



The Association Between Aspects of Self-Reported Intrinsic Motivation and Challenge Preference in Second-Graders

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BACKGROUND

- **Intrinsic Motivation:** pursuing a task based on one’s own desire to gain new knowledge, satisfy their curiosity, or for their enjoyment
- **Extrinsic Motivation:** pursuing a task in order to gain approval or obtain an external reward while being dependent on a teacher (Harter, 1981)
- **Challenge Preference:** preference to pursue challenging tasks over easy tasks
 - Challenge preference is a component of intrinsic motivation (Harter, 1978)
- Intrinsic motivation and challenge preference are positively associated with academic achievement, whereas extrinsic motivation is negative associated with academic achievement (Lepper et al., 2005; Sulik et al., 2020)
- Intrinsically motivated children pursue more challenging puzzles when given the option (Boggiano et al., 1988; Gilmore et al., 2015)

PURPOSE

Determine the association between different aspects of self-reported intrinsic and extrinsic motivation and performance on a task measuring challenge preference

Hypothesis: Second graders who self report that they are more intrinsically motivated and less extrinsically motivated are more likely to choose more challenging puzzles

MATERIALS AND METHODS

- **Harter’s Motivational Scale:** Assesses intrinsic and extrinsic motivation (Lepper et al., 2005)
 - 3 intrinsic motivation subscales (challenge, curiosity, and independent mastery) and 3 extrinsic motivation subscales (easy work, pleasing teacher, and dependence)
 - Scored using 5-point Likert scale (1 = *not at all true for me* to 5 = *very true for me*)
- **Puzzle Task:** Assesses challenge preference (Gilmore et al., 2015; Gilmore & Cuskelly, 2009)
 - Scored using the mean of the puzzles’ difficulty levels:
1 point = easy, 2 points = medium, 3 points = hard

RESULTS

Descriptive Statistics

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Puzzle difficulty	95	1.75	0.34	1 – 2.67
Intrinsic motivation	86	3.68	0.79	0 – 5
Intrinsic – challenge	86	3.45	0.93	1 – 5
Intrinsic – curiosity	86	3.92	0.84	1 – 5
Intrinsic – independent mastery	86	3.63	1.02	1 – 5
Extrinsic motivation	86	3.37	0.86	1.06 – 5
Extrinsic – easy work	86	3.34	1.03	1 – 5
Extrinsic – pleasing teacher	86	3.94	1.04	1 – 5
Extrinsic – dependence	86	3.03	1.13	1 – 5

