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Examining Patterning Abilities in First Grade Children: A Comparison of Dimension, Orientation, Number of Items Skipped and Position of the Missing Item

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ABSTRACT

Current curricula in most school districts in the United States include some instruction on the recognition of patterns in kindergarten and continuing into the early elementary school years. Despite the fact that patterning is so common in school curricula, very few reports of what types of patterns are easy or difficult for children to learn have been published. In an effort to address this issue, 121 first grade children from an urban school district were tested with 48 patterns that varied in dimension, orientation, position of missing items, and magnitude of the gap between items. An ANOVA for completely correlated factors was conducted. Results indicated that only the magnitude of gaps (i.e., "skips") made a significant difference. There were indications of an interaction between that factor (skips) and the position of a missing item. Implications were discussed.

KEYWORDS

Patterning; Oddity; Transitivity

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References

- [1] Boyer, C., Sweeting, A., Parniak, R., & Kidd, J. (2010). How predictable are sequences of time, rotation, letters and numbers? Annual Convention of the Association for Psychological Science, Boston.
- [2] Burton, G. M. (1982). Patterning: Powerful play. *School Science and Mathematics*, 82, 39-44. doi:10.1111/j.1949-8594.1982.tb17161.x
- [3] Clements, D. H., & Sarama, J. (2007). Effects of a preschool mathematics curriculum: Summative research on the Building Blocks Project. *Journal of Research in Mathematics Education*, 38, 136-163.
- [4] Clements, D. H., & Sarama, J. (2008). Curriculum focal points for prekindergarten through grade 8 mathematics. *Teaching Children Mathematics*, 14, 361-365.
- [5] Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159. doi:10.1037/0033-2909.112.1.155
- [6] Duclon, C. K. (2000). Quality literature as a springboard to problem solving. *Teaching Children Mathematics*, 6, 442-446.
- [7] Economopolous, K. (1998). What comes next? The mathematics of patterning in kindergarten. *Teaching Children Mathematics*, 5, 230-233.
- [8] Gadzichowski, K. M., & Parniak, R. (2010). How odd is that? Meeting of Association for Psychological Science, Boston.

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- [9] Gadzichowski, M. K., Kidd, J. K. Pasnak, R., & Boyer, C. (2010). Children' s understanding of series rules. Annual Convention of the Association for Psychological Science, Boston.
- [10] Hendricks, C., Trueblood, L., & Pasnak, R. (2006). Effects of teaching patterning to first graders. *Journal of Research in Childhood Education*, 21, 77-87.
- [11] Hendricks, C., Trueblood, L., Willson-Quayle, A., Malabonga, V., Ciancio, D., & Pasnak, R., (1999). Effects of instruction in sequenceing and class inclusion for first graders. *Genetic, Social, and General Psychology Monographs*, 125, 297-312.
- [12] Herman, M. L. (1973) Patterning before mathematics in kindergarten. Doctoral dissertation, New York: Columbia University. Dissertation Abstracts International, 33, 4060. doi: 10.1080/02568540609594580
- [13] Jarboe, T. & Sadler, S. (2003) It' s as easy as 123: Patterns and active ties for a creative, balanced math program. Peterborough, NJ: Crystal Springs Books.
- [14] Liljedah, P. (2004). Repeating pattern or number pattern: The distinction is blurred. Focus on Learning Problems in Mathematics, 26, 24 42.