

Education: the zoo's new mission

The perception of the visitors of the Isle of Wight Zoo
regarding educational messages

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Graduation thesis

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*1: The perception of the visitors of the **Isle of Wight Zoo** regarding educational messages*

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Preface

This thesis is established by a cooperation between students and a company: the Isle of Wight Zoo. Included in this essay is the following research: the perception of the visitors of the Isle of Wight Zoo regarding educational messages. The research will be used as a foundation of the educational programme of the Isle of Wight Zoo. In the end, the student wants to make an effective translation of the outcome of the investigation to the educational programme. The research will be executed by the student Kelsey den Boer with guidance from Tracy Dove, education officer of the Isle of Wight Zoo.

Although the zoo has never welcomed higher education students at this part of the company, they are willing to offer two students a great opportunity to conduct their graduation thesis, which will be a once in a lifetime experience.

Special thanks to:

- Tracy Dove: for the great assignment, her enthusiasm, all her help and engagement in our research,
- Isle of Wight Zoo: for the participation and providing the needed tools,
- Josien van Herwerden: for being a travel companion and for the great cooperation,
- Janet Bloemberg: for her enthusiasm and guidance from school.

Enjoy reading this thesis!

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Abstract

Educational messages are used to raise awareness and to encourage people to participate in protecting and managing global biodiversity. The Isle of Wight Zoo is one of the zoos which recognizes the increased importance of education. The zoo wants to connect two important aspects of zoo visits: perception and education. The goal of this thesis is to find out the interests of zoo visitors of the Isle of Wight Zoo and to clarify visitors' main motivations to visit a zoo. In this way, the research can contribute to the zoo's goal: to raise visitors' awareness regarding valuing the natural world. The research question is as follows: "Do the visitors of the Isle of Wight Zoo have a need for zoo educational messages and if so, how could this be translated to the educational programme of 2015 in a way that it encourages visitors to take part in it and helps them to value the natural world?" The research is executed by using literature studies, a survey, visitor observations, evaluations and interviews. The results of this thesis indicate that visitors do feel that they want to learn about animal related topics like animal welfare. Zoo visitors mention educational aspects as one of the main reasons for a visit, besides their focus on family bonding and entertainment. Visitors note "more contact with animals in certain ways" as an activity that could change their attitude towards the natural world. Because of visitors' focus on entertainment and family bonding, the new educational activities will most likely be effective by using interactive, hands on experiences. In addition, it is recommended to focus on child friendly educational messages and activities.

Keywords: zoo visitor, educational messages, natural world, attitude.

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Summary

Many visitors of zoos and aquaria all over the world take part in zoo educational opportunities each year. These two groups share the same interest: commitment to environmental education. Through education, zoos and aquaria can encourage people to participate in protecting and managing global biodiversity, which has a positive influence on environmental outcomes over time. The Isle of Wight Zoo is one of the zoos which recognizes the increased importance of education. The zoo wants to connect two important aspects of zoo visits: perception and education. The right balance between perception, entertainment and the educational message has to be found. This thesis will focus on the most effective way visitors will learn and want to learn, regarding important messages about valuing the natural world, animal welfare, wildlife population management and training programmes. The goal of this thesis is to find out the interests of zoo visitors of the Isle of Wight Zoo and to clarify visitors' main motivations to visit a zoo. In this way, the research can contribute to the zoo's goal: to raise visitors' awareness regarding valuing the natural world.

The main question is investigated through exploring research. Five different data collection methods were used to get an answer on the sub-questions: literature studies, surveys, evaluations, visitor observations and interviews. The survey contained five important questions and is put online in combination with the conservation research. The survey had to be short and effective, so the barrier for zoo visitors to fill it in would be as low as possible. The visitor observations are executed by using 15 observation hours at 15 different educational signs. The interviews took place at five different educational signs and with 10 different participants. Lastly, the evaluations are executed by evaluating six different animal tour talks and three different tour guides for every talk.

Observations has shown that visitors' sign reading behaviour has improved over the past five years. In addition, more participants actually discuss the information on it. On the other hand, the observations show that - just like five years ago - more than half of the visitors do not look at educational signs. Visitors also do not read the signs as long as they did five years ago. This indicates a difference between visitor perception and research results.

The results of this thesis indicate that visitors do feel that they want to learn about animal related topics. Zoo visitors mention educational aspects of the zoo as a main reason for a visit. Visitors want to learn (more) about animal welfare, general information about the zoo animals and personal details about the animals. Visitors note "more contact with animals in certain ways, more harsh facts and eye openers about endangered animal species and more information in animal talks about general and detailed information about the animals" as subjects that could change their attitude towards the natural world.

Recommended is to get a more reliable answer on the first part of the research question, by using an additional data method. During a longer period of time, visitors can fill in a survey when they leave the zoo to go home. This survey will be about their participation in the educational tours and encounters. The visitors can fill in if they have participated and they can rate on a scale from one to five if they are interested in zoo educational messages. It is also recommended to focus the new educational activities on contact with animal species, as this is mentioned multiple times as an activity that could encourage visitor participation and attitude regarding the natural world. Focussing on more detailed information about the zoo animals, give the animal tour talks a "wow" effect and shock visitors with harsh facts and eye openers are recommended to use in new or existing educational tools. Because of visitors' focus on entertainment and family bonding, the new educational activities will most likely be effective by using interactive, hands on experiences. In addition, it is recommended to focus on child friendly educational messages and activities.

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Samenvatting

Elk jaar nemen veel bezoekers van dierentuinen en aquaria van over de hele wereld deel aan educatieve mogelijkheden in dierentuinen. Door gebruik te maken van educatie, kunnen dierentuinen en aquaria mensen aanmoedigen om deel te nemen aan het managen en beschermen van wereldwijde biodiversiteit, omdat dit een positieve invloed op milieutechnische uitlagen zal hebben. De Isle of Wight Zoo is een dierentuin die de verhoogde waarde van educatie ook inzien. De dierentuin wil beleving en educatie met elkaar verbinden, sinds dit twee belangrijke aspecten voor een dierentuinbezoek zijn. Het is belangrijk om de juiste balans te vinden tussen beleving, entertainment en de educatieve boodschap. Deze scriptie zal zich focussen op de meest effectieve manier waarop dierentuinbezoekers leren en willen leren, met betrekking tot belangrijke boodschappen over het waarderen van de natuurlijke wereld, dierwelzijn, training programma's en populatie management. Het doel van deze scriptie is om uit te vinden waar de interesse van de bezoekers van de Isle of Wight Zoo ligt en daarbij de reden voor een bezoek aan de dierentuin. Op deze manier kan dit onderzoek bijdragen aan het doel van de dierentuin: het verhogen van het bewustzijn van de dierentuinbezoeker, met betrekking tot het waarderen van de natuurlijke wereld.

De onderzoeksvraag is onderzocht aan de hand van explorerend onderzoek. Bij de beantwoording van de deelvragen is gebruik gemaakt van literatuur studie, enquêtes, evaluaties, observaties en interviews. De enquête bevat vijf belangrijke vragen en is samen met het conservatie onderzoek online gezet. De enquête moest kort en bondig zijn, op die manier zouden bezoekers zich meer aangemoedigd voelen om deel te nemen aan de enquête. De observaties zijn uitgevoerd door 15 verschillende informatieborden te observeren, verspreidt over 15 observatie uren. De interviews zijn afgenomen bij vijf verschillende informatieborden, met 10 verschillende deelnemers. Tot slot zijn de evaluaties uitgevoerd door zes verschillende educatieve tours te evalueren, evenals de drie verschillende tour presentators.

De resultaten van deze scriptie tonen dat bezoekers aangeven dat deze willen leren over dier gerelateerde onderwerpen. De bezoekers noemen de educatieve aspecten als een reden om de dierentuin te bezoeken. Dierwelzijn, algemene en meer gedetailleerde informatie over de dierentuindieren worden genoemd als onderwerpen waar de bezoekers meer over willen leren. Bezoekers geven eveneens aan dat meer contact met verschillende diersoorten gewenst is. Dit zijn allen onderwerpen die de houding van bezoekers tegenover de natuurlijke wereld zou kunnen verbeteren. Observaties tonen dat, vergeleken met vorig jaar, meer bezoekers de informatieve borden lezen. Daarbij bespreken meer bezoekers de informatie die op de borden staat. Maar daar tegenover staat wel dat meer dan de helft van de bezoekers niet leest wat er op de borden staat, net zoals dat vijf jaar geleden het geval was. Ook lezen bezoekers minder lang dan vijf jaar geleden. Dit zou kunnen betekenen dat er een verschil tussen de beleving van de bezoeker en de daadwerkelijke onderzoeksresultaten. Aanbevolen wordt om een andere dataverzamelmethode te gebruiken om een meer betrouwbaar antwoord op de onderzoeksvraag te krijgen. Tijdens een langere periode kan een enquête worden gegeven aan dierentuinbezoekers die de dierentuin verlaten. De bezoekers kunnen daarbij invullen of er interesse is in educatieve boodschappen, waarbij er een schaal van 1 tot 5 ingevuld kan worden hoe groot deze interesse is. Ook wordt aanbevolen om de focus te leggen op contact met verschillende diersoorten, gezien dit meerdere keren genoemd wordt als een activiteit dat een positief effect kan hebben op de waardering en houding van bezoekers tegenover de natuurlijke wereld. Meer focus op gedetailleerde informatie over de dierentuindieren, meer 'wow' momenten en harde feiten in de dierenpraatjes worden ook aanbevolen om te gebruiken bij nieuwe of al bestaande educatieve activiteiten. Door de focus op familietijd en entertainment, zullen de nieuwe activiteiten waarschijnlijk het effectiefst zijn wanneer er interactieve en praktische ervaringen gebruikt worden. Het is daarbij aan te raden om het nieuwe educatieplan ook te focussen op kindvriendelijke educatieve boodschappen en activiteiten.

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Chapter 1 Introduction

“Zoos must educate, argue and explain” (Wilson, 1993). Many visitors of zoos and aquaria all over the world take part in zoo educational opportunities each year. These two groups share the same interest: commitment to environmental education. By means of education, zoos and aquaria can encourage people to participate in protecting and managing global biodiversity, which has a positive influence on environmental outcomes over time (Matiassek & Luebke, 2014, ed. 41, p. 77-84). Education has become a central objective. (Patrick & Tunnicliffe, 2013). Many zoos include wildlife conservation into the zoos mission and have started changing the focus of the institutions. This is in order to increase the benefits of the zoo’s activities even further (Zimmermann, 2007).

It is possible that the educational aspect of a zoo visit can be strengthened by drawing a visitors attention to particular wildlife- related issues and campaigns (van Dijk et al., 2012, ed. 33, p. 1502-1510). An example of a certain campaign is the BIAZA Big Bug Bonaza (BBBB). The British and Irish Association of Zoos and Aquaria (BIAZA) wants to increase awareness of people towards the great role an invertebrate plays in the eco system. Zoos and aquaria in the United Kingdom will hold lots of fun activities to raise awareness about insects, and show people what fascinating creatures exist in the bug world (BIAZA, 2015). People often dislike invertebrates or are scared of them, the BBBB wants to use the special activities to create more positive attitudes towards invertebrates.

The Isle of Wight Zoo is one of the zoos which recognizes the increased importance of education. The zoo wants to create more awareness of the visitors towards environment and wildlife conservation, as this is a major aspect of a zoo’s mission. In addition, the zoo has strategies in place to make education about the natural world as accessible as possible, with the hope of inspiring the next generation of conservationists (Isle of Wight Zoo, 2011). Through adding new activities to the educational programme of 2015, the zoo wants to focus on aware more people about the destruction of habitats of more and more endangered animals. “There is no need for a lot of money, it is just a matter of recognizing the opportunities within an organisation to participate” (Gordon, 2008, ed. 44, p.7). Participation with the BBBB and the develop of activities for this campaign, will make a contribution to this goal.

Eventually, the educational programme will be used as a tool: to deliver important messages about conservation and biodiversity to the visitors of the zoo. Studies have revealed that the understanding of zoo visitors, regarding basic animal biology, is fairly secure. But on the other hand, their ideas about more complex concepts are unsophisticated and at times confused. This result suggests that incorporating material into zoos’ education programmes across a range of topics and at different levels of complexity, are necessary in order to facilitate the development of all visitors’ scientific knowledge and understanding (Dove & Byrne, 2013, ed. 4, p. 17-18).

