

**ZMATH 2008c.00300**

**Cayton, Gabrielle A.; Brizuela, Bárbara M.**

**First graders' strategies for numerical notation, number reading and the number concept.**

Woo, Jeong-Ho (ed.) et al., Proceedings of the 31st annual conference of the International Group for the Psychology of Mathematics Education, PME, Seoul, Korea, July 8–13, 2007. Vol. 1-4. Seoul: The Korea Society of Educational Studies in Mathematics. Part 2, 81-88 (2007).

Summary: We have come to accept that children's appropriation of written numbers is not automatic or simple. Studies of children's use of notation point to different types of notational practice. In a recent study (Cayton, 2007) we found that some common strategies of children for representing large numbers were correlated with different levels of understanding of our base-ten system. In this paper, we explore the connections among three representations of the number system, addressing the question: Are there differences in how children represent (through production and interpretation): numbers in writing; numbers orally; and numbers conceptually?

*Classification:* F22 F32 C32 A62

*Keywords:* mathematical thinking; number representations; natural numbers; decimal system; number sense; student observation; primary education