Toward Lasting Behavior Change: The Challenge of Persistence

Susan M. Schneider, PhD

The Problem

Sustainability interventions intended to produce an ongoing behavior change are impactful *only if* the new behaviors persist – and they often don’t. *And post-intervention data are often not even taken.*

This presentation focuses on how learning principles can help. (References & contact info in Handout)
The Persistence Problem

Why do researchers find that new behaviors like green commuting often fail to "stick"?

Sample Reasons

- Barriers like extra effort
- Insufficient reinforcement
- Insufficient prompts
- Regression to past habits
- Failure to generalize/spill over to a new context

Successful methods and two examples follow.
Evidence-based Solutions 1

Take follow-up data and Plan for maintenance

Use variable schedules of reinforcement. Then gradually “thin” them.
Modify other reinforcement schedule parameters (e.g., size)
Gradually remove prompts
Offer a choice to participate
Offer a sound rationale
Focus on more than one behavior
Relatedly: Outcome vs specific behavior focus – outcome can work better
Relatedly: Use indiscriminable contingencies (also one of the benefits of variable schedules)
Evidence-based Solutions 2

Have on-site workers deliver feedback (not researchers)

Make feedback dependent on overall performance rather than individual behaviors

Emphasize positive outcomes and recognize success

Transition to natural consequences (including intrinsic reinforcers)

Natural reinforcers include cost savings from using less heat/AC/water
- or intrinsic rewards like the endorphins from a bicycle commute

Gamification lends itself to tailoring & metrics that can help
Example 1:
Seattle’s In Motion Initiative

23,000 participants
Reduce solo car trips/Increase public transit, carpooling, biking
Barriers identified, pledges/free transit card
Individual tracking charts online, weekly reinforcing emails, reminder prompts

Persistence Success!
Typical 20% drop in solo car trips, new habits established

*Graph follows after Example 2 summary*

“Legacy” is 18 months after intervention end.
Example 2: “Food Dudes”
Randomized Controlled Trial

Sometimes tangible incentives are critical for maintenance (Morrill et al. 2016; also Maki 2016, Runnion 1978)

Getting children to eat their veggies! (& fruit)
Win-win for nutrition, health, *and* the climate crisis

6 elementary schools, 2292 students
Cartoon models in gamified videos, goals, shaping, teacher praise, parental support. 3 groups. With or without tangible rewards (small toys). 4.5 month intervention, 6 month follow-up

6-month follow-up: only prize schools consumed more than controls, 42.9% difference. Graph follows.
Example 1
Seattle Results:

Example 2 Food Dudes
Ultimately, new sustainable behaviors are maintained indefinitely through a variety of processes, e.g.:

- Social reinforcers from newly created social norms
- Naturally occurring reinforcers of any sort (including intrinsic)
- Naturally existing prompts and other cues
- Ideally, establishment of a new habit

Persistence can even require long-term continuation of the intervention (as for Opower).

We will need a lot more post-intervention follow-up data to see not just what works, but what LASTS.