

## SCHOOL OF BRAIN AND BEHAVIORAL SCIENCES, THE UNIVERSITY OF TEXAS AT DALLAS

### INTRODUCTION

- One important cue that children can use to determine if a source of information is likely to provide accurate information is whether that source has relevant **expert** knowledge (e.g., Landrum, Mills, & Johnston, 2013).
- However, just because someone has expert knowledge in one area does not mean that person has expert knowledge in all areas. Therefore it is crucial for children to recognize when expert knowledge in one field implies expert knowledge in another and when it does not.
- Although prior work demonstrates that children can sometimes tell which of two facts a specialist (i.e., someone with a narrow domain of expertise) or a generalist (i.e., someone with a broad domain of expertise) is likely to know (Keil et al. 2008), this work tells us little about where children might see limitations to these experts' knowledge.
- The current research examines how elementary school-aged children and adults might perceive each one of these expert's knowledge to be limited and how these perceptions might change across development.

### Research Questions

- Do children think **specialists** know more than **generalists**?
- Do children think **generalists** know less specific trivia than **underlying principles**?
- Do children think **specialists** have more knowledge of specific trivia than **underlying principles**?

### METHOD

Sixty children (20 in 3 age groups: 6yos, 8yos, 10yos) and 20 adults participated. Each was presented with an expert (a type of generalist or a type of specialist) and asked whether that particular expert would know about two items. For each item, participants were asked how much that expert would know about that item (i.e., nothing-0, a little-1, a lot-2). Participants saw 16 experts total. *Participants were asked about one expert at a time, they were not asked to compare experts.*

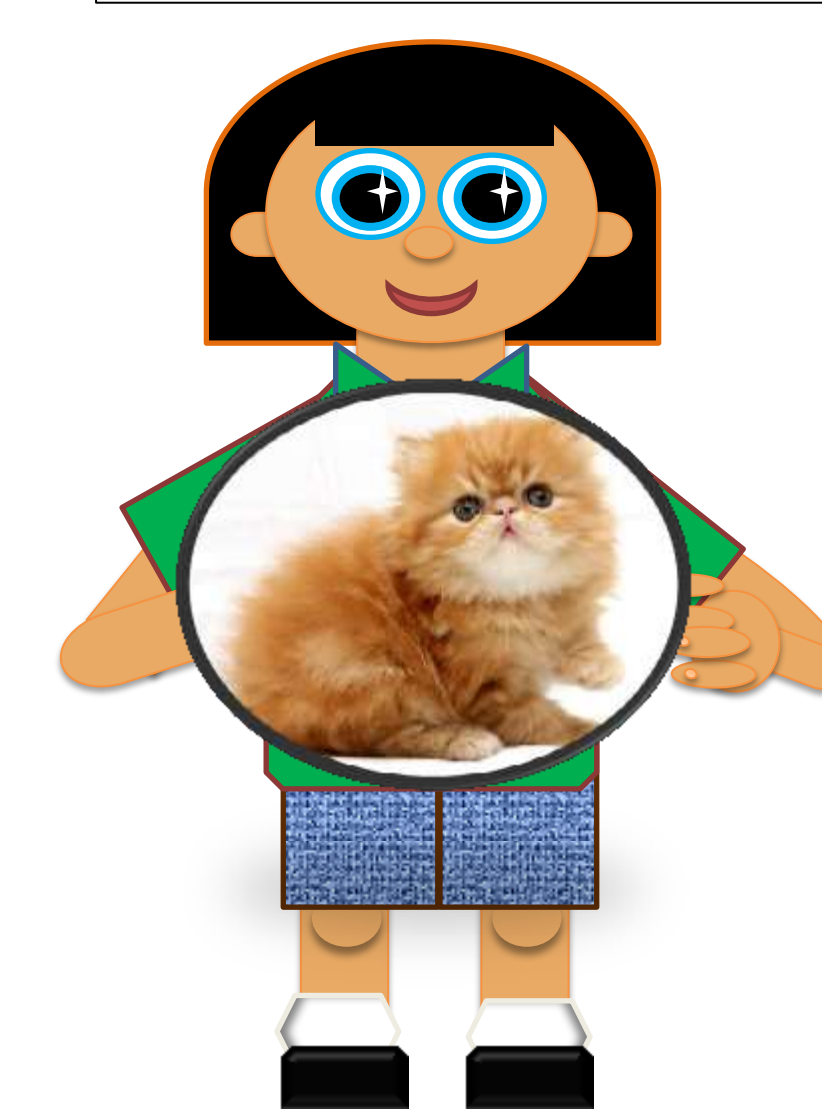
#### Generalist



Ex: Sally knows a lot about **animals**. She is an **animal** expert.