The results of the research that is mentioned before, suggests that the educational programme has to include a range of topics and different levels of complexity. The level of the zoo visitors is investigated. But how exactly do the visitors learn, and how do they want to learn? Do they actually want to learn? Tunnicliffe and Scheersoi mentioned in their investigation in 2009, that visitors of a zoo are well aware of topics as; the effect that humans can have on the natural world, but that it is not their primary interest in making a visit to a zoo. As mentioned before, this topic belongs to the primary thing zoos want to focus on. Earlier studies reveal that families primary interest is to provide their children with opportunities to see animals, this is an important motivating factor for their visits. It also reveals that the interest and expectations of zoo visits are more focused on entertainment or family bonding, than animal welfare or education (Linke & Winter, 2010). At the same time, more managerial attention is required to provide different educational programmes and a more

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naturalized zoo environment, which were defined as important determinants of overall satisfaction of zoo visits (Lee, 2015, ed.47, p.251-260).

The Isle of Wight Zoo wants to connect two important aspects of zoo visits: perception and education. Although education is not the primary interest of zoo visitors, zoos want to deliver a message about conservation, animal welfare and biodiversity. Therefore, the zoo is attempting to be both, an experience as a source of information. The right balance between perception, entertainment and the educational message has to be found. This thesis will focus on the most effective way visitors will learn and want to learn, regarding important messages about valuing the natural world, animal welfare, wildlife population management and training programmes. These messages has to be spread by connecting perception and education. Because of this focus, detailed discussion about other aspects of education; like conservation and biodiversity, will stay out of the picture. The goal of this thesis is to find out the interests of zoo visitors of the Isle of Wight Zoo and to clarify visitors' main motivations to visit a zoo. The idea is that the research contributes to the goal to find out in what way visitors will learn and want to learn. In this way, the research can contribute to the zoo's goal: to raise visitors' awareness regarding valuing the natural world.

Based on the information that is discussed in this introduction, the research question of this thesis will be: "Do the visitors of the Isle of Wight Zoo have a need for zoo educational messages and if so, how could this be translated to the educational programme of 2015 in a way that it encourages visitors to take part in it and helps them to value the natural world?"

Added to this research question are the following sub- questions:

1. Do zoo visitors consider educational activities as one of the main reasons to visit the Isle of Wight Zoo?
2. What educational topics are zoo visitors most interested in learning (more) about?
3. To what extent do visitors value the natural world?
4. What can be done to increase visitor participation in educational activities?
5. What can be done to develop visitors' positive attitude towards the natural world?

It is possible that the outcome of the research suggests that visitors in the Isle of Wight Zoo are not interested in zoo educational messages. In this case, if the activities are enjoyable, visitors may still be motivated to do the activities and the visitor may still increase their knowledge and understanding, even if that is not the primary intention of visiting the zoo. It could also come to similar recommendations as mentioned in earlier research. Another possibility is that the research will reveal different and renewing results. The research will be used as a tool for the development of the new educational programme, as the research can give more detailed information about an effective implementation of the new educational trails and activities. The thesis is meant to find out the most effective way of translating educational messages, so that most zoo visitors can learn from it.

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Chapter 2 Methodology and participants

This chapter describes which materials and participants were needed to execute the research. It also describes the working method, the data collection methods, the analysis and the ethical considerations.

2.1 Materials and participants

This sub-chapter describes the materials and participants that are required to execute the research properly.

2.1.1 Materials

List of materials that are used:

- ✓ (Scientific) literature studies
- ✓ Agenda or notebook
- ✓ Printed evaluations
- ✓ Printed survey / online survey.

Literature

During the research, literature is used as background information and potential to support or disprove the findings and results of the research. Literature study was also used to support subjects in the discussion and conclusion. (Scientific) literature can be found in databases like Wiley Interscience, Springerlink and Science Direct. It was also provided by the education department of the Isle of Wight Zoo and the BIAZA association, which has useful links on the site. Several key words are used during the search for relevant literature for this thesis:

- ✓ Conservation and zoo
- ✓ Education and zoo
- ✓ Biodiversity and zoo
- ✓ Observation and visitor
- ✓ Experience and visitor
- ✓ Visitor and zoo.

In addition to online articles, multiple editions of the Journal of International Zoo Educators Association are used to get background information.

Agenda or notebook

Is used for observations, information and notes in the Isle of Wight Zoo.

Printed evaluations

Are used to evaluate the educational tours. This evaluation form is received from BIAZA Education Handbook (2014, p. 7). This handbook is not accessible without a member password.

Printed/ online survey

Are used as a tool to gather information for the research. More information can be found in subchapter 2.2 "Data collection methods".

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2.1.2 Participants

List of participants:

- ✓ Education team of the Isle of Wight Zoo
- ✓ Staff of the Isle of Wight Zoo
- ✓ Zoo visitors.

Education team

During the research, the student was involved with the education team of the zoo. This team is responsible for tours and educational activities in the zoo. In this way, the education team played a great role in developing activities and it was an important part of the research. Members of the education team had access to important information about education and the daily routine in the zoo.

Staff

The zoo staff is familiar with the daily routine and have provided useful information about, for example, the animals that can be used for educational activities.

Zoo visitors

The zoo visitors had the most important role in this research. The visitors were observed and questioned, in order to get the information that was needed to get a result. Therefore, the zoo visitors were also the *investigation units*. As mentioned in the introduction, zoo visitors are all at different levels of knowledge and learning. The prior goal of this research was therefore based on finding a way that most visitors of the Isle of Wight Zoo can learn from educational activities and tours. This means: the investigation unit “visitor” was a general understanding, regarding most visitors in the Isle of Wight Zoo.

2.2 Data collection methods

“It is essential that zoos and aquaria use a variety of methods to evaluate the impact of their education and training programmes”(The World Zoo and Aquarium Strategy, 2005).

The research question was investigated through *exploring research*. This is because the research question was based on how and why. The goal of this type of investigation is to develop various hypothesis. Furthermore, the investigation was executed through *mixed methods research*. In other words; qualitative and quantitative research are combined. The first part of the research question is based on if there is a need for zoo educational messages. The second part of the question is about how to translate this and how to encourage the visitors. This means the first part is quantitative and the second part is qualitative. An advantage of this combined research is, when executed in the right way, that the validity and reliability are increased. An example: based on interviews and observations, hypotheses can be formulated. By means of a survey, these hypotheses can be tested. Vice- versa, a survey can be an occasion for observations, that was used to get to the underlying mechanism of the quantitative results (De afstudeerconsultant, 2014).

The five sub-questions were answered by using five different data collection methods:

- ✓ Literature studies
- ✓ Survey
- ✓ Visitor observations
- ✓ Visitor interviews
- ✓ Tour talk evaluations.

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The survey was used to get answers on all sub- questions. The survey was based on *trend research*. This means the data was collected at different times, but the same questions were asked. Furthermore, data was collected *randomly*, no distinction was made between participants. Elderly people, teenagers, families and adults were approached and asked to fill in a survey. The survey contained five important questions and was online in combination with the conservation research. In total, the online survey contained eleven questions. The survey had to be short and effective, so the barrier for zoo visitors to fill it in would be as low as possible. In this way, the chance that zoo visitors would feel more encouraged to participate, would be bigger. The survey was online for four weeks and the link on social media was repeated three times. The personal surveys were spread around every other day for a period of three weeks, also to improve visitors' participation.

A check-up question was asked at the beginning of the online survey: "Did you ever visit the Isle of Wight Zoo?" The people who said no, were not able to answer the questions of this survey, because these people never visited the Isle of Wight Zoo. These respondents were no visitors of the Isle of Wight Zoo, what means that this group was not part of the investigation units. The people that answered "no" were therefore re-directed to the questions to the conservation research

In addition, literature studies were used to support or disprove the results of every sub-question. The relevant information that was found in this literature studies, was processed in the introduction and the discussion of this thesis.

A precise description about the additional data methods that are used for this research, can be found per sub- chapter.

2.2.1 Zoo visitors' main reason for a visit

Sub- question one: "Do zoo visitors consider educational activities as one of the main reasons to visit the Isle of Wight Zoo?" was answered by using relevant information out of previous literature studies, by the results of question one of the survey and by the results of the visitor observations.

The survey question that was used to get an answer on sub- question one is: "What are your reasons to make a visit to the Isle of Wight Zoo?" The visitors could fill in multiple answers.

- ☐ To have a nice family day out
- ☐ To introduce my children to different kinds of animals
- ☐ To gather information about the animals that are living in the zoo, for example: to take part in the zoo tours and read the educational signs
- ☐ To take part in the different kinds of daily, unique experiences: like the animal encounters with wallabies and meerkats
- ☐ To make use of the paid unique experiences: like keeper for a day, tiger milk feeding and big cat training
- ☐ Other reason- please tell us your reason.

This question was asked to get sight on the visitors' motivation to come to the zoo, and compared with the results with results from previous researches.

Sign study

As the visitors walked through the park, there were multiple information signs about the different animals in the zoo. The sign tells the visitor what kind of animal it is, where it is from, when it is born and important, why it has a value to the ecosystem. The signs are designed to easily explain to the visitors why all animals are of value to this world, even though maybe it is not as clear to humans.

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The old signs were already investigated by the zoo, but the new signs were not properly tested yet. Investigated was whether the signs have an effect on zoo visitors and whether visitor can understand and appreciate these signs. The same data collecting method was used during this evaluation and the results of this investigation were compared with the results of the previous investigation. This previous investigation was executed in 2010 by Tracy Dove, Head of Education of the Isle of Wight Zoo. The research included two methods. The first method was visitor observations during a period of 15 observation hours and with 15 different signs. The second method were personal interviews with ten different people at 5 different signs. A filled in example of the forms that were used for this study, can be found in Annex I.

The observations included three parts that had to be filled in:

- Did the visitor look at the sign? Yes/ No
- How many seconds did the visitor look at the sign?
- Did the visitor discuss the information that is on the sign with others? Yes/No

The first visitor of a group that entered the reading zone of a sign was observed. The remaining group members did not count. If the group came back and another person entered the reading zone first, it counted as a new group.

The outcomes of the observations were used as an indicator for this sub-question. If visitors did not look at the signs, so visitors are not reading educational messages, this indicated a lack of interest. If visitors did read the signs, this indicated an interest for educational messages.

2.2.2 Zoo visitors' most interesting educational topic

Sub- question two: "What educational topics are zoo visitors most interested in learning (more) about?" was answered by using relevant information out of previous literature studies, by the results of question three of the survey and by visitor interviews.

The survey question that was used to get an answer on sub- question two is: "What topics would you be interested in learning (more) about within the zoo?" The visitors could fill in multiple answers.

- ☐ Conservation (projects)
- ☐ Animal welfare
- ☐ General information about the zoo animals
- ☐ Personal details about the zoo animals
- ☐ Animal behaviour/ training
- ☐ Captive population management/ breeding programs
- ☐ Other topic- please tell us your topic.

This question was asked to figure out what information can help to get more visitors interested and involved with education. In this way, topics where zoo visitors are most interested in, become clear. This outcome of this question is valuable, it can provide the needed information to change visitors attitude or participation in protecting the natural world.

The outcomes of the interviews, as a part of the sign study, were also used as an indicator for this sub-question. One of the questions asked in the interview was if visitors miss any information on the signs. The visitor then had the freedom to add suggestions or comments on information that was missing on the signs.

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Additional questions of which the interview contains, were:

1. Tell me about the information contained in this sign?
2. What have you found out from the sign?
3. Give me your view about the design and layout?
4. How easy is it to read and understand?
5. Other comments or suggestions?

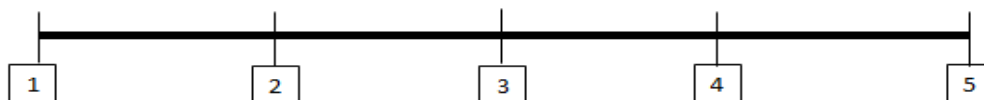
A filled in example of an interview that took place, can be found in Annex I.

For the ethical considerations about visitor observations and interviews, see subchapter 2.3. “Ethical considerations”.

2.2.3 Valuing the natural world

Sub- question three: “To what extent do visitors value the natural world?” was answered by using relevant information out of previous literature studies and by the results of question four of the survey.

The survey question that was used to get an answer on sub- question three is: “On a scale from one to five, where one is very much and five is not at all, do you think the zoo is protecting the natural world enough?” The visitors could mark their answer.



The answer on this question is compared with the work the Isle of Wight Zoo is already doing regarding the protection of the natural world. It also reflects on the opinion of the visitors and on how the visitor can support the actions of the zoo.

