Persistent overconfidence despite practice: The role of task experience in preschoolers' recall predictions

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ABSTRACT

In three experiments, preschoolers' ability to predict their picture recall was examined. Children studied 10 pictures, predicted how many they would recall, and then attempted to recall them. This study–prediction–recall trial was repeated multiple times with new pictures on each trial. In Experiment 1, children were overconfident on the initial trial, and this overconfidence persisted across three trials. In Experiment 2, children predicted either their own performance or another child's performance. Their predictions were overconfident across all trials regardless of whether they made predictions for themselves or for another child, suggesting that wishful thinking cannot fully account for their overconfidence. In Experiment 3, some children postdicted their previous recall performance prior to making each prediction. Although their post-dictions were quite accurate, their predictions were still overconfident across five trials. Preschoolers' overconfidence was remarkably resistant to the repeated experience of recalling fewer pictures than the children had predicted. Even asking them to report the number that they recalled on a previous trial, which they could do accurately, did not cause them to lower their predictions across trials.

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Introduction

Young children are overconfident about their abilities. If you spend a day around preschoolers, you are likely to hear them claim that they can accomplish feats that are well above their actual capabilities. Such overconfidence is evident across a variety of physical tasks (e.g., Plumert, 1995;

Plumert & Schwebel, 1997; Schneider, 1998; Stipek, Roberts, & Sanborn, 1984) and cognitive tasks (e.g., Cunningham & Weaver, 1989; Flavell, Friedrichs, & Hoyt, 1970; Schneider, 1998; Shin, Bjorklund, & Beck, 2007; Yussen & Levy, 1975). Although overconfidence declines with age (Schneider & Pressley, 1997), grade school students and even adults still show overconfidence in their memory performance (e.g., Lipko, Dunlosky, Rawson, Swan, & Cook, 2007; Schneider, Visé, Lockl, & Nelson, 2000), which in turn can lead to poor self-regulation and performance (Thiede, 1999). Unfortunately, the reasons why children are so overconfident during the preschool years are still not fully understood.

A major goal of the current investigation was to investigate preschoolers' overconfidence. More specifically, we assessed whether preschoolers' overconfidence would persist across multiple trials of a memory task or whether the children would incorporate task experience into their predictions and, thus, show less overconfidence across trials. In the remainder of the introduction, we review some of the previous research on children's overconfidence and then present the rationale for the current experiments.

Early research investigating children's overconfidence in their learning

In a classic study, Flavell and colleagues (1970) used a performance prediction paradigm in which nursery schoolers, kindergarteners, second-graders, and fourth-graders were asked to predict their memory span. On each trial, a single picture was added to the memory set (up to 10 pictures total) and children were asked whether they would be able to remember the pictures once they were removed. Children's predicted memory span was defined as the longest series of pictures they said they would be able to remember. After completing the prediction task, children's actual memory span was assessed with an aural recall task. An experimenter read a series of familiar object names, and then the children were asked to repeat the names in the correct order. Children's actual memory span was defined as the longest series of words they were able to recall correctly. In all age groups, children were overconfident in that their predicted span was higher than their actual span. Using a similar procedure, Yussen and Levy (1975) also found that preschoolers and third-graders overpredicted their performance.

More recently, Shin and colleagues (2007) asked kindergarteners to make predictions of their memory using a different methodology. Children were asked to predict how many of 15 pictures they would be able to remember. After making their predictions, they were shown 15 pictures and were asked to name each one as it was presented. The children were then given 2 min to study the pictures. At the end of the 2-min period, they completed a distractor task and attempted to recall the pictures they had just studied. Children's prediction values were significantly higher than their recall performance.

Although studies like the ones described above have demonstrated repeatedly that young children are overconfident, the degree of children's overconfidence across trials of a task has not been explored systematically. Investigating change in children's predictions across trials allows for a better evaluation of potential explanations of children's overconfidence. For example, the wishful thinking hypothesis posits that children's predictions are based on how they want to perform rather than on how they expect to perform (Stipek et al., 1984). If children base their predictions on wishful thinking, their predictions may remain equally overconfident across all trials. Another possibility is that children are merely unfamiliar with the task and begin by setting an optimistic anchor for their performance. If so, then with further task experience that involves recall attempts, their overconfidence may be reduced dramatically.

Rationale for the current experiments

In Experiment 1, children were asked to predict their picture recall. They named 10 pictures and, following a brief study period, predicted how many they would be able to recall. The pictures were covered, and the children attempted recall. They were then told how many pictures they had recalled, and a new trial began using 10 new pictures. They completed three of these study–prediction–recall trials, with new pictures being presented on each trial.