When Wrong is Alright

Research on the impact of positive versus negative models sheds light on one of behavior modeling's most perplexing questions.

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Models have always been powerful tools for building skills. Everyone has learned activities such as tying a shoe or skiing by watching someone else and then trying it themselves. Behavior modeling for supervisory and management training uses this concept.

We know that models displaying the correct behavior aid learning. But the effect of negative models has perplexed training professionals and researchers for some time. Trainers question how such models will affect learners. Will they be confused? Will they copy only the inappropriate behavior? Will learners be able to discriminate between correct and poor behavior?

Subjects who view *two* models tend to have better recall than subjects who see only one model

Studying the problem

In 1986 Zenger-Miller, Inc., undertook a study to gain further understanding of positive versus negative models. To begin tackling the issue, we contacted a variety of researchers in the field and reviewed current literature. Surprisingly, we found limited resources. In fact, though we encountered many opinions, we found only one study—a 1977 effort by L.L. Alssid and W.R. Hutchinson that focused on counselor training.

At this point, we realized we had to do some of our own in-depth research. We intended to gather and analyze specific data on the issue as well as advance the state-of-the-art in behavior modeling methodology.

Our subject population consisted of 20 people ranging from 20 to 50 years of age. Occupations of subjects ranged from statisticians and managers to administrative assistants and clerical staff. We collected data over a three-week period at several locations, using the same procedures at each location.

Week one

We showed each subject a listing of the key behaviors for one of two skills: listening with understanding or resolving issues with others. Then we showed the subject two video models demonstrating these skills. Half the subjects saw two models of positive behavior. The other half saw one negative model followed by a positive model.

After each subject viewed a video model, we asked the subject to write down as much as he or she could remember of key behaviors and the statements or actions in the video that exemplified those behaviors. We also asked subjects to rate

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the degree of difficulty they had in understanding the video and the key behaviors and difficulty they had in recalling key behaviors.

Following the above activities, we asked subjects to read a scenario involving two people, assume the role of one of the two people, and demonstrate the key behaviors in the scenario. A member of our research team played the second person in the scenario; we didn't tell this individual which model sequence—positive/positive or negative/positive—the subject had viewed. We videotaped these role plays.

Week two

When subjects returned in the second week, we asked each to recall the key behaviors and videos they saw the previous week. After noting subjects' recalls, we asked each to demonstrate the key behaviors they learned the previous week by interacting with the research team member in another scenario. Again, we videotaped the session.

When the second round of videotaped sessions was completed, we showed subjects a listing of key behaviors from the second skill area. As they had done with the first skill area, subjects viewed two videos of these new behaviors and completed recall sheets after each video. We then gave subjects another scenario in which to demonstrate the new key behaviors. Of course, we videotaped this session too.

Week three

We completed the final phase of the research by bringing back participants and asking them to recall the key behaviors and video scenarios for the second skill area modeled during the session in week two. We asked them to demonstrate in a scenario the key behaviors for the second skill area. After videotaping this fourth session, we briefed the subjects on the purpose of the research.

Analyzing the data

Two people who didn't know whether subjects had seen a positive/positive or a negative/positive model sequence scored subjects' recall of key behaviors and performance of those behaviors. Scorers said a recall was correct if it reflected the content; behaviors didn't have to be recalled in order.

To score performance, observers viewed the videotaped scenarios and rated the occurrence of specific behaviors that related to each key behavior. For example, for the key behavior "ask for the other person's views," observers looked for statements such as "Are you aware. . .?" or "What do you think. . .?" or they looked for behaviors indicating that the other person's suggestions were welcome.

The observers rated on a scale of 1 to 5 the skill displayed on each key behavior. Since the ratings were very similar between the two observers we decided the data were reliable and we combined the results for analysis.

Our analysis of the recall and performance data revealed only minor differences between subjects viewing the two types of models. We therefore can assume the positive/positive model and the negative/positive model have similar impact on learning.

This study's design also allowed us to examine the effects of multiple models on learning. In this area we found that subjects who view *two* models tends to have better recall than subjects who see only one model. This is true in either a positive/positive or negative/positive format.

Wait! There's more

While we undertook this investigation in a business setting, Zenger-Miller supported similar research within the academic setting. These other research studies used not only positive/positive and negative/positive models but, at our suggestion, they included positive/negative and negative/negative models.

The following major findings from the academic studies corroborated our own research:

- Subjects who saw two models had improved recall and recognition when they viewed positive/positive, positive/negative, or negative/positive formats. And their levels of recall and recognition were at about the same level following the second model.
- When they viewed two models, subjects had improved recall from the first viewing to the second viewing for the positive/positive and the negative/positive models. In contrast, when subjects experienced the positive/negative format, seeing the second model didn't affect their recall. This seems to indicate that seeing the negative model last doesn't appreciably aid learning.

Information from the Zenger-Miller studies combined with that of the academic researchers leads us to the following additional conclusions:

- Recall, recognition, and performance were at a lower level with the negative/negative model than with the other models. People can neither recall nor perform key behaviors after seeing two negative models.
- Positive/negative and negative/positive models appear to aid learning when key behaviors are subtle or ambiguous.
- Positive/positive and negative/positive models show less decline in recall over a three-week period than the other models.
- Negative/positive models receive higher ratings on learning retention and satisfaction level compared to the three other models.

Implications for training

Clearly, showing subjects two positive models leads to improved learning. But when you are considering using a negative model, keep in mind that the current results suggest using the negative/positive ordering. The negative/positive format also may be most effective when you're training people in subtle, ambiguous behaviors. It provides more contrast, improved retention, and heightened trainee satisfaction.

We further conclude that using more than one model improves learning, presumably due to repetition and generalization. At least one of these models must be positive.

Also, two negative models seem to lead to ineffective learning. For people to learn, you must show them what to do correctly. So if you are planning to use only one model in your training, make it a positive one.

With this information, trainers and designers can make rational rather than subjective decisions when designing behavior modeling training programs. Furthermore, they can select an appropriate model format based on the skills they are trying to address.

We see our findings only as an initial step. More research about positive and negative models and other issues surrounding behavior modeling will help trainers and designers in their efforts to develop more effective training systems.