



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

- **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

RESULTS

Descriptive Statistics

Variable	N	M	SD	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

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

ACKNOWLEDGMENTS

I am grateful to the McNair Scholar’s Program for the funding to complete this research, to the research assistants who helped conduct the SMILE study, and the families who participated.

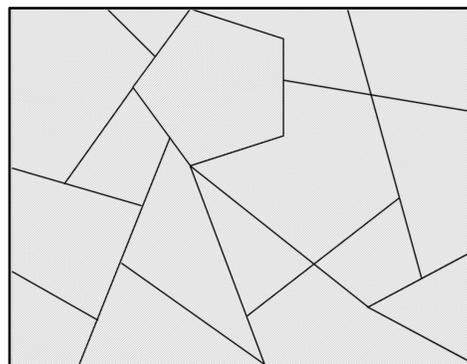


Figure 1. Sample puzzle task

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**