2.2.4 Increasing visitor participation in educational activities

Sub- question four: “What can be done to increase visitor participation in educational activities?” was answered by using relevant information out of previous literature studies, by the results of question two of the survey and by the tour talk evaluations.

The survey question that was used to get an answer on sub- question four is: “What are your favourite things about the zoo?” The visitor could fill in multiple answers.

- ☐ The amount of unique animal species in the zoo
- ☐ That it is a small, personal and close zoo: you can get close to the animals
- ☐ That it has special, child friendly activities
- ☐ The educational aspects: like the daily tours and the information signs
- ☐ The animal encounters
- ☐ The special experiences: like keeper for a day and tiger milk feeding
- ☐ Other favourite thing- please tell us your suggestion

This question was asked to help get an insight in visitors’ interest and which things about the zoo were appreciated/valued by them.

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Tours talks

There were several educational tours that took place in the zoo:

- ✓ Animals of the new world
- ✓ Lemur feed
- ✓ Lion talk
- ✓ Tiger talk
- ✓ Big cat feed
- ✓ Meerkats of the Kalahari.

These tours provide visitors knowledge about the animals that are living in the zoo. The tour guide used background information, real- life examples, facts, tools; like a lion skull and interaction with the animals in a tour.

The educational tours were evaluated by using an official evaluation form, that was also used by Bristol Zoo and Chester Zoo. The form helped to develop their talk programmes. This evaluation form was received from BIAZA Education Handbook (2014, p. 7). This handbook is not accessible without a member password. A filled in tour evaluation form can be found in Annex II. The findings suggest changes or improvements regarding the educational tours, which can improve visitor participation in the educational activities.

2.2.5 Developing visitors' positive attitude towards the natural world

Sub- question five: "What can be done to develop visitors' positive attitude towards the natural world?" was answered by using relevant information out of previous literature studies and by the results of question five of the survey.

The survey question that was used to get an answer on sub- question five was: "How could the zoo help or encourage you to take positive action that would benefit wildlife?" This question was an open question, to let the visitor think and to provide the visitor the freedom to use their imagination.

The online survey included a different question five: now the respondent had options to choose from. "Which activity in a zoo would help you to feel more involved in conserving endangered species? Multiple answers are possible."

- ☐ Lecture on conservation projects
- ☐ Contact with a particular species
- ☐ Information on the signs about this topic
- ☐ A distant adoption in India or Madagascar
- ☐ Visuals on this topic
- ☐ Bring the impact of losing certain species into the picture
- ☐ A stand especially for this topic
- ☐ Information processed in animal talks
- ☐ Other activity- please tell us your suggestion.

2.3 Ethical considerations

Because the research included surveys, observations, interviews and evaluations, ethics had to be taken into consideration. When visitors were observed, signs were spread through the zoo. These signs told the visitors that there is an investigation going on, and that it was possible that observations took place. It also mentioned that conversations between visitors may have been used for the research.

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2.4 Analysis

The data from the surveys, interviews, observations and evaluations individually form a result of the research. The results were compared with knowledge from previous scientific literature and the outcomes of these researches. After evaluating these results, a discussion is started. This leads to the conclusion and recommendations regarding the educational programme of the zoo.

Chapter 3 Results

The results of every data collection method are described in this chapter. There are five different sub- chapters, each one describes the results of a sub- question. More details can be found in Annex I, II, III and IV.

3.1 Zoo visitors' main reason for a visit (results)

The results of question one of the survey and the results of the visitor observations are mentioned in this sub- chapter, as this data collection method was used to get an answer on the sub- question.

Question one of the survey was answered by 214 participants. Figure 3.1 below shows that participants' main reason to visit the Isle of Wight Zoo is "to have a nice family day out". This option was chosen the most (34%). "To gather information about the animals that are living in the zoo" (18%), "to introduce my children to different kinds of animals" (13%) and "to take part in the different kinds of daily, unique experiences" (13%) were chosen as second and shared-third motivation.

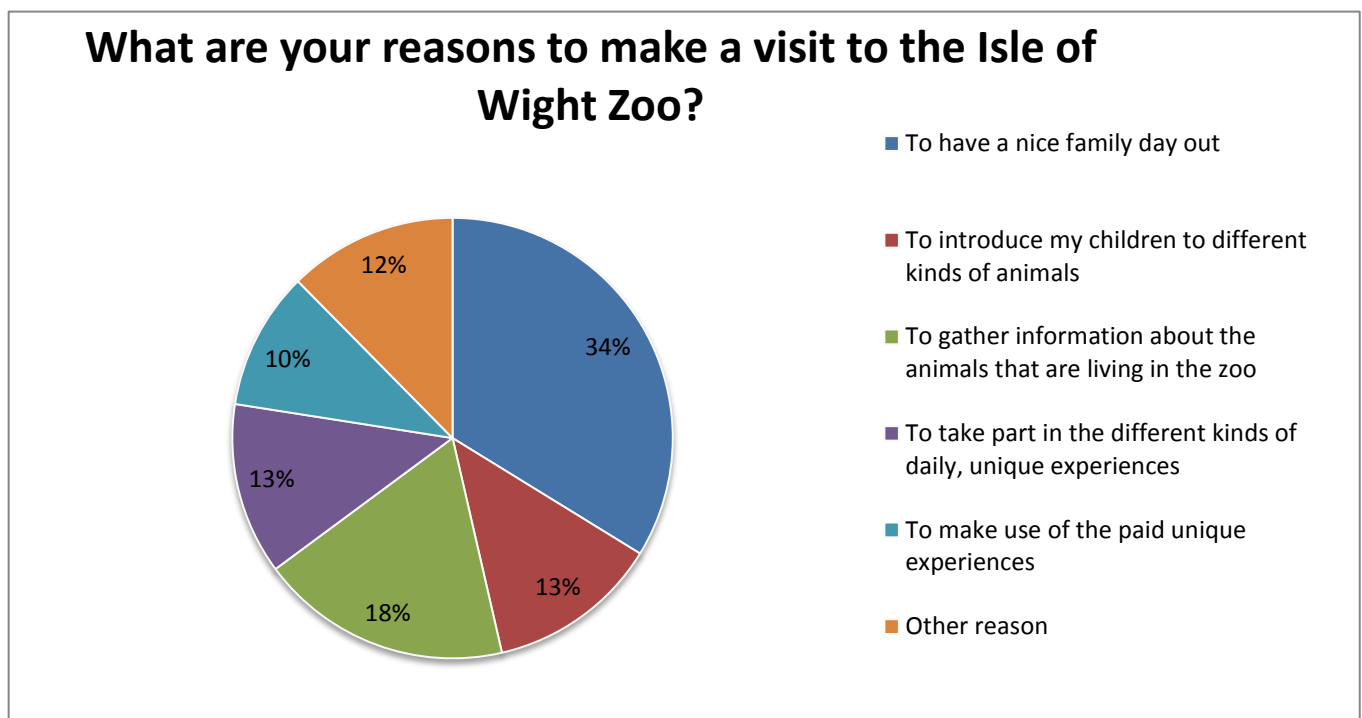


Figure 3.1 Results "motivations for a visit"

The results of the observations can be found on the next page. These new results were compared with the visitor observations in 2010, when Tracy Dove, Head of Education of the Isle of Wight Zoo, executed these observations. The research in 2010 was executed in the summer, so more visitors were observed. Exact numbers can be found on the left side in every figure. However, it was still valuable to compare this data with the results of the new research in 2015.

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Figure 3.2 shows that in 2010, 69% of the participants did not read the sign. The sign was discussed by 16% of the participants and 15% read the sign to themselves. Figure 3.3 shows that in 2015, 62% of the participants didn't the sign. The sign is discussed by 28% of the participants and 10% read the sign to themselves. Participants read the signs more often in 2015 and the signs were also discussed more.

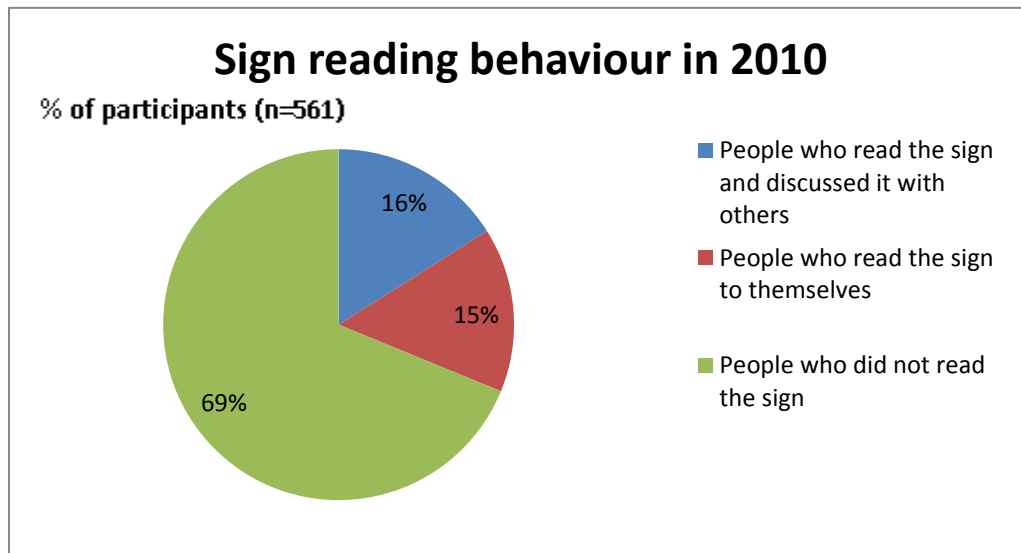


Figure 3.2 Sign reading behaviour in 2010

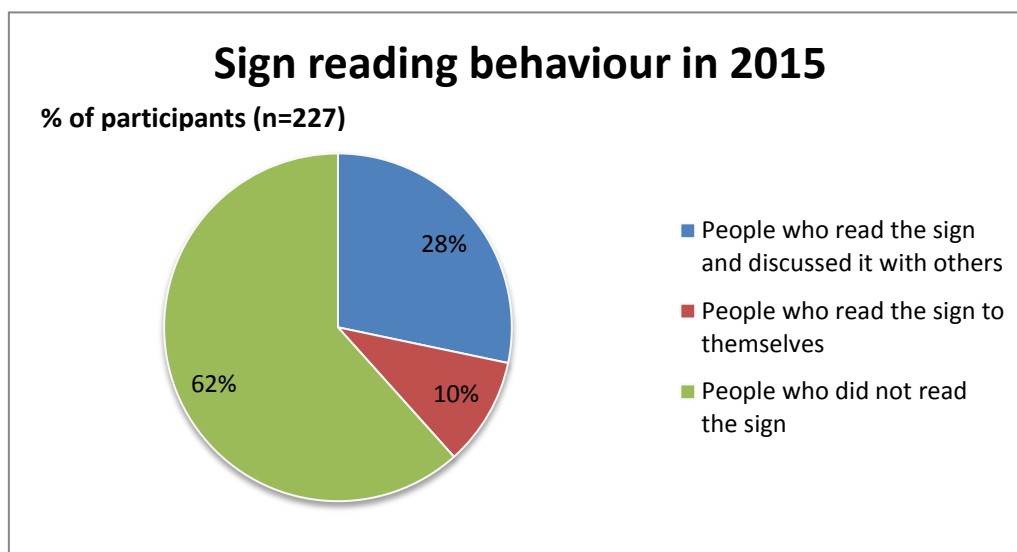


Figure 3.3 Sign reading behaviour in 2015

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In 2010, the mean period for which participants read the signs was 23.3 seconds. In 2015, the mean period for which participants read the signs was 7,18 seconds. Figure 3.4 shows that in 2010, 42% of the participants were reading the signs between 0-10 seconds, and 35% was reading the signs between 11-30 seconds. Figure 3.5 shows that in 2015, 78% of the participants spent between 0-10 seconds reading the signs and 21% spent reading the signs between 11-30 seconds. These figures show that most participants spent half a minute or less reading the signs, and that participants spent more time reading the signs in 2010. Fifty seconds was the longest time a participants spent reading a sign, this was the sign that is giving information about the brown Capuchin Monkey.

