Opposition to Animals For Education

Replacing animals used for education with technological dissection as an alternative.

Tag Words: Educational animals, Dissection, Animal rights

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Summary

For years, animals have been used as a creative way to educate students on the different bodily functions of different types of species. On Rutgers campus, several science courses make it mandatory for students to engage in animal dissection as a means of increasing their knowledge about animal’s bodies and systems. Not only does this activity involve the harming of a dead animal’s body, but the way in which they do so will be graded based on performance. If students feel that this type of learning is unnecessary, it is possible that their grade can be harmed. We propose a technological means of dissecting on computer as an alternative method if students are against animal harm.
The Issue: Animal Rights

Introduction (JE)
There are several sciences courses offered on Rutgers campus that try to devise original, creative, and normal ways of teaching. Some teachers believe that lecturing is more efficient than slides and other teachers say that group work is better than doing lots of one on one work. Whatever means teachers choose, their job is to educate the students as best as they can. One way the science department goes about teaching their students is through the use of animal dissection. Animal dissection is very typical and normal in most of the university classrooms. Teachers believe that if students can visualize what they are being taught, they would be able to learn better and increase their knowledge about different body parts and functions. This technique has been often used by universities all over the nation in several different science courses. Although this means is very educational, some people overlook the unethical practice that is involved. Dissection is basically harming the body of a dead animal without consent of the animal when alive. Some animal activists feel that this practice should be banned from the classroom and replaced immediately. Other schools have adopted an alternative means of educating their students. Several teachers have developed computer programs which can be used for technological dissection. Not only does this educate the students, but it does so in a more ethical way.

Immorality of Dissection (JE)
In some religions, animals are held in very high regard. By even hurting an animal in any way shape or form would be against their religion. In some Indian culture, animals are looked upon as high as gods. They worship these animals and praise them as gifts to the Earth. The act of dissection is completely disregarding their religious beliefs when there are better and stronger alternatives for it. In retrospect, we as humans believe that our bodies shouldn’t be tampered with unless given consent (organ donors). If people were to pass on, it is typical for humans to want their bodies to be treated with respect and taken care of. One would not want to be disrespected in the afterlife in a way they might feel as demeaning. If students refuse to participate in dissection, they may also suffer the chances of getting their grade lowered. Some teachers believe that college students should be able to have the will to participate in dissection without any problems whatsoever.

In an article found on an NEAVS website, they describe the different situations in which animals are used for testing. Some admit to stealing cats off the street and from owners before being sold to the labs for dissection. In Mexico, some cats are drowned or have their throats slit first before being used for dissection in America. Sows who are pregnant are slaughtered so that the fetal pigs can be used for dissection. This goes to show you how far some people will go in order to do animal dissection.

Along with immorality issues, there are many psychological effects that go hand in hand with animal dissection. Some students experience several different concerns when dealing with animal dissection. The psychological effect on students of using animals is in ways that they see as morally, ethically, and religiously wrong. Students from different schools, which include John Hopkins University, Montclair, etc., feel that animal dissection goes against what they believe to be good.
Alternative Means of Dissection (JE)
Computer programmers have developed multiple different programs that deal with computer dissection. This has been created for users who may be too squeamish to participate in hands on dissection or for those who feel animal dissection is immoral in any way. There are programs that give numerous animals and a very easy step by step process that helps educate the student. The dissection can last just as long as a hands-on dissection could be and still show all the different organs, tissues, and their function. Not only does the user get to use the program, but some of them also have a computer wizard in the program that teaches them about the body parts and anything else that may be useful. Technology is becoming more and more advanced and helping students learn through a computer.

After speaking with one of the professors here at Rutgers, we came across a great online alternative to dissection. A professor in the Department of Ecology and Evolution here at Rutgers offered us a company dedicated to computer dissection called NEAVS. NEAVS is an acronym that stands for the New England Anti-Vivisection Society located in Boston Massachusetts. The company website offers a tools for teachers section which includes Dissection tools on the web. Another big organization that the professor offered to us was the John Hopkins University Center for Alternatives to Animal Testing. The CAAT works to promote and support research in the development of both people and animals. They following the philosophy of the three R’s; replacement which is to not use animals if a non-animal method exists; reduction, if you must use animals keep the number to a minimum; and refinement which is if you must use animals, keep pain to a minimum. CAAT also offers a free online course to educate about the practice of humane animal experimentation. This company along with NEAVS goes to show what kind of alternatives some companies offer.

