

Espasandin Lopes, C. A. (2003). *O conhecimento profissional dos professores e suas relações com estatística e probabilidade na educação infantil* (Teacher's professional knowledge in relation to statistics and probability in primary school education). PhD University of Campinas (Brazil). Supervisor: Anna Regina Lanner de Moura.

This is a collaborative research linking researcher and teachers working together at schools. Our assumption is that teachers' professional knowledge, resulting from the integration of theory and practice, is personal and can be mainly observed from teacher's work while developing the curriculum. Moreover, teachers' professional development emerges when they intentionally engage in an educational project, and reflect on their practice, as individuals and as a group. We also took into account the relevance of researchers' participation, professional knowledge, questioning capacity and empathy when encouraging teachers to learn more about themselves and their practice. Freire's concept of reflective teacher was taken into account to investigate the contributions that Statistics and Probability concepts can bring to a group of Kindergarten teachers' professional education and pedagogical practice in a private school in Campinas. A planned intervention led to collaborative production, which allowed the enlargement of professional knowledge concerning Mathematics and Statistics, the curriculum, and the teaching learning process for these teachers. Information was collected along three years of teaching, using questionnaires, interviews, papers, the researcher's notes, collective discussion of texts, videotaped lessons and analysis of activities planned and performed by the teachers. Case study of teachers and coordinators participating in the experience when trying to identify important points in their mathematics, statistics and didactics knowledge and their professional development were used.

Main conclusions were: The curriculum knowledge was linked to teachers' conception about the meaning of statistics and probability in Kindergarten education. Teachers were aware of the curricula goals, and were capable to design projects related to their context. Their didactical knowledge was visible in solving the problems and in the diversity of strategies and solutions. Their professional development increased through their ethical and solidary work when jointly producing concept developments and didactics knowledge for Mathematics and Statistics. Consequently, we suggest an educational process that values the teachers' knowledge, challenges their reasoning, encourage teachers' research on their own practice and allow them to contribute to collective production of knowledge.