

ICPE 2017
International Conference on Psychology and Education

**ANALYSIS OF ECOPSYCHOLOGICAL TYPES OF
INTERACTION IN SYSTEM "LEARNER-TEACHER"**

V.I. Panov (a)*, I.V. Plaksina (b)

*Corresponding author

(a) Laboratory of ecopsychology of development and psychodidactics, Psychological Institute of Russian Academy of Education, Moscow, Russia ecovip@mail.ru

(b) Department of the general and pedagogical psychology, Vladimir State University named after Aleksander Grigoryevich and Nikolay Grigoryevich Stoletovs, Vladimir City, Russia irinaplx@mail.ru

Abstract

Article is dedicated to description of subject-subject pedagogical position as the most important condition for forming of scholar's subjectness. According to ecopsychological types of interaction (V.I. Panov, 2014), subject-subject type of interaction in system "scholar - trainer (educational environment)" is defined by the role position of its each components and has three subtypes: subject-insular, subject-cooperative and subject-generative.

Article represents reliable differences in pedagogical excerpts by parameters, characterizing precepts and reactions to scholars, showing that pedagogues affect on children's behavior actively, with usage of traditional "parental" methods: suppress infant aggression, demonstrate irritation, form infantilism and dependence from pedagogue. Accentuation of dominating signs in structure of variables demonstrates that subject-subject position of pedagogue does not depend on person's subject characteristics development level.

In development of professional pedagogical competence it's important to create conditions for revealing habitual behavior styles, analyze behavioral patterns from positions of transact analysis and form flexible behavioral skills, which let implementation of real subject-subject interaction of subject-cooperative and subject-generating types.

© 2017 Published by Future Academy www.FutureAcademy.org.UK

Keywords: ecopsychological approach, ecopsychological types of interaction, pedagogical subjectness, subject-subject relations.



1. Introduction

Main participant of the modern learning process is a learner included into learning activity and multilateral communication. Achieving modern substantive, metasubstantive and personal results presumes learner's ability to be a subject of universal learning actions (ULA). Forming of their must go purposefully.

Forming of learner's subjectness will go purposefully, if psychological models of those qualities needed for a child to be a subject of substantive and universal learning actions, will be used as initial basis for formation of educational technologies. In psychodidactic paradigm (Panov, 2014) subject qualities of learners are exactly distinguished, while substantive content of learning materials and actions with it are used by pedagogue as psychological and pedagogic mean for development of learner's subjectness. In this way, pedagogue must create a condition for becoming of learner's subjectness, that presumes presence of pedagogue's own subject position.

Investigation of pedagogue's subject position in modern psychological and pedagogical practice is one of the most complicated investigational tasks. Obtaining objective data of pedagogue's position is difficult: generally recognized diagnostic tools are absent, observation of subject qualities appearance is difficultly available, pedagogues give socially "attractive" and difficultly comparable answers during tests, investigators deal with characteristics of pedagogical excerpts in various quality (age, stage, teaching discipline).

In scope of ecopsychological approach (Panov, 2014; Panov & Plaksina. 2016a, 2016b) six basic types of ecopsychological interactions between components "learner - teacher (educational environment)" are distinguished. Type of interaction is defined by role position of each component, where each partner by interaction can hold either subject or object position:

- object-object, when interaction in system "learner - teacher (educational environment)" has formal character and characterizes by passivity of both sides;
- object-subject, when learner, holding passive position in process of learning, plays a role of an object obeying influences of educational environment and teacher as its subject. Learner's subjectness with such type of interaction appears in accept of pedagogical interaction and obeying it;
- subject-object, when educational environment and teacher, as its subject, appear as an object for perception, analysis and effect from learner's side.

Components of system "learner - teacher (educational environment)" hold active role position in relationship to each other in subject-subject relations. However, subject position can appear both in collaboration, and in concurrent relationships. Because of this, three subtypes of subject-subject communication are distinguished:

- a) subject-standalone, where each of components in system "learner - teacher (educational environment)" hold active position in relationship to another one, without paying attention to subjectness of other component. Learning situation is characterized with mutual misunderstanding, competition going to struggle;
- b) subject-cooperative subtype, which is characterized with cooperative-distributive activity and cooperation of joint efforts for achieving common goal;

c) subject-generative subtype of interaction in system "learner - teacher (educational environment)" is intrinsic for those situations, when learner and teacher are in process of uniting into subject community. During this process such changes of learner's and pedagogue's subjectness happen, promoting creation (generation) of group subject for joint action "learner-teacher".

