

# A Personalized AI Coach to Assist in Self-Directed Learning

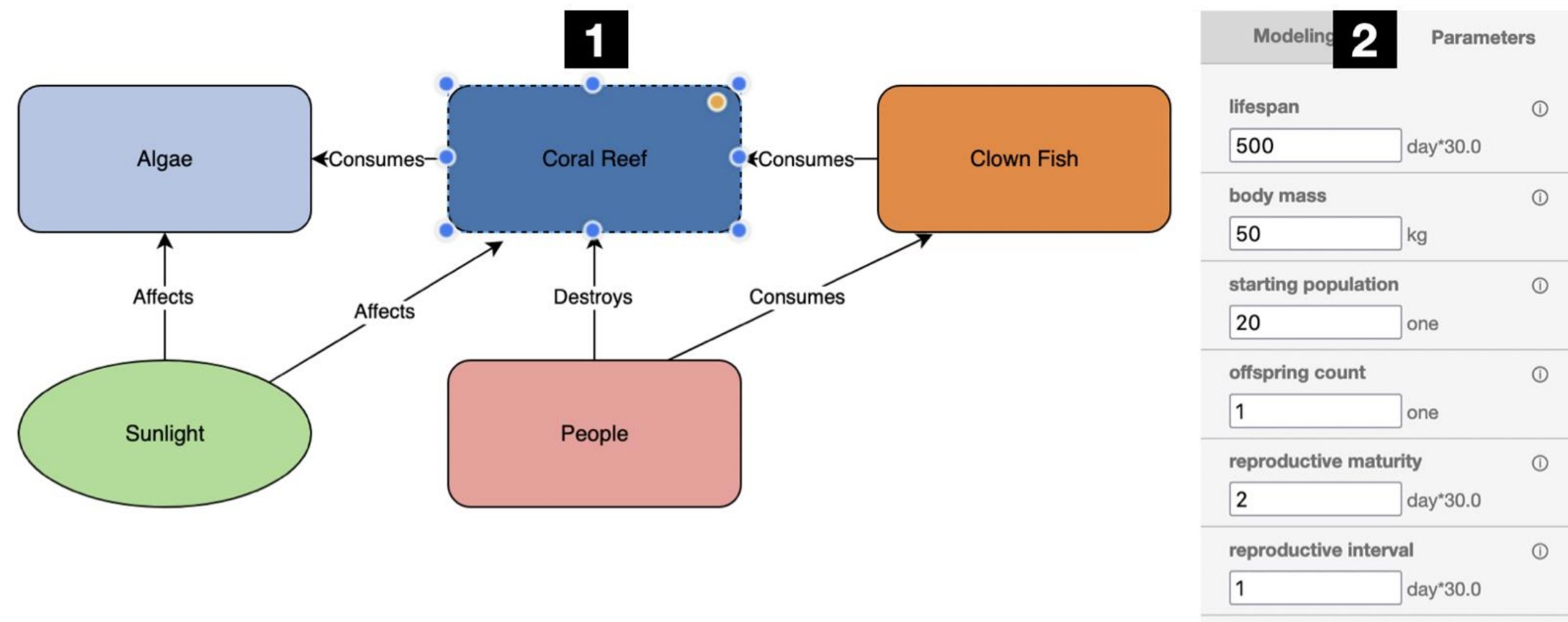
