



Learning Logs in College Algebra:

A window into student
perceptions about learning
progress and student
engagement

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Research Question

- To what extent do class examples applicable to student interests effect student engagement or perceptions?

Methodology

Table 2: Features of Groups 1, 2, and 3

	Control Group	Experimental Groups	
	G1	G2	G3
Examples	Algebraic	Applied to student interests	Applied to student interests
Homework	Algebraic	Algebraic	Include problems applied to student interests
Quizzes	Algebraic	Algebraic	Include problems applied to student interests
Exams	Algebraic	Algebraic	Include problems applied to student interests
Pre/Post tests	Algebraic	Algebraic	Algebraic



Learning Log

- Consisted of 3 questions
 - 1) What have you learned?
 - 2) What do you want to learn more about?
 - 3) What will you do to learn more?
- Collected 9 times from each group

Learning Log Comments

- Group 1: broad topic questions
 - "x and y intercepts and symmetry"
- Group 2: specific questions
 - "#63, #64 & #75"
- Group 3: specific and descriptive
 - "I have a very hard time with equations questions/story problems. I can't understand what it's asking or how to find it. I don't know how to tell what's part of the question or not and which sign to use."

Results: Learning Log Participation

Entry	Group 1	Group 2	Group 3
1	83%	100%	67%
2	26%	86%	100%
3	43%	43%	58%
4	9%	33%	67%
5	26%	43%	92%
6	22%	62%	58%
7	22%	52%	75%
8	35%	38%	42%
9	57%	67%	25%
Average	36%	58%	65%



Learning Log Use

- Communicate & assess
 - what students had learned
 - questions/interests students had
- Engagement

NSSE

- Asked questions in class or contributed to class discussions.

Mean

G1: 2.78

G2: 3.21

G3: 3.92

Effect Size

G3 vs G1: 1.06*

G2 vs G1: 0.47

G2&3 vs G1: 0.70



Significant Effect Sizes

- Asked questions in class or contributed to class discussions.
- Put together ideas and concepts from different courses to complete assignments.
- Talked about career plans with instructor.
- Actively participate in class.



Acknowledgements

- *Dr. Ray Denton*
- *Dr. David Fowler*
- *Dr. Delwyn Harnisch*
- *Dr. Ruth Heaton*
- *Dr. Cindy Horn*
- *Dr. Ira Papick*