2. Problem Statement

To clarify parameters, characterizing pedagogical subjectness, several pilot investigations were performed (Panov & Plaksina. 2016a). Those investigations let conclude of that parameters characterizing personal vitality, as readiness for meaningful and active work, and also types of pedagogues' professional identity can be markers of pedagogic subjectness. Because the experimental data were obtained with use of small and slightly differentiated excerpt, investigation was continued with use of extended excerpt.

Two groups of pedagogues participated in investigation: primary class teachers (N= 50) – group 1, teaches of the Russian languages and literature from schools of the Vladimir City and Vladimir Oblast (N=30) – group 2.

3. Research Questions

Seven empiric tasks were set and being solved in empiric plan:

- 3.1. Investigation of parameters characterizing features of interactions in system "pedagogue-learner";
- 3.2. Investigation of existential fullness of pedagogues' personalities;
- 3.3. Investigation of pedagogues' personalities vitality characteristics;
- 3.4. Studying types of pedagogues' professional identity;
- 3.5. Investigation of field dependence characterizing degree of person autonomy;
- 3.6. Studying features of education environment perception.
- 3.7. Statistic processing of empiric data for revealing differences between parameters of pedagogical subjectness, distinguished by us, and correlation interactions between them.

4. Purpose of the Study

Goal of investigation was to reveal differences in expression degrees of parameters characterizing pedagogical subjectness in investigational excerpts, and also in revealing correlation between parameters of subjectness and characteristics of subject-subject interactions.

5. Research Methods

The next methods were selected as diagnostic:

- 5.1. Method of studying settings and pedagogical reactions (Sereda, 2006)
- 5.2. Method "Scale of existence" (Maynina, 2011)

- 5.3. Vitality test (Leontiev, 2006)
- 5.4. Method for evaluation of professional identity types (Yermolayeva, 2011)
- 5.5. Questionnaire TCOB-4 (evaluation of field independence) (Selivanov and Osokina, 2015)
- 5.6. Method of educational environment vector modeling (Yasvin , 2001)

6. Findings

Table 1 represents comparative results, characterizing training reactions and pedagogues' settings of two groups in relation to children.

Table 1. Settings and pedagogical reactions of pedagogues from different groups (Sereda's method)

	Socially desirable settings	Settings for encouraging of busyness	Severe reactions to children	Settings for encouraging of dependence from teacher	Irritable reactions to learner	Settings for suppression of child's aggressiveness	Settings for infantilization of learner	Settings for symbiotic relations to learners
gr. 1	8,61	3.13	-1.60	-0.67	-0.60	2.47	-0.53	0.07
gr. 2	6,33	5.56	0.28	2.10	-1.18	5.06	0.36	1.18

Mann — Whitney U-test was used in relation to obtained results. Reliable differences were found only for parameters characterizing settings and pedagogical reactions: «Socially desired settings» (with $p < 0.05$), «Settings for encouraging busyness» (with $p < 0.01$), «Severe reactions to a learner» (with $p < 0.05$), «Settings for dependence from a teacher» (with $p < 0.05$), «Suppression of aggression» (with $p < 0.01$).

Obtained results demonstrate that primary class pedagogues actively affect on children's behavior, with use of traditional methods of patronizing parent, while middle class pedagogues, in otherwise, suppress childish aggression, demonstrate irritation, and also form infantilism and dependence from pedagogue. Generally, both positions characterize subject-object relations in training process.

Table 2 represents results characterizing degree of autonomy and existential fullness of pedagogues from different groups. Calculations with use of Mann-Whitney's U-criterion did not reveal reliable differences by investigated parameters obtained in two excerpts. We emphasize that parameter of field independence in numeric value retrieved opposite pole - field dependence. All parameters characterizing existential fullness of person, have average values in correspondence to norms represented in methodic aim.

Table 3 represents differences in characteristics of vitality and expressivity of pedagogues' professional identity types from two groups. Calculations with use of Mann-Whitney's U-criterion did not also reveal reliable differences by investigated parameters obtained in two excerpts.

Table 2. Field dependence and characteristics of existential fullness of pedagogues from different groups (Maynina's, Selivanov's and Osokina's methods)

	Self-distancing	Self-trans-cedention	Freedom	Responsi-bility	Existence	Field dependence
gr. 1	32.63	68.70	38.03	42.23	80.27	119.30
gr. 2	32.56	66.76	38.04	44.38	82.42	122.34

Table 3. Characteristics of vitality and types of professional identity of pedagogues from different groups. (Leontiev's and Yermolayeva's methods)

	Involvement	Control	Accept of risk	Vitality	Emotional identification	Pragmatic identification	Negative identification
gr. 1	54.07	47.33	27.07	128.47	24.20	23.80	8.00
gr. 2	55.50	45.56	26.62	126.46	24.42	22.92	6.40

Table 4 represents average results of educational environment characteristics evaluation by pedagogues from two groups, by means of 10-point scales, proposed by Yasvin : freedom, dependence, activity, passivity. Calculations with use of Mann-Whitney's U-criterion did not also reveal reliable differences in characteristics of educational environments, in which pedagogues realize their professional pedagogical activity.