- How much does she know why some **Persian cats are in cat food commercials**? [Specific trivia]
- How much does she know why **Persian cats need to sleep**? [Underlying principles]

#### Specialist



Ex: Suzy knows a lot about **Persian cats**. She is a **Persian cat** expert.

- How much does she know why some **Persian cats are in cat food commercials**? [Specific trivia]
- How much does she know why **Persian cats need to sleep**? [Underlying principles]

### CONCLUSIONS

This experiment examined **developmental changes** in *what kinds* of knowledge and *how much* of that knowledge children expect generalists and specialists to have.

**Q1: Do children think specialists know more than generalists?**

A1: **YES**. By age 8, children recognize that specialists are likely to have different types of and amounts of knowledge than generalists (Figure 1).

Specifically, by age 8, children expect **specialists** to know more than **generalists** about **underlying principles**.

By age 10, children expect **specialists** to know more than **generalists** about **specific trivia**.

**Q2: Do children think generalists know less specific trivia than underlying principles?**

A2: **YES**. By age 8, children expected **generalists** to have more knowledge about **underlying principles** than about **specific trivia** (Figure 2).

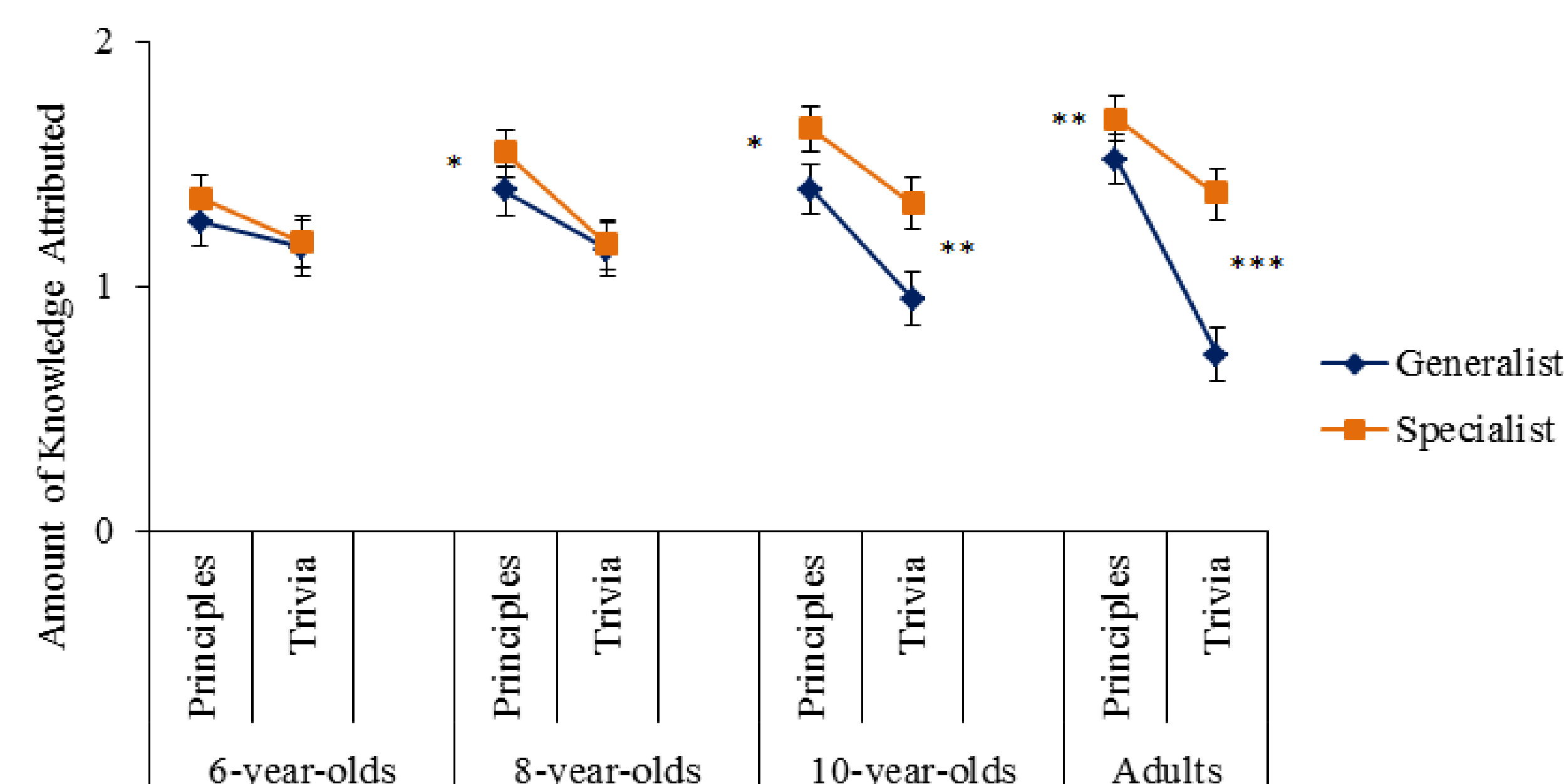
**Q3: Do children think specialists have more knowledge of specific trivia than underlying principles?**

