

Utilizing a Construct of Teacher Capacity to Examine National Curriculum Reform in Statistical Thinking: A Comparative Study between China and Australia

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This study uses a construct of Teacher Capacity to examine how Australian and Chinese teachers understand and give effect to new curriculum content in “Statistics and Probability” for the upper primary and junior secondary years. One hundred and twenty teachers – 60 from China and 60 from Australia – were involved in the study. A questionnaire was used to test teachers’ capacity in teaching of statistical thinking. Their responses to questionnaires were analysed qualitatively and quantitatively in terms of four criteria which form the basis of our construct of teacher capacity: Knowledge of Mathematics, Interpretation of the Intentions of the Official Mathematics Curriculum, Understanding of Students’ Thinking, and Design of Teaching. These analyses gave rise to three classifications of Teacher Capacity: High, Medium and Low Capacity. Among the four criteria, Design of Teaching appears to be the critical dimension for the implementation of curriculum reform.

Key Words: teacher capacity; national curriculum reform; statistical thinking