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Psychology of Education in Socialist States of Europe:

Trends and key problems in Czechoslovakia and the Soviet Union

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1. GENERAL CHARACTERISTICS

The English term «psychology of education» (PE) corresponds with the discipline labeled in socialist states of Europa as «pedagogická psychologie», «pedagogicheskaja psichologija» (i. e. pedagogical or educational psychology). The discipline can be characterized by the following features — if compared with PE in Western countries:

1) Its *methodological foundation* rests on the philosophy of Marxism (dialectical and historical materialism). Consequently, a basic principle of PE is that all psychological and educational phenomena and processes are to be seen as determined by material (economic) basis of the respective society. PE has, therefore, to study psychological phenomena of education in relation with the concrete historical and socio-economic conditions of the given society (as proclaimed already by L. S. Vygotskij in the late 20's, and others).

2) A second main feature (with direct consequencies for research in PE) stemms from the fact that educational systems in socialist countries of Europe reveal a high degree of *comprehensiveness*: Not only that education is provided in comprehensive schools for all children during the entire mandatory school age (e. g. in Czechoslovakia compulsory schooling continues until the end of grade 10) but also curriculum is the same for the same types of schools throughout the country. It means, for instance, that for a particular subject only one textbook is used in all regions of the country.

2. DELIMITATION OF PE

An interdisciplinary nature of PE is so much obvious that though it is often defined as a part of the psychological science, actually (and also in research institutions) it is incorporated into pedagogy. This is apparent from the two definitions which I am quoting from Czechoslovak and Soviet literature:

DEF (1): «Pedagogical psychology is a branch of psychology, which investigates psychological problems of the educational practice: It analyses conditions, process and results of education (upbringing and instruction); it is concerned

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with man, his activities, learning and personality development, in conditions of education» (Cap., 1980, p. 17)

DEF (2): «Pedagogical psychology is a branch of psychology investigating problems of the acquiring by man social experience in educational stettings» (Psichologiceskij slovar, 1983, p. 252).

Both definitions reflect a typical orientation in PE of socialist countries: Till recently, the main object of PE has been seen in studying only problems concerned with school children and with the respective teaching process. At present, however, a new approach becomes to be used, i. e. a scope of PE has been broadened to (educationally based) socialization in all age groups, and in school as well as out-of-school settings. Thus, the main concern of PE is seen nowadays in problems of educationally determined personality development (see, in more detail, below, in part 5.1.).

3. PRESENT-DAY STATE OF PE IN CZECHOSLOVAKIA AND THE SOVIET UNION

In both countries, psychological and pedagogical sciences have great traditions. Consequently, also PE has grown significantly in the past years. In what follows, I am evaluating the present-day state of PE by means of two kinds of data: Data concerning institutional base of PE, on the one hand, and data from the content-analysis of publications, on the other hand.

3.1. *Institutional base of PE*

According to the official source, in the Soviet Union there are 23,000 psychologists working in Research and/or teaching of PE (Melik-Nubarov, 1984). Among them some 20,000 work at departments of psychology, education, etc. of universities, the remaining part in research institutes of the Academy of Pedagogical Sciences. The central research institution is *The Institute of General and Pedagogical Psychology*, in Moscow (headed by A. M. Matjuskin).

There exists no special journal for PE in the Soviet Union. The works of Soviet pedagogical psychologists are published in monographs and in journals *Voprosy psichologii* (Questions of Psychology) and *Sovjetskaja pedagogika* (Soviet Pedagogy) (both in Russian only, with English summaries) (1).

In Czechoslovakia, the number of educational psychologists is much smaller. It is estimated that among some 2,500 qualified psychologists about 400 are those dealing directly with PE. According to Kovác (1982) as for the number of psychologists Czechoslovakia is behind the highly developed countries of Western Europe: For instance, in The Netherlands (with smaller population than Czechoslovakia) there are about 10,000 psychologists. It should be added, however, that psychologists in Czechoslovakia are typically more universal than in other countries, i. e. many of those working in developmental or social psychology are contributing to PE as well.

The central research institutions of PE in Czechoslovakia are: *Ústav detskej psychológie a patopsychológie* (The Institute of Child Psychology and Pathopsychology), in Bratislava; *Oddelení pedagogické phychologie, Pedagogicky ústav JAK CSAV* (Department of Pedagogical Psychology,

(1) Most relevant Soviet papers are republished promptly in English translations, in journals *Soviet Psychology* and *Soviet Education* (issued by International Arts and Sciences Press, N. Y., USA).

