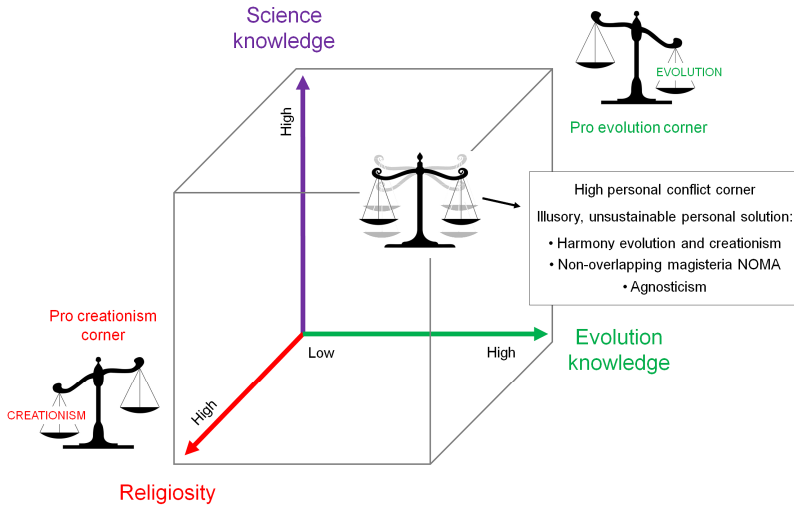# Image Resources of Didactic Relevance

Fig. 1 Cubic landscape used to explain to the general public how science and evolution knowledge interact with religiosity. The landscape allows us to examine three positions: A pro-evolution corner (top right), where knowledge of science and evolution will be high, religiosity will be low and, therefore, the weighing scale of acceptance of evolution will lean toward the right (= high acceptance of evolution). A pro-creationism corner (bottom left), where knowledge of science and evolution will be low, religiosity will be high and, therefore, the weighing scale of acceptance of creationism will lean toward the left (= low acceptance of evolution). And a high-personal conflict corner (front-center), where science/evolution knowledge and religiosity will be high. We represent this corner by a weighing scale at unsustainable equilibrium, the point at which the evolution controversy will be intense and individuals will adopt self-comforting, short-lasting solutions, including: the claim of *harmony* between science/evolution and religion; the proposal of *non overlapping magisteria* (NOMA, science/evolution and religion occupy separate domains), or *agnosticism* (doubt about the existence or non existence of a deity). Topics discussed in Chapter Three.
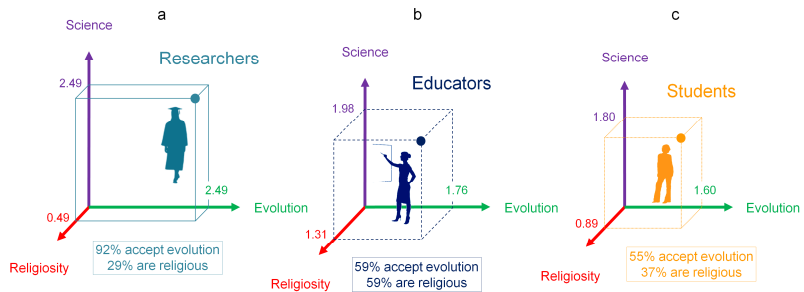
Fig. 2 Acceptance of evolution by New England researchers (a), educators of prospective teachers in the U.S. (b), and New England college students (c) in respect to their science knowledge, evolution knowledge, and level of religiosity. Each dimension in the landscape ranged, numerically, from 0.0 (low) to 3.0 (high). Topic discussed in Chapters Three and Six.
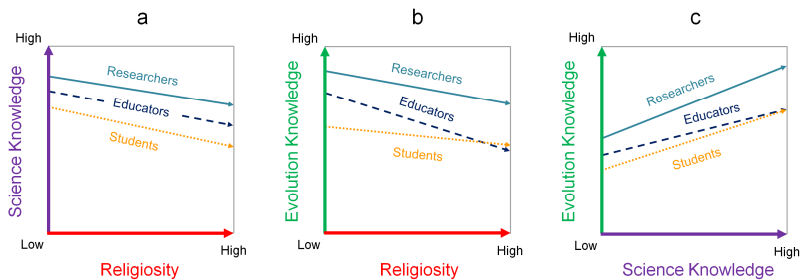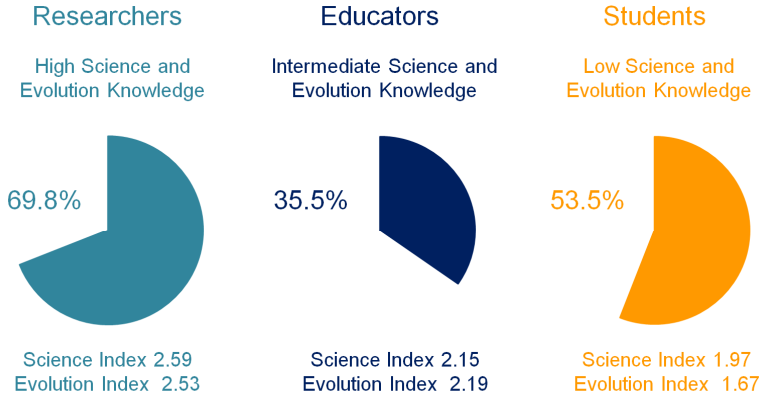

