is the main wildlife being hunted and eaten because all ethnics can eat deer in Sarawak compared to wild boar. The result shows that 58.0% of respondents and family have ever eaten and taken wildlife in the forest. Fig. 2 shows some listed wildlife ate or taken from the forest. Deer (31.2%) is the most of wildlife type eaten or taken from wild followed by wild boar (30.0%), python (15.1%), monitor lizards (6.1%), pangolin (6.7%), squirrel (3.5%), birds (3.3%), monkey (3.3%), tortoise (1.4%), pitcher plants (1.3%), crocodile (1.1%), civet (0.7%) and wild mushroom (0.5%). Reported by Melynda and Mohd-Azlan (2018), species which were regularly hunted in selected areas in Sarawak were the ungulates (e.g. bearded pig, muntjac, mousedeer, and Sambar deer).

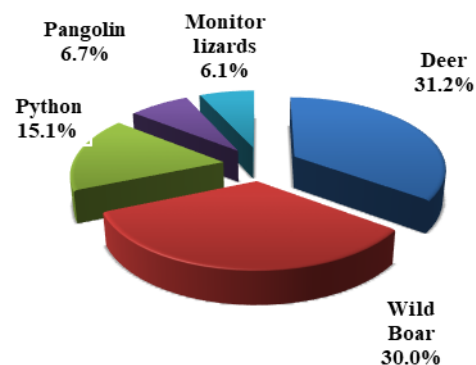


Fig. 2. Among the five highest types of wildlife eaten or taken from the forest by the respondents

IV. CONCLUSION

Television and teacher are the most effective medium for Year 5 students in Bintulu Sarawak to obtain knowledge and information about wildlife followed by family, book, school, internet friends, radio, newspaper and natural habitat. Generally, most of Year 5 students in Bintulu know the importance of wildlife as a food source, for medical purpose and research. The students also have an awareness of wildlife where they want to protect wildlife and to see wildlife is conserved and cared well. However, some aspects should be of concern such as getting knowledge and information about wildlife from natural habitat and data on never seen types of wildlife (tigers, wild boar, pitcher plant and rafflesia). The knowledge and exposure about wildlife should be nurtured since childhood so that awareness of the importance of wildlife can be understood and applied from generation to generation.

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