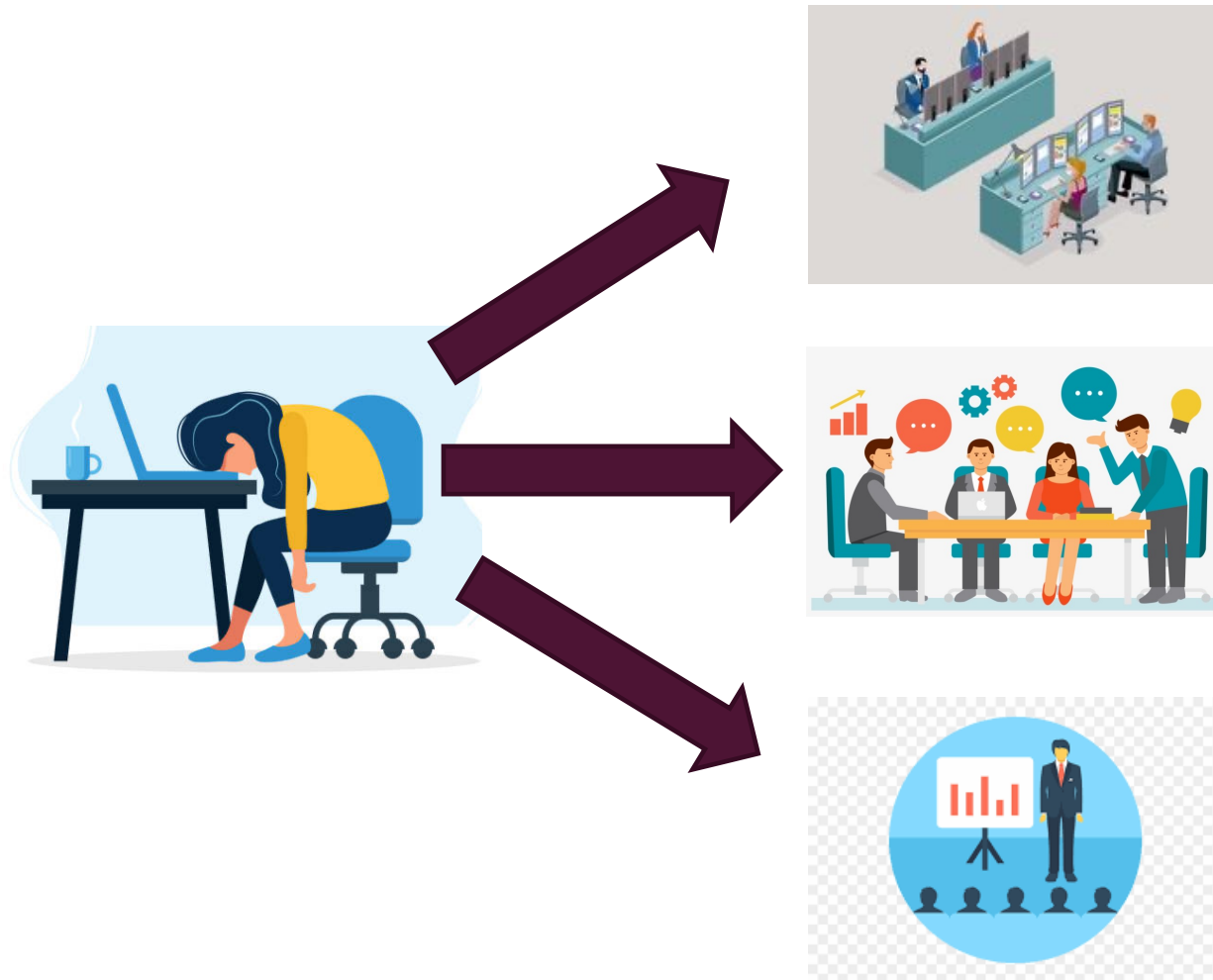# Motivating Novice Crowd Workers through Goal Setting:
An Investigation into the Effects on Complex Crowdsourcing Task Training

Amy Rechkemmer & Ming Yin
Purdue University

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Many Approaches Have Been Developed to Enable the Completion of Complex Tasks by the Crowd

❖ Performance Goal

❖ Learning Goal

❖ Behavioral Goal

Main Research Questions

Q1: How does setting different goals affect workers' learning perceptions during training?

Q2: How does setting different goals affect workers' learning gain during training and performance on tasks after training?

Experimental Design

Pre-Test (12 Tasks)

× 12

Goal Setting

e.g., Complete at least 9 practice (out of the entire of 10 practice

TREATMENT DEPENDENT

Task 2/12: Which meal has more protein?