Comenius Institute of Pedagogy), and *Psychologicky ústav CSAV* (The Institute of Psychology of the CSAV), both in Prague. Research papers of PE are published in journals *Psychológia a patopsychológia dietata* (Child Psychology and Pathopsychology; in Slovak with English summaries); *Ceskoslovenská psychologie* (Czechoslovak Psychology) and *Pedagogika* (Pedagogy) (both in Czech, with English summaries).

3.2. *Structure of PE as reflected by the content-analysis of publications*

Because there are no data about current thematic structure of research in PE in the USSR I have tried to evaluate it by means of the content-analysis. I have inspected a sample of original research papers published in the journal Questions of Psychology (the journal appears 6 times a year with 18-20 articles in each issue). All papers published during the years 1980-1986 have been analysed (for the 1986 year issues 1-3 only).

The findings are as follows:

(a) In the given period 768 psychological papers have been published in Questions of Psychology of which 201 (26.1 %) are articles dealing with PE (see Table 1, in Appendix). This reflects a large proportion (about ¼) of PE in the whole Soviet psychological research.

In the sample of 201 PE papers about 59 % are of purely theoretical nature and only about 41 % deal with empirical research. This is also characteristic of the present-day state of Soviet PE, i. e. more attention has been devoted to strictly theoretical problems than to concrete empirical (experimental) studies — which is subjected to criticism (see below in part 4).

(b) I have further assessed *thematic distribution* of the publications (see Table 2 and 3, in Appendix): In the total sample of 201 articles 87 % deal with problems concerning pupils while only 8 % of articles concern research on teachers. In a more detailed content-analysis is has been found that a prevailing part of PE papers deals with domaines of learning and teaching (together 43.5 % of all), social-psychological problems of education (19.4 %) and cognitive development of pupils (12.5 %).

To less explored domaines in the Soviet PE research belong: school psychological care (3.4 %) and pedagogical-psychological diagnosing and testing (1.9 %). In the Table 3 (Appendix) I am presenting an information about the most frequent and least frequent topics studied in Soviet PE.

Though the analysis I have performed is limited to publications in one journal only it probably reflects adequately the general situation in present-day Soviet PE because the findings fit well with what is criticized at present as shortcomings of the discipline (cf. below in part 4).

4. TRENDS IN PE IN CZECHOSLOVAKIA AND THE SOVIET UNION

At present, there is doubtlessly one trend dominating in PE in both countries: *It is an endeavour to utilize (more than till now) all the PE research for serving the needs of educational practice.*

What is the background and reason of this trend? Generally speaking, the relation of PE research and practice is a matter which is subjected to strong criticism nowadays, esp. in the Soviet Union (Babanskij, 1982; Bodalev, Lomov, Matjuskin, 1984; Charlamov, 1986, a. o.). The following features are pointed out:

The first and main shortcoming is that *PE contributes insufficiently to problems of the real-life educational practice.* According

to Malik-Nubarov (1984) — representing Ministry of Education of the USSR — «the educational practice has to receive much more from an enormous army of scientists (i. e. from 23,000 of Soviet educational psychologists — J. P.) than it receives today» (p. 5). For instance, in the year 1983 from all Soviet research centres of PE only 167 works for direct applications have been offered of which only 22 have been evaluated as really applicable in school practice.

This is a consequence of the fact (according to critics) that (1) Soviet PE produces mainly theories not related to educational practice, and (2) experimental investigations have been performed primarily in laboratory settings and their results do not fit adequately with real-life conditions of education.

In a recently published critical paper three leading Soviet psychologists (Bodalev, Lomov, Matjuskin, 1984) write about «scholasticism» or «academism» in PE because theory and practice are not related enough and the researchers in PE have paid too little attention to new practical problems connected with the realization of the school reform in the USSR. The named authors (as well as other critics) have accentuated the following tasks for reesarch in PE:

— Exploration into *psycho-didactial problems concerning curricula* (syllabi, textbooks, etc.). The aim here should be to elaborate psychological measures, aids, recommendations, etc. for educational planners, teachers, supervisors and others as to prevent pupils from overloading by curriculum content (overloading of pupils as well as teachers by the great volume and difficulty of the curricular subject-matter is one of the most negative phenomena in schools in both countries). Therefore, a task arises for PE as, e. g., «to identify the extent to which the content and range of syllabuses and textbooks are in line with the real capabilities of children» (Monakhov, 1985, p. 179).

— Elaboration of modern *learning methods* (esp. of intensive learning) and qualitative criteria for *assessing the efficiency* of learning and teaching in natural school settings.