Table 4. Characteristics of educational environment in evaluation by pedagogues from two groups

	Freedom	Dependence	Activity	Passivity
gr. 1	6,23	5,70	4,47	6,13
gr. 2	6,38	5,21	3,90	6,59

Thus, comparative analysis of empiric data demonstrates that subject qualities of pedagogues in two independent excerpts have no significant differences and expressed at level of statistic norms. Educational environments of pedagogues were revealed identical. Types of interactions in system "pedagogue-learner" have different role positions of pedagogues.

In further, method of rank correlation (r-Spearman, $r_{crit} 0.005 \approx 0.332$) was used in relation to obtained data. Correlation analysis revealed the next meaningful relations between investigated parameters characterizing pedagogical subjectness:

- education environment parameter "Dependence" form reverse correlation with parameter "Existence" ($r = - 0.201$);
- parameter "Passivity" form reverse correlation with parameters "Existence" ($r = - 0.255$), "Freedom" ($r = - 0.206$) and "Self-distancing" ($r = - 0.212$);
- environment parameter "Activity" is related to pedagogue's settings and reactions to a learner – "Setting for suppression of will" ($r = 0.228$), "Severe reactions to learner" ($r = 0.284$), "Encouraging dependence of learner from teacher" ($r = 0.297$), "Setting for symbiosis" ($r = 0.211$). Obtained correlations let conclude that educational environment parameter "Activity" is perceived by pedagogues as active pedagogical influence (authoritarian or excessively tutelary in our case). It's important to notice that parameter "Socially desired

settings in relation to learner" formed meaningful correlation to setting for "Symbiosis" in relations. These results emphasize necessity in deep reflexive analysis of relations in dyad "pedagogue-learner".

This conclusion is sustained by revealed correlation between parameters "Field dependence" and "Socially desired settings in training" ($r = 0.313$). Field-dependent form of behavior is characterized by tendency of cohesive interaction with environment, dependence from norms and demands of socium, based on stereotypes and prejudices, and, undeniably, restrict activity and spontaneity of childish behavior, obstruct development of subject-cooperative and subject-developing kinds of interaction.

Further analysis revealed correlation between field dependence and parameters, characterizing existential fullness and vitality (Table 5).

Table 5. Correlation coefficients denoting correlation between parameters, characterizing existential fullness, field dependence and vitality of a person

Parameters, characterizing subjectness	Correlation coefficients (r-Spearman) r crit 0,005 ≈ 0,195
Field dependence	Freedom (-0.353); existence (-0.305); accept of risk (-0.206)
Vitality	Existence (0.542); responsibility (0.513); freedom (0.377); self-transcendence (0.274); self-distancing (0.424); irritable reactions to learner (-0.421); suppression of learner's will (-0,223)

Definition of maximal effect in correlation between each variable and quantity of significant relations for each variable, allowed define average rang for each variable by effect of contribution into obtained structure (Table 6).

Table 6. Average rang positions for variables in correlations tables for pedagogical excerpts

	Variable	Average rang
1	Freedom (characteristics of environment)	19
2	Dependence	20
3	Passivity	14
4	Activity	11
5	Socially desired settings in training	23
6	Learner's will suppression	9
7	Encouraging of stirring life	13
8	Strict reactions to learner	17
9	Encouraging of dependence from teacher	15
10	Irritated reaction to learner	10
11	Suppression of children's aggression	16
12	Setting for infantilism	22
13	Setting for symbiotic relations	21
14	Field independence / Field dependence	12
15	Self-distancing	7
16	Self-transcendence	20
17	Freedom (characteristics of person's existence)	4
18	Responsibility	8
19	Existentiality	1
20	Involvement	6
21	Control	5
22	Accept of risk	3
23	Vitality	2

Dominating characteristics, defining pedagogical subjectness, are existence, accept of risk and person's vitality. Level of their development will define character of relations, implemented by pedagogue in relation to learner.

