

# Shaping

This is an alternate version of the characteristics overview chart on the next page. It is provided for accessibility.

## Verbal skills

- Nonverbal
- Mixed
- Verbal

## Grade Level

- Elementary
- Middle/High


## Cognitive Level

- Classic
- High Functioning

## Areas Addressed

- (Pre)Academic/Cognitive/Academic
- Adaptive Behavior/Daily Living
- Behavior
- Communication/Speech
- Social/Emotional

## Shaping

 <b>Verbal Skills</b>	<b>Grade Levels</b>	<b>Cognitive Level</b>	<b>Areas Addressed</b>
<input checked="" type="checkbox"/> Nonverbal	<input type="checkbox"/> PK	<input checked="" type="checkbox"/> Classic	<input checked="" type="checkbox"/> (Pre)Academic/ Cognitive/Academic
<input checked="" type="checkbox"/> Mixed	<input checked="" type="checkbox"/> Elementary	<input checked="" type="checkbox"/> High Functioning	<input checked="" type="checkbox"/> Adaptive Behavior/ Daily Living
<input checked="" type="checkbox"/> Verbal	<input checked="" type="checkbox"/> Middle/High		<input checked="" type="checkbox"/> Behavior
			<input checked="" type="checkbox"/> Communication/Speech
			<input checked="" type="checkbox"/> Social/Emotional



### **Brief Introduction**

Shaping is a useful applied behavior analysis (ABA) technique for teaching new behavior. When the desired behavior is not easy to acquire by instruction or other prompts, teachers can reinforce predetermined approximations of a behavior in order to teach the target behavior. It is recommended that a systematic approach be used to provide reinforcement when closer approximations to the target behavior are detected (Alberto & Troutman, 2006).



### **Description**

Shaping is used when an existing behavior needs to be changed into a more appropriate or new behavior or skill. The strategy involves use of reinforcement of successive approximations of a desired behavior. Specifically, when using a shaping technique, each approximate desired behavior that is demonstrated is reinforced, while behaviors that are not approximations of the desired behavior are not reinforced.

For example, if a child engages with a peer by hitting him, this behavior may be shaped by reinforcing interactions in which he touches the peer more gently. Over many interactions, successful shaping would replace the hitting behavior with other gentle behavior. It is believed that by reinforcing a desired behavior, the child will increase the desired behavior and eliminate or change the undesired behavior. Shaping is a part of the principles of ABA and is based on thorough knowledge of operant conditioning principles and extinction (Cooper, Heron, & Heward, 2007).

## Shaping

Shaping behavior is an aspect of behavior analysis that gradually teaches new behavior through the use of reinforcement until the target behavior is achieved. In order for shaping to be successful, it is important to clearly define the behavioral objective and the target behavior. Also, in order to gradually achieve the target behavior, a teacher must know when to deliver or withhold reinforcement (Wolfgang, 2001).



### Steps

Shaping starts with a task analysis in which a desired behavior is broken down into smaller and more manageable steps that would move the child successively closer to that desired behavior. For example, if the desired behavior is to play independently for 10 minutes with two or fewer prompts, a step analysis may break the desired behavior down into the following approximations:

1. Play for 2 minutes with two or fewer prompts
2. Play for 4 minutes with two or fewer prompts
3. Play for 6 minutes with two or fewer prompts
4. Play for 8 minutes with two or fewer prompts
5. Play for 10 minutes with two or fewer prompts.

Once the small approximations of the desired behavior are clearly identified, one must select the reinforcement to be used and make sure that everyone working with the student knows which behavior, when, and how to reinforce the approximations. Data on the behavior should be collected and reviewed by the team. The program must continue until the child demonstrates the desired behavior.



### Brief Example

Ms. Brown, 10-year-old Jason's general education teacher, and Ms. Henderson, Jason's resource room teacher, targeted sitting in his seat during lectures as a desired behavior for Jason during social studies and reading in general and special education settings, respectively. Ms. Henderson suggested a shaping technique to teach seated behavior after she had determined that Jason was remaining in his seat a mean of 2 minutes during social studies.

They analyzed approximations of the target behavior and planned to reinforce those behaviors as follows:

- Reinforcing when Jason sits in his seat for a 3 minutes
- Reinforcing when Jason sits in his seat for 5 minutes
- Reinforcing when Jason sits in his seat for 10 minutes
- Reinforcing when Jason sits in his seat for 15 minutes
- Reinforcing when Jason sits in his seat for 20 minutes (the targeted time)

Both Ms. Brown and Ms. Henderson differentially reinforced Jason’s sitting behavior in their classrooms based on their criterion of approximations for each phase. After six weeks, Jason acquired sitting behavior in class.



## Summary

Shaping is a systematic process of reinforcing successive approximations to a target behavior. The technique is used when students need to learn new behavior. A teacher identifies the student’s behavior and provides reinforcement only for closer approximations toward the desired behavior, which is a terminal behavior of the shaping process. Shaping is especially useful when the desired behavior is difficult to learn by instruction, imitation, and verbal or physical cues.



## Research Table

# of Studies	Ages (years)	Sample Size	Area(s) Addressed	Outcome
2	8-12	4	Vocalization frequency, social behavior	+



## Studies Cited in the Research Table

1. Esch, B. E., Carr, J. E., & Michael, J. (2005). Evaluating stimulus-stimulus pairing and direct reinforcement in the establishment of an echoic repertoire of children diagnosed with autism. *Analysis of Verbal Behavior*, 21, 43-58. Three experiments were conducted to evaluate stimulus-stimulus pairing and direct reinforcement in establishing an echoic repertoire for children with AU. One intervention, Experiment 3, demonstrated that shaping increased vowel frequency for one participant.
2. Hupp, S.D.A., & Reitman, D. (2000). Parent-assisted modification of pivotal social skills for a child diagnosed with PDD: A clinical replication. *Journal of Positive Behavior Interventions*, 2, 183-187. Two parents were instructed in implementing a token reinforcement and shaping program designed to improve the social behavior of their 8-year-old son diagnosed with PDD. Results showed positive response generalization by targeting one pivotal behavior.



## References

- Alberto, P.A., & Troutman, A. C. (2006). *Applied behavior analysis for teachers* (7th ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- Esch, B. E., Carr, J. E., & Michael, J. (2005). Evaluating stimulus-stimulus pairing and direct reinforcement in the establishment of an echoic repertoire of children diagnosed with autism. *Analysis of Verbal Behavior*, 21, 43-58.
- Hupp, S.D.A., & Reitman, D. (2000). Parent-assisted modification of pivotal social skills for a child diagnosed with PDD: A clinical replication. *Journal of Positive Behavior Interventions*, 2, 183-187.
- Wolfgang, C. H. (2001). *Solving discipline and classroom management programs: Methods and models for today's teachers*. New York: John Wiley.



## Resources and Materials

- Association for Science in Autism Treatment (ASAT): [www.asatonline.org/resources/procedures/shaping.htm](http://www.asatonline.org/resources/procedures/shaping.htm)  
This link is to the ASAT's fact sheet on shaping.
- Shaping: [www.polyxo.com/discretetrial/complex.html](http://www.polyxo.com/discretetrial/complex.html)  
The information in this site provides basic information about some examples of shaping.
- Shaping and Chaining: [www.bbbautism.com/aba\\_shaping\\_and\\_chaining.htm](http://www.bbbautism.com/aba_shaping_and_chaining.htm)  
This link takes the user to information that defines and provides rules for using shaping and chaining.