— More attention should be given to PE investigation on *teachers' work*: «Educational psychologists have studied for the most part pupils only and have neglected to sutdy activities of teachers, their pedagogical abilities, their personality factors which are relevant for the successful learning and instruction process» (Bodalev, Lomov, Matjuskin, 1984, p. 16).

— Another important task for PE research is to study more intensively problems concerning *individual differences in pupils*, with the aim to recognize and promote pupils' potentialities, not only, however, potentialities for successful learning (as reflected in academic achievement) but for practical creative activities:

«In our pedagogical psychology it occurs only a partial solving of problems of individual differences, i. e. only assessing the differences in knowledges acqired by pupils... In some cases, individual differences have been even explained not as children's virtues but as their disadvantages or deviations caused by some mistakes in their upbringing» (Bodalev, Lomov, Matjuskin, 1984, p. 18).

Generally, there is a strong tendency nowadays in Soviet and Czechoslovak psychology and pedagogy *to relate more closely the basic research with the applied research* (Babanskij, 1982; Skalková, 1983, a. o.). Some authors even claim that educational researchers (including PE) have themselves to ensure an implementation of research findings into practice: It is not possible any more that educational scientists only perform investigations and educational practioners have to take care of utilization of the results (Babanskij, 1982). Some other authors (Prucha, 1985 a) try to analyze what actually is «educational practice» as a field

of applications of pedagogy and PE research; it means, who are potential «consumers» of research findings, which are their information needs, what properties have research findings to possess to be accessible and usable for practitioners, etc.

Another dominating trend in a present-day PE (and pedagogical science as well) in both countries is aimed at *increasing the efficiency of the educational process (learning and instruction)* in all types os schools:

The concept «efficiency of educational process» has been as yet not very thoroughly elucidated in Marxist social sciences. Until lately, efficiency has been understood in a narrow sense (derived from economy) as a category of certain result (outcome), i. e. efficiency as a relation between «costs»(e. g. subject-matter presented to pupils) and «effects» (e. g. pupils' acquired knowledges). In this traditional sense a lot of studies concerning educational achievements has been performed in socialist countries — similarly to those studies performed (in much greater scales, of course) by IEA (International Studies of Educational Achievements).

Nowadays, however, this kind of explanation of the educational efficiency seems to be not sufficient enough. At least two new aspects (with relevance for PE, too) appear as more adequate for an inquiry into efficiency of the educational process:

(a) Efficiency of the educational process should be assessed primarily from the point of view of its *social usefulness*, not only as immediate results reflected in pupils' knowledges and skills which were intended that they should master. An indicator of the social usefulness of education should be how education serves to fulfil contemporary and future needs of society's members (Blinov, 1979). For PE a task arises here to contribute to elaborating criteria of assessing what psychological prerequisites should be involved in education (in curricula, in instruction, etc.) as to fulfil the social usefulness of education (2).

(b) A second aspect is: Efficiency of education should be understood not only with respect to results achieved but also with respect to the process itself (*processual aspect*): It means to assess efficiency on the basis of properties, conditions and inputs of the process which determine its results. Thus, a causal and processual view has to be incorporated into explanations of educational efficiency. Again, an important, task for PE arises here, namely an assesment of causes and inputs of efficency, i. e. what causal variables (in pupils, teachers, their interaction, etc.) have influenced the «effects». Here, of course, a lot of work has bee done already (see below about findings in Czechoslovak PE in part 5.2.).

5. KEY PROBLEMS AND RELEVANT INVESTIGATIONS

5.1. In socialist countries the basic and the most important problem in PE (as well as in pedagogy) is to orient research to *all-round (multilateral) and harmonius personality development*. This key concept can be explained as follows: Let's consider the question: What is the fundamental aim of the education? What properties should be formed in a man who is educated in socialist school? According to the Marxist philosophy of education as well as school policy the aim is to educate a personality developed

(2) In this respect the conception of the Soviet psychological school Vygotskij — Luria — Leontjev (labeled once by J. S. Bruner «Act Psychology») has put a theoretical basis stating that PE has to study not immediate characteristics of pupils demanded by school but characteristics reflecting what pupils are able to do in their «zone of the next development» (see, e. g., in Lenotjev's (1975) book Activity — Consciousness — Personality, 1975, or in German translation, 1979).

harmoniously in his/her abilties, intellectual and other skills, moral and political attitudes, etc. so that young people will be able to perform successfully all social, economic, cultural and other activities for society's welfare.