The Service Project: Research and Alternative Methods (Pros and Cons) (NK)

Our service project involves researching Rutgers University policies to find out whether they have any policies in place for students who do not want to dissect and want an alternative method to dissection without being penalized for that in their grades. It has been researched that Rutgers does not have a policy in place and is not on the list for “Schools with Choice Dissection Policies”. However it is on the list for having allowed students to use alternatives but only on the Newark Campus. As such we are initiating the project to put in place such a policy school-wide on all campuses that will ensure students are aware and told at the beginning of the semester they have a choice when it comes to dissection. They may choose to use the alternatives such as digital software on a computer (they may go to a separate computer lab during the lab session), or use plastic models alongside other students in class. Most importantly the policy should indicate that by choosing the alternative, they will not get penalized in any way in terms of their grades, as this would be unfair for someone to get punished for following what they believe in. It is a work in progress in obtaining these models and software programs for Rutgers University, at a discounted price or loan.

The advantages of such a policy is definitely that people who have a strong objection to using animals for education will be able to stick to their moral values and not feel resentful towards the education process. It is unlikely that the students who have such objections can really learn from real dissection if they personally have a problem with it. The difference in costs has also been calculated, and contrary to popular belief that the ‘higher technology’ of alternatives will cost
more, it will in fact be cheaper. The software is a one-time cost, as compared to constantly having to buy new dissection kits in a traditional wet lab. Up to $5,951.00 can be saved in a period of five years. Other advantages include less preparation and clean up time, no need for disposal of hazardous chemicals, and ability to repeat experiments on the computer.

The disadvantages are that its effectiveness is debatable. Some people feel that seeing a dissection ‘live’ is more impactful and effective, while some people feel computer generated diagrams and models are clearer and more accurate as they do not vary from animal to animal, thus leading to better retention of information. Also it could be more troublesome splitting students into groups for dissecting or not dissecting, while trying to teach everyone the same thing.

**Rutgers Policies (NK)**

At Rutgers University, there is no policy put in place which lowers a student’s grade if they choose not to participate in the hands on dissection. The act of dissection is between the student and teacher, as long as the student can do well in the exams without dissection then that would deem them as fine. Animal dissection is not necessary as long as the student can understand the material through watching or from speaking with the professor or students for information. After calling some of the professors, we were able to see which classes had dissection and which didn’t. Some classes that have dissection in class in General Biology, Systems Physiology, and Animals in Nutrition. Some departments that do not have animal dissection is the Animal Science department, Cell Bio and Neuroscience, Molecular Biology and Biochemistry departments all do not have animal dissection as part of the curriculum.

**Policy Proposal (NK)**

The policy we would like to put in place would involve allowing students to become a part of animal dissection by participating in an online program to do so. This program would make more students involved in the activity and it is more ethically and morally right then the hands on experience. The policy would include:

I. The student be informed at the beginning of the semester that alternatives are available if they choose to
II. Students grades should they choose not to participate in the hands on dissection. They will not lose lab participation points
III. Students grades are based solely on exams and quizzes and how they choose to study is based on his/her choice.
IV. Using models in computer programs is free of charge
V. All students will be shown how to use the program prior to lab usage
References

Johns Hopkins University center for animal testing, “Center for alternative testing” http://caat.jhsp.edu/

Appendices

### The Digital Frog 2.5 vs. Real Frog Dissection

<table>
<thead>
<tr>
<th>Issue</th>
<th>The Digital Frog 2.5</th>
<th>Traditional Wet Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep time per class</td>
<td>Minimal</td>
<td>Variable</td>
</tr>
<tr>
<td>Time between animal learning</td>
<td>One study suggests framing is accomplished in 45 min.</td>
<td>Variable</td>
</tr>
<tr>
<td>Cost of biological waste disposal</td>
<td>None</td>
<td>Variable</td>
</tr>
<tr>
<td>Set-up costs</td>
<td>$880.00</td>
<td>Approx. $300 per 15 dissection kits</td>
</tr>
<tr>
<td>Consumables (class of 30 preserved specimens)</td>
<td>None</td>
<td>10.5% assuming 15 preserved frogs are used in 17 weeks</td>
</tr>
<tr>
<td>Consumables (class of 30 organs, vessels, skeleton, etc.)</td>
<td>None</td>
<td>$15 - $25 per lab</td>
</tr>
<tr>
<td>Setup time</td>
<td>Minimal</td>
<td>Approx. 20 minutes, with 10-15 minutes clean up</td>
</tr>
<tr>
<td>Restrictions</td>
<td>Students can repeat and content is understood</td>
<td>Not practical in most cases</td>
</tr>
<tr>
<td>If student misses class</td>
<td>Can borrow CD to learn at home</td>
<td>Too bad</td>
</tr>
<tr>
<td>Test based on human anatomy and physiology with human anatomy components</td>
<td>Integral</td>
<td>Required and expensive</td>
</tr>
<tr>
<td>New vocabulary and scientific terminology</td>
<td>Integrated content sensitive dictionary with Spanish pronunciations</td>
<td>Dictionary required</td>
</tr>
<tr>
<td>Students right to dissection alternatives</td>
<td>Sensible ethical and moral issues concerning dissection, effective alternative</td>
<td>Need to provide different activity for students who object</td>
</tr>
<tr>
<td>Safety concerns</td>
<td>None</td>
<td>Sharp instruments and chemical allergies</td>
</tr>
<tr>
<td>Learning retention</td>
<td>Studies include more effective than wet labs.</td>
<td></td>
</tr>
<tr>
<td>Nanocheck and formative assessment outcomes</td>
<td>Included</td>
<td>Teacher must create or purchase separately</td>
</tr>
<tr>
<td>Analysis of teaching biology as the study of living things</td>
<td>Includes integrated ecology section</td>
<td>Teacher must provide materials</td>
</tr>
<tr>
<td>Cost Comparison</td>
<td>Includes 20 dissection kits &amp; consumables for 200 students for 5 years</td>
<td>50,000.00</td>
</tr>
</tbody>
</table>

