Generalization of the Behavior Sit in Canines to Novel Trainers

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Introduction

Generalization, in the context of training dogs, refers to a command controlling a behavior in novel environments or when given by a novel person (Mills, 2005).

Stokes and Baer (1977) claim that generalization does not automatically occur, but active procedures need to be in place to ensure that the command will transfer to another trainer or environment.

If trainers do not actively program for generalization, training would occur by only one trainer or by training the dog in one environment and hoping that the command will generalize to another trainer or environment. If trainers do actively program for generalization, training would occur by training different elements from other situations in which the dog will need to perform the behavior (e.g. train with multiple trainers, train in a different environment).

Through Behavioral Applications Regarding Canines (B.A.R.C.), trainers work with dogs until the dog is adopted, then the dogs go home (to a new environment) and are given commands by a new person. Often dogs are worked with by only one trainer from B.A.R.C. and when the dog is adopted a new trainer (the new owner) gives the commands. No follow-up occurs to determine if the dogs retain the behaviors taught by the trainers in B.A.R.C., thus the social validity of the program is not checked.

The current study looks to determine if one trainer is sufficient, or if multiple trainers are necessary for dogs to generalize the command "sit" to a novel trainer.

Method

Participants, Materials, & Setting

16 male and 9 female dogs of mixed breeds between the ages of 4 months and 6 years that did not have the behavior sit under stimulus control of the verbal command "sit" participated.
All sessions were conducted at the Eau Claire County Humane Association.
Small pieces of hot dogs, praise, petting, playing, and toys were used as reinforcers.

Baseline

Each dog was given the verbal command "sit" five times. If the dog did not sit for 80% or more of the trials the dog was eligible to participate.

Training

Dogs were trained by one, two, or five trainers throughout the entire acquisition phase of the command "sit," then were tested by a novel trainer after the specified mastery criteria were met to determine how well the dog performed the behavior when given the command by a novel trainer.

Approximation 1

Trainers increased the dog's behavior of sit. Trainers delivered reinforcement after each prompted sit that the dog performed.
The dog met mastery criteria when the dog sat 15 times in 5 minutes or less.

Approximation 2

Trainers paired the dogs' sit behavior with the verbal command "sit." Trainers delivered the verbal command "sit" approximately 20 times per session on a 5:1 prompt to probe ratio.
The dog met mastery criteria when 85% or more of the trials over two consecutive days were correct.

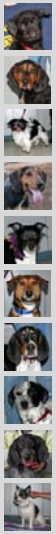
Generalization Test

Dogs were given the verbal command "sit" for 20 trials. Dogs' responses could be either correct or error and were not prompted. Each correct sit was reinforced.

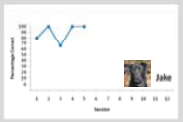
Procedural Integrity & Interobserver Agreement

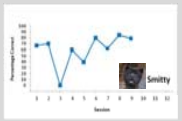
Procedural integrity was measured as the percentage of trials implemented correctly.
Procedural integrity was measured during all the sessions and was 97% across all sessions.
Interobserver agreement was the agreement of the trials outcome between observers.
Interobserver agreement was measured during 15 sessions and was 100% across all measured sessions.

Results



1 Trainer





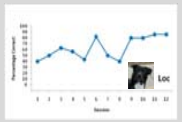


Figure 1. Acquisition data from dogs in the 1 trainer group that met mastery criteria.

2 Trainers

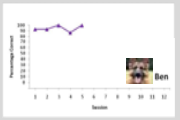


Figure 2. Acquisition data from the dog in the 2 trainer group that met mastery criteria.

5 Trainers

Figure 3. Acquisition data from the dog in the 5 trainer group that met mastery criteria.

Generalization Test

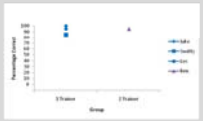


Figure 4. Novel trainer generalization data for dogs that met mastery criteria in the 1 and 2 trainer groups.

Trials to Mastery

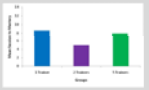


Figure 5. Mean number of trials to mastery criteria for dogs in the 1, 2, and 5 trainer groups.

Figure 6. Number of trials to mastery criteria for individual dogs in the 1, 2, and 5 trainer groups.

Discussion

Results indicate that 1 trainer is sufficient to allow for generalization of the verbal command sit from a trainer to a novel trainer. Novel trainer generalization tests from dogs in the 1 trainer and 2 trainer groups showed no difference between the accuracy of sitting between a familiar and novel trainer giving the verbal command sit. Acquisition took fewer sessions in the 2 trainer and 5 trainer groups than the 1 trainer group, but only 1 dog met mastery criteria in the 2 and 5 trainer groups each. Diamond (5 trainer group) met mastery criteria, but was unable to be tested by a novel trainer in the generalization test because she was adopted.

The results found in the current study support previous findings from generalization research conducted in B.A.R.C. that there is no difference on generalization tests between dogs trained by 1 trainer or multiple trainers.

A limitation from the current research is that dogs were adopted from the Humane Association while participating in the research. The adoption of dogs decreased the number of dogs that participated in the generalization test.

A second limitation from the current research is that dogs that obtained high percentages correct throughout the entire research may have come into the training paradigm with previous training to perform the behavior sit.

Future research could continue the current training paradigm to obtain generalization test data points in the 5 trainer group and more acquisition and generalization test data points in all three groups. Also, training dogs to generalize verbal commands to novel environments, and trainers with different training abilities could be examined.

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