My research is longitudinal and cross-sectional in nature. It is concerned with studying how mathematical ideas and ways of reasoning develop in learners using video as a tool to study in fine detail the development of reasoning, early proof making, and how learners build isomorphism between and among problems of the same structure. My theoretical perspective is based on a constructivist view that key mental building blocks of knowledge come from an individual’s prior experiences. The individual, to build appropriate representations of mathematical ideas, can use mental images that are derived from these experiences. In order to build accurate mental representations for mathematical situations, a learner needs to be able to draw on a large collection of ideas. In my work, learners are invited to work with others and engage in strands of investigations that call for the revisiting of existing ideas with opportunities to modify and extend them. In having access to the ideas of others, they receive and provide feedback. In this way, my approach is consistent with social-constructivist views of learning. The longitudinal nature of my work offers insight into schema acquisition of learners and the development of ways of reasoning, particularly in the areas of counting and probability. This approach is consistent with the work of Paul Cobb, Robert B. Davis, Tom Kieren, Alan Schoenfeld, Robert Speiser, Susan Pirie, Les Steffe and others.