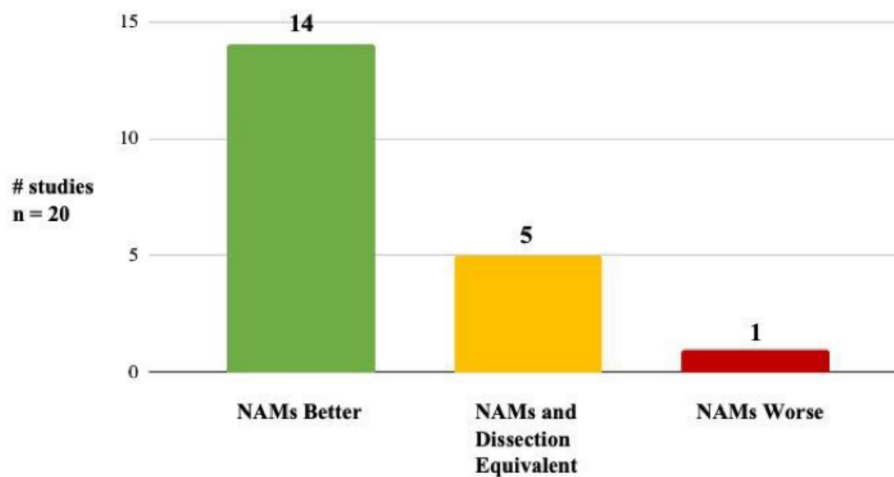


Comparative Studies of Dissection vs. Non-animal Teaching Methods

Our data show that in 95% (19/20) of studies students do just as well, and in most cases better, when they use non-animal methods compared to dissection. These data demonstrate that, in most instances, science education goals can be achieved using non-animal methods. To achieve proper implementation of the Three Rs principle of Replacement, we recommend that when there is evidence that non-animal teaching methods can help students meet their learning goals, they should be used in place of animal dissection.



Studies in Secondary Education

Study	Teaching Method	Better	Equivalent	Worse
Akpan & Strayer 2010	BioLab Frog software	o		
Boothby 2009	V-frog	o		
Grigg et al 2020	Clay model	o		
Kiehl 2007	Froguts		o	
Lalley et al 2010	V-frog	o		

Lee et al 2009	V-frog	o		
Montgomery 2008	Cyber Ed dissection series		o	

Studies in Postsecondary Education

Study	Teaching Method	Better	Equivalent	Worse
DeHoff et al 2010	Clay model	o		
Fancovicova & Prokop 2014	3D plastic model	o		
Haspel et al 2014	Clay model	o		
Lombardi et al 2014	Plastic model and Anatomy Lab software	o		
Motoike et al 2009	Clay model	o		
Quinn et al 2009	Computer simulation			o
Taeger 2006	Digital Frog 2		o	
Waters et al 2011	Clay model	o		
Waters 2008	Clay model	o		
Waters et al 2005	Clay model	o		
Yuza 2010	Virtual dissection software	o		

Studies in Medical School

Study	Teaching Method	Better	Equivalent	Worse
Aggarwal et al 2007	LapSim VR simulator		o	
van Bruwaene et al 2014	Lap Mentor VR simulator		o	

Results shown are from the following article:

Ormandy, E., Schwab, J., Suiter, S., Green, N., Oakley, J., Osenkowski, P., and Sumner, C. (2022) Animal Dissection vs. Non-Animal Teaching Methods: A Systematic Review of Pedagogical Value. **The American Biology Teacher**, September 1, 2022. 84 (7): 399–404.