LEGISLATIVE EDUCATION STUDY COMMITTEE
BILL ANALYSIS

Bill Number: HB 302 **50th Legislature, 1st Session, 2011**

Tracking Number: .184525.1

Short Title: Protection from Certain Scientific Topics

Sponsor(s): Representatives Thomas A. Anderson and Larry A. Larrañaga

Analyst: Pamela Herman **Date: February 17, 2011**

Bill Summary:

HB 302 creates a new section of the *Public School Code* to provide protection for teachers who teach certain scientific topics defined as "controversial" in the bill.

Among its provisions, HB 302 states that:

- the Public Education Department (PED), public school governing authorities and school administrators may not prohibit a teacher, when teaching a controversial scientific topic in accordance with adopted state standards and curricula, from informing students about any scientific information regarding strengths or weaknesses pertaining to the topic;

- only the teaching of scientific information is protected, and not the promotion of any religion or religious belief or doctrine;

- a teacher teaching such topics shall be protected from reassignment, termination, discipline, or other discrimination for doing so; and

- teachers shall hold students accountable for understanding material taught in accordance with adopted standards and curricula but may not penalize a student for holding a particular position on the topic.

HB 302 defines the terms:

- "controversial scientific topic" to include biological origins, biological evolution, the causes of climate change, human cloning, and other topics regarded by society as controversial; and

- "scientific information" to mean information derived from observation, experimentation and analyses regarding aspects of the natural world to determine the nature of or principles behind the aspects being studied; and may include information that coincides or harmonizes with certain religious tenets but does not include information derived from religious writings, beliefs, or doctrines.

Fiscal Impact:

HB 302 does not contain an appropriation.

Fiscal Issues:

- According to a bill analysis of HB 302 by the Administrative Office of the Courts, enactment of the bill may result in litigation over its constitutionality.

- The Attorney General's Office states that HB 302 is vulnerable to legal challenge on grounds that its definitions and application are unconstitutionally vague.

Substantive Issues:

- In 2011, Quality Counts, an annual publication of *Education Week* magazine, gave New Mexico's standards and accountability system a rating of A-, among the top third in the nation. In 2006, Quality Counts described state science standards as "clear, specific and grounded in content."

- The New Mexico Science Content Standards deal explicitly with the teaching of evolution and scientific investigation and inquiry.

- In 2006, the current New Mexico Science Content Standards (codified in Title 6 of the New Mexico Administrative Code) received a grade of "A" from the Thomas B. Fordham Foundation, which named New Mexico one of 19 states to receive a top grade for science standards, stating that:

  - regarding "process—inquiry and the nature of science—New Mexico provides an unusual amount of well-articulated good sense ('persistence, respect for evidence, open-mindedness balanced with skepticism'); and
  - regarding evolution, in particular, the foundation:

    - ✓ states that "evolution is the organizing principle of modern biology, and its simple but powerful principles and algorithms have colonized scholarly disciplines formerly as remote from biology as economics, engineering, and literature."; and
    - ✓ gave New Mexico's standards a grade of 3 out of 3, with the statement that "the life sciences. . .are treated quite fully and exceptionally well. The build-up to teaching and effective learning of evolutionary science reveals original thought on content and presentation, not just copying from national models."

- The definition of "scientific information" in HB 302 states that it does not include information derived from religious or philosophical writings, beliefs, or doctrines, but that such information may "include information that coincides or harmonizes with certain religious tenets," thus possibly permitting the teaching of theories of biological origins such as intelligent design.

- Several provisions of HB 302 track a model "academic freedom statute on evolution" promulgated by the Discovery Institute, which states that "to help combat the dogmatism that presently pervades evolution-education, Discovery Institute supports legislation that protects academic freedom for teachers who would dare to challenge Darwin in the classroom. There are presently academic freedom bills in Oklahoma, Tennessee, New Mexico, Kentucky, and Missouri.

- In an analysis of HB 506, *School Science Content Standards*, a 2007 bill with language similar to HB 302, PED stated that Dr. Kenneth R. Miller, Professor of Biology at Brown University and co-author of a widely-used series of high school biology textbooks, points out that the term "biological origins" is not a widely accepted scientific term but rather a way of saying evolution without using that word.

