

# Gaining evidence for the educational value of play: a theory-driven methodological approach

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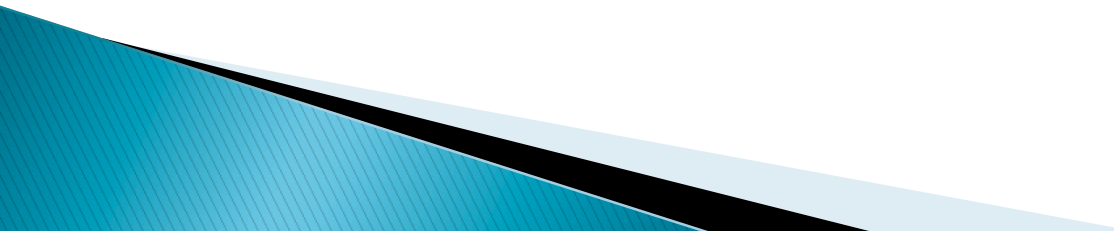
# The educational value of play: what do we mean?

- ▶ Effectiveness of the educational institute (optimizing the outcomes of children's learning)?
  - SOME PROBLEMS:
    - What are desired and expected outcomes?
    - How to measure them reliably in young children?
- ▶ The best way to promote players' learning (developmentally appropriate)?
  - SOME PROBLEMS:
    - What is developmentally appropriate learning?
    - Which stage theory?
    - Only for young children?
    - Transition from play to formal learning

# A pedagogical interpretation of the educational value of play

- ▶ Creates opportunities for meaningful learning (both meaning and sense)
- ▶ Playful learning can contribute to the development of agency in cultural practices

# General problems with theories of play:

- ▶ Definition of play
  - ▶ Role of adults
  - ▶ Conceptualisation of playful learning
  - ▶ The fate of play during ontogenesis
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# Varying outcomes from research on play: no evidence

- ▶ No reliable evidence for major learning outcomes from play:
- ▶ Sutton–Smith (1989) :
  - Mostly rethoric regarding different values of play (cognitive development, identity, imagination, self, etc);
  - “Play as an exercise in adaptive potentiation is no guarantor of actual progress, apart from that of becoming a player”

# Varying outcomes from research on play: positive evidence

- ▶ Positive results have been reported:
  - e.g. Christie in domain of literacy; van Oers (2010) in area of mathematics
  - Hirsh–Pasek, Golinkoff, Berk & Singer: *A Mandate for playful learning*: positive outcomes found as academic gains & social learning
  - However (see Lillard), some research outcomes may not be reliable:
    - Correlative findings interpreted as causal
    - Not–replicable/replicated
    - Unmasked evaluation (only by experimenter)

# Is there a way out?

- ▶ **Improve theory:** on play, playful learning, outcomes of learning
- ▶ **Better research**

# Research on play

- ▶ Proof of causal relations between play and learning outcomes?
- ▶ Ecologically valid experimental research is difficult to achieve:
  - Impossibility of random selection
  - Limited **manipulation of variables** (like pleasure, tiredness, spontaneity, freedom, attitude, etc)
- ▶ Obscurities with respect to definition of outcomes (*result* of action or *consequences* of action)
- ▶ Need for a detailed theory of play & methodology



# Levels of description of play

- ▶ **Molar level of description of behaviour:** description of behaviour in general terms, that characterizes the behaviour in a culturally comprehensible way (e.g. description in terms of activity as a unit of analysis)
- ▶ **Molecular level of description:** behavioral description in the smallest meaningful and constituent units of a larger entity (e.g. actions as moments of activity)

# Relations between molar and molecular descriptions

- ▶ There is no predictive relationship between the two levels
- ▶ Theoretical entities may figure at both levels, but mostly have different meanings (e.g. notion of object)

# Play as a mode of activity (molar description)

- ▶ **Play is an activity** (in the sense of Leont'evs 'dejatel'nost') that is characterized by:
  - Rules (technical, social, conceptual, strategic);
  - Degrees of freedom for the participants;
  - Involvement and voluntary participation
- ▶ Play is concretely established in **Playful actions** (molecular level descriptions), i.e. as specific moments of a play activity in which tool-mediated, goal-directed attempts to change an object take place.

# Playful learning

- ▶ Deliberate or ‘spontaneous’ change of play actions over time. NOTE: learning is a process at molecular level! (Actions, operations or even deeper, when we take the consequences in the brain into account)
- ▶ Engaging children in play activities (molecular level) NEVER can predict learning (at molecular level)
- ▶ Organizing for playful learning implies BOTH the establishments of conditions (at activity level) AND the guidance at action level that does not contradict the parameters of play (as a mode of activity)

# Future Research on play:

- ▶ Failures to find outcomes of playful learning is a result from:
  - lack of distinction between activity and action
  - wrong assumptions regarding relationships between molar and molecular level
- ▶ Valid studies of play include different approaches:
  - Quasi-experimental designs: Matched groups
  - Case-studies (Qualitative study of naturalistic cases)
  - Single-subject designs (case-study + intervention)
  - Study of paradigm cases

# Paradigm cases

- ▶ exhibit a *particular phenomenon* in a theory-based intervention (embedded case-study)
- ▶ have been constructed as much as possible on the basis of the *underlying theory*, and as such can be considered paradigmatic for the concretisation of the theory in practice;
- ▶ are taken from an *everyday classroom activity* (not staged or otherwise artificially directed), and are acknowledged as instances of ‘good practice’ by committed, well-informed practitioners;
- ▶ can be *accomplished and repeated* by a number of teachers
- ▶ can be demonstrated *in different activity-settings*

# Why studying paradigm cases?

- ▶ Creates opportunities to study actions in ecologically and theoretically explicit activities
- ▶ And: study the influence of the parameters (from the molar level description) on the course of actions, agency, and results/consequences (molecular level descriptions)

# Young children's play in the shoe store

- ▶ Thematic project in a play-based curriculum (Based on a CHAT theory of play)
- ▶ Idea is initiated by children and collaboratively developed (pupils and teacher together)
- ▶ Teacher introduces new tools only when they are meaningful for the children and contribute to their play



# CONCLUSION

- ▶ When studying play and its outcomes, it is necessary:
  - To focus on the level of actions,
  - To embed these in theory-based organisation of activity
  - To construct relevant data in paradigm cases
- ▶ Playful activity can include adults as long as they answer the needs of children in the context of their play, and don't disturb the essential, qualities of play
- ▶ Playful learning can be observed as changes in action in a play context

Thanks for your attention

**Time for questions**

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