(Assume equal portion sizes)

Peanut butter and jelly sandwich

Kale, red peppers, bacon and cream cheese on a bagel

The left meal has more protein

The right meal has more protein

Exit Survey

Demographics

Age
Gender
Location
etc.

Goal Setting Treatments

We considered an experimental design along two factors:

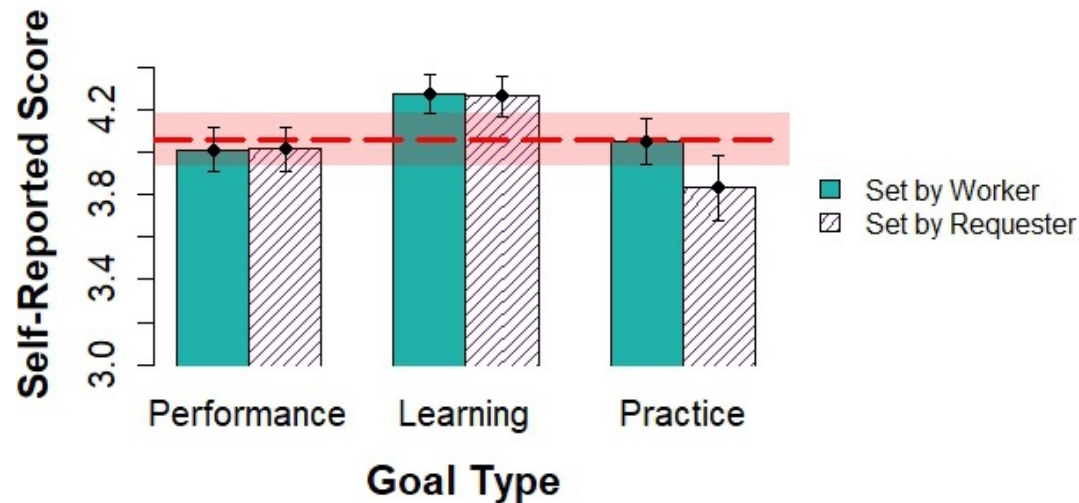**Initiator of goal**
- Worker-set
- Requester-set

Type of goal
- Performance goal
- Learning goal
- Practice goal

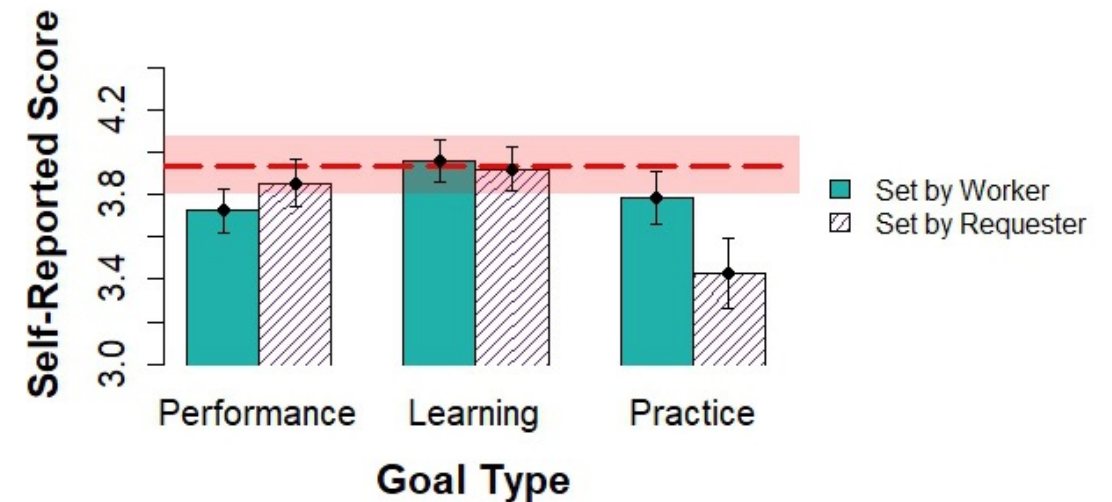Altogether, this is a 2 × 3 + 1 design for a total of **7 treatments**

And a control treatment where workers did not have a goal

Effects of Goal Setting on Perception & Performance

Perceived Helpfulness of Lessons

Perceived Learning Level in Lessons

Setting different goals while training was **not** found to lead to significantly different learning outcomes or post-training performance