Fig. 3 Science and evolution knowledge had a negative association with religiosity; both declined with increasing religious beliefs, as documented for the New England researchers, educators of prospective teachers in the U.S., and New England college students (a-b). Note how evolution knowledge increased with increasing science knowledge in the three groups (c), a positive association of variables. Topics discussed in Chapter Three.

The Non-Religious: Religiosity Index = 0.0

Researchers

High Science and
Evolution Knowledge

69.8%

Science Index 2.59
Evolution Index 2.53

Educators

Intermediate Science and
Evolution Knowledge

35.5%

Science Index 2.15
Evolution Index 2.19

Students

Low Science and
Evolution Knowledge

53.5%

Science Index 1.97
Evolution Index 1.67

The Deeply Religious: Religiosity Index = 3.0

Researchers

Intermediate Science and
Evolution Knowledge

3.2%

Science Index 2.0
Evolution Index 2.0

Educators

Low Science and
Evolution Knowledge

18.5%

Science Index 1.58
Evolution Index 1.10

Students

Low Science and
Evolution Knowledge

12.3%

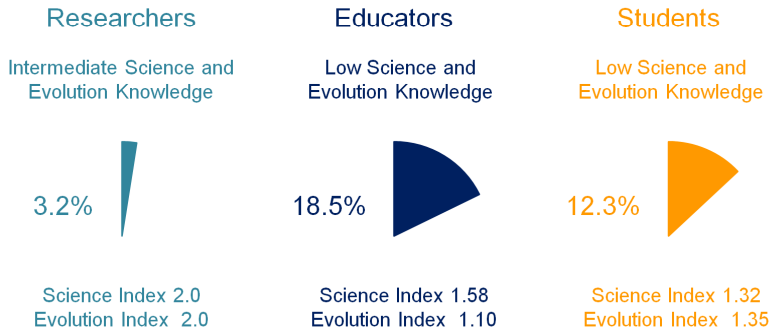Science Index 1.32
Evolution Index 1.35

Fig. 4 Science and evolution knowledge among the non-religious (top; religiosity index = 0.0) and the deeply religious (bottom; religiosity index = 3.0). The non-religious New England researchers, educators of prospective teachers in the U.S., and New England college