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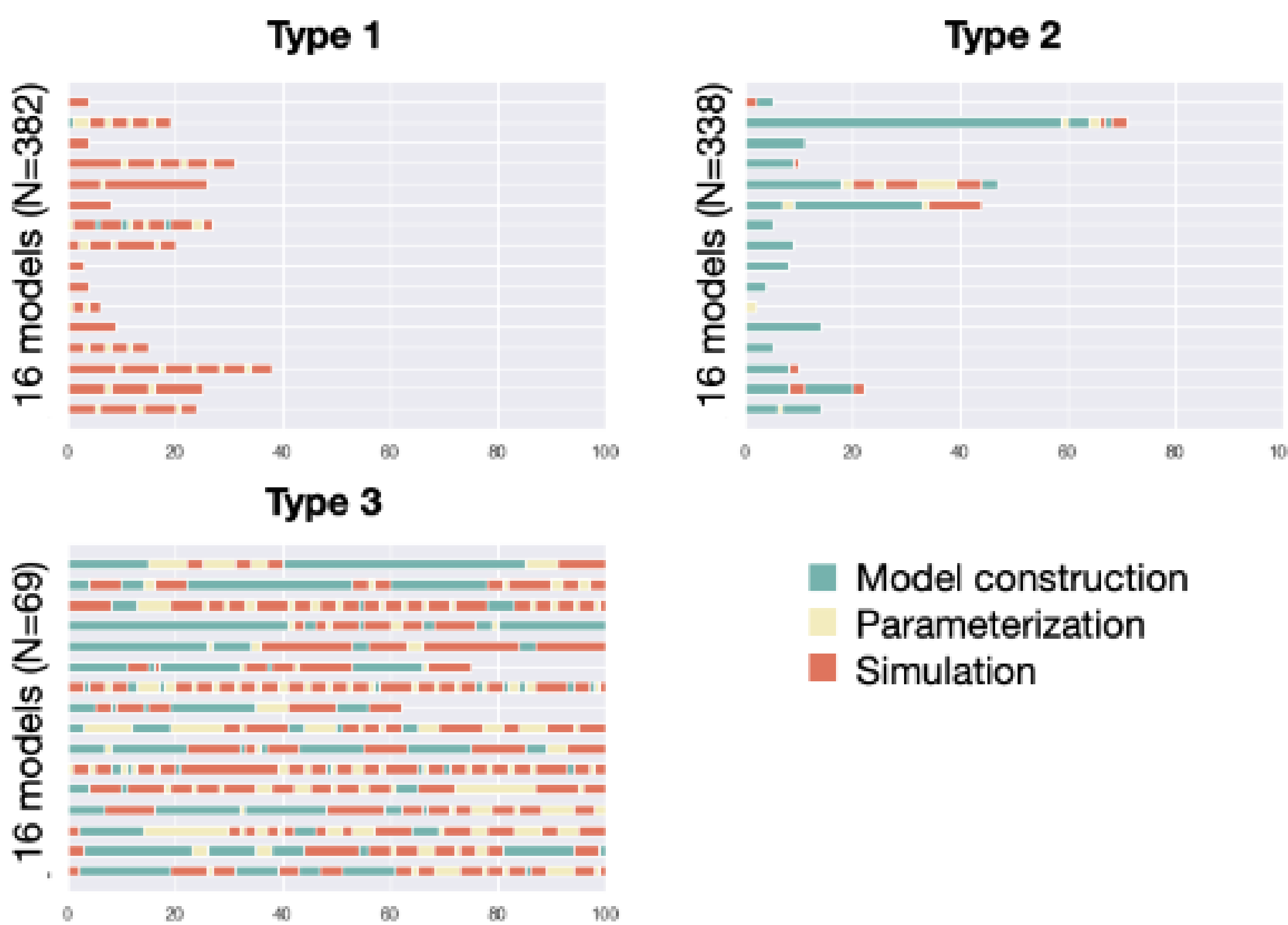
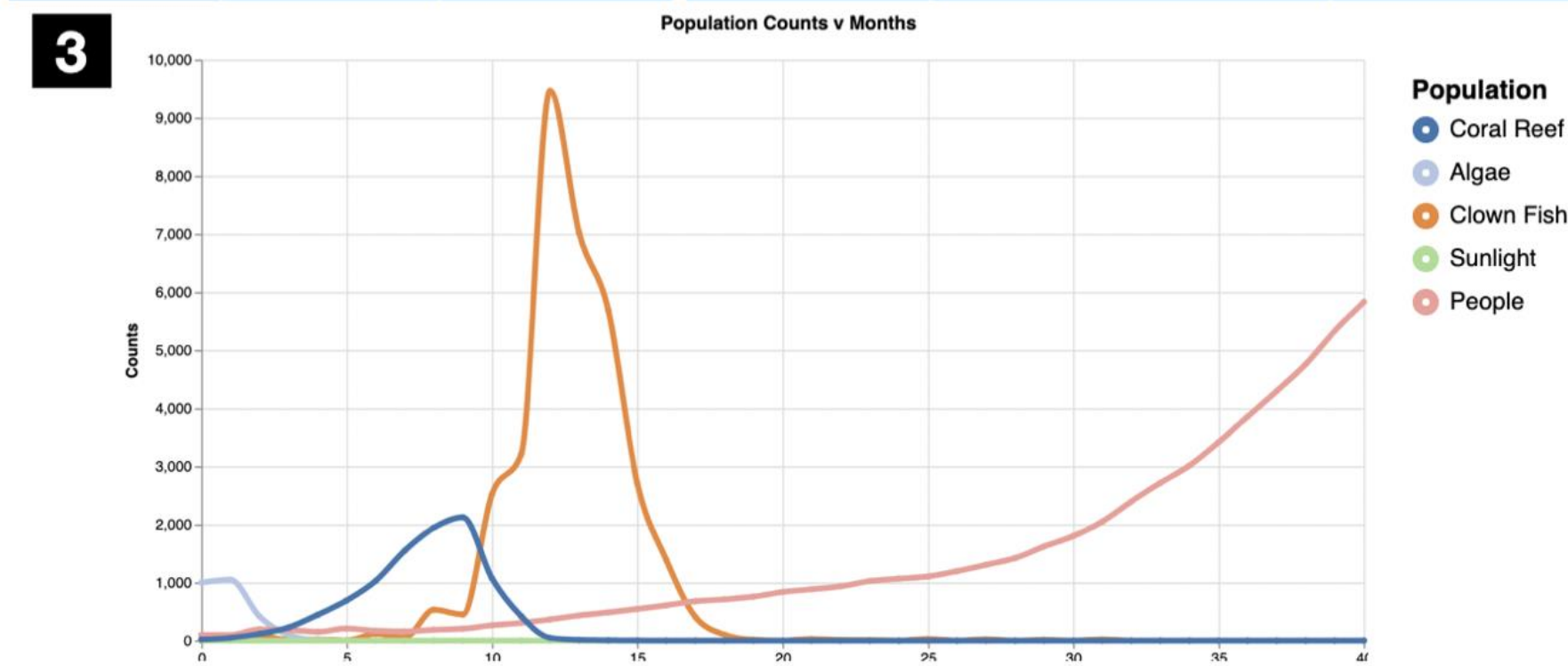
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## In VERA: Inquiry Based Modeling to Action Sequences

