

The effect of animal aspects in a zoo education program on the attitude of children towards animals and protecting biodiversity

Summary

The importance of biodiversity conservation is widely accepted. An important part of successful conservation are people's behavioral choices. An essential part of people's conservation behavior is their attitude towards animals and protecting biodiversity. Education about biodiversity can contribute to conservation behavior by evoking positive attitudes towards animals and protecting biodiversity. The aim of this study is to learn more about which variables of animals in a zoo education program for primary schools, play a key role in children's attitude towards animals and protecting biodiversity. To study this, the following three research questions were formulated: *Does the education program about biodiversity influence children's feelings towards biodiversity?; How do differences between animal species in a zoo education program about biodiversity influence the children's attitude towards animals?; And how do these differences influence the children's willingness to act for biodiversity?*

To answer the research questions, three schools participating in the zoo biodiversity education program *Bio-diversi-wat?!* were studied. This was done by using a mixed-method with emphasis on qualitative focus group interviews. To answer the first research question, if the education program influences children's feelings, surveys and worksheet about children's emotions were studied. A Wilcoxon signed-rank test was used to analyze the difference between children's emotions before and after the education program. To answer the second and third research question, semi-structured, open-ended interviews were conducted in focus groups.

The results show that the biodiversity education program did influence the children's feelings. A significant shift towards the emotions *sad, angry, worried* and *not confused* was found after the lessons. In the interviews, the variables that were found to influence children's attitude towards animals the most were: daytime-activity in the zoo, animal's natural and man-made habitats, extinction risk status of animals and new knowledge about animals. The variables that were found to have the most positive influence on children's willingness to act were: extinction risk status, new knowledge about animals and their role in the ecosystem and values.

The outcomes of this study suggest a relationship between knowledge and children forming positive attitudes towards animals and protecting biodiversity. Moreover, the results emphasize

the important role of learning about animals, animals' extinction risk status and animals' role in the ecosystem in biodiversity education programs. Additionally, the influence of attitude towards animals on willingness to act is discussed. Zoos can contribute to biodiversity education by using aspects that foster positive attitudes towards animals. Nature-like enclosures in which animals have good welfare and are able to show natural behavior, have the biggest positive influence on children's affective outcomes.

Future studies should focus on learning more about the variables that influence favorable attitudes towards animals and protecting biodiversity, and how they are correlated. Additionally, they should focus on how the different aspects of attitudes, behavioral, cognitive and affective, interact in the formation of attitudes. Furthermore, it is of great importance to improve the understanding of how biodiversity education can play a role in allowing children with a positive attitude to convert this into acting for biodiversity. Only with a future generation that has a positive attitude towards protecting biodiversity and knowledge on how to act, biodiversity conservation has a chance to succeed.