students scored highest in science/evolution knowledge: values ranging from 2.59 (high) to 1.67 (low). In contrast, the deeply religious, scored lowest in science/evolution knowledge: values ranging from 2.0 (high) to 1.35 (low). Topics discussed in Chapters Three and Four.
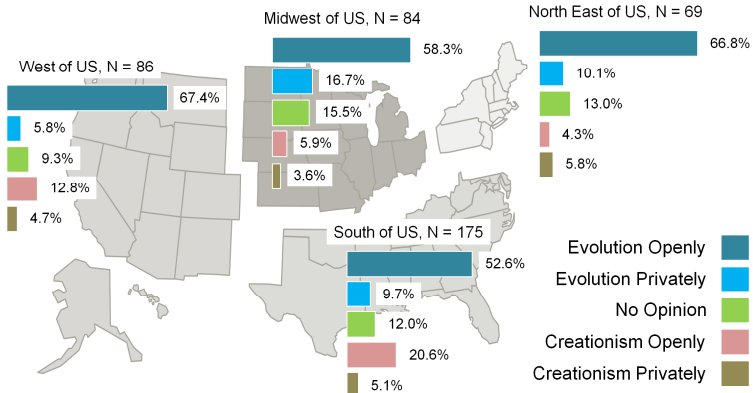
Acceptance of Evolution or Creationism

West of US, N = 86
- 67.4%
- 5.8%
- 9.3%
- 12.8%
- 4.7%

Midwest of US, N = 84
- 58.3%
- 16.7%
- 15.5%
- 5.9%
- 3.6%

North East of US, N = 69
- 66.8%
- 10.1%
- 13.0%
- 4.3%
- 5.8%

South of US, N = 175
- 52.6%
- 9.7%
- 12.0%
- 20.6%
- 5.1%

Legend:
- Evolution Openly
- Evolution Privately
- No Opinion
- Creationism Openly
- Creationism Privately

Fig. 5 Acceptance of evolution or creationism among educators of prospective teachers in the U.S. The majority of educators accepted evolution openly; creationism was accepted openly mainly in the South and West of the U.S. Topic discussed in Chapter Four.

Level of Concern about the Controversy
Evolution vs. Creationism vs. Intelligent Design

West of US, N = 99
- 42.4%
- 37.4%
- 1.0%
- 13.1%
- 6.1%

Midwest of US, N = 107
- 47.7%
- 28.9%
- 2.8%
- 15.9%
- 4.7%

North East of US, N = 90
- 42.2%
- 37.8%
- 6.7%
- 10.0%
- 3.3%

South of US, N = 212
- 51.9%
- 28.8%
- 1.9%
- 13.7%
- 3.8%

Legend:
- Very Concerned
- Somewhat Concerned
- No Opinion
- Not Concerned
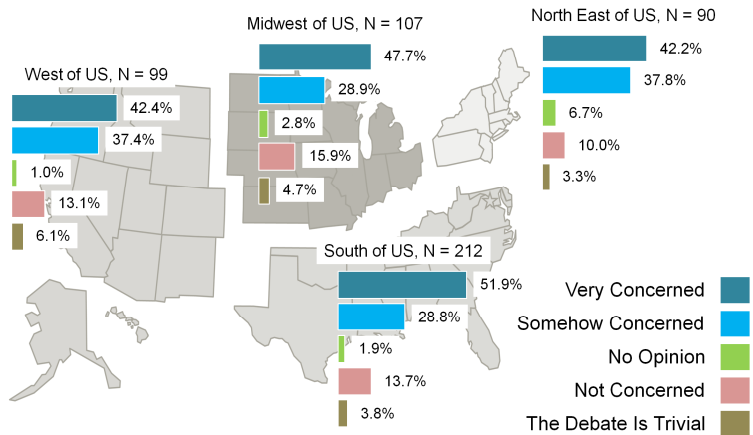- The Debate Is Trivial

