

Methodological problems of research on developmental transitions

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Status of human sciences

- Few (no?) new attempts to elaborate general theories e.g. general theory of human (cultural) development (Vygotsky's "Paedology" – integrative discipline combining knowledge on human development from all sciences)
- Specific theories explain narrow phenomena, but there are no theories explaining how specific theories are related e.g. cognitive, emotional, moral (Vygotsky – unity of affect and intellect)
- Physics – elaboration of "theory of all", which could combine specific theories

Crisis in psychology (education)

- Dualism: spiritual and bodily, psychic and physical, internal and external are studied and explained using different concepts, principles and methods
- What is psychic/ spiritual??
- The relation between theory and practice?
- The philosophy of practice – methodology?

Scientific explanations (Vygotsky)

- Principles of scientific explanations often are found outside a specific scientific domain and they force to seek relationships between domains and common principles
- What are explanatory ideas in psychology and how they are changed?
- Influential ideas in the history of psychology: unconscious (psychoanalysis), reflexes, Gestalt, personalism (anticipation?)

Vygotsky's conclusions

- Relation between theory and practice: Do we think that theory is independent from practice, is located outside "science" or is practice challenge to the elaboration of theory
- Practice requires philosophy i.e. scientific methodology and impels elaboration of methodology
- Only western people are able to divide spiritual and physical. Are we looking for psyche from a wrong place, specify a wrong research object and use wrong methods?

Vygotsky's project on art

- The study on the laws of the psychology of art: one fable ("Grasshopper and the ant"), one short story (Bunin's "Gentle breath") and one drama (Shakespeare's "Hamlet")
- What I study? What is the basis of all art: the character and mechanism of aesthetic reaction as a general law
- The strength of analysis depends on the level of abstracting; unconventionality and originality of the experiment

How to study cultural development?

- What methods are valid?
- “Methodological cocktail” of thesis: declarative theoretical part (e.g. use of Vygotsky) + descriptive methods = no analysis, no explanation and new scientific knowledge
- Study of cultural development using methods of natural sciences?
- Instructions create a social situation in interviews, but it is not analyzed (e.g. Influence of interviewer)

Experiment in human sciences

- Classic approach: the experimenter creates a situation (variables) and modifies conditions according to his hypotheses
- Often stimulus – reaction setting: stimuli are varied and reactions are registered as objectively as possible (Dualism?)

Methods in use

- Descriptive vs. inductive-analytic methods
- Descriptive methods do not try to solve the problem of dualism: reality is divided to physical and spiritual
- Subjective is spiritual and spiritual cannot be objective. How to explain mind and not just describe it?

Psychological experiment?

- Often only the concept of development is adopted, but methods are not changed
- Vygotsky: Psychological phenomena cannot be studied *ex post facto*. In other words psychological study should produce phenomena under study:
 - The method of double stimulation;
 - Designing social relations in interaction as *genetic experiments*

Challenges of psychological experiments

- How conscious self-control of participant subjects is created in experiments?
- How subjects create artificial tools of guiding one's own actions – signification, what makes sense?
- How transition from external guidance to internal, personal guidance takes place?
- Vygotsky: specific psychological tools are used in modifying psyche in the same way as external tools are used in modifying physical objects

Experimental-genetic method

- Launch the process of psychological (cultural) development
- Development cannot be studied like objects (Ding), but a living process has to be constructed, which produces stages of development (an object has to be transformed back to process)
- Explanations instead of descriptions. What are real causal-dynamic relations and connections = dynamic analysis
- Alternative processes are searched, not one correct only

Development

- Dialectic process, which includes crises, abrupt qualitative changes and latent periods
- Consists of reorganization of psychological systems and qualitative changes (metamorphoses)
- Internal and external factors are intertwined
- Different pace of different functions
- No development without overcoming difficulties – dramatic collisions (development in terms of drama)

Development

- Collisions with cultural ideal forms of behavior are unavoidable
- A new stage is not born from realization of the potential of the previous stage, but from real collision with cultural environment
- New psychological function has been social relation between people. Through others we become ourselves
- Social action cannot be derived from individual behavior

Developmental transitions

- Stage model based on qualitatively different periods (Vygotsky: crisis –latent period) and activity types (El'konin)
- Activity types are discerned by motives (El'konin) – crisis indicates the change of motivation (decrease of the significance of motives of previous activity and search for new motives of next activity)

Transition from play to learning activity

- What is play activity? (When is activity?)
- Motives of play activity?
- Leontiev, El'konin: Wish to be like an adult?? (Possible in imagined situation with imaginary actions, only) Wallon's critic!
- My proposal: Children's experimenting with significance (smysl) of positions, relations and life phenomena??

Transition from play to learning activity

- Learning activity?
- Davydov: Theoretical generalizations as the main goal = understanding the basis and dynamics of developing systems of a knowledge domain (explanation of origin and development of phenomena)
- Six learning actions = learning activity
- New type of learning interaction (Zuckerman)

Learning activity

- Is not possible without changing the whole didactic approach aiming at theoretical thinking = understanding, explaining origin and development of phenomena
- In western school dominates “school-going activity” (Engeström 1987) because theoretical thinking is not developed
- Constructivist approach to learning maintains Tyler’s linear model (starting point is ready knowledge which must be constructed)

How play prepares to learning?

- The need for real learning origins from advanced social role-play
- Imagination and symbolic function are behind the need for real learning (Davydov)
- Advanced actions are possible in imaginative situations only and children would like to carry them out in real life

How play prepares to learning?