Though this aim of the socialist education is generally accepted in PE, in concrete investigations some difficulties arise:

(a) First of all, it is not clear what should be an inventory of desirable personality's traits. Some psychologists (e. g., Cáp, 1980), maintain that an all-round personality development can be understood in opposition to a unilateral personality:

- multilaterality vs. unilaterality in man's life activities, style of life, etc.,
- multilaterality vs. unilaterality in man's education and preparation for future profession,
- multilaterality vs. unlaterality in man's psychological abilities and attitudes (creativity, interests, cooperation with others, etc.).

(b) Another unclear point is how and by means of what an all-round personality development can be reached. Until lately, an opinion has dominated in socialist pedagogy that education in school (together with other social institutions as mass media) is the most important (or almost exclusive) source of young personality formation. However, when it has been proved by PE and devedopmental psychology that school has not so forceful influence another opinion is of use, namely the influence of family and socio-cultural background is recognized (in a wide spectrum of factors) as the most relevant factor in personality development (see about concret findings below in part 5.2.3.).

Some of the controversial points in the conception of an all-round personality development have been recently experssed by a group of Soviet psychologists, in their book *Philosophico-Psychological Problems of Education* (Davydov et al., 1981). The authors, above all, disagree with commonly shared opinion that a multilateraly developed personality is simply a sum of different traits in a individual:

«What actually a multilateraly developed personality is? From empirical point of view it is an unattainable ideal because potentialities of an individual to acquire all human culture are limited» (p. 32).

They argue that formation of personality cannot be based on a picture of some ideal man possessing qualities desirable from today's needs. They disagree with deriving aims of the personality formation «from the objective needs resulting from the production, social-economic and political demands of the society. Supporters of this approach are convinced that it corresponds both with the needs of practice and with the Marxist theory as well as with the humanistic aims of the formation of the communist society» (p. 63).

Thus — according to Davydov et al. (1981) — educating the personality of young people should be not derived from society's contemporary needs because the main mission of the man's life is to change reality: «If we shall educate a personality as a wholly adapted to the society, we at the same time remove possibilities for changing the society (p. 63)... «It seems, therefore, that it is necessary to take as a main aim of education the development of an individual as such, his creative abilities... Above all it is necessary to reject as a main aim an adaptation of individual to outer purposes, to the socalled society's needs, expressed in whatever way — as needs of production, economy, management, etc.» (p. 116) ([3]).

([3]) Here I want to add one remark: Though the just mentioned opinions by Davydov et al.

There is a broad variety of problems stemming from pupils' personality development. In PE of Czechoslovakia, two main lines of research approaches can be distinguished:

— The first line is represented by investigations dealing with *sozialization* of children and adolescents (Svancara, 1982; Kotásková, 1986, a. o.). The main interest here is to indentify which factors are involved in personality development; education in school is taken here as one of the socialization factors.

— Another line can be characterized as an effort to study *pupil as a component of the educational process.* The crucial problem here is seen in searching causes of «pupil's success» which is, of course, understood more completely than a traditional concept «academic achievement». For instance, according to Helus et al. (1979) pupil's school success must be explained as a product of educational cooperations:

«It means that pupil's school success is not resulting only from pupil himself, from his abilities, talent, diligence, interests, etc. Also, it is not resulting only from teacher, his pedagogical skills, effort, enthusiasm... Pupil's school success is created by educational cooperations» (p. 52) (4).

In the following part I am trying to formulate some conclusions from research findings contributing to the explanation of factors that affect pupil's school success. Instead of «pupil's success» I am using a more spread term «academic achievement».

(1981) are not very well known or accepted in Soviet and Czechoslovak PE they are in agreement with (and actually supported by) the recent directions of political centers. For instance, in official documents of the XVIIth Congress of the Soviet Communist Party (1986) it is accentuated — as a necessary condition of the socialist society's further development — «to increase the role of the human factor», «to develop creative subjects with innovatory abilities», etc.

5.2. *Estimating causes of pupils achievement*

As it is well-known, in PE the logic of the assessment of pupils' academic achievement is a follows: Academic achievement is seen as certain output determined by certain causes and inputs. PE tries to identify and analyze what factors have influenced an achievement. In Czechoslovak PE a lot of studies has been carried out some of which confirm an influence of factors recognized already in other national populations of students (cf., e. g., Bloom, 1976) and some of which indicate specific causes that probably stem from peculiarities of Czechoslovak population or of the socialist educational system.

In Table 4 (Appendix) I have distinguished into three groups the already identified causes of pupil's achievement:

— factors givens by *personal characteristics* of pupils (intellectual capacities, motivation, interests, verbal abilities, etc.),
— *interactional factors* (characteristics of T — P communication in classroom, teachers' instructional behaviour and attitudes, etc.),
— *social factors* (pupils' family background, environmental factors, etc.).