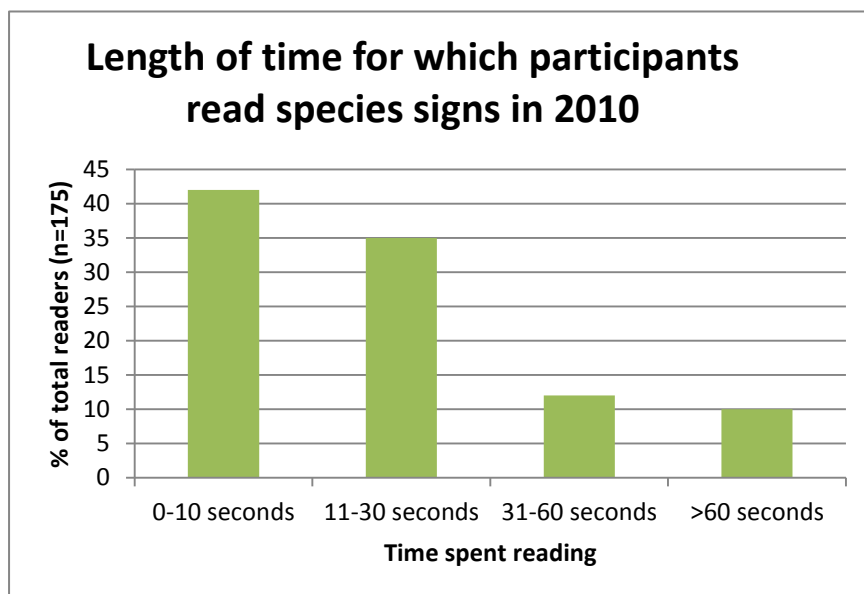


Figure 3.4 Length of time reading 2010

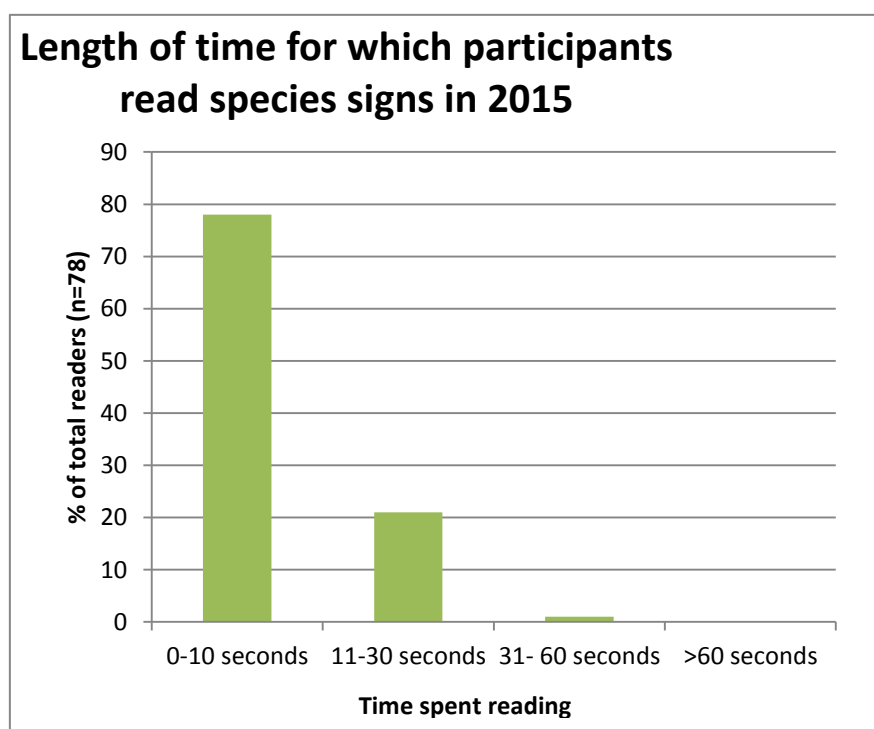


Figure 3.5 Length of time reading 2015

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Some signs have changed over the past years, also there have been some changes in the animal collection. Therefore, some new signs were observed in 2015. In 2010, the white tiger sign had the most readers (29), although the zone around the sign did not have the highest number of visitors. Figure 3.6 shows that the Black and white ruffed lemurs had the least participants entering the reading zone (28), while Meller's ducks and the Brown lemur had the greatest numbers (68). Figure 3.7 shows that in 2015, the Black and white ruffed lemurs and the Coati's had the most readers (8). The Black and white ruffed lemurs had also the most participants entering the reading zone (36). The female tiger (tigress) had the least participants entering the area.

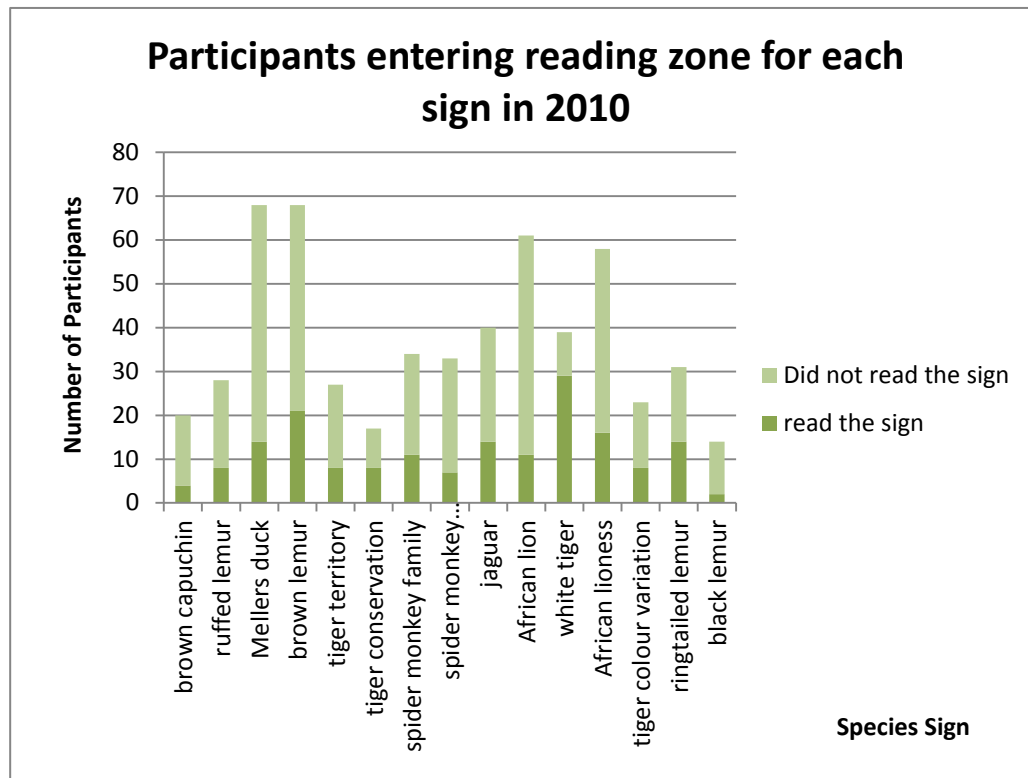


Figure 3.6 Reading zone each sign 2010



Figure 3.7 Reading zone each sign 2015

3.2 Zoo visitors' most interesting educational topic (results)

The results of question three of the survey and the results of the interviews are mentioned in this sub- chapter, as this data collection method was used to get an answer on the sub- question.

Question three of the survey was answered by 200 participants. Three topics were noted as topics participants are most interested in learning more about: animal welfare, general information about the zoo animals and personal details about the animals. These topics were all rated with 18%. The results are shown in figure 3.8 below.

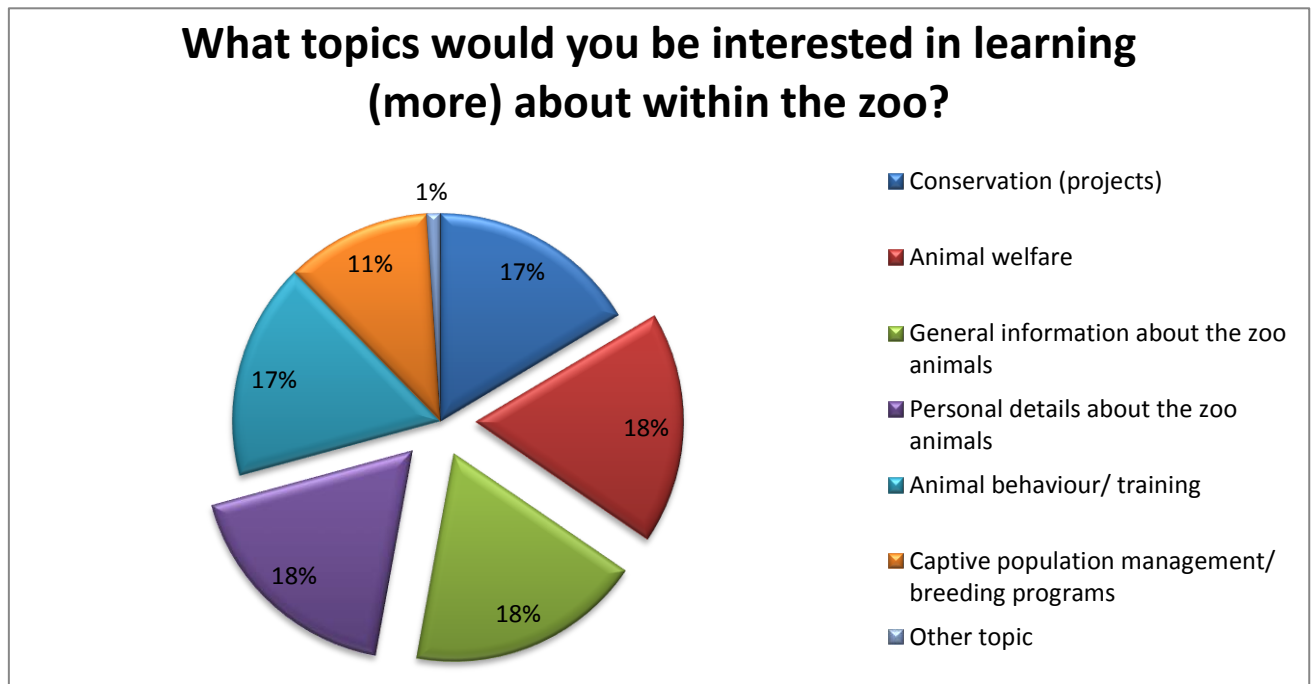


Figure 3.8 Results "most interesting topics"

The interviews of the sign study in 2010 showed that:

- ✓ Most of the information on the signs is easily understood
- ✓ Visitors are able to develop their knowledge by reading the information on the signs
- ✓ Specialist terms such as those used to describe conservation status need to be defined and clearly explained (Dove, 2010).

The sign study in 2015 showed that:

- ✓ The new signs are really easy to understand; also for foreigners who do not have English as their first language
- ✓ Almost all participants understood the conservation aspects described on the signs
- ✓ Most participants thought the information on the signs is clear and basic
- ✓ Most participants found out something new from the signs
- ✓ Some participants said that some more detailed information about the animals- like their background and a map where they are found in the wild- missed on the signs.

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3.3 Valuing the natural world (results)

The result of question four of the survey is mentioned in this sub- chapter, as this data collection method was used to get an answer on the sub- question.

Question four of the survey was answered by 211 participants. The results in figure 3.9 below show that most participants (35%) choose option two on a scale from one to five.