A3: **NO**. Like with the generalists, by age 8, children expected specialists to have more knowledge of **underlying principles** than specific trivia (Figure 3).

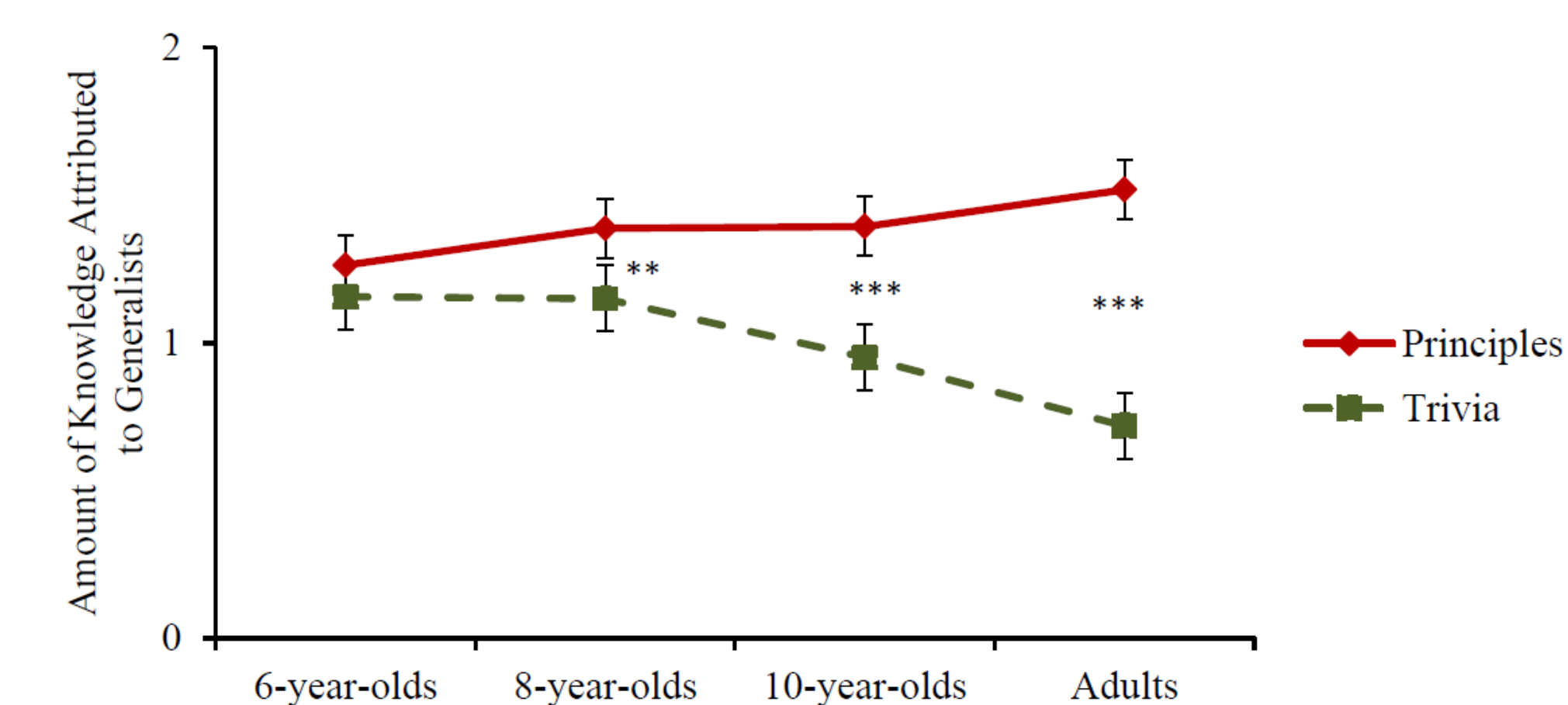
Thus, it seems that during the ages of 6 to 10 years, children adjust how they attribute knowledge to generalists and specialists.

### RESULTS & FIGURES

**Figure 1: Generalists versus Specialists**



**Figure 2: Generalists**



**Figure 3: Specialists**