A survey in Table 4 is, of course, not exhaustive but rather illustrative one. I shall

(4) It should be added here that the concept *cooperation* has, at present, a significant position in PE of Czechoslovakia. Ii is understood as a substantial part of the human joint activities. Thought it has been experimentally confirmed (Janoušek, 1984) that the cooperation does not increase alwayes group's performance in a joint activity, in comparison with competitive variant, preference is given to cooperation. Cooperation (between teachers and pupils, and among pupils themselves) is held for one of the decisive factors of pupil's school success.

now briefly comment on some most interesting findings and some contradictory or disputable results.

5.2.1. *Personal characteristics of pupils as factors of their achievement*

Generally it is accepted that among personal factors affecting academic achievement *intellectual abilities* of individual learners are the significant causal variables. It has also been proved that intellectual abilities — when measured by intelligence tests — are different in particular social groups and sexes of pupils. (In Czechoslovak PE, most frequently Amthauer, Raven, or Wechsler tests of intelligence have been applied for research purposes.)

For example, Kolejková and Mazálková (1983) have found significant differences in intellectual abilities between secondary school students (i. e. a higher level of abilities) and apprentices (i. e. a lower level of abilities), both of the same age.

However, some other findings lead to *methodological questions concerning an adequate assessment of achievement's causes*:

— It seems questionable if the assessment of achievement's causes can be reduced to only one-dimensional relation: intelligence — achievement. For instance, Mares and Milková (1983) have shown (in their empirical research on underachievers and overachievers among 138 students of the medical faculty) that the causes of students' differences in achievement are to be looked for not only in intellectual abilities, and not only in other personal characteristics (as motivation or cognitive style, etc.), but also in external variables (as, e. g., characteristics of T — P interaction in course of instruction, etc.). Therefore, in the further research (Mares and Hartmanová, 1986) a *more complex approach* has been applied: Among variables affecting achievement the following were analyzed: personal variables of students; personal variables of teachers; educational aims; variables of the instructional process; qualities of textbooks used by students. Moreover, the influences of variables have been assessed both by objective measures (i. e. correlations between particular variables and academic achievement) and by subjective appraisal (student's own evaluation of particular variables).

— On the other hand, Hrabal (1984) has argued that a broader view should be taken on the whole complex of causes determining achievement (or underachievement), including also the notion of «what is a successful pupil» — because even «the choice of an intelligence test in the study of the relative underachieving implicitly includes the researcher's own conception of an achieving pupil» (p. 364).

— Besides, Miglierini (1983) has performed a multiple analysis of correlations between students' achievement and general intellectual abilties and has proved that the intensity of the relation between them *decreases in dependence of the age* of students:

concerning learners of the basic school (up to 14 years) the multiple correlation is $r = 0.6 - 0.8$

concerning students of higher education the multiple correlation ir $r = 0.2 - 0.3$.

At the same time, the influence of non-intellectual variables increases significantly from lower to higher age of students. Therefore, the author concludes that «the correlation coefficient of the relationship between scholastic achievement and general intellectual abilities... is merely a very rough and vague statistical measure» (p. 46).

— Among non-intellectual variables of students' achievement *motivational factors*, as expected, have been confirmed as very significant causes. However, it has been found (Hrabal, Man and Pavelková, 1982)

that pupil's achievement is determined not only by their cognitive motivation (e. g. needs to achieve a successful performance at school) but also by their *future time orientation* defined as individual's ability to plan his/her own long-term aims, and ways or intentions of reaching them.

— Some other variables were also found as significantly correlating with academic achievement: pupils' *verbal abilities* and *communication predispositions* (Novák, 1982; Novák and Pstruzinová, 1982); *vocational aspirations of adolescents* (Hargasová, 1981) defined as «the individual's courage of setting an attractive but realistic goal in the vocational sphere» (p. 42); *creativity* of pupils (Kovác and Kovácová, 1981); *anxiety* of pupils in relation to schooling (Seemanová, 1981); *adjustment* of pupils at school (Janásková, 1983); *self-appraisal* of pupil's own potentialities (Bláha, 1981), and other.

5.2.2. *Interactional variables as factors of pupils' achievement*

In Czechoslovak PE it is commonly accepted that pupils' achievement is highly depending on properties of instructional and social interaction in classroom. Therefore, many empirical studies have focused on teacher — pupils communication in different types of schools, in particular subjects and grades, etc. Because I have recently published a survey of theoretical and empirical studies on *pedagogical communication* in Czechoslovakia (Prucha, 1986 a) I shall mention here only some most relevant findings.