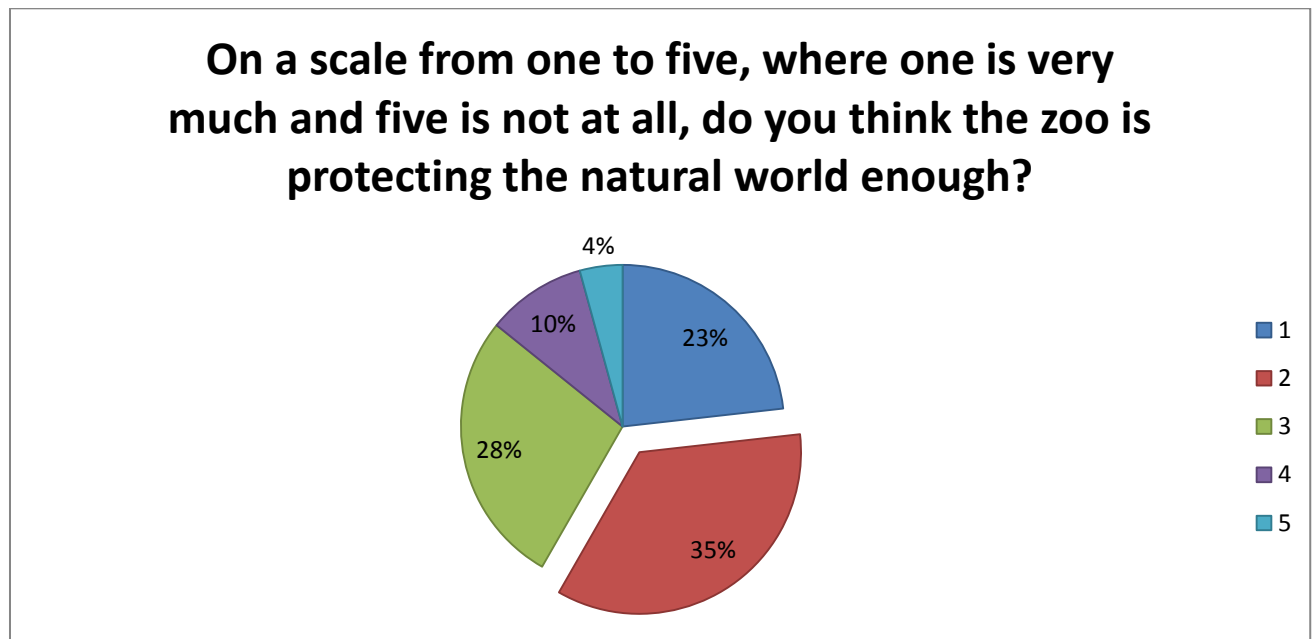


Figure 3.9 Results “valuing the natural world”

3.4 Increasing visitor participation in educational activities (results)

The results of question two of the survey and the results of the tour talk evaluations are mentioned in this sub- chapter, as this data collection method was used to get an answer on the sub- question.

Question two of the survey was answered by 213 participants. The results in figure 3.10 below show that 28% of the participants’ mentioned “that it is a small, personal and close zoo: you can get close to the animals” as their favourite thing about the zoo. “The animal encounters” (18%) and “the amount of unique animal species in the zoo” (16%) were noted as second and third favourite thing.

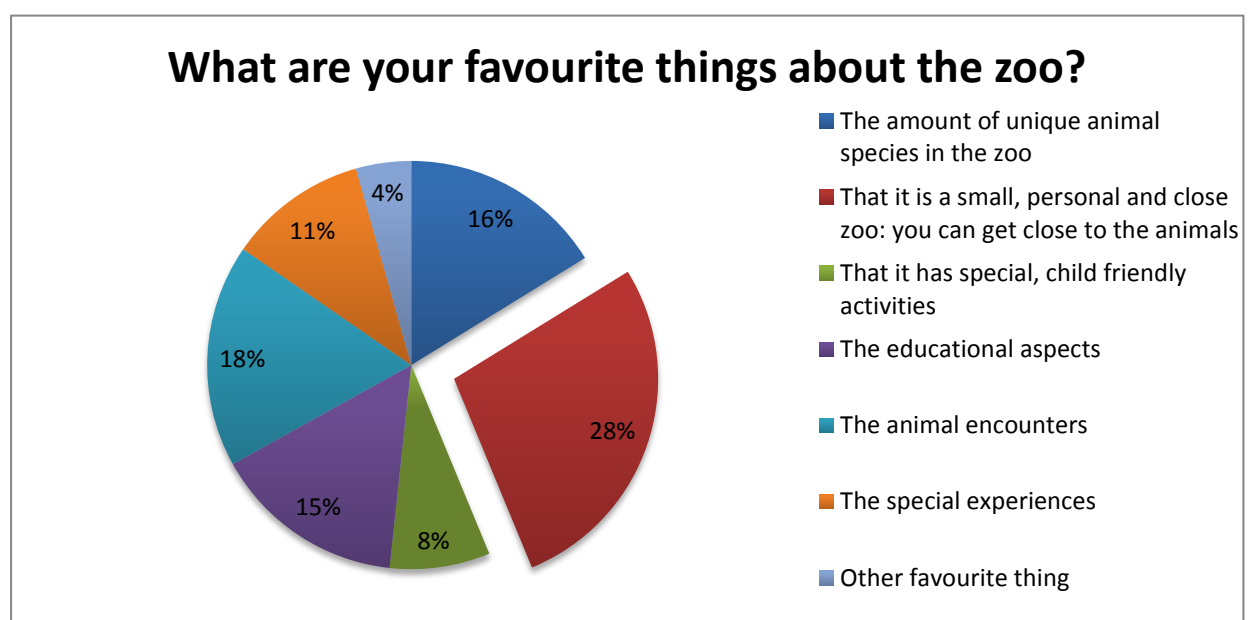


Figure 3.10 Results “favourite things about the zoo”

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The results of the tour talk evaluations in table 3.1 shows that overall, the tour “Lemurs of Madagascar” scored the most points in total. It also shows that tour guide 2 scored the most points in total. The tour “Lion talk” scored the least points in total. Parts that scored just one point (rating: no) were:

- ✓ There was no obvious position for a presenter
- ✓ Sometimes there was no working audio equipment
- ✓ There is no shelter for visitors
- ✓ It wasn't always a mixed species exhibit
- ✓ It wasn't always related to a particular field programme or project.

Lemurs of Madagascar and Animals of the new world were tour talks about different animal species (mixed species exhibit). Lion talk, Tiger talk, Big cat feed and Meerkats of the Kalahari were not.

Lemurs of Madagascar and Tiger talk were tour talks that are related to particular field programmes/ conservation projects. Lion talk, Animals of the new world, Big cat feed and Meerkats of the Kalahari were not.

The animal encounters were particularly focussed on the experience to make contact with an unique animal. Little information about the animals was shared, the focus wasn't on educational or conservational messages. The amount of information that was shared, varied with the encounter and the keeper or tour guide who was present during the encounter.

Table 3.1 **Results evaluations**

Tour guides	Tour guide 1	Tour guide 2	Tour guide 3	
Total points per tour (102 possible)				
Name tour				Total per tour (306 possible)
Animals of the new world	81	82	75	238
Lemurs of Madagascar (Lemur feed)	87	87	90	264
Lion talk	69	77	75	221
Tiger talk	85	86	80	251
Big cat feed	82	94	74	250
Meerkats of the Kalahari	85	81	80	246
Total per tourguide (612 possible)	489	507	474	

3.5 Developing visitors' positive attitude towards the natural world (results)

The result of question five of the survey is mentioned in this sub- chapter, as this data collection method was used to get an answer on the sub- question.

Question five of the survey was answered by 154 participants. The reason for this lower number was because many participants choose to leave this question unanswered on the paper survey. The question on the paper survey was an open question and the online version had options, see subchapter 2.5 for more information. The three suggestions that are mentioned most in the paper survey, were combined with the options from the online survey and are processed in figure 3.11 below. This figure shows that contact with a particular species was most mentioned(18%) as an activity that would help participants feel more involved in conserving endangered species. "Bring the impact of losing certain species into the picture" (17%) and "information processed in animal talks"(14%) were second and third most mentioned activity that could help participants feel more involved.

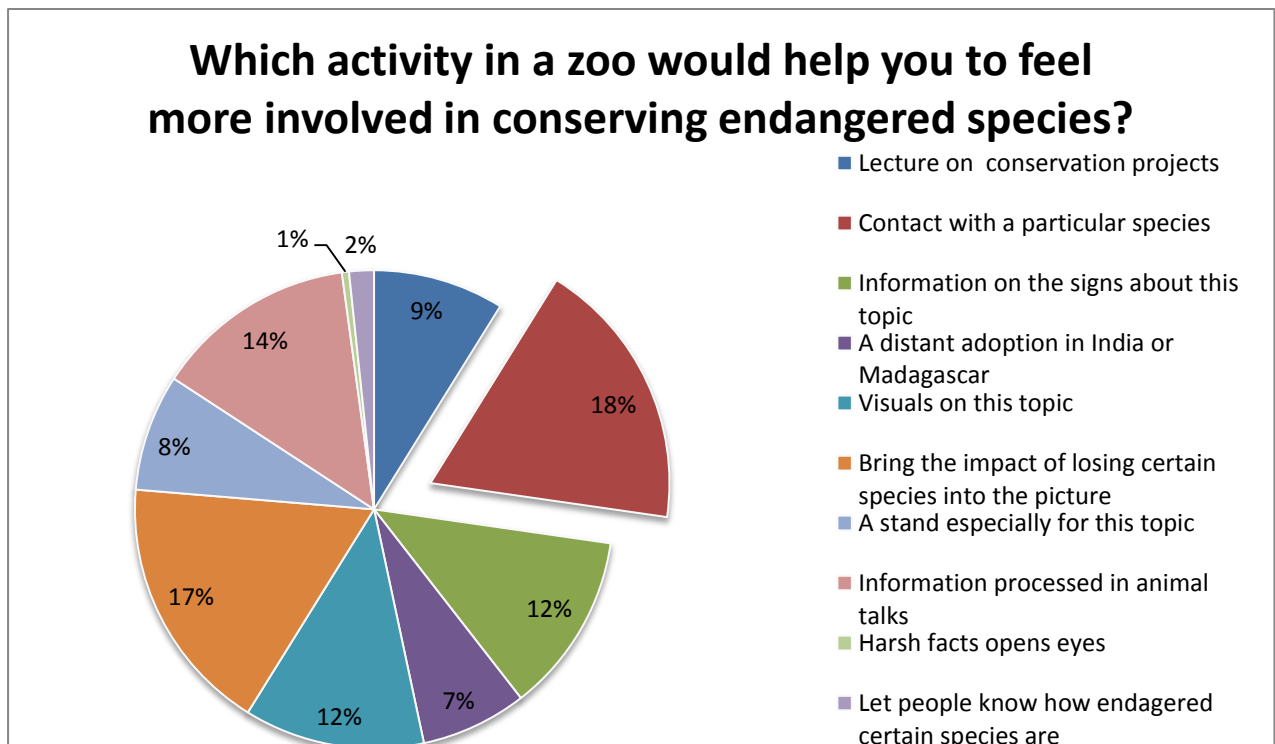


Figure 3.11 Results "activities to feel more involved"

Chapter 4 Discussion

Most of the visitors of the Isle of Wight Zoo have chosen “a nice family day out” as their main reason to visit the zoo. “To gather information about the animals that are living in the zoo, for example: to take part in the zoo tours and read the educational signs” is the second best main reason for visitors to visit the Isle of Wight Zoo. The educational activities can still be considered as one of the main reasons to visit the Isle of Wight Zoo, because the visitor had the opportunity to choose multiple reasons.

The results of the sign study show that visitor’s sign reading behaviour has improved over the past five years. Also, people are discussing the contents of the signs more than five years ago. But on the other hand, still more than half of the visitors in the reading zone of the sign, do not read the signs. In addition, time that visitors spend reading the signs has decreased since 2010. In this way, the results of the survey and the results of the observations are antithetic. There is a difference between visitors’ perception and reality. Visitors do consider educational activities as one of the main reasons for a visit, but this educational opportunity is being ignored by more than half of the visitors. This difference between perception and reality is supported by relevant literature. This earlier study states that although some people may cite education as one of the reasons for their visit, it is often not their primary objective (Dutta, 2005, p.15).

A reason for the fact that the signs are being ignored can be that the design and content of exhibit labels in zoos and museums is often poor, with labels reflecting the values and needs of the preparer, rather than those of the visitor (Blais, 1995). On the other hand, there is now considerable understanding of the factors that affect the educational quality of exhibit signs and labels. Zoo and museum educators increasingly utilise these factors effectively to communicate ideas and concepts to visitors (Serrell, 1996). An example of this is the develop of the new signs, after the research that was executed in 2010 by Tracy Dove. Whether the visitor stops to read a sign or not, will depend on their perception of whether it is worth taking the time and effort required to read it. In addition, zoo visitors are less likely to read a sign if the visitor is distracted by something that the participant thinks was more interesting (Thompson & Bitgood 1988). Earlier studies also reveal that visitors were less likely to give much attention to an element of an exhibit that was badly-placed (Alt & Shaw, 1984). The facts out of this studies can be submitted to the fact that some areas that were observed during the signs study in 2015, just had a few visitors entering the reading zone. An example is the area that had the least visitors in the reading zone: the tigress, which is placed in a dead corner of the zoo behind the education centre. Visitors normally won’t walk past it during their visit, unless the visitor is familiar with the zoo and knows it’s there. It took the researcher of this thesis one week to found out there that there were two more tigers in that area.

