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**Notions of variability in chance settings.**

Novotná, Jarmila (ed.) et al., Mathematics in the centre. Proceedings of the 30th annual conference of the International Group for the Psychology of Mathematics Education, PME, Prague, Czech Republic, July 16–21, 2006. Vol. 1-5. Prague: Charles University, Faculty of Education. Part 5, 25-32 (2006).

Summary: This investigation was designed to answer the question: Do students pass through the stages of: disorder, structure, variation in their construction of the notions of statistical variation? To be precise, do these three stages exist in the populations studied? If they do, what are their characteristics? To respond to these questions, a questionnaire, with some of its items taken from the survey of Watson, Kelly, Callingham & Shaughnessy (2003), was designed. A code was defined in such a way that permits the location of answers within each of the stages earlier mentioned. The questionnaire was administered on two groups of senior secondary students; the first being second grade students while the other group is already in the third grade. The students in the third grade already had a semester course on statistics, while the first one had not studied statistics.

*Classification:* K64 C34

*Keywords:* random variables; variability; concept formation; statistical variation; concept formation; conceptual understanding; educational research