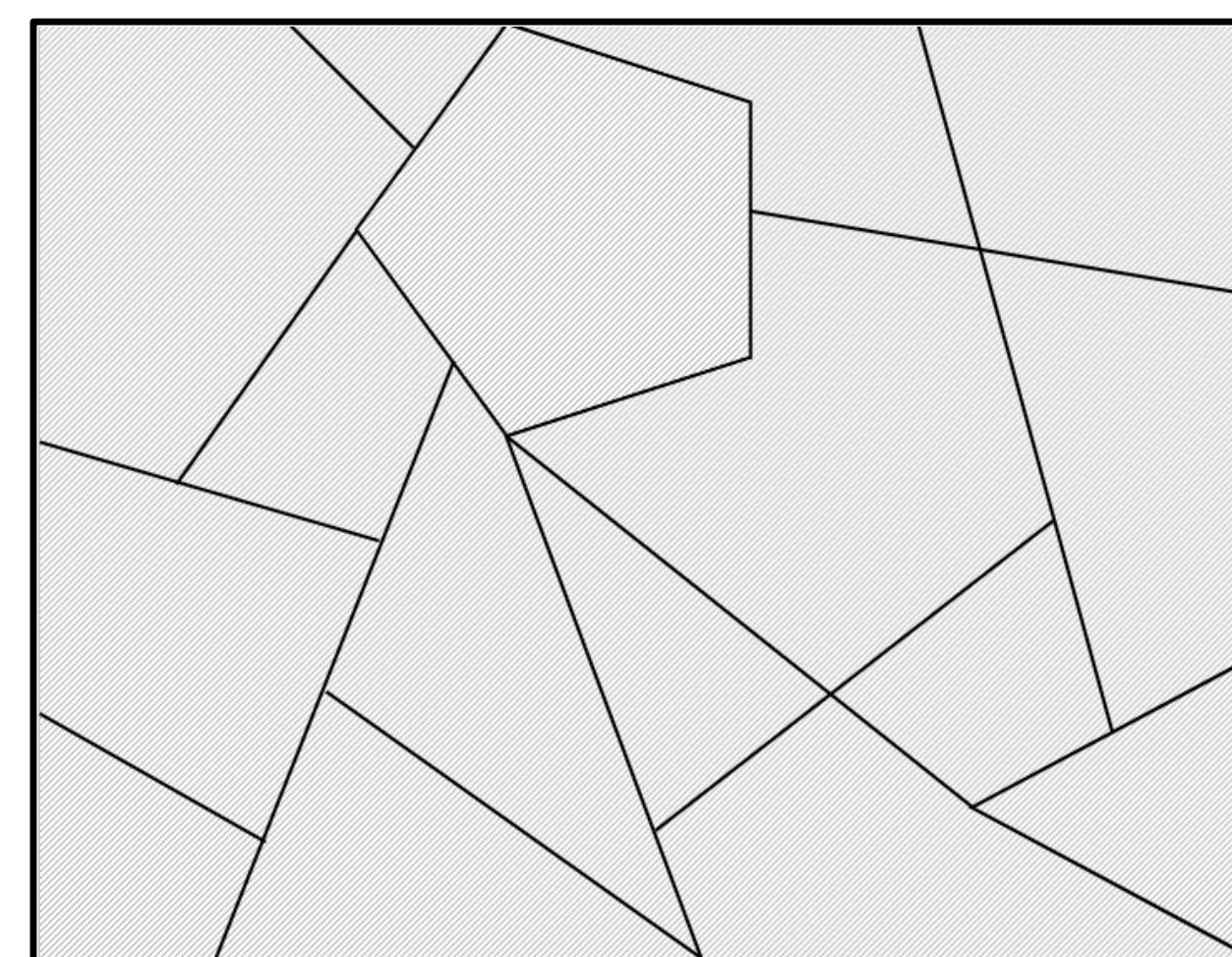


Figure 1. Sample puzzle task

Bivariate Correlations + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

	1	2	3	4	5	6	7	8
1 Puzzle difficulty	—							
2 Intrinsic motivation	.18+	—						
3 Intrinsic – challenge	.23*	.93***	—					
4 Intrinsic – curiosity	.16	.84***	.72***	—				
5 Intrinsic – indept mastery	.09	.81***	.65***	.45***	—			
6 Extrinsic motivation	-.14	-.22*	-.23*	-.03	-.29**	—		
7 Extrinsic – easy work	-.35**	-.38***	-.39***	-.18+	-.41***	.84***	—	
8 Extrinsic – pleasing teacher	.08	.11	.01	.18+	.10	.65***	.34**	—
9 Extrinsic – dependence	-.02	-.15	-.12	-.01	-.27*	.87***	.57***	.39**

RESULTS

- **Summary**
 - Results support the hypothesis
 - The challenge subscale of intrinsic motivation was positively associated with puzzle difficulty
 - The easy work subscale of extrinsic motivation was negatively associated with puzzle difficulty
- **Implications**
 - Evidence that second graders can accurately assess their preference for challenges versus more easy work
 - May lead to a better understanding of academic achievement in elementary students

LIMITATIONS/FUTURE WORK

- Small sample with limited ethnic/racial diversity
 - Conduct a larger study in a location with access to more diverse children
- Only 3 puzzles that may be too challenging
 - More puzzle sets at a more appropriate challenge level for children’s abilities

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