- In analyzing the 2007 bill, the PED Office of General Counsel cites federal court decisions regarding the teaching of creation science and intelligent design as bearing directly on the bill; specifically:

  - In 1971, in the case of *Lemon v. Kurtzman*, the US Supreme Court established an "endorsement test" to determine if a government-sponsored message violates the Establishment Clause of the US Constitution, which prohibits government from transgressing the limits of neutrality and acting in ways that show religious favoritism or sponsorship, as follows:

    - ✓ the message does not have a secular purpose;
    - ✓ its principal or primary effect advances or inhibits religion; or
    - ✓ it creates an excessive entanglement of the government in religion.

  - In 1987, in the case of *Edwards v. Aguillard*, the US Supreme Court held that a requirement that public schools teach "creation science" along with evolution violated the Establishment Clause of the US Constitution.

  - In 2005, in the case of *Kitzmiller v. Dover Area School District*, the US District Court for the Middle District of Pennsylvania held that a policy requiring students to hear a statement mentioning "intelligent design" as an alternative to evolution amounted to an endorsement of religion in violation of the Establishment Clause. The court concluded that that language of the policy in question, while attempting to sound neutral, amounted to an endorsement of religion.

- Recent federal court cases that interpret the free speech rights of school teachers in the classroom, including *Lee v. York County School Division*, in the Eastern District of Virginia in 2006, and *Mayer v. Monroe County Community School Corporation*, in the 7th Circuit Court of Appeals in 2007, follow a line of federal cases holding that "curricular speech" does not touch on a matter of public concern such that it should be protected by the First Amendment. In the *Mayer* case, the court cited an earlier holding that rejected a teacher's assertion that he had a constitutional right to teach that the earth is much younger than the textbook maintained, "because the school system does not 'regulate' teachers' speech as much as it *hires* that speech" which policymakers, ultimately elected ones, have established in the curriculum:

  > . . . .The Academy and its affiliated institutions—the National Academy of Engineering, the Institute of Medicine, and the National Research Council—have all sought to counter misinformation about evolution because of the enormous body of data supporting evolution and because of the importance of evolution as a central concept in understanding our planet.

Background:

- According to the National Academy of Sciences, in *Teaching About Evolution and the Nature of Science*:

> The ability to use scientific knowledge and ways of thinking depends to a considerable extent on the education that people receive from kindergarten through high school. Yet the teaching of science in the nation's public schools often is marred by a serious omission. Many students receive little or no exposure to the most important concept in modern biology, a concept essential to understanding key aspects of living things—biological evolution. People and groups opposed to the teaching of evolution in the public schools have pressed teachers and administrators to present ideas that conflict with evolution or to teaching evolution as a "theory, not a fact."

- A study published in January 2011 by researchers at Penn State University, based on data from the National Survey of High School Biology Teachers, a representative sample of 926 public high school biology instructors, found that:

  - only about 28 percent of those teachers consistently implement National Research Council recommendations calling for introduction of evidence that evolution occurred, and craft lesson plans with evolution as a unifying theme linking disparate topics in biology;
  - about 13 percent of biology teachers "explicitly advocate creationism or intelligent design by spending at least one hour of class time presenting it in a positive light," and that many of these teachers typically rejected the possibility that scientific methods can shed light on the origin of species, and considered both evolution and creationism as belief systems that cannot be fully proven or discredited; and
  - about 60 percent are neither strong advocates for evolutionary biology nor explicit endorsers of nonscientific alternatives, thus failing to explain the nature of scientific inquiry, undermining the authority of established experts, and legitimizing creationist arguments, possibly playing "a far more important role in hindering scientific literacy in the United States than the smaller number of explicit creationists." This 60 percent commonly use one or more of three strategies to avoid dealing with controversies:

    - ✓ teaching evolutionary biology as if it applies only to molecular biology;
    - ✓ rationalizing the teaching of evolution by referring to high-stakes examinations, indicating that "it does not matter if they really believe in evolution, so long as they know it for the test"; or
    - ✓ exposing their students to all positions, scientific and otherwise, and letting them make up their own minds, and so telling students that "well established concepts can be debated in the same way we debate personal opinions."

Related Bills:

None as of February 17, 2011.