The amount of text on a sign also influences if visitors are stopping to read or choose to ignore the signs. Labels of fewer than 75 words are more likely to be read than larger blocks of text (Bitgood, 1991). The length of time spent reading indicates a sign’s holding power. Thomspson and Bitgood found out in a study that was executed in 1988, that there was a direct relation between the number of words on a sign and the mean reading time per word. This study suggests that when a sign contains lots of text, a visitor may skim quickly through it, searching for interesting or relevant items rather than reading every word. The facts out of these researches don’t exactly match the results of this thesis, because the old signs contained a lot more information and words than the new signs, but the reading time of the new signs decreased. On the other hand, more people are reading the new signs and the information is found more interesting, because more people are discussing it with others. Visitors said in the interviews that the information was clear and basic. In this case, this basic information could indicate the decreased time that is spent reading the signs, if the information is too basic to hold visitors’ attention. Additional factors that might influence if a visitor is motivated to

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stop to read a sign are: images, clear headings and interest in or curiosity about the exhibit (Serrell 1996). Serrell also indicates that by varying sentence length and presenting information in short paragraphs, it may mean that signs are seen to be more inviting, especially if clear and informative headings are used to identify themes. The results of the interviews indicate that visitors think the signs are attractive and have a nice colour. It also indicates that the signs are easy to understand and visitors find out something new from the signs, the signs are divided in separate parts like conservation status, natural habitat and diet. Visitors state that the conservation parts of the signs are well understood, different than five years ago, when visitors state that specialist terms such as those used to describe conservation status need to be defined and clearly explained (Dove, 2010). This matches the fact that more visitors stop, read and discuss the signs more than five years ago: the holding power of the new signs has increased.

In perception, zoo visitors consider educational activities as one of the main reasons to make a visit to the Isle of Wight Zoo if this is asked in a survey. In reality, it is not considered as the main reason to visit a zoo. A lot of work still has to be done to increase visitor participation in educational activities.

To measure visitors' actual participation in educational activities, an additional data collection method is recommended. During the research, the researcher counted the number of visitors that participated in the tour talks to investigate the participation of zoo visitors. These numbers were compared with visitor numbers of that measure day. After evaluation of this data collecting method, the student came to the conclusion that this type of data collection could not give a reliable answer. This is because at the time of a tour talk, it was not clear how many visitors were in the zoo at that exact moment. In this way, visitor participation could not be measured in percentages, because a part of the needed data was missing. Visitor numbers could only be given at the end of the measure day. When visitor participation of all day's tour talks is measured and compared with visitor numbers of a measure day, it also cannot give conclusive answers. This is because visitors may have participated in more than one tour talk. There was not enough time left to make changes in the data collection, the researcher therefore chose to reject this type of data collection.

Linke & Winter's said in their study in 2010 that the interest and expectations of zoo visitors are more focused on entertainment and family bonding, than animal welfare or education. The results of this thesis show, on the other hand, that animal welfare is a topic that visitors want to learn (more) about, although education is not the main reason for visitors to come to the zoo. Added to animal welfare are general- and more detailed information about the zoo animals. These three topics are considered as topics that visitors are interested in learning more about. This can be supported by the information that visitors gave at the interviews: most of the visitors missed a map on the signs that shows the location of that particular animal in the wild. Zoo visitors are interested in this kind of background information of zoo animals. This kind of background information could increase visitors' interest in the educational signs, as it could increase the reading time. Next to adding maps to every sign, a world map showing the location of every zoo animal in the wild, can be designed. An idea is to place this map at empty walls at more remote parts of the zoo. It can be used as an extra design and as a new part of the educational trail.

The zoo is doing a fairly good job protecting the natural world, the zoo scores two out of five. The zoo is judged well by the visitor, regarding this aspect. Because this doesn't say much about to what extend visitors value the natural world, this sub- question isn't answered. For the overall view, the sub- question didn't add new or valuable information to this research. Besides, an answer based on a survey question, would probably not give a realistic answer, considering the survey results of sub-

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question one. The question could better have rephrased to if visitors think the zoo is doing a good job protecting the natural world, instead of to what extent the visitor value the natural world.

“That it is a personal and close zoo, you can come close to the animals” is mentioned as visitors’ favourite thing about the zoo. “The animal encounters” and “the amount of unique animal species in the zoo” are noted as second and third favourite thing. Getting close to the animals is also mentioned as favourite thing about a wildlife park in Australia in an earlier study. This was found by Mitchell’s survey in 1992 (as cited by Bulbeck, 2005, p. 37), it also mentions aspects as touching the animals. Bulbeck’s own study produced similar results.

The evaluations of the tour talks indicate that two out of eight animal tour talks are related to a particular field programme. The tour talk “animals of the new world”, which has scored the most points, contains talks about multiple animal species and is related to a conservation project in Madagascar, which the zoo supports. The existing tour talks already contain conservational messages about the protection of the natural world. By not only mentioning, but also showing and experiencing the differences visitors can make by helping the zoo protecting the natural world, could have a very positive effect on people’s positive attitude regarding the natural world. In addition, the conservational messages has to be similar in every tour talk, even if it’s not particular related to a field project which the zoo supports.

Visitors prefer contact with a particular species as a main activity that could help them feel more involved in conserving endangered species. This can be associated with the fact that visitors choose “animal encounters” as a second favourite thing about the zoo and the fact that the third reason to visit the Isle of Wight Zoo is “to take part in the different kinds of daily, unique experiences: like the animal encounters with Wallabies and Meerkats”.

Chapter 5 Conclusion

Zoo visitors do consider educational activities as one of the main reasons to make a visit to the Isle of Wight Zoo if this is asked in a survey. In reality, it is not considered as the main reason to visit a zoo. Observations has shown that sign reading behaviour has improved over the past five years. In addition, more participants actually discuss the information on it. On the other hand, the observations show that the visitors do not read the signs as long as they did five years ago. More than half of the visitor ignore this kind of educational messages. The focus of visitors is more on family bonding and entertainment .

Visitors want to learn (more) about animal welfare, general information about the zoo animals and personal details about the animals. Visitor interviews support the interest in background- and more detailed information about the animals: most of the visitors missed a map on the signs that shows the location of that particular animal in the wild.

An answer based on a survey question, wouldn't give a realistic answer on to what extend visitors value the natural world. The question could better have rephrased to if visitors think the zoo is doing a good job protecting the natural world. It also doesn't add any new or valuable information to this thesis.

"That it is a personal and close zoo, you can come close to the animals" was mentioned as visitors' favourite thing about the zoo. The animal encounters were noted as second favourite thing about the zoo. The evaluations of the tour talks indicate that two out of eight animal tour talks are related to a particular field programme. The tour talk "animals of the new world", which has scored the most points, contains talks about multiple animal species and is related to a conservation project in Madagascar, which the zoo supports.

To encourage and stimulate visitor participation in educational aspects of the zoo, the focus must lie on contact with animals. General information about the animals in the zoo is already in place, this information can be found at the signs and the animal talks. Because more than half of the visitors do not look at the signs, important information about the animals has to spread by using other ways of sharing zoo educational messages.

More contact with animals in certain ways, more harsh facts and eye openers about endangered animal species and more information in animal talks about general and detailed information about the animals. These are tools and information that can be used to encourage participation in educational activities and it could have a positive effect on people's attitude regarding the natural world.

The first part of the research question, about whether zoo visitors have a need for educational messages, can be answered based on the answers of sub question one. Educational activities are considered as one of the main reasons to visit the Isle of Wight Zoo, based on the results of the survey. On the other hand, the results of the visitor observations indicate that educational messages on information signs are being ignored by more than half of the visitors. Information has to be spread otherwise. The second part of the research question can be answered based on the answers on sub- question two, four and five. Feedback from visitors, regarding the need for more background- and detailed information about the zoo animals, can be used to increase visitor participation in educational activities. Harsh facts and more contact with particular species can also increase this participation and the visitors' attitude regarding the natural world. Because of visitors' focus on entertainment and family bonding, the educational activities will most likely be effective by using interactive, child- friendly educational messages and activities.

Chapter 6 Recommendations

Recommended is to focus the new educational programme on interactive, hands on experiences. In addition, it is recommended to focus on child friendly educational messages and activities.

To motivate visitors reading behaviour, is to combine the already existing animal stamps with an animal quiz about the information on the signs. Visitors consider family bonding as a prior reason to visit the zoo. Children love to collect the stamps, so the adults will most likely participate in child-friendly educational activities. The existing stamp card can be adjusted with easy, child friendly questions like: "how old is Harley, the Capuchin Monkey?" The parents can help the children to find the right answer. After finding the answer, the children can collect the stamp of the Capuchin Monkey.

Visitors note that a world map is missing on the educational signs. Recommended is to add a world map that includes more detailed- and background information about the particular zoo animal's location in the wild. Next to adding maps to every sign, a world map showing the location of every zoo animal in the wild, can be designed. An idea is to place this map at empty walls at more remote parts of the zoo. It can be used as an extra design and as a new part of the educational trail. The extra addition to the signs could also have a positive effect on the reading behaviour of visitors: the information on the signs is less basic and meets more of their expectations and needs.

The same amount of general information has to be shared in every tour talk, varied with predominately detailed and background information about every animal. Details and background information is what it makes a talk interesting and have the "wow" factor. On the other hand, serious and eye opening facts can be used to shock the visitor and to make them aware of the critical situation of certain animals. Important is to tell the visitor what they can do to help these endangered animals, and not just giving money to a project. Something that they really can get their hands on and examples of things they can do to help saving an animal species. Information about conservation matters also has to be equal in every talk, since this is one of the most important messages a zoo should spread.

Thereby, recommended to focus the new educational activities on contact with animal species. The intention is to encourage visitors as much as possible to take part in animal encounters, because there are already multiple encounters taking place at the zoo. Encouraging visitors to take part in the animal encounters can be done by making these encounters really attractive: an example is to offer deals or multiple encounters on one day, so visitors have the chance to meet all kinds of unique animals on one day at the zoo.

Another idea to encourage visitor participation, is something the visitor can do first, regarding the participation in the protection of the natural world. Something easy but meaningful, like a small donation to the tiger conservation project of the zoo. If the visitor has done this, they can get discount on an animal encounter. A recommendation will be to share as much interesting personal details about the animals as the contact is made. An addition is to have a "save an animal species" challenge, with real life examples and challenges anyone can do to help save an endangered species. These examples can be implemented on the zoo animals in a fun and creative way, so it will stay a zoo activity, but visitors can continue to protect the natural world at home.

Some information about their welfare could also be shared. Again, it is recommended to keep the same amount of information per encounter. Because the zoo wants to increase the attitude from visitors regarding the natural world, it would be great for visitors to take something of their animal

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encounter home, so their positive attitude will continue as they leave the zoo. Something like a picture with the animal or a card which contains a “thank you” and something the visitor can do or continue to do to protect the natural world.

To get a more reliable answer on the first part of the research question and in addition to the first sub- question, an additional data method is recommended. During a longer period of time, visitors can fill in a survey when they leave the zoo to go home. This survey will be about their participation in the educational tours and encounters. The visitors can fill in if they have participated and they can rate on a scale from one to five if they are interested in zoo educational messages. Another question can be whether the visitors learned something new in the time they were in the zoo. To encourage visitor participation in this kind of research, visitors can be rewarded with a small gift like a voucher for a drink in the café. Another option is to ask all leaving visitors individual if they have participated in any educational tour talks or encounters during a longer period of time. At the end of the day, the answers can be compared with visitor numbers of that measure day.

Sub- question three could better have rephrased to if visitors think the zoo is doing a good job protecting the natural world.

References

Alt, M.B. & Shaw, K.M. (1984) 'Characteristics of ideal museum exhibits' *British Journal of Psychology*, 75, 1, pp. 25-36

Anonymous, BIAZA. (2015). *Biaza Big Bug Bonanza (BBBB)*. Retrieved on 25-01-2015, from <http://www.biaza.org.uk/campaigns/biaza-big-bug-bonanza-bbbb/>

Anonymous, Isle of Wight. (2011). *Conservation*. Retrieved on 25-01-2015, from <http://www.isleofwightzoo.com/conservation.aspx>

Anonymous, BIAZA.(2014). *BIAZA Education Handbook*. Retrieved on 12-03-2015, from <http://www.biaza.org.uk/uploads/Education/resources/Education%20Handbook%20May.pdf>

Blais, A (Ed) (1995). Text in the Exhibition Medium. Societe des musees quebecois and Musee de la civilisation. Quebec .

Bitgood, S. (1991). The ABC's of label design. *Visitor Studies: theory, research and practice*. Jacksonville, AL: Centre for Social Design, pp.115-129.