Further Analysis Provides Support for Personalization of Goals

Matching workers who are highly motivated to learn new things with learning goals led to **improved** learning gain, but not improved post-training performance
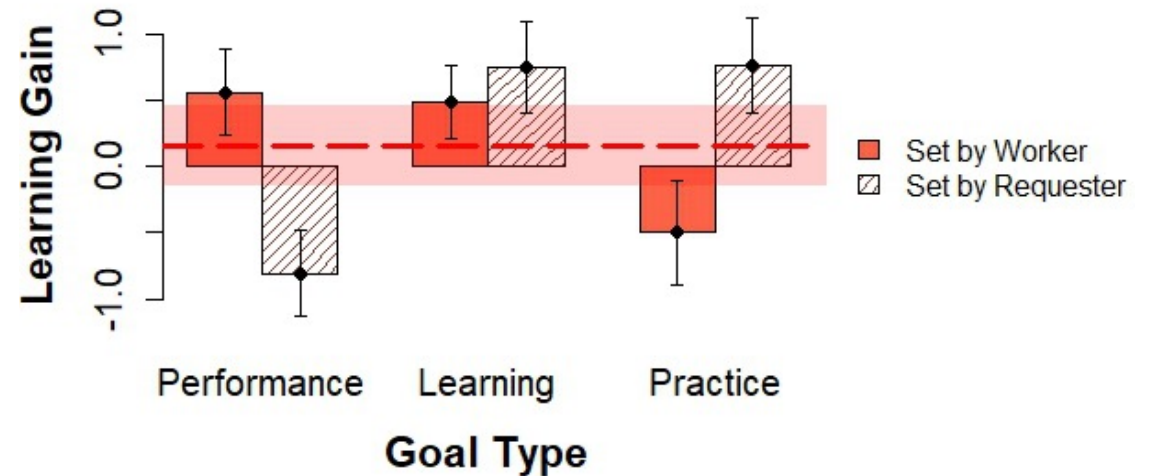
Behavioral Goals Lead to Unexpected Results
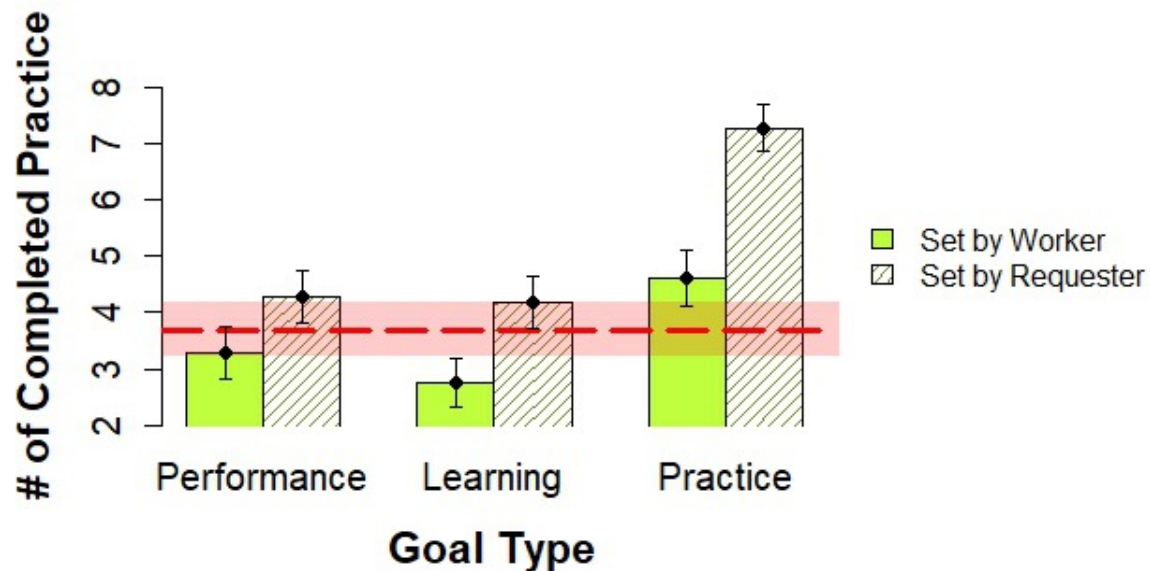
Workers with requester-set practice task goals completed **more** practice tasks on average than workers in other treatments

However…

Their learning gain and post-training performance was **lower** than workers in other treatments who chose to complete many practice tasks

Practical Implications for Setting Goals When Training Crowd Workers

❖ Additional studies should be done to further explore ways to **personalize goals** for workers in order to see greater benefits when training for complex tasks

❖ Behavioral goals **increase adoption** of desired behavior, and future work should be done to discover how to make workers see the merit of this desired behavior

Thank You!

A more complete presentation recording can be found at: https://www.youtube.com/channel/UCIFAwgmHFwS3B0vU2Yys_Bg