Exploring the Effects of Goal Setting When Training for Complex Crowdsourcing Tasks (Extended Abstract)

Amy Rechkemmer Ming Yin
Purdue University

Motivation

- Some crowdsourcing tasks require complex knowledge to complete, and one approach is to train workers.
- Goal setting has been shown to be an effective strategy for motivating individuals during training to enhance learning and performance, but the effects in the context of crowdsourcing are unclear.
- In this work, we explore the effects of goal setting on crowd workers' learning during training for complex tasks, and their perceptions and performance after training.

The Nutrition Task

4 Nutritional Components:
- Fat
- Fiber
- Protein
- Carbohydrates

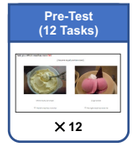
Treatments

Type of Goal:
- Performance
- Learning
- Practice (Behavioral)

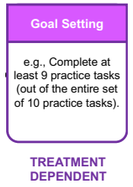
Initiator of Goal:
- Worker-set
- Requester-set

2 × 3 + 1 (control treatment) design

Experimental Procedure

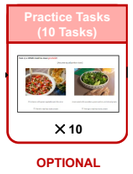


Workers completed 12 nutrition tasks

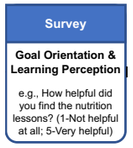


Workers received 1 of 7 goal setting treatments

Workers went through lessons for each nutritional component



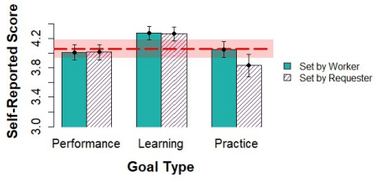
Workers could perform up to 10 practice tasks

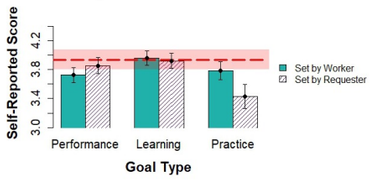


Workers took a survey on goal orientation and perceptions

Workers completed 12 more nutrition tasks

Main Findings

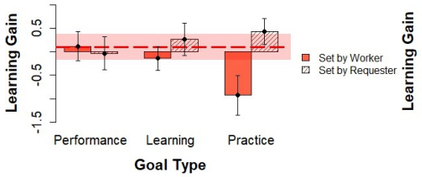




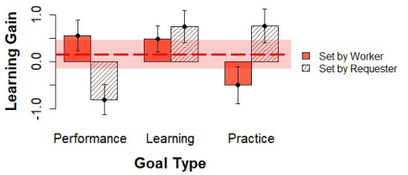
- Workers with a learning goal believed the lessons to be more helpful and perceived themselves as having learned more.
- Setting different goals was **not** found to lead to significantly different learning outcomes or post-training performance.

Exploratory Findings

Matching Goals to Goal Orientation



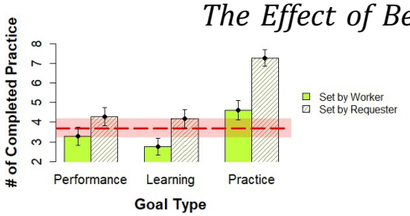
(a) Performance Goal Orientation



(b) Learning Goal Orientation

Matching workers who are highly motivated to learn new things with learning goals led to **improved** learning gain, but not improved post-training performance

The Effect of Behavioral Goals



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 more practice tasks

Implications

- 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.