Three lines of investigations can be perhaps distinguished:

— The first area is represented by those studies that try to describe a *general profile of T — P communication* (Mares, 1982; Gavora et al., 1986). The main interest has been focused on the patterns and structure of pedagogical communication: For instance, what are proportions of teacher's and students' talk (Mares, 1982); how teachers control communication and how teachers or pupils initiate communication (Gavora et al., 1986); how many and what kinds of questions teachers present to pupils (Mares, 1984), etc.

From the profile of pedagogical communication obtained by the respective studies certain conclusions about causes of pupils' achievement were drawn out, e. g. a relatively small proportion of an active participation of pupils in classroom setting caused by traditional framework and rules of pedagogical communication, etc.

— In another area of studies the researchers try do describe variables based in teacher's behaviour, in his/her attitudes to pupils, in his/her evaluation of pupils, etc. For instance, Helus and Pelikán (1984) have carried out a thorough investigation of teachers' *preferential attitudes*, defined as consciously or unconsciously communicated preferences of a teacher to those of his students who are relatively more than others in the centre of his interest. The findings are in close relation to those obtained by analysis of teachers' *causal attribution* (Langová and Kvapil, 1984; Langová, Kodym and Kvapil, 1986), confirming the same phenomena in teachers' behaviour (Pygmalion effect, etc.) that were found in schools of other countries.

In some cases, the findings in this field of research are controversial as for *impact of teachers' behaviour on pupils' achievement*: On the one hand, a prevailing part of findings proves that variables of teachers' behaviour significantly affect not only pupils' academic achievement but even their personality development, their aspirations, self-appraisal, etc. and, in certain consequences, even their future life career. For instance, Gavora (1985) has found that even experienced teachers in the basic school are not able to estimate adequately pupil's intellectual abilities if compared with the objec-

tive data (measured by tests), neither their special ability for text-processing (learning from texts). On the contrary, however, Kovác and Kovácová (1981) who measured pupils' creativity (by Torrance test of creativity) and compared it by the subjective appraisal of pupils' creativity by their teachers, came to the conclusion:

«In the majority of psychological investigations, aimed at assessing creativity of pupils on the part of their teachers, teacher ratings are not in full agreement with the psychological identification (testing) of creativity... In the present study, however, it was found that teachers are able relatively adequately to assess their pupils' creativity» (p. 301).

— A relatively new but intensively developing field of research is that of *interactional variables of learning material.* How the acquisition of knowledge by learners is caused by properties of curriculum content to be taught? How the variables of learning material (printed texts, ora explanations of teachers, etc.) influence pupils' achievement? The main focus here is on analyzing various parameters of textbooks affecting learning as well as interests of pupils to the respective subject-matter (e. g., Prucha, 1985 b, 1986 b): reading difficulty of texts, information density, level of scientific complexity, distribution of advance organizers, etc. This area of research becomes very important in the socialist countries (see a survey in Prucha, 1985 c), both for theoretical and practical reasons: The pupils of socialist school suffer from overloading of which one of the most serious causes is that the content of curricula (especially content in textbooks) is not in line with real capabilities of children. Simply, the volume and difficulty of many textbooks lead to heavy work-load of children as well as their teachers who have to fulfil the demands of curricula in a limited time of instruction — which, unifortunately, causes negative phenomena as anxiety, frustration or even mental disorders in some children.

Thus, a very important task for PE in the socialist countries arises here, i. e. to help to remove a gap between a theoretical model of instruction (including curriculum content) and a real educational process — as expressed by Monakhov (1985):

«By the nature of things, educational content is worked out on the basis of an ideal abstract model of the teaching-learning process. Moreover, such a model concentrates mainly on the internal interrelated features of the process: the aims and purposes of education, its content, methods, devices, types of organization and expected results. Educational researchers ignore a whole range of factors directly connected with the external links of the learning-teaching process and, above all, with actual teaching conditions» (p. 185).

5.2.3. *Social variables as factors of pupils' achievement*

In Czechoslovak PE the similar findings have been ascertained as in the world literature, namely that social factors ar of powerful influence on academic achievement. Among social factors identified in Czechoslovakia the *family background* plays a most decisive role:

For instance, Kraus (1985) compared family, local environment of pupils, and their school as educational factors (in 11-15 years old pupils) and has found that characteristics of the family background correlate in 72 % of cases with characteristics of the achievement-related personality traits of pupils, while as for local environment and school in 58 % and 38 %, respectively. Inside family factor, the most significant characteristics are the socio-cultural conditions (esp. educational level of parents) and to a less degree socio-economic condi-

ditions (profession of parents, family income, etc.).

