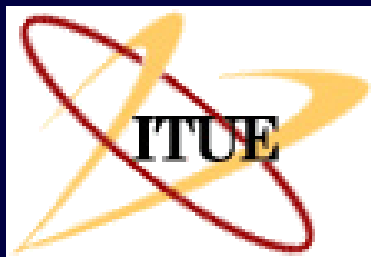


Working Constructively with Student responses to PBL



Institute for Transforming
Undergraduate Education

The projects really forced me to actually understand the material and how to apply it instead of just memorizing it for a test. I was able to see first hand how the techniques and tools we were learning about actually are used. I think the problem-based format has really great potential.

The problem-based learning format was good because it taught us how to work in groups and how to analyze problems on a team. We could teach each other and learn through each other as well.

The MOST DIFFICULT course I have taken at UD. However it was not in vain. It didn't seem like I was learning with out a purpose. I may not do as well as I want to but i have learned more than any other science class.

I frequently got things explained with just more questions instead of gaining a firm, consistent understanding of the material.

The instructor did not teach.

There were no concrete notes from class to study from for tests.

Sometimes what we were supposed to be learning was vague and it was hard to organize the material in my head.

A taxonomy of student responses

Affective

“PBL is very enjoyable”

“I don’t like the lack of structure”

Behavioral

Eager attendance, hard work

Withdrawal, absences

Metacognitive

“I am learning without trying to”

“I can’t tell what I’m learning”

Social

Cohesive, effective groups

Slackers, dominators

Behavioral

Eager attendance, hard work

Withdrawal, absences

Students with learning goals

Want to learn

Think intelligence is improvable, through effort

Think that errors signal how to learn more

Students with performance goals

Think that intelligence is a fixed entity

Want to *look* smart

Aversive to challenge

Think that errors signal you are bad at this

Students with learning goals

Seek classes they can learn from

Work harder after failures

How can you help
These students get the
most out of PBL?

Students with performance goals

Seek classes they can get easy grades in

Withdraw effort after failures

Communicate that effort makes a difference in this subject (in this class)

Praise (and criticize) the process,
not the person
("You worked hard at that")

Mistakes are embarrassing only
if you think abilities are fixed

Metacognitive

“I am learning without trying to!”

“I can't tell what I'm learning”

Ask students to list what they learned after each problem; compare this list to your own learning objectives

Metacognitive skills develop as students practice reflecting on learning issues

Affective

“PBL is very enjoyable”

“I don't like the lack of structure”

“You're not teaching us!”

I will not teach you anything. I repeat: I will not teach you anything. Instead, I'm going to try to arrange the situation so that you cannot avoid learning more than they ever wanted to know about psychology and more than you ever learned in any other course.

Charles Brewer, 2005

PR for PBL:

Cultural images emphasize the college
“sage on the stage”
not the “guide on the side”

Remind students of your role
in scaffolding their learning

Emphasize the importance
of learning how to learn

Social

Cohesive, effective groups

Slackers, dominators

Less “social loafing” when there are:

Clear roles for each person (nonredundancy)

Clear accountability for each person (Karau & Williams, 1995)

Peer evaluation of groups is a must; grades should be contingent upon clear feedback

Divorce options for intractable members

Constructing groups carefully

Karau, S. J. & Williams, K. D. (1993). Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology*, 65, 681-706.

Think about your experience working in groups. Please select the one response that best suits your experience.

- A. _____ I enjoy working in groups because my group members usually help me understand the material and tasks and therefore I can perform better.
- B. _____ I question the value of group work for me, because I usually end up doing more than my fair share of the work.
- C. _____ I have little or no experience working in groups.
- D. _____ I have a different experience than the choices given above. Please describe.

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