Analysis of list of dominating and subordinated features in structure of variables allowed unite parameters into co-subordinated blocks, characterizing one or the other side of pedagogical subjectness:

- dominating block of person's subject qualities "Meaningfulness of life or experience of ontological meaning of life by a human" included the next parameters: freedom; existence; responsibility; self-transcendence; self-distancing; vitality; involvement; control; accept of risk;
- subordinated block "Authoritarian management / hard forming": irritable reactions to learner; setting for infantilism; suppression of will; encouraging of busyness; suppression of aggressive reactions;
- subordinated block "Patronizing management / soft forming": socially desirable settings in relation to a learner; setting for symbiosis; encourage of dependence from teacher; severe reactions to learner;
- subordinated block "Educational environment" included parameters of educational environment: activity, passivity, dependence, freedom

7. Conclusion

1. Comparison of two independent excerpts by parameters characterizing such subject qualities, as vitality, existence, types of professional identity, revealed their equal expressivity at level of statistical norm. Consequently, features of professional activity (subject-matter scope, age of learners) don't have any influence on expressivity level of pedagogue's subject qualities.

2. Investigation of field independence, characterizing degree of pedagogues' person autonomy from two groups, did not also reveal reliable differences. Shown characteristics appears in results of excerpt as field dependence - following norms, regalements, traditions and stereotypes of pedagogical activity.

3. Pedagogues, composed investigational excerpt, work in different pedagogical collectives / educational environments. Wherein, educational environments have parameters, slightly different in their evaluation by pedagogues.

4. Parameters of vitality and existence of person are dominating in the structure of variables, characterizing level of pedagogical subjectness formation. Precisely these parameters must define character of interactions in system "pedagogue-learner".

5. Investigation of interpersonal interactions' features in system "pedagogue-learner" revealed subject-object type, but having difference in behavioral strategy of pedagogues from different groups. Pedagogues of the 1st group (primary school) use strategy of tutelary parent, while pedagogues from the 2nd group use strategy of dominating parent.

Obtained results demonstrate that psychological and social model of interaction in dyad "learner - teacher" can be described by means of S. Karpman's classical triangle (Stephen Karpman, 1968)

(Karpman drama triangle), in which relations of authority and subordination are formed. As we know, triangle is set by three positions: despot (dominating), rescuer (tutelary) and victim (obeying influence). Role behavior in scope of triangle is linked to manipulations and conflicts, and generates negative emotions: irritation, resistance, guilt, hurt. We may assume that style of pedagogical activity, role positions in interaction, inherent for experimental excerpt of pedagogues, were non-critically adopted at stages of professional becoming. Many behavioral patterns of pedagogical (parental) influence were adopted in family, at infant age.

In this way, obtained results allow us affirm that subject-subject pedagogical position, promoting forming of learner's subjectness, is not a simple derivative of life sensibility. Pedagogical excerpt with dominating signs of subjectness in structure of qualities, transmits habitual subject-object relations in professional activity. Thus, in development of professional pedagogical competence, we consider especially important to create conditions for revealing habitual behavior styles, analyze behavioral patterns from positions of transact analysis and form flexible behavioral skills, which let implementation of real subject-subject interaction of subject-cooperative and subject-generating types. In practice of professional training and improving qualification of pedagogues, it can go on in scope of training programs, targeted to development of self-awareness, reflexive abilities and communicative competence, needed for development of pedagogue's subject qualities as a subject of productive pedagogical interaction.

Acknowledgments

Authors thanks secondary school pedagogues participating in experiment.

References

- Leontiev ,D.A., Rasskazova Ye.I. (2006). Test of vitality. *Smysl*, 63.
- Maynina, I.N. (2011). Psychodiagnostic abilities of method "Scale of existence". *Psychological diagnostics (2)*, 60-84
- Panov, V.I. (2014). Ecopsychology: Paradigm search. *M.; SPb.: Psychological institute of the RAS; Nestor-Istoriya*, 304.
- Panov, V.I., Plaksina I.V. (2016a). Characteristics of pedagogical subjectness. *Messenger of the Vladimir State University named after Aleksandr Grigoryevich and Nikolay Grigoryevich Stoletovs. Series Pedagogical and psychological sciences. 25 (44)*. 86-96.
- Panov, V.I., Plaksina I.V. (2016b). Ecological approach to investigation of educational environment of pedagogical high school. *Theoretical and experimental psychology. Volume 9. 1*. 29-34.
- Selivanov, V.V., Osokina K.A. (2015). Diagnostics of cognitive style by means of questionnaire TCOB-4. *Messenger of practical psychology in education. 4 (45)*. 31-36.
- Sereda, Ye.I. (2006). Practical work of interpersonal relations: help and personal growing up. *SPb.* 224.
- Yasvin, V.A. (2001). Educational environment: from modeling to projecting. *M.: Smysl*. 365.
- Yermolayeva, Ye.P. (2011). Evaluation of professional's realization in system "human - profession - society". *M.: Publishing office "Psychological Institute of the RAS"*, 176.