- Play is best approach to executive functions; direct training does not facilitate transfer
- Executive functions are comprised of three core abilities: a) self-control, b) use of working memory, and c) cognitive flexibility
- Tools of mind approach in the USA (Bodrova & Leong)
- Hirsh-Pasek, K., et al. (2009). *A mandate for playful learning in the preschool: Presenting the evidence*. New York: Oxford University Press,

How to support transition?

- Transitory activity?
- From play to learning activity – hybrid activity (Kravtsova)
- “Narrative learning” (Hakkarainen) – realistic learning and problem solving in narrative frames (play worlds)
- Theoretical challenge: how narrative learning constructs children’s personality?

How to study transition?

- What are the products of play activity?
- What is the level of imagination, creativity, initiatives and use of cultural tools
- What are symptoms and phase of developmental crisis (the crisis of seventh year by Vygotsky)

Doing research on development crisis

- Vygotsky: social situation of development; new functions = social relations; development in terms of drama
- How to introduce new social situations with dramatic collisions – how to select narrative environments and play worlds? (Example Hakkarainen 2008)
- Possibility for experimenting with different role positions in narrative play environments

How development is supported

- Emphasis on subject development
 - initiatives
 - self development, sense making
 - motives, will and moral issues
- Enhancing active participation and peer interaction in joint problem finding and solving (joint efforts to help in narrative worlds; child experimentation)

Intervention to cultural development?

- Aims of intervention = new cultural tools are taken into use (e.g. children start to “write” down orders in their pizzeria play (Hakkarainen 2006), draw a model in order to rebuild the racetrack for cars (Bert van Oers))
- Stimulating children’s initiatives, desires and motives (Would you like to help Winnie the Pooh? He needs your help)
- Stimulating creative imagination (intervention aims at new interpretations and creative solutions)

Genetic experiment?

- Vygotsky's idea is on the level of psychological functions
- Later (1932-34) units of cultural development are psychological systems (composed of functions) or personality / consciousness
- How relevant genetic experiment is?
- Later proposals: Leontiev – hierarchy of motives; Engeström – elimination of contradiction of an activity system: a new system (network?)

Narrative interventions?

- Children develop in their activity (joint activity with adults). Direct instructions/models do not effect developmental changes
- Narrative mode/frame offers a model to organize one's ideas to comprehensible form, but also every time reinterpreted
- A model how to make sense and how to relate to phenomena
- New cultural tools, which can be creatively elaborated and experimented with

Genetic, narrative experiment?

- Vygotsky's idea: the new psychological functions are artificially produced by arranging a problem solving situation, in which a neutral object is given a new function
- In narrative (imaginative) environments new aspects of sense making are offered, which may reorganize consciousness of the child (this idea was first presented in Vygotsky's lecture plan on play: transition in sense making bring about changes in consciousness – today: play change the brain according to US evidence)

Why narrative?

- Analysis of psychological development in terms of drama (conflicts, collisions, counteraction and opposition between people)
- “social situation of development” = organic totality of personality and situation
- Personality development (ages, periods, stages) can be traced in changes of dominant types of “perezhivanie” although only symptoms of personality can be observed.
- environment can direct children’s activity and actions through “perezhivanie” only

Psychological tools

- Psychological tools are tools with help of which a person can elaborate his or her psychological functions and personality structure
- Psychological tools in narrative play-world environments
- The role of psychological tools in the construction of the zpd in imaginative play environments: two types of play-worlds (content oriented and human values – oriented)
- In both the main type of help – how children's reflection is promoted

How psychological tools are used in play-worlds?

1. Story structure as organizer of children's thinking and reflection – e.g. children's self-initiated play using the core of dramatized tale “Rumpelstiltskin”
2. Unsuccessful example – students' careful plan how to carry out dialogue after dramatization of “The snow queen”. Questions did not lead to children's reflection, but children discussed with their parents at home and initiated play at day care center groups

Psychological tools

3. Psychological tools of boundary crossing – moving from real world to imaginative worlds

Examples: From classroom to “Narnia” – cardboard box fixed to the door frame marked the boundary (Adventure was organized in winter in the nearby forest. The children were ready to go out, but suddenly one boy realized “if we go out we are not in “Narnia””). Children went through the “Narnia cupboard” and then out to be in “Narnia”)

Examples continued

- From the classroom to the “Kingdom of Surmundia”
“Rumpeltiltskin” put the spell on the kingdom, which turned everything upside down. King Albert sent his messenger to the classroom asking children’s help in returning his castle back to previous state. In order to be like other citizens of the kingdom the children turned their jackets, stepped backwards through the door and talked backwards

Psychological tools

4. Self-regulation tools

A. Shields made from cardboard for protecting against the spell of “Rumpeltiltskin”

- “anti-spell” written on the shield
- a strong symbol of positive value on the shield (Finnish flag, heart, love, etc.)
- color (“R” is allergic to red)

B. Magic powder of concentration

Teacher competences in traditional and narrative learning interaction

Criteria	Traditional learning interaction	Narrative learning interaction
Mode of conversation	Questioning skills	Socratic, dialogic skills
Attention direction	Attention arousing	Mutual attunement
Sharing of activity	Control of performance	Creative initiatives and participation
Position in relationships	Skills in using symbolic power	Skills in partnership
Degree of participation in getting results	Expert's skills	Participatory skills
Degree of freedom in learning	Acting according to instructions	Possibility for new ideas and creative turns

Developmental methodology in practice:
**Research Center for Developmental Teaching
and Learning at Oulu University in Finland**

- Main focus is on early development (0-8 years). Three main types of developmental environments:
 - creative environments of play (0 - 6 years),
 - narrative play & learning environment aiming at personality development (4 - 8 years),
 - playful learning environments (6 - 9 years).

Publications

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