

# Homework in Physical Chemistry Using Blackboard

Brown Bag Seminar

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# HW “History”

- Hillsdale College, AY07:
  - pencil & paper
  - Submitted 2-3 lessons after chapter was complete
- University of Nebraska-Lincoln, Summer 06 & 07:
  - Blackboard
  - Due prior to each lesson
  - Mix topics
- USMA, AY09
  - Blackboard
  - Due prior to lesson
  - Concept check/review

# Typical Physical Chemistry HW

- Assignment
- Solution
- General characteristics:
  - “Long” solutions
  - Multi-step problems
  - Showing work key
  - Few (solely) conceptual questions

# Transition to ...

- Assignment
- Most questions are multiple choice, fill-in-the blank, or calculated numeric answers.
  - Little to no work is possible
  - Little partial credit because work isn't shown
- Why??

# Feedback/tracking

- Summary of HW
- Detailed statistics
- “Personality” of class
- Study habits
  - When they study
  - What types of questions they do/do not answer
  - How they answer questions

# HW Classification

	H	I	Avg.
Calculation	69.83	84.42	77.13
Mostly calc.	<u>65.08</u>	<u>67.87</u>	66.48
Mostly SA	84.07	94.49	89.28
All SA	<u>86.83</u>	<u>97.92</u>	92.38
Other	82.22	93.33	87.78

# Advantages/Disadvantages

- Advantages:
  - Instant feedback
  - Low set-up cost if assessment pool available
  - Students can maximize their HW grade
  - Lots of data/statistics
  - Copying can be addressed
- Disadvantages:
  - Not tailored feedback
  - Takes time to set up; no way (?) of saving so done yearly
  - Learning curve for students
  - Students work at night
  - Copying can be hard to address
  - Time consuming

# What I would like from Blackboard

- Integration of equations from Equation Editor into questions/answers
- Ability to add pictures or figures to questions and answers
- Time elapsed
- Better salesmanship/recruiting for question pools

# Questions?