Bulbeck, C. (2005). *Facing the Wild: "Ecotourism, Conservation and Animal Encounters"*. New York: Earthscan, p. 37.

Byrna, J. & Dove, T. (2013). Do Zoo Visitors need Zoology Knowledge to Understand Conservation Messages? An Exploration of the Public Understanding of Animal Biology and of the Conservation of Biodiversity in a Zoo Setting. *International journal of science education part B: Communication and Public Engagement*, 4, 17-18. <http://dx.doi.org/10.1080/21548455.2013.822120>

De afstudeerconsultant (2014). *Mixed methods research*. Retrieved on 04-2-2015, from <http://deafstudeerconsultant.nl/afstudeertips/onderzoeksmethoden/mixed-method-research/>

Dickie, L.A., Hatchwell, M., West, C & Zimmermann, A. (2007). *Zoos in the 21st century: catalysts for conservation?* New York, United States: Cambridge University Press.

Dijk, van, P.A., Curtis, J., Mair, J. & Smith, L.D.G. (2012). Request for zoo visitors to undertake pro-wildlife behaviour: how many is too many? *Tourism management*, 33, 1502 -1510.

[doi:10.1016/j.tourman.2012.02.004](https://doi.org/10.1016/j.tourman.2012.02.004)

Dutta, T. (2005) 'Visitor profile at Peshwe Zoo, Maharashtra'. *Zoos' Print Magazine*, 20, 8, p. 15.

Gordon, L. (2008). Mixing Marketing and Education. *Journal of the International Zoo Educators Association*, 44, 7.

Lee, H.S. (2014). Measurement of visitors' satisfaction with public zoos in Korea using importance-performance analysis. *Tourism management*, 47, 251-260.

[doi:10.1016/j.tourman.2014.10.006](https://doi.org/10.1016/j.tourman.2014.10.006)

Linke, S. & Winte, C. (2010). *Zoos and tourism: Conservation, education, entertainment?* Bristol, UK,: Cannel View Publications, pp. 69-82

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Luebke, J.F. & Matiassek, J. (2014). Mission, messages and measure: engaging zoo educators in environmental education program evolution. *Studies in educational evolution*, 41, 77-84.

[doi:10.1016/j.stueduc.2013.10.002](https://doi.org/10.1016/j.stueduc.2013.10.002)

Patrick, P & Tunnicliffe, S.D. (2013). *Zoo talk*. Dordrecht, the Netherlands: Springer.

Serrell, B. (1996). *Exhibit labels: An Interpretive approach*. Walnut Creek, CA: Sage Publications.

Scheersoi, A. & Tunnicliffe, S. D. (2009). Engaging the interest of zoo visitors as a key to biological education. *Journal of the International Zoo Educators Association*, 45, 18–20.

Thompson, D. & Bitgood, S. (1988). The effects of sign length, letter size and proximity on reading. *Visitor Studies – 1988: Theory, research and practise* Jacksonville, AL: Centre for Social Design, pp. 101-112

Wilson, E.O. (1993). *The biophilia hypothesis*. Washington, DC: Shearwater Books, pp 31-40.

World Association of Zoos and Aquaria. (2005). *Building a future for wildlife- The World Zoo and Aquarium Conservation Strategy*. Bern, Switzerland: WAZA.

Annex I Sign study forms

Interview Framework

Date: 15-03-2015

Time: 15:17- 15:22

Location: Ayshia's enclosure

Participant: Female and Male, no family group, age 21-30.

Tell me about the information contained in this sign?

I do not know what to say but it is useful. It is kind of educating the people about the animal. It is easy to understand. I think everything we need is on the sign yeah.

What have you found out from the sign?

M: Half of the information on the sign we found out new actually.

F: can I have a suggestion? If they can point out of the location where the animal comes from on a map? Then it becomes more clear.. because all the signs are more like with letters and words, and maybe it could have more pictures or something, so it will become more clear.

Give me your view about the design and layout?

M: It is attractive.

F: I think it is more like for children, yeah, because I think their target.. their audience is children.

M: she is studying marketing *laughs*. The layout is suitable for both adults and children, but for children it is more suitable. But it is suitable for both, but I mean.. it is a little bit more for children.

F: but they also mention about the website, it is like if they also want to take a knowledge for people.. I do not know, I just feel like we can check something and it is on the website.

F: it is a good colour for tigers, because the sign is yellow.

M: yeah and the tiger is yellow. Oh okay, all signs are the same... yeah for me the same is more beautiful.

M: the position of the sign on the side is much better, because people can have more sight and see the whole cage.

F: yeah because from this side, I can not see the whole area.

M: yeah maybe when it is crowded so people can not see

How easy is it to read and understand?

M: yeah it is easy. And for foreigners like us, who can not talk English fluently, it is really easy to understand.

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Other comments or suggestions?

M: hmmm, what do you think?

F: maybe you could add more information. Because it is is easy to understand, but it is is not.. maybe just for children to understand. But for adults.. maybe they want to know more detailed knowledge.. something like that. More general information, about what is their habitat.. something like that.

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Direct Structured Observation Recording Sheet

Date: 31-03-2015

Start time: 12.00 Finish time: 13.00

Location: Black and white ruffed

N.B. Data should be recorded only for the first person from a group that enters the reading zone around the specific sign being observed.

	YES	NO
1. Did participant look at the sign? <i>Tally mark for each individual.</i>	8	28

	Time spent reading the sign (minutes and seconds)
2. For how long did the participant read the sign? <i>List reading period for each participant. Continue overleaf if necessary.</i>	0.04 sec 0.02 sec 0.02 sec 0.23 sec 0.05 sec 0.01 sec 0.19 sec 0.01 sec

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	YES	NO
3. Did participant discuss the content of the sign with anyone else in their party? <i>Tally mark for each individual.</i>	1	7

4. List any other relevant behaviour (continue overleaf if necessary).

-

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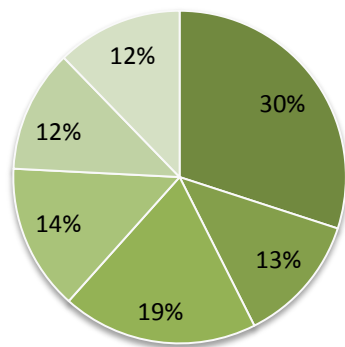
Annex II Tour evaluation form

Date: 04/03/2015	Yes - 3	Section totals
Time: 10:30	Sometimes/ a little - 2	
Weather: Sunny	No - 1	
Evaluator: Kelsey		
Enclosure		
Is there potential for large crowd capacity?	3	16
Is there an obvious position for a presenter?	1	
Is the location easily accessible?	3	
Will visitors know where to wait for a talk?	3	
Do the barriers allow clear visitor viewing?	3	
Is there a sound system - does it work?	3	
Presenters		
Is the presenter able to see the animals?	3	10
Is the presenter able to see the audience?	3	
Can keepers be relied on to interact with animals?	2	
Is the presenter able to interact with the animals?	2	
Visitors (double score)		
Are the animals visible?	3	10
Is the presenter visible?	3	
Will the talk be audible?	1	20
Is there a keeper presence?	2	
Is there any shelter for visitors, will they be comfortable?	1	
Species		
Is it always visible anywhere in the enclosure?	1	20
Are the animals close to the visitors?	3	
Is it dependable?	3	
Is it sociable?	3	
Is it active?	3	
Is it appealing?	3	
Is it a mixed species exhibit?	1	
Is it a unique species?	3	
Messages		
Is it related to a particular field programme/project?	3	16
Are there any appealing individual characters?	3	
Are there any fun facts?	3	
Is there any captive population management in place?	3	
Is there any unique data?	3	
Is there conservation research happening in the zoo?	1	
TOTAL		82

37: The perception of the visitors of the Isle of Wight Zoo regarding educational messages

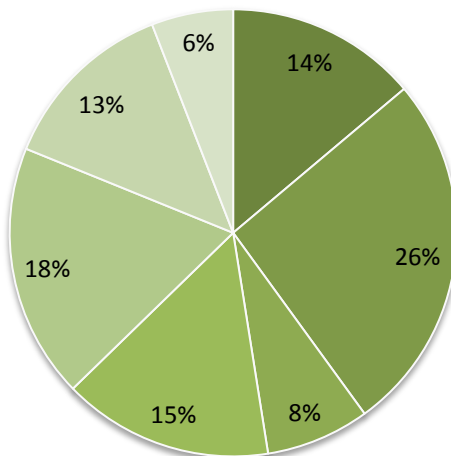
Annex III Results online survey

What are your reasons to make a visit to the Isle of Wight Zoo?



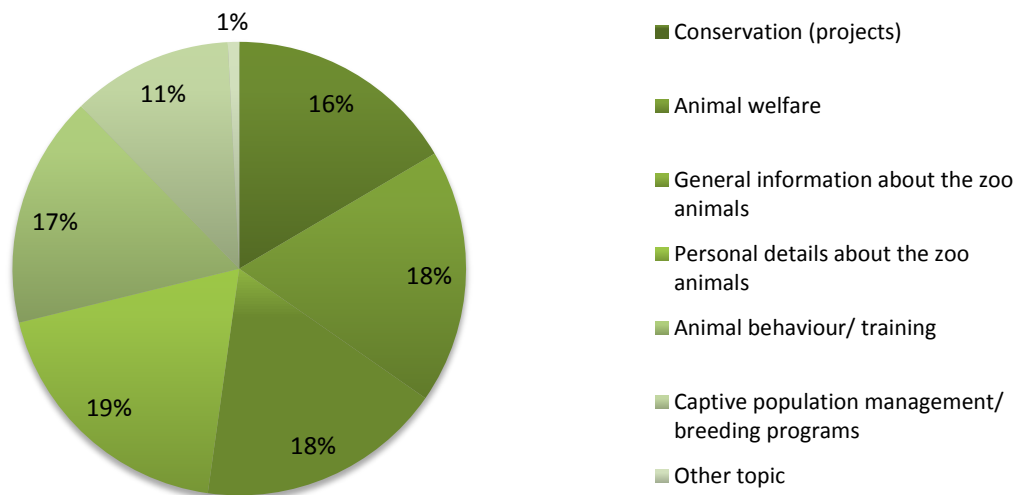
- To have a nice family day out
- To introduce my children to different kinds of animals
- To gather information about the animals that are living in the zoo
- To take part in the different kinds of daily, unique experiences
- To make use of the paid unique experiences
- Other reason

What are your favorite things about the zoo?

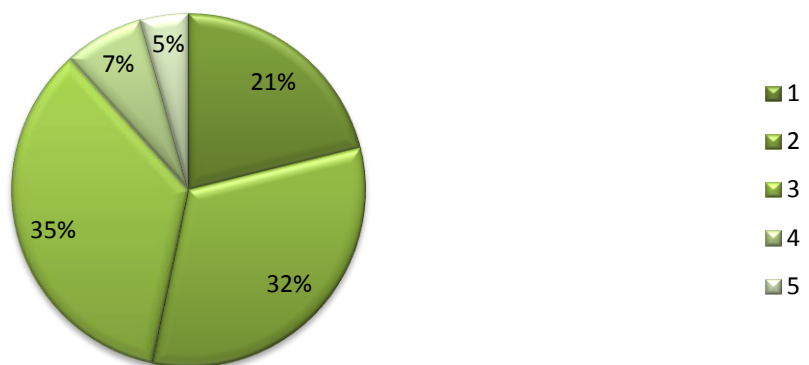


- The amount of unique animal species in the zoo
- That it is a small, personal and close zoo: you can get close to the animals
- That it has special, child friendly activities
- The educational aspects
- The animal encounters
- The special experiences
- Other favourite thing

What topics would you be interested in learning (more) about within the zoo?