Even more convincing are findings of Árochová, Bakicová, and Sevcíková (1984) who carried out a multifactorial longitudinal investigation of the sample of 96 Slovak children, in the course of the 8 years of their school attendance. They proved that the academic achievement was significantly depending on parents' educational level and the housing conditions, not, however, on family's income.

While the above mentioned studies are based on objective procedures, not considering what children evaluate as significant for themselves, Kotásková (1986) used another approach: She has applied a semantic differential to identify children's own evaluations of the importance of different social factors. In a large samples (N = 1,800) of Czech 2nd and 5th graders she found that children evaluate as the most significant the educational influence of their mothers, then fathers, and as the least significant their teachers.

Similarly, Svancara (1986) in a longitudinal study of some 500 Czech children has confirmed that educational level of parents (and most significantly of mothers) is a more powerful factor of children's development than the socio-economic status of family. This is in good agreement with Novák (1982), Novák and Pstruzinová (1982) who found that verbal abilities (as achievement's pre Requisities) of 9 years old children are «predominantly under the influence of family environment. Among family conditions the level of parental education seems to be the most important one» (Novák, 1982, p. 215).

Two *cross-cultural studies* are worth-mentionning here:

Hrabal and Kozéki (1982) carried out a comparative research about the share of family in the motivation of pupils' achievement at school. The research was made with Czech (Prague) and Hungarian (Budapest) sample of 13-14 years old pupils. The results indicate certain cross-cultural differences in motivating children for academic achievement between the two socialist countries (with a very similar educational system): For instance, Hungarian families seem to be more oriented to their children's achievement than Czech families; on the other hand, Hungarian school setting seems more support positive atmosphere in classroom than Czech school (e. g., Hungarian underachieveres feel themselves less stressed than underachievers in Czech school while Czech school setting is more eliciting anxiety and fears for underachievers).

Another cross-cultural study related to social factors of academic achievement has been made on samples of *Czech and Portuguese* school children (Svancara, 1986). The study has focused on the impact of urban and village environments on the characteristics of social behaviour and intellectual abilities as determinants of academic achievement in both populations. The main findings are: In the Czech samples non-significant differences were found between children from urban and from village environments as to cognitive performance; significant differences were found, however, between boys and girls in both social environments. On the contrary, in the Portuguese sample the differences as to both environments were significant, in cognitive performance as well as in characteristics of social behaviour (i. e. children from village regions were less developed). According to the author, this is caused by an unfavourable socio-cultural and economic conditions of Portuguese children living in village regions.

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As a conclusion to the above survey of the research on factors of academic achievement I am adding one remark:

In Czechoslovak PE (and Soviet PE as well) much effort has been made to identify and explain causes of pupils' achievement or failure. There are, however, at least three serious difficulties connected with estimating causual determinants of pupils' achievement:

(a) In a prevailing part of investigations academic achievement is explained as a result of a single factor only while, actually, it is the result of a wide complex of factors (cf. an example in Table 4). Therefore, the task for future investigations in PE is to search instruments for identification of multiple factors and for assessment of their different power (cf. an attempt of Mares and Hartmanová, 1986, mentioned in section 5.2.1.).

(b) Another difficulty in searching the causes of academic achievement is that a «cause» is established by means of statistical correlation only. But how we can be convinced that a correlation between some two variables is not incidental, but is actually reflecting the real-life determination? If the researchers simply state that two variables correlate, it does not automatically mean that changes in one variable have been caused by changes in the other.

(c) A third complication stemms from what is meant under the term «academic achievement» (or «successful pupil»). If it is conceived as pupil's learning outcomes represented by quantitative criteria (marks given by teachers or scores in educational tests) — as it is the case of almost all investigations — then it ignores the qualitative aspect: Pupils' abilities and performances are not reflected only in how much has something been learned but also how well it has been learned. In other words, for an adequate understanding of «academic achievement» we need also qualitative evaluation of learning ouctomes and their causes (as attempted, e, g., by Babanskij, 1978).

Those are, of course, some of methodological difficulties met in all domains of psychological and pedagogical research. They can be, doubtlessly, solved in the further progress of sciences to wich the international experience is a fruitful stimulation.

