

## Theoretical Framework

- 1) A significant part of the children does not detect differences between the dissolution of sugar in water or oil.
- 2) Although in their drawings children seem to comprehend the conservation of sugar in the solution, in their predictions many of them assume that sugar is not conserved.
- 3) Developmental characteristics and processes (child's imagination, creativity, multiple social interactions, every day experience etc.) have been underestimated although the dynamic potential outcomes to the development of children initial reasoning towards the formation of interpretive models compatible with the scientific one used in education.

## Methodological Framework

- Data were collected from conversations between two children in an urban-area kindergarten in Greece.
- The research procedure was based on the utilization of conceptual play (a form of educative activity that combines learning and playing).

## Research Questions

- 1) How do young children conceptualize dissolution while participating in an interactive play activity in kindergarten?
- 2) In what way children's experiences and social interactions during play facilitate the transition of reasoning constructed during the exploration of one natural system (water-salt) to another natural system (water-sugar)?
- 3) Is it possible for young children to develop methodological skills for the distinction between soluble and insoluble materials through an interactive play activity with natural elements?

children gain  
consciousness of  
dissolution of known  
solid materials in known  
liquids



After all..

socio-cultural environment  
urges children towards the  
development of reasoning

## Purpose of Research

Exhibit the importance of the socio-cultural environment for the conceptualization of the dissolution of solids into liquids by 5 to 6 years old children.

## Results

- 1) Constant interaction between the children themselves as well as with the researchers helped children develop their thinking.
- 2) A child is recalling an experience from his everyday domestic reality and he displays a stable view of the subject of dissolution, even though he cannot provide any interpretation of the phenomenon.
- 3) The framework facilitates the orientation towards the development of a methodological ability.

## References

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