

CASE 3: High school students as a vulnerable research population?

For his dissertation research, Fred Fitch, a student in educational psychology proposes to study the question of what makes a scientific theory believable to a high school student. He anticipates that the answer to this question might have all sorts of useful implications for efforts to improve science education.

Fitch proposes an experiment built to answer the specific questions:

“When students are taught scientific data both supporting and challenging macroevolution, do they maintain or change their beliefs over time? What empirical, cognitive and/or social factors influence students' beliefs?”

As his research will involve comparing students whose instruction features a “teach the controversy” curriculum to students whose instruction uses his state’s standard biology curriculum, he needs to submit his protocol to his Institutional Review Board (IRB) for approval. Since his proposed research subjects are minors, he refers to the Federal guidelines for research with children:

The issue of children as research subjects is a complex one since they are not considered able to make informed choices independently. Further, exposure of children, particularly healthy children, to more than minimal risks must be weighed carefully.

When including children in research, the role of the family should be considered in devising the protocol as well as in obtaining informed consent from the parents or guardians. If the research is based in schools, appropriate involvement and permission must be obtained from the school. Adequate measures must be developed to protect children's privacy and to ensure that their participation does not stigmatize them in the present or future.

Fitch has drafted forms to get consent from the students’ parents, and preliminary phone calls to the high school’s administration have made them sound receptive to the research project. Indeed, in the last school board election in the town, a close race elected a new set of board members who ran on a platform that included reforming the science curriculum to “teach the controversy” and “make more room for God”.

As Fitch is putting the finishing touches on the protocol he will send to the IRB, a professor of biology he has consulted while thinking up his experiment sends Fitch an email message that states:

“There are no valid scientific data challenging macroevolution. You would be misinforming the students in your study if you teach them otherwise.”

Can Fitch proceed with the research project he has in mind? Why or why not?