

Playing « As If » as a way to learn mathematics: the equality concept in 1st grade in 1969

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Playing “As If” is perhaps one of the most commonly associated expressions with children and their games. In what Piaget (1972) has called symbolic play, or imitative play, children act as doctors, mechanics, merchants, and so on. In these moments, they put all their imagination into action (Archambault & Venet, 2007; Nielsen et al., 2010; Clerc-Georgy, 2020); a creative imagination that Vygotsky (1930) considers to be one of the superior functions of the mind. As a driving force behind the game, the “As If” approach is not unrelated to the teaching of mathematics, nor perhaps to mathematics itself, as suggested by the philosopher Vaihinger (1911,1924), who made the “As If” (“Als Ob”) the core of his thinking.

Based on a film made in 1969 in France in a 1st grade class, it is this question of doing “As If” for mathematical learning that we will explore in this communication. In this session, in a fictional game based on the merchant's game and a doll to be dressed, the students manipulate two sets of abstract symbols in order to (try to) construct the notion of equality in all its generality. Because it shows students actually in activity, this film constitutes one of the rare testimonies recorded during the “New Math” period (Trabal, 1999; d'Enfert & Gispert, 2011; Gosztonyi, 2015); a period that is sometimes decried but which, if we focus on the didactic analysis of the practices as they have come down to us, proves to be rich in new pedagogical approaches (d'Enfert, 2010) whose consequences have lasted long after the fall of this reform.

The film that will be presented is part of a series intended for teacher training and is an example of a corpus of nearly one hundred reels (16 mm, with sound, color) edited between 1969 and 1972, which are currently being preserved and valorized. A large part of these documents shows classroom sessions, where active pedagogies are articulated with abstract mathematical notions but nevertheless approached in a very concrete way.

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