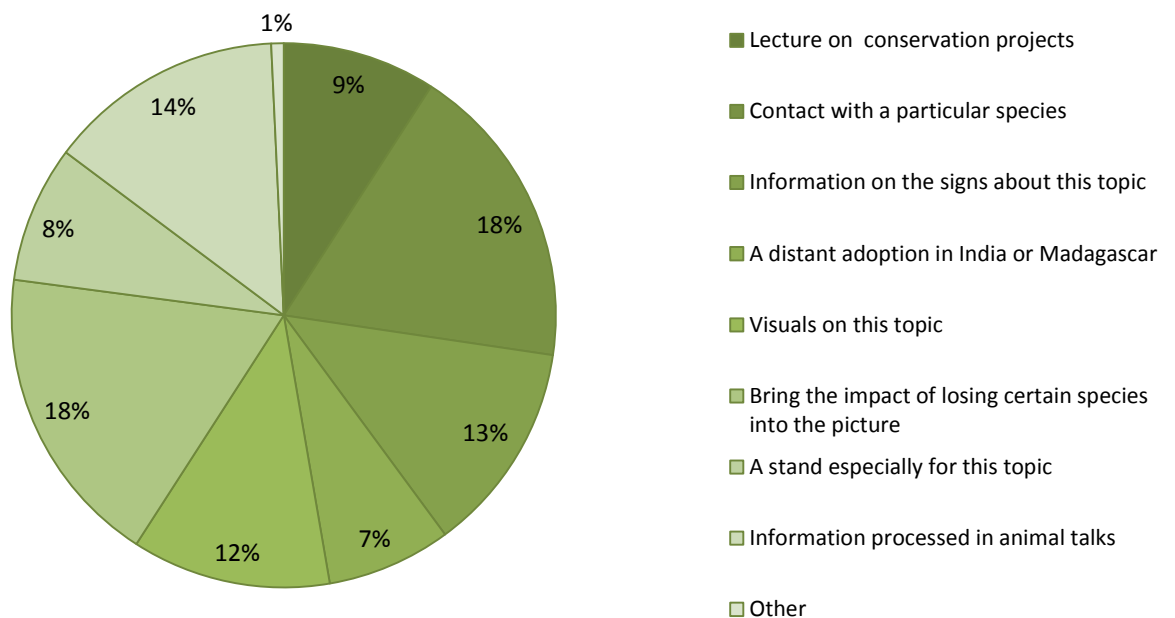


On a scale from one to five, where one is very much and five is not at all, do you think the zoo is protecting the natural world enough?



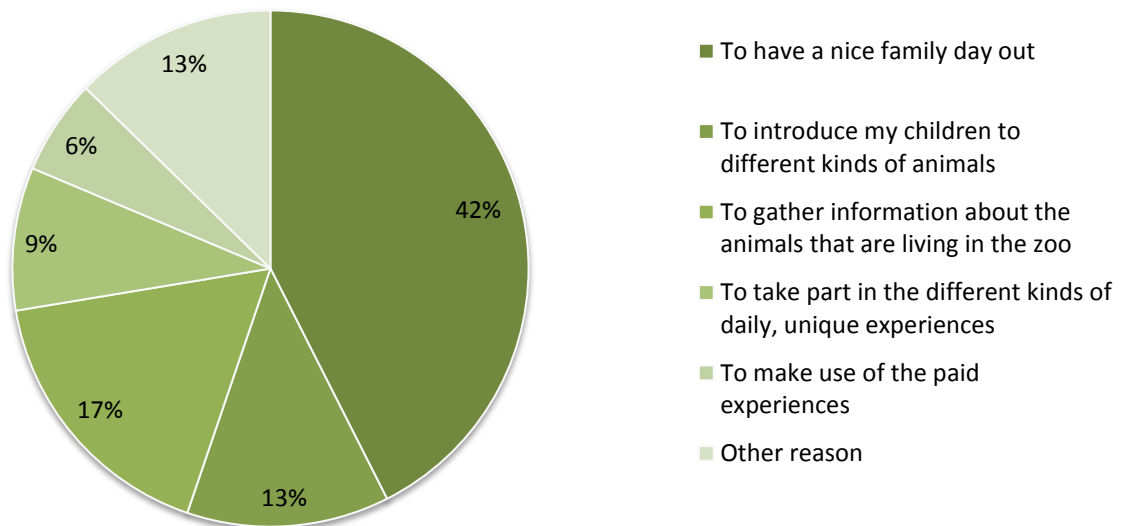
39: *The perception of the visitors of the Isle of Wight Zoo regarding educational messages*

Which activity in a zoo would help you to feel more involved in conserving endangered species?

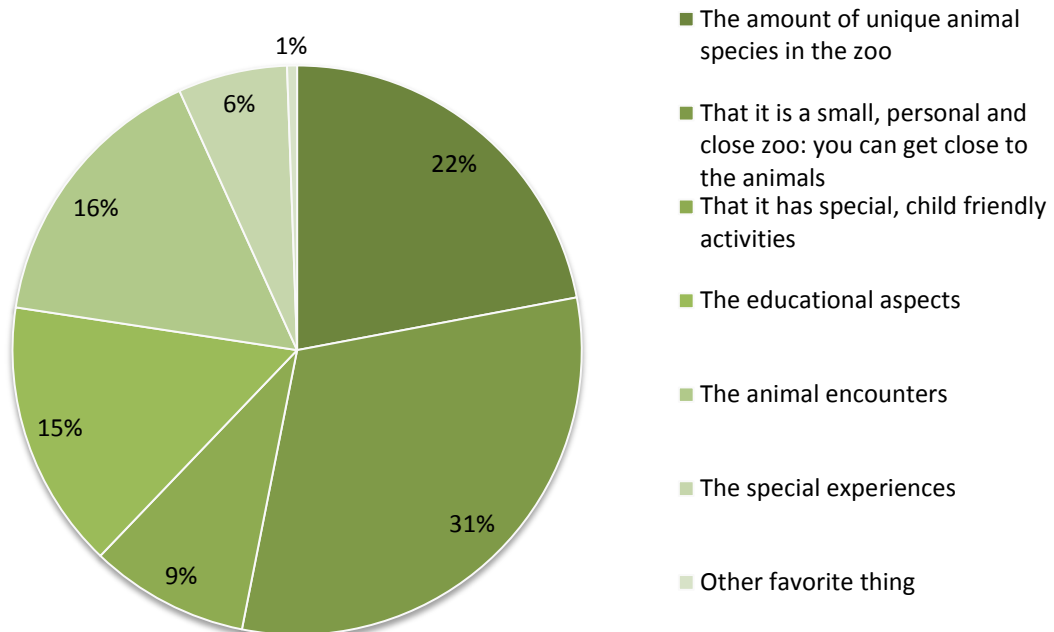


Annex IV Results paper survey

What are your reasons to make a visit to the Isle of Wight Zoo?

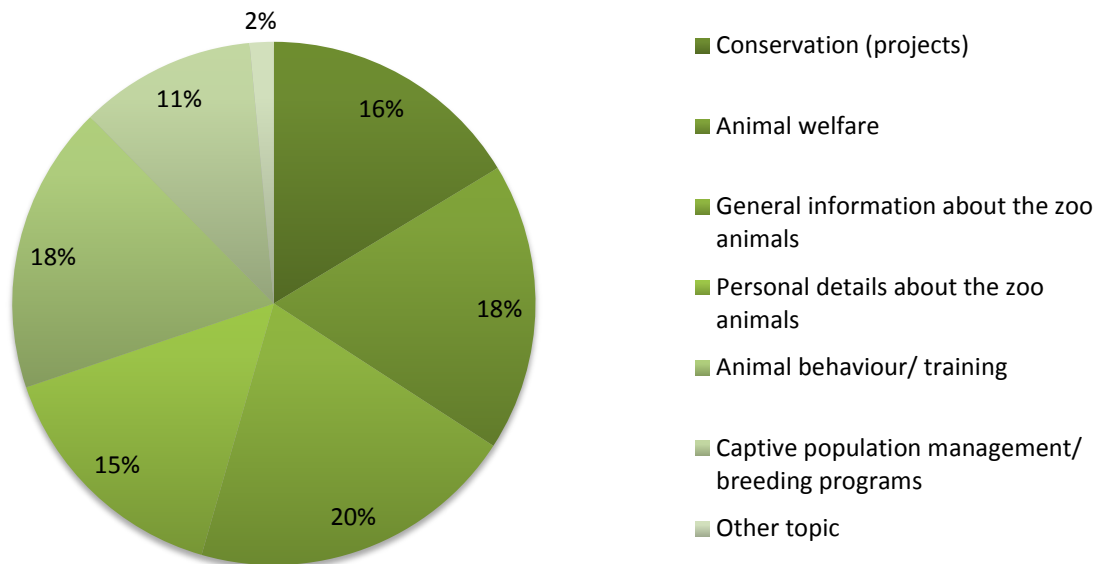


What are your favorite things about the zoo?

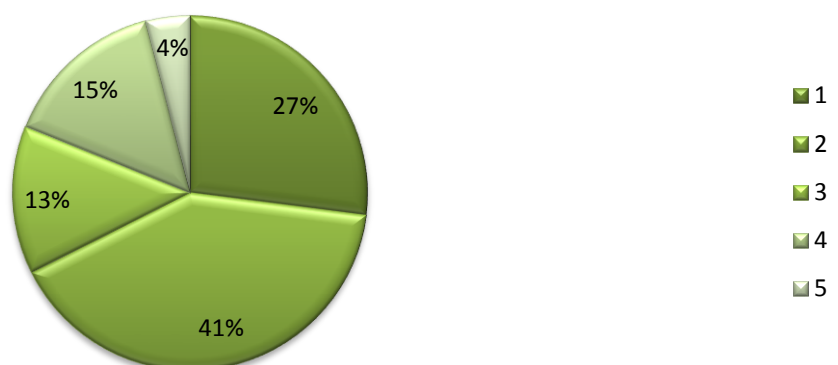


41: The perception of the visitors of the Isle of Wight Zoo regarding educational messages

What topics would you be interested in learning (more) about within the zoo?

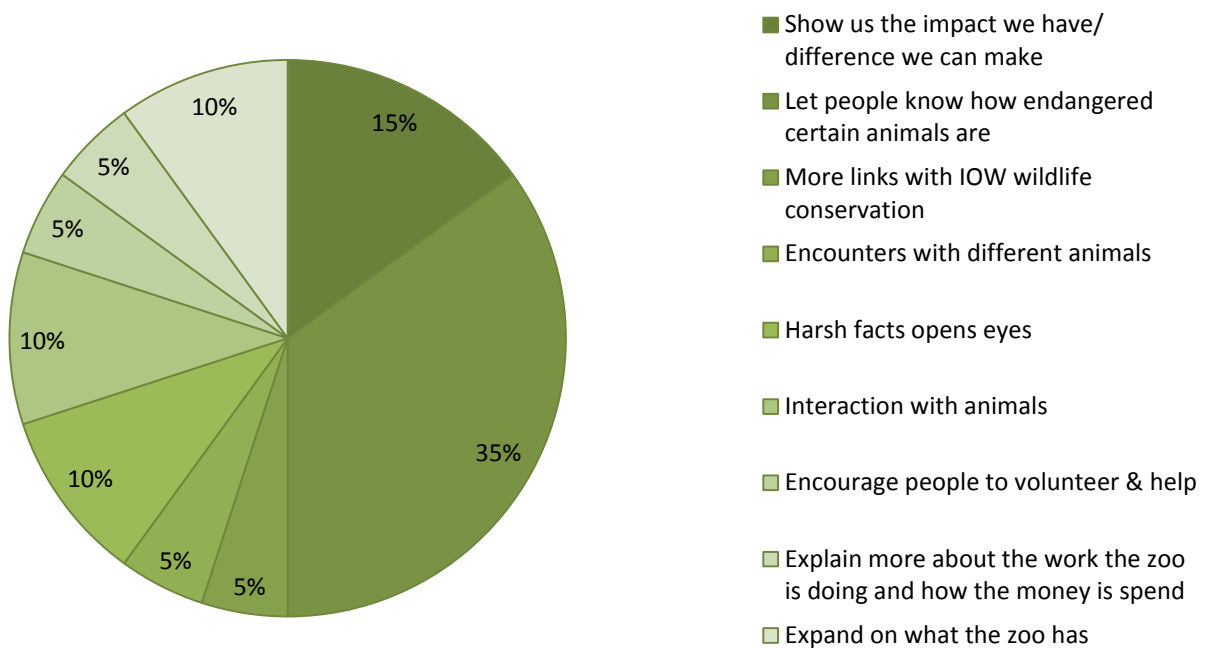


On a scale from one to five, where one is very much and five is not at all, do you think the zoo is protecting the natural world enough?



42: The perception of the visitors of the Isle of Wight Zoo regarding educational messages

How could the zoo help or encourage you to take positive action that would benefit wildlife?



- Advertising: make everyone aware of the good things the zoo already does (conservation projects)
- More educational tours and talks within local schools and colleges to highlight endangered species in the wild
- Show where the money is being spend on and how it has helped already
- Opportunities for kids to make bird feeders: more wild bird conservation
- Information given in the talks.