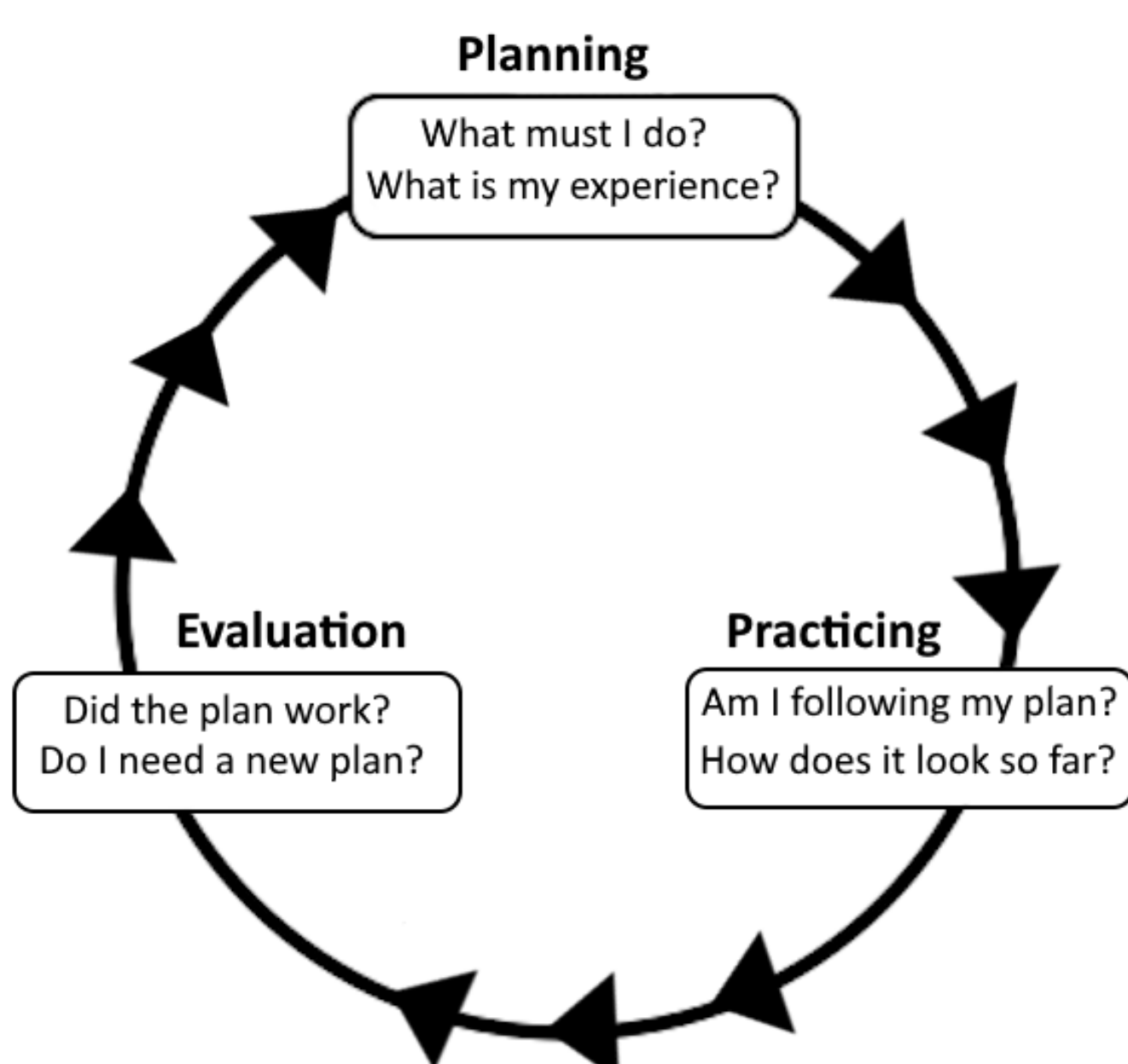


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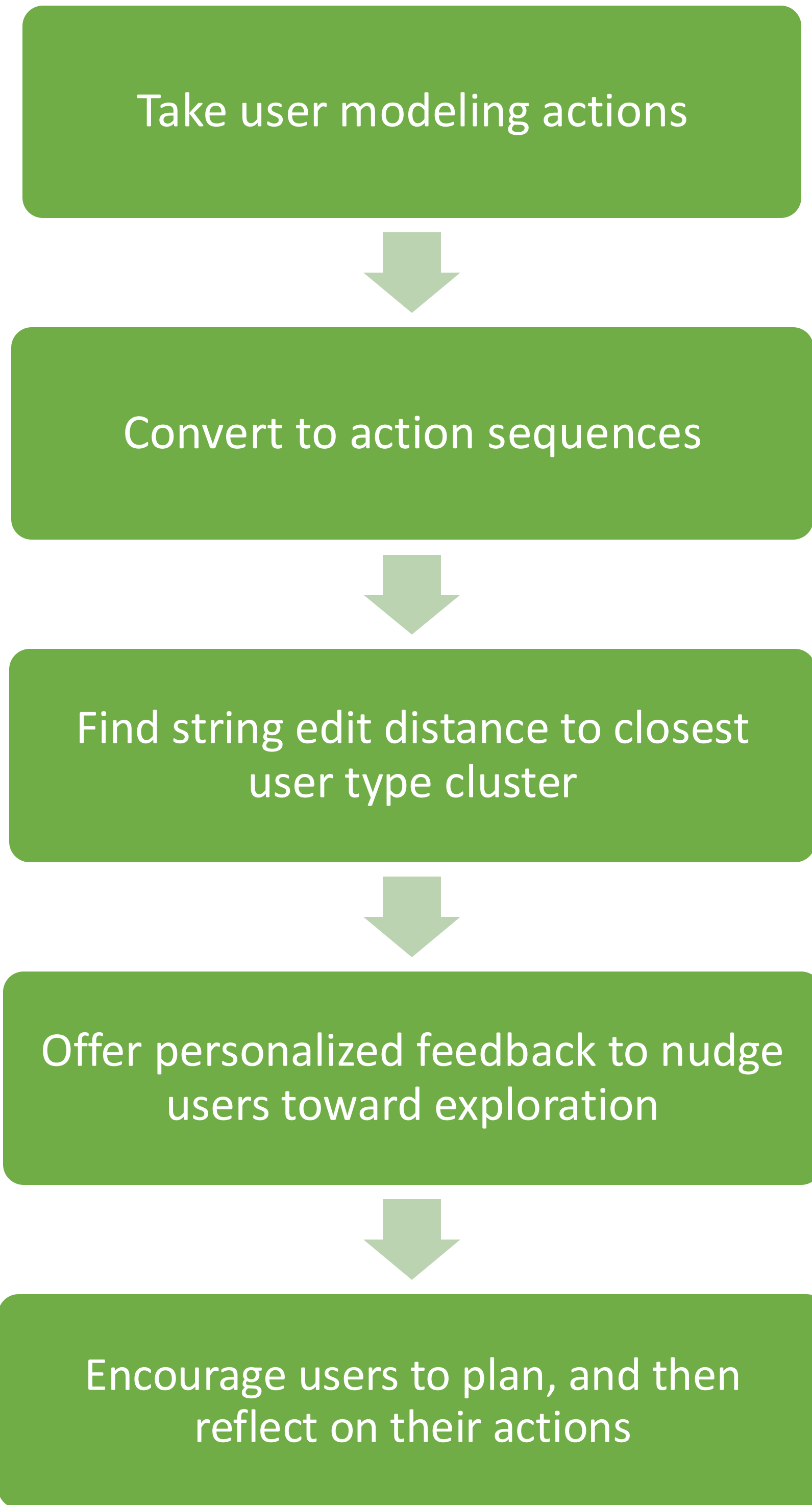
Taken from: Sungeun An, Spencer Rugaber, Jennifer Hammock, and Ashok K. Goel. Understanding self-directed learning in an online laboratory, 2022.

## Self-Directed Learning Cycle



- Planning**, as found in the self-regulated learning cycle, is a process that occurs fully in the mind. For this reason, we do not have action logs that correspond to the planning phase.
- Practicing**, in the self-regulated learning cycle is when a learner is taking steps toward completing their plan. This corresponds to constructors who focus solely on the practice step of the cycle by only constructing within VERA.
- Evaluation**, typically occurs after the learner has taken steps toward their goal in the self-regulated learning cycle. Observers in VERA are continuously evaluating their current model by simulating without planning or practicing.

Self-Directed Learning promotes greater learning and life outcomes!



## User Clusters

**Observers:** Mainly simulated the model and did not make changes

**Constructors:** Mostly added new nodes to the model but did not parameterize or simulate

**Full Explorer:** Engaged in a balance of all three activities