Vygotsky and Wertsch

How to understand human thinking - Basic concepts

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Sociocultural perspective
on human thinking

The aim for this kind of perspective is to create an account of human mental processes that recognizes the essential relationship between these processes and their cultural, historical and institutional settings.

Point of departure in ACTION

- Human beings are viewed as coming into contact with, and creating, their surroundings as well as themselves through the actions in which they engage

- Action must be understood as dialectically interacting moments between mental functioning and sociocultural settings

- The key to this is …

Mediated action

Who is carrying out the action will invariably identify the individual(s) in the concrete situation and the mediational means that are employed

Two main mediational means

1. **Tools** – ex pole vaulting as a tool that mediates men's ability to jump (bamboo vs fiberglass, 15-20 feet)

   Task: Talk in pairs and identify other kinds of tools that mediate your actions for example at university and/or at home. Spend approx 5-10 minutes.

Two main mediational means

2. **Language** - ex sound bites in television (60 sec-9 sec)

   Ex scientific practice – follow experimental procedures according to particular disciplinary vocabularies (and tools)

   Task: Talk in pairs and identify other kinds of language use that mediate your actions for example at university and/or at home. Spend approx 5-10 minutes.

Wertsch further develops Vygotsky's ideas of internalisation by building on Bakhtin's thoughts highlighting intermental processes

- *Utterance* are *dialogically* oriented not intramental but intermental
- *Voice(s)* - mental functioning in the individual originate in social, communicative processes and assume several voices (ref the documentary of Bulgarian disabled children)
- *Mind* (not cognition) – socially distributed and connected to the notion of mediation
- *Multivoicedness* describes the meeting between intramental and intermental and it is here that meaning takes place (disapproves the idea of internalisation because it is not compatible with the idea of mediation)

Empirical implications

Unit of analysis is mediated action

Levels of descriptions

- Tools

- Disciplinary issues or other characteristics of the particular setting the actor is part of

- Institutional setting (sense versus meaning, a farm or a church, beans and prayers)

Design implications

Arrange for actions where the design of for example computer based tools for learning take the characteristics of the particular
- tool(s)
- the curriculum
- the institutional issues

into account to foster productive learning situations

Background for the Zone of Proximal Development (ZDP)

- Developmental processes lags behind the learning processes – the four arithmetic operations provides the basis for the subsequent development of a variety of highly complex internal processes in children's thinking

- Human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them.

ZPD

Learning should be matched with the child's developmental level
- **Actual developmental level** – defines functions that have already matured, that is, the end products of development. Retrospectively.
- **Potential development** – those functions that have not yet matured but are of the process of maturation, functions that will mature tomorrow but are currently in an embryonic state. Prospectively.

ZDP definition: the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration more capable peers.

What a child can do with assistance today she will be able to do by herself tomorrow.

"Good learning" is that which is in advance of development

Ex cooking with children

General developmental law

An essential feature of learning is that it creates the zone of proximal development, that is learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers.

Task: Talk in pairs and identify zones of proximal development that you take part in either one where you are going to learn or where you are the one that can be considered as the more capable peer for example at university and/or at home. Spend approx 5-10 minutes.

Empirical implications

- The aim of the psychological and educational analysis of development is to describe the internal relations of the intellectual processes awakened by school learning.

- What they say and what they do given the tools they use, the disciplinary domain they are working with, and the particular setting they are part of.

Development of concepts

Scientific concepts – grounded in particular sorts of semiotic activity. A concept is not scientific before it is considered in relation to, or as part of, a larger conceptual system.

Everyday concepts – children's concrete experience.

Design implications – ask explicitly, visualize or identify other ways to link different concepts together.

Design implications

- Task: Talk in pairs and discuss how you can design to make it more likely that your students can development scientific concepts. Does this look the same when planning an educational trajectory using a CD room, a Second Life solution or a mixed reality set up? Spend approx 5-10 minutes.