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VP (*Voprosy psichologii*, USSR)
SP (*Sovjetskaja pedagogika*, USSR)
ČP (*Československá psychologie*, Czechoslovakia)
PP (*Psychológia a patopsychológia dietata*, Czechoslocakia)
P (*Pedagogika*, Czechoslovakia)

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APPENDIX

TABLE 1

Content-analysis of papers published in Soviet journal Voprosy psichologii (Questions of Psychology)

Years: 1980-1986		
Number of research papers	768	
Number of PE papers	201	(26.17 %), of which
— Dealing with PE theory	118	(58,7 %)
— Dealing with PE empirical research	83	(41.3 %)

TABLE 2

Content-analysis: Thematic distribution of Soviet PE papers

GENERAL DISTRIBUTION

N = 201

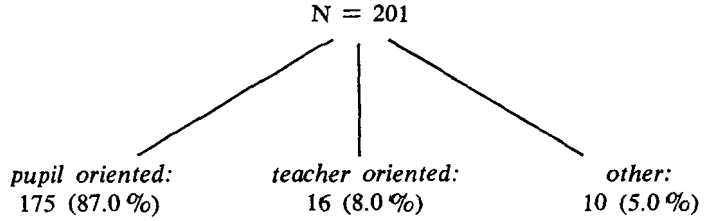

TABLE 3

Thematic distribution

Theme	Number of papers	Proportion in N
1. Learning	44	22.0 %
2. Teaching	43	21.5 %
3. Socio-psychological problems of education	39	19.4 %
4. Cognitive development in pupils	25	12.4 %
5. Teacher	16	8,0 %
6. Pedagogical communication	14	7.0 %
7. Metodology of pedagogical psychology	9	4.4 %
8. School psychological care	7	3.4 %
9. Pedagogical-psychological diagnostics	4	1.9 %
TOTAL	201	100.0 %

TABLE 4

Content-analysis: the most frequent and less frequent topics of PE research (Soviet)

1. LEARNING (44 papers)

Most frequent topics:

General problem (9)
Learning of primary and secondary school pupils (8)
Learning from text (8)
Overloading of pupils (7)
Academic achievement (6)

Less frequent topics:

Learning of preschool children (2)
Learning of adults (1)

2. TEACHING (43 papers)

Most frequent topics:

Computer assisted teaching (9)
Instruction in primary and secondary shcool (7)

Less frequent topics:

Instructional aids (1)
instruction in higher education (1)

3. SOCIO-PSYCHOLOGICAL PROBLEMS OF EDUCATION (39 papers)

Most frequent topics:

Cooperation in classroom (7)
Self-appraisal of pupils (7)
Professional orientations of pupils (7)
Attitudes and values of pupils (6)

Less frequent topics:

Socio-cultural background of pupils (1)
Anxiety in pupils (1)

4. COGNITIVE DEVELOPMENT (25 papers)

Most frequent topics:

General problems of personality development (8)
Intellectual abilities (8)
Creativity in pupils (4)

Less frequent topics:

School readiness (3)
Attention (1)
Testing intellectual abilities (1)

TABLE 5

Determinants of academic achievement: Empirical findings in Czechoslovak PE

I. PERSONAL FACTORS (In pupils)	
Intelectual abilities	(Mareš and Milková, 1983; Miglierini, 1983)
Creativity	(Kováč and Kováčová, 1981)
Motivation	(Hrabal, Man, and Pavelková, 1984)
Future time orientation	(Hrabal, Man, and Pavelková, 1984)
Vocational aspirations	(Hargašová, 1981)
Adjustment	(Janásková, 1983)
Verbal abilities	(Novák, 1982; Novák and Pstružinová, 1982)
Self-appraisal	(Bláha, 1981)
Anxiety	(Seemanová, 1981)
Group of personal factors	(Mareš and Hartmanová, 1986)
II. INTERACTIONAL FACTORS	
Teacher-pupils communication	(Gavora et al., 1986) (1)
Teachers' personal variables	(Mareš and Hartmanová, 1986)
Teachers' questions	(Mareš, 1984) (2)
Teachers' preferential attitudes	(Helus and Pelikán, 1985)
Teachers' causal attributions	(Langová and Kvapil, 1984)
Teachers' estimating ou pupils' abilities	(Gavora, 1985)
Parameters of textbooks	(Prucha, 1985 b, 1986 b) (3)
Teachers' attitudes to textbooks	(Prucha, 1985 b, 1986 b)
III. SOCIAL FACTORS	
Pupils' family background	(Kraus, 1986; Švancara, 1986)
Educational level of parents	(Kraus, 1985; Árochová et al., 1984)
Economic status of family	(Árochová et al., 1984)
Housing conditions of pupils	(Árochová et al., 1984)
Significance of educational factors for pupils	(Kotásková, 1986)
Cross-cultural factors:	
Czech vs. Hungarian family background	(Hrabal and Kozéki, 1982)
Czech vs. Portuguese social environment's factors	(Švancara, 1986)

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