Fig. 6 Level of concern about the controversy evolution vs. creationism vs. Intelligent Design among educators of prospective teachers in the U.S. The majority of educators were very concerned or somehow concerned about the controversy and its implications for science education. Topic discussed in Chapter Four.
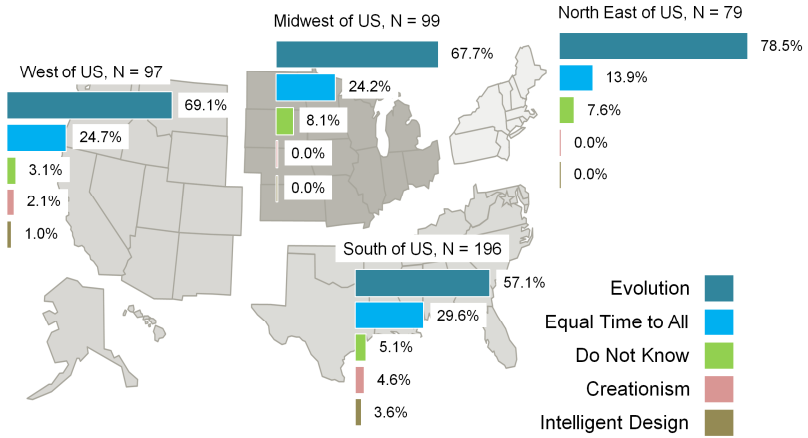
What Should Be Taught in the Science Class?

West of US, N = 97
- 69.1%
- 24.7%
- 3.1%
- 2.1%
- 1.0%

Midwest of US, N = 99
- 67.7%
- 24.2%
- 8.1%
- 0.0%
- 0.0%

North East of US, N = 79
- 78.5%
- 13.9%
- 7.6%
- 0.0%
- 0.0%

South of US, N = 196
- 57.1%
- 29.6%
- 5.1%
- 4.6%
- 3.6%

Evolution
Equal Time to All
Do Not Know
Creationism
Intelligent Design

Fig. 7 What should be taught in the science class? The majority of educators of prospective teachers in the U.S. supported the exclusive teaching of evolution in the science class. However, support to dedicating *equal time* to evolution, creationism and Intelligent Design was conspicuous in all regions of the U.S. Topic discussed in Chapter Four.

Comprehensive vs. Lamarckian Definition of Evolution
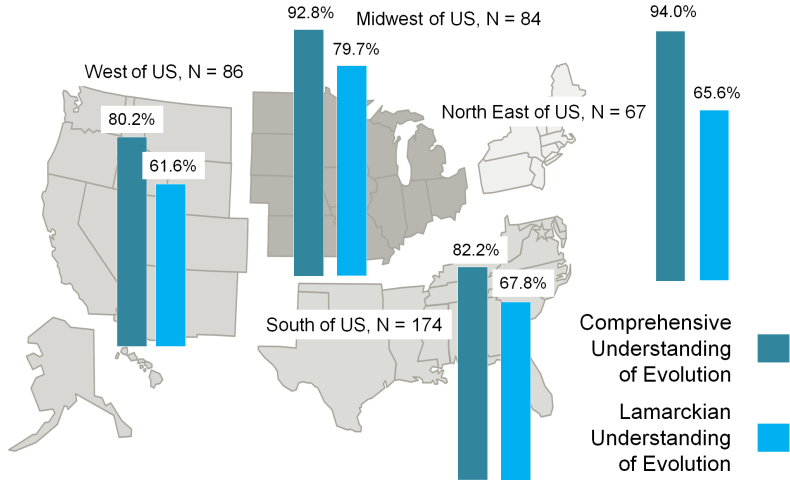
Fig. 8 Comprehensive vs. Lamarckian understanding of evolution. In true/false questions, most educators of prospective teachers in the U.S. agreed with a comprehensive definition of evolution (i.e. a gradual process by which the universe changes; it includes the origin of life, its diversification and the synergistic phenomena resulting from the interaction between life and the environment). Interestingly, they also agreed with a Lamarckian definition of evolution (i.e. a gradual process by which organisms acquire traits during their lifetimes, such as longer necks, larger brains, resistance to parasites, and then pass on these traits to their descendants). Topics discussed in Chapters Four, Six and Seven.