

Mark Saul

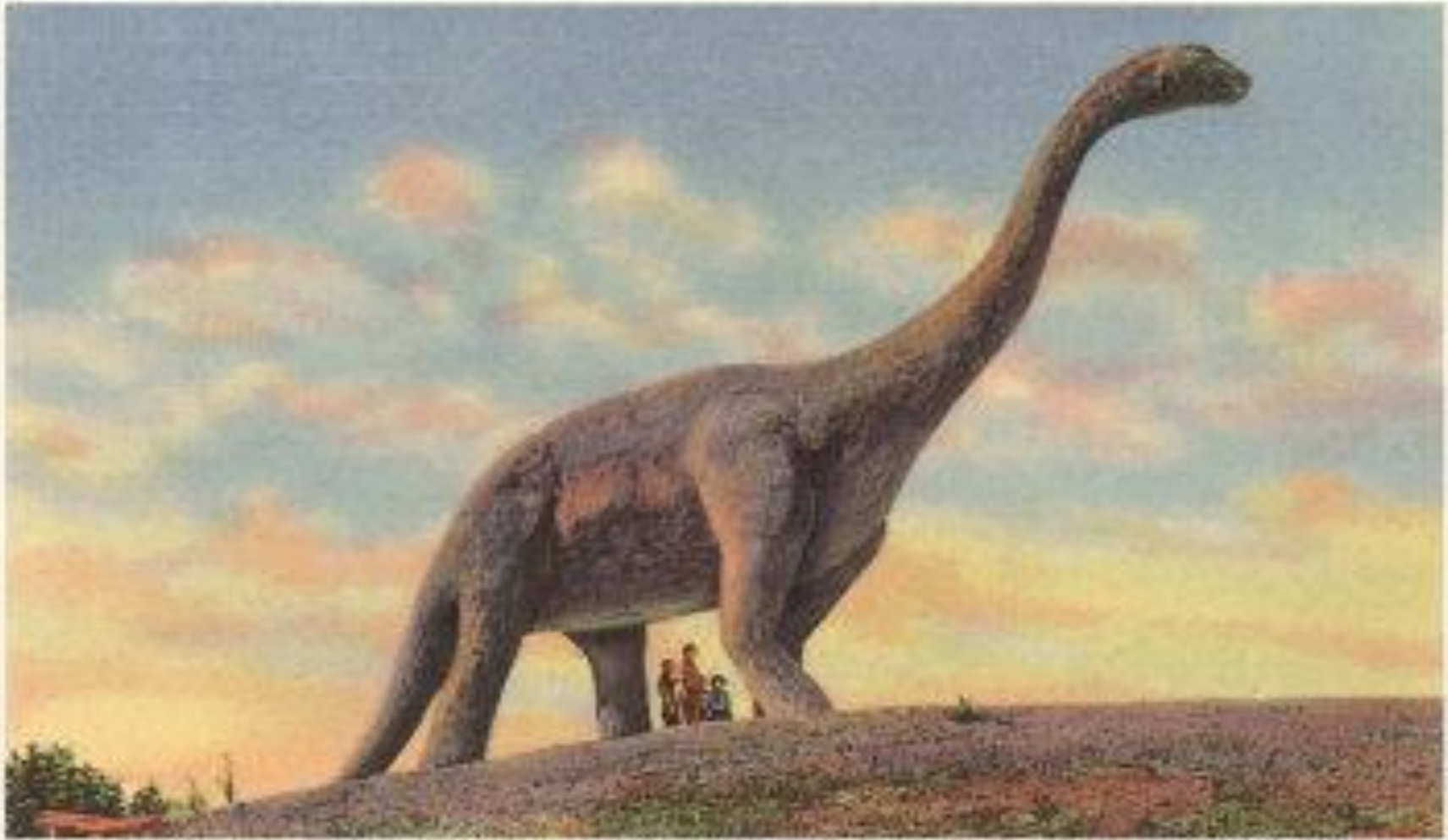
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Plowing a field...



...with a dinosaur.



BRONTOSAURUS, DINOSAUR PARK, RAPID CITY, SO. DAK.

Ways of Knowing:

“Pedagogical Content Knowledge” (Lee Shulman)

“Pedagogical Research Knowledge”

“Pedagogical Policy Knowledge”







$$\lim_{x \rightarrow 0} \frac{e^x - 1}{x}$$

“That’s just the derivative
of e^x , when $x = 0$ ”

*That's just the derivative
of e^x , when $x = 0$*

(evaluated at $x = 0$)

$$\lim_{x \rightarrow 0} \frac{\cos x - 1}{x} = \lim_{x \rightarrow 0} \frac{\cos x - \cos 0}{x - 0} = \frac{d}{dx} (\cos x)_{x=0} = (-\sin x)_{x=0} = -\sin 0 = 0$$

$$\lim_{x \rightarrow 0} \frac{\operatorname{tg} x}{x} = \lim_{x \rightarrow 0} \frac{\operatorname{tg} x - \operatorname{tg} 0}{x - 0} = \frac{d}{dx} (\operatorname{tg} x)_{x=0} = \left(\frac{1}{\cos^2 x} \right)_{x=0} = \frac{1}{\cos^2 0} = 1$$

$$\lim_{x \rightarrow 0} \frac{\ln(1+x)}{x} = \lim_{x \rightarrow 0} \frac{\ln(1+x) - \ln 1}{x} = \frac{d}{dx} (\ln(1+x))_{x=0} = \left(\frac{1}{1+x} \right)_{x=0} = 1$$

At 50 degrees Fahrenheit, 30 people will complain about the temperature of a building. For every drop of 10 degrees in temperature, five more people will complain. How is the number of complaints received related to the temperature in the building?

