113

Attitudes towards animal dissection and animal-free alternatives among high school biology teachers in Switzerland

Miriam A. Zemanova[1,2,3] and Silvia Frey[1]

[1]Animalfree Research, Bern, Switzerland; [2]University of Fribourg, Environmental Sciences and Humanities Institute, Fribourg, Switzerland; [3]Oxford Centre for Animal Ethics, Oxford, United Kingdom

Harmful animal use in education has raised ethical and environmental concerns as well as concerns about the potential psychological harm to students [1]. Consequently, there has been an ongoing debate during the last decades about the role and importance of animal use in teaching across all education levels. Animals are not only used in human or veterinary medicine training at universities but also as a part of general biology education in high schools. This tradition began in the early 1900s [2] and is still present in many countries [3]. The teachers' decision on whether to use animal dissection or alternatives can be influenced by many factors, for example, their own education, and/or previous experience with animal-free teaching methods [4]. The exploration of teachers' attitudes towards dissection and alternatives can provide a clearer picture of the barriers and opportunities for making the shift towards more humane biology education. Nevertheless, up to date, only a few studies investigated the attitudes and experiences of high-school biology teachers towards animal dissection.

This study aimed to evaluate, for the first time, the experiences, and attitudes of Swiss high school teachers towards the use of animal dissection and animal-free alternatives. Specifically, the survey intended to determine 1) the extent to which animals or animal parts are being used in biology classes in Swiss high schools, 2) whether Swiss high school teachers embrace and adopt humane teaching methods, and 3) the attitudes of teachers towards dissection and humane teaching methods.

We designed an anonymous online survey in which questions were organized into two parts: 1) a general part with questions about demographic data of the respondents, and 2) a scientific part with questions on the use of animal or animal organ dissection in their teaching practice. The survey contained a combination of open-ended questions and multiple-choice questions, allowing respondents to check one or more boxes from a list of possible answers. The first version of the survey was launched in August 2019 and an updated version with several additional questions was launched again in June 2021. A total of 76 teachers participated in the survey.

The vast majority (97%) of the teachers reported using animal / animal parts dissection in their classes. Mostly used are various animal organs, fish, insects, earthworms, squids, and rats or mice. As the obstacles to adopting alternatives were listed lack of time to research alternative methods, high costs, and peer pressure. The responses also revealed that a large proportion of the teachers are not convinced that animal-free alternatives are as good for teaching as the use of dissection. This is in stark contrast with the empirical evidence showing that humane teaching methods can provide equivalent or superior learning outcomes in comparison to the use of animals [5].

Our survey highlighted the barriers and opportunities for future work on raising awareness among high school teachers and the implementation of humane teaching alternatives. We conclude that the wider uptake of humane teaching methods would require financial support as well as a shift in the attitudes of high-school biology teachers. More widespread dissemination of information about available alternatives in particular might help teachers to adopt non-harmful practices and minimize the number of animals used in education.

References

[1] Capaldo, T. (2004). *Altern Lab Anim 32*, 525-531. doi:10.1177/026119290403201s85

[2] Kinzie, M. B., Strauss, R. and Foss, J. (1993). *J Res Sci Teach 30*, 989-1000. doi:10.1002/tea.3660300813

[3] Balcombe, J. (2001). *J Appl Anim Welf Sci 4*, 117-126. doi:10.1207/S15327604JAWS0402_3

[4] Oakley, J. (2012). *Int J Environ Sci Educ 7*, 253-267. doi:10.1080/21548455.2016.1254358

[5] Zemanova, M. A. and Knight, A. (2021). *Animals 11*, 114. doi:10.3390/ani11010114

Submission declaration:
Conflicts of interest: The corresponding author declares that there is no conflict of interest with the authors.
Statement on ethics vote: There is a positive ethics vote.