

-

***HRI Strategies
to Attract Children's Attention
toward a Robot
Based on Their Extroversion***

-

***Dahyun Kang and JongSuk Choi
Korea Institute of Science and Technology (KIST)***

1. Backgrounds

#1

Designing Robot's Social Cues

Designing Robot's Character → *Designing Robot's Social Cues*

#2

People prefer or not prefer an artificial agent that has a certain character according to their personality (*Moon & Nass, 1996*).

-

-

Hypothesis. Depending on the personality of a child and a robot, the frequency of the interaction between them will be different.

-

2. Study Design

Independent Variable

2 (Robot's character: proactive vs. reactive) x 2 (Child's personality: more extroverted vs. less extroverted)

Dependent Variable

Interaction frequency between children and robots

-

Participants

Five elementary school students (male: 2, female: 3) between 8 and 12 years old

-

Material



The proactive BoxBot

- proactively hangs out with a child
- recommends clothes actively
- guides a child ahead

The reactive BoxBot

- responds to a child's request for help
- Answer the question of a child
- follows the child when he or she moves

(Fichten et al., 1992;
Fink et al., 2014;
Grant & Ashford, 2008;
Spitzmuller & Van Dyne, 2013)

3. Result

- ✓ **Hypothesis.** Depending on the personality of a child and a robot, the frequency of the interaction between them will be different.

Extroversion Evaluation

Results of extroversion evaluation (Items drawn from Big Five Inventory; John O P, Donahue , 1991)

Participants	A	B	C	D	E
Extroversion	3.25	4	3.38	3	3.63

Interaction frequency between children and robots

	More Extroverted	-----	Less Extroverted		
	B	E	C	A	D
Proactive Robot	18	7	4	5	9
Reactive Robot	8	6	6	10	12