Fig 1

Animals used in the Dissection
Research that goes into Animal Dissection
Animal dissection or vivisection is to cut open bodies of animals and reptiles (usually), to study and analyze the internal structure of the body. It is a common method used to teach students studying the sciences about the anatomy and physiology of animals. Commonly used animals are pig fetuses because pigs are known to have very similar body parts and processes to humans, thus pigs are used to help better understand humans.

I had one experience with dissection that I managed to excuse myself from. However I still had to stand by the side and watch the fetal pig get ripped apart. I feel it is disrespectful to an animal’s dead body to cut it up and mutilate it. When I had to watch the dissection of the fetal pig, the way it was handled was disgraceful. It was treated like a toy and just handled so roughly; it was skinned and poked at with no mercy. It just bothers me a lot that someone can do that without feeling anything, while I stood by unable to do anything. The thoughts running through my head were that: that pig is barely a baby, how would its mother feel?

Perhaps there is the argument that it is quite irrational to have to feel ‘respect’ for an animal’s dead body. However, why not just use a human body then? Since ultimately we are trying to learn about a human body. Shall we use human bodies in every biology lab in high school and college? I am sure the thought of cutting a human will require a lot more debate in relation to ‘respect’.

Also there is the argument that the animals are already dead; but the bottom line is that using animals for human purposes is wrong, in my opinion. As a vegan I personally find it hard to use animals for human purposes no matter what. A vegan does not consume any animals or animal byproducts, including eggs and dairy. The main belief is to not harm any living animal by using it for human purposes. Thus in the spirit of compassion and love for all living beings, it is crucial in my opinion to not take part in the act of dissection. Why should death be followed by more mutilation? The poor animal is already dead, so why not just let it rest in peace? The thought that ‘just a frog’ is unimportant because it ate, it breathed, it thought and it lived.
I honestly feel that we should not be using animals for such purposes, as there are viable alternatives. There are very good computer simulation programs because of advanced technology and research. I understand that to create these programs, developers probably had to use real animals, but at least those animals were used just once, and never again. So why ‘waste’ those animals that were used to develop these excellent programs in the first place? Also there are very accurate models that are the same shape and scale of actual animals that depict various cross sections and internal structures of animals. Hence with such humane options available I feel that dissection is not absolutely necessary.

Jeffrey Esquillo: Editorial

With the help of inspiration from Professor Julie Fagan’s Ethics in Science class, Natalie Khoo and I were able to come up with a new proposed way of educating students. We were able to persuade a few teachers in the Biology department to have computer programmed dissection as an option available to students for labs.

The idea for the concept began when my partner, Natalie, began to feel upset during one of her dissections for a Biology class. We decided to build on this feeling and see if there was any way we could up with an alternative to dissection. We came up with several different ideas, but we wanted something that would be able to generate the same educational experience yet is still ethical. Brainstorming was a very important part of this process until we eventually came up with

After realizing the cruelty that goes into animal dissection, we realized that there needs to be an option for change. We felt that some students may not enjoy the idea of participating in the dissection of a dead animal. We, as well as other students, feel that this is not only cruel but should not be mandatory to do well in a class. For years, animal dissection has been mandatory in several classes in the biology department. By offering students with a more ethical option, you are not subjecting them to what some may feel as animal cruelty.

Professor Fagan gave us the necessary information we would need to make this happen. So we contacted different professors to see who would be open to this proposal. Several of them agreed to open this option up to their students as long as they were getting the same educational experience. We showed the teachers the program and they decided to step out of the norm and give the simulated dissections a try.

The program we are offering for use is free of charge and easily downloadable online. We received this program from another professor outside of the Rutgers community who felt the same way we did. We have hopes that this movement will slowly make its way around Rutgers campus and make students move more towards the computer simulated dissection option as opposed to the traditional means of dissection. By doing this, we hope to help students understand the significance of animal cruelty and how it affects our community in a negative way.