Write an equation relating the temperature to the number of complaints received.

<i>D</i>	50	40	30	20	10
<i>C</i>	30	35	40	45	50

$$C = -\frac{1}{2}D + 55$$

At 50 degrees Fahrenheit, 30 people will complain about the temperature of a building. For every drop of 10 degrees in temperature, five more people will complain.



$$C = 50 + 30d$$

$$C = 30 + 50d$$

$$C = 50 + 10d$$

$$C = 30 + 5d$$



C= complaints

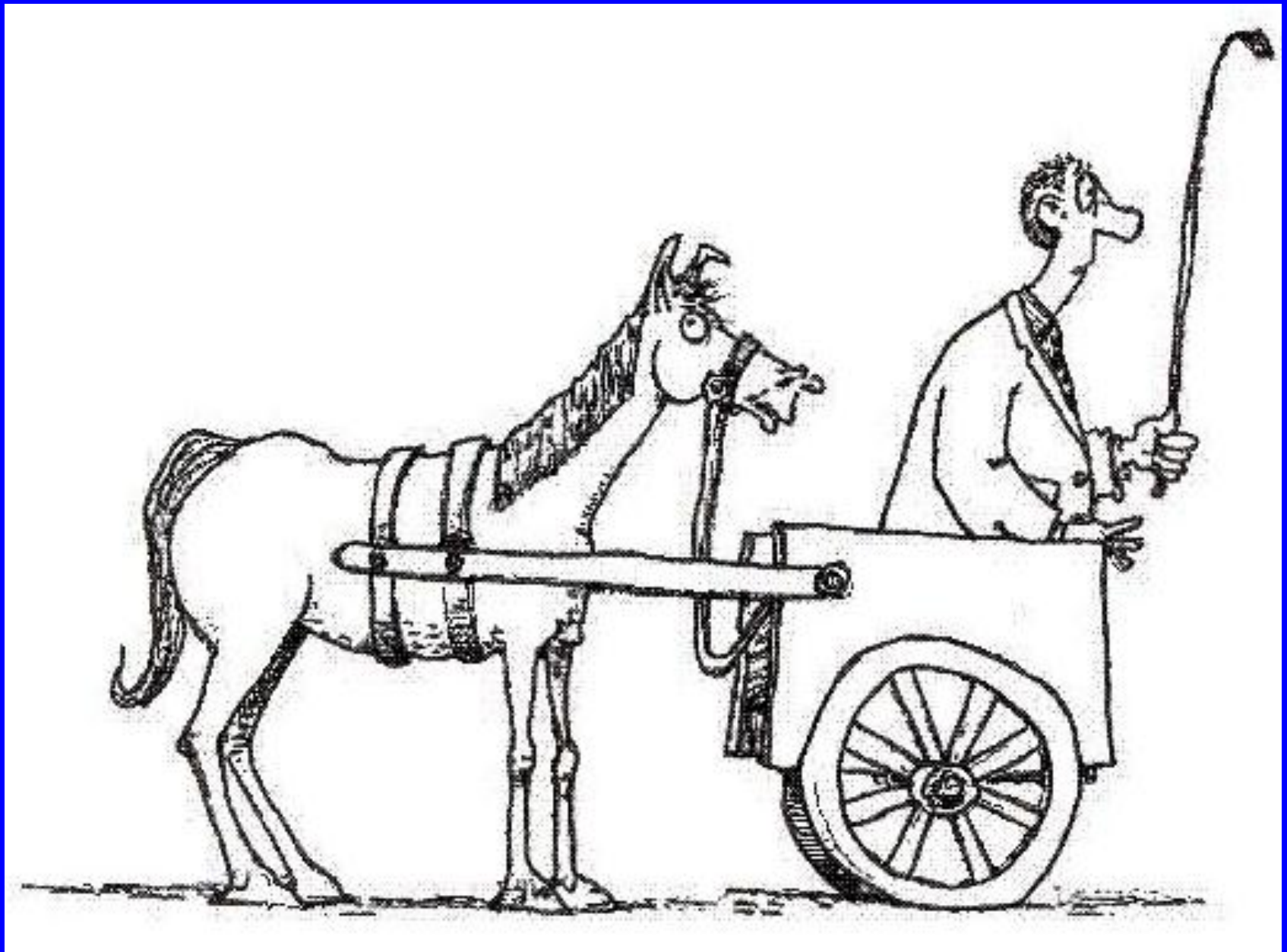
d= drops (of five degrees)

<i>d</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>C</i>	35	40	45	50	55

$$C = 30 + 5d$$

What are the Policy Issues?

- Differentiation of instruction
- Multiple entry points
- Multiple means of assessment
- Personalization of instruction



What sorts of policies (levels, mechanisms, actual documents) support teachers in doing this kind of work?

THINK GLOBALLY, ACT LOCALLY

