
Empirical studies in Polish pedagogy – between quantitative and qualitative research

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Introduction

Polish Pedagogy is highly heterogeneous: firstly it is divided into many sub-disciplines, secondly in each of them, it is used in various ways. It is characterized - at least in comparison with the German pedagogy - by a relatively strong empirical current. In Germany, for many years after World War II, pedagogy was placed in the tradition of *Geisteswissenschaft*, therefore the main method of research was hermeneutics. The so-called realistic turn (*realistische Wende*), expressed by the abandoning of text analysis in order to discover empirical phenomena occurred only in the 1960's. In Poland, the perception of the importance of empirical research for theoretical reflection on the processes of education and human development had already occurred in the interwar period, particularly within social pedagogy. As an example, we can mention the collective research on the social causes of school successes and failures conducted by H. Radlinska (several years of research in different locations in Poland; Radlinska, 1937).

My statement refers to more recent times, i.e. the period of People's Republic of Poland and the next two decades. To a lesser extent, it relates to teaching the practice of empirical research, it contains more recommendations on how these tests should be conducted. I have analyzed selected extracts from textbooks devoted to pedagogical methodologies of empirical research (or methodologies for educators), focusing on the functions attributed to qualitative research, in the past and in the present and the assessment of its cognitive abilities. My statement is associated with a more general issue - the status of the method, and indirectly, the status of methodology, however it does not exhaust the issue.

The information contained in the textbooks is treated as a reflection of the dominant research orientation, which more or less is reflected in practice. Al-

though I have declared that I do not reconstruct this practice in a systematic way, I have participated in it since the late 1970's. To this effect, I have gained experience from different perspectives (as a researcher, reader of texts presenting test results, lecturer working on students' theses, reviewer), and thus acquiring knowledge of how textbook recommendations were (and are) implemented and what consequences it brings to the organization of cognitive process and its quality.

Qualitative research in the positivistic research model

It should be noted initially that the teachers did not develop their own - in the sense of qualitatively different - methodology of empirical research. They have benefitted from the achievements of other sciences, especially sociology and psychology (more recently anthropology), there movements devised their methods and techniques of research on their own ground.¹ On this ground, however, these two disciplinary research perspectives have failed to integrate. As a rule, they are applied separately in the examination of various aspects in the field of the subject pedagogy. Psychological methods were and are more often used by researchers of teaching and educational processes taking place at school and other educational institutions, methods of sociological research are more often used by researchers penetrating environmental determinants of education, or more generally, human development in different phases of life. Overall, the researchers who gravitate towards the methodology of psychology tend to conduct experiments and tests measuring knowledge and individual predispositions and other means of measurement, while those who move towards sociology are inclined to use surveys and interviews, rather than observation².

The first textbooks in the field of methodology of educational research appeared in the late 1960's and 1970's, and by the end of this century did not have any competition. (Two of them - revised - are still published).³ Only at the beginning of the new millennium, were new studies published (but those previously issued are still widely used, especially by students). It can be

1 It was Richard Wroczynski (1974) who noticed it, stating that »the influence of natural science on pedagogy was not direct but mainly through psychology and sociology« (25), Aleksander Kaminski (1974: 50), in turn, stated: »*The methodology of empirical education is rooted in the methodology of social sciences. There is not a separate methodology of empirical pedagogy, there is, however, skillful use, completion and adaptation of methodology of social science to the needs of empirical education*«.

2 It is about presenting a dominant trend, not a detailed description of the conducted research because it is possible to combine different ways of collecting data in one research project.

3 These are *Zasady badań pedagogicznych* (Principles of pedagogic research) by T. Pilch, the co-author of three recent publications is T. Bauman and *Metody badań pedagogicznych* (Methods of pedagogic research) by M. Łobocki, with the supplemented version entitled *Metody i techniki badań pedagogicznych* (Methods and techniques of pedagogic research).

assumed that the general 'methodological approach' of several generations of educators was formed by the research scheme postulated by the authors of the first textbooks. The authors cared about - as Z. Zaborowski (1973) stated - *"the clarification of the research and giving it a more modern formula"* (5). The teachers were thought to lack *"sufficient awareness and knowledge of contemporary formula of empirical research."* (Ibid.) As we know at the beginning of the 1970's, this contemporary and thus modern formula was represented by natural sciences, also referred to as experimental. The formal purpose of these sciences is to discover regularities, mainly of cause and effect relationship, which can explain and predict the course of events. Teachers who wanted their discipline to become a science had to submit to a particular rigor, taking the methodology of natural science as their own branch. Thus, for example, H. Muszynski perceived empirical research on the education process as the only way for *"real development of scientific knowledge of pedagogy"* to identify the regularities, *"which govern it, based on continually improved methodology"* (1967: 6). He worked out a model of pedagogy as a modern and practical discipline, *"Pedagogy as a practical science deals with detection of causal dependence, in which educational activities play the role of independent variables, and educational objectives are defined by dependent variables. (...) All this is possible only on the basis of theoretical knowledge of the relationships between different phenomena"* (1970: 191). As we have seen in this period, Polish pedagogy was regarded as a science, which is to identify the regularities, so that it might indicate the means to achieve educational objectives.

Muszynski considered verification tests as the most important in pedagogy which checked the accuracy and reliability of the relationships postulated by the theory. The tests had to be conducted on representative, large sample research using standardised methods and research techniques - such studies are traditionally referred to as quantitative research. However, it should be noted that in pedagogy, another type of study was also allowed, sometimes referred to as 'soft test' or qualitative research. Muszynski, quoted above, stressed the importance of verification tests, he also stated that *"it cannot mean a denial of the importance of different type of tests, especially the analysis of individual cases. However, such analysis plays in the development of pedagogy, definitely a role of secondary importance. It has some heuristic significance before formulating the theory and as a source of interesting hypotheses or ideas. However, after formulating the theory, the analysis of individual cases plays a fairly explanatory role."*⁴ (Muszynski, 1967: 72 - underlined by the

4 Perhaps Muszynski cites the relationship between chance and regularity. T. Benton and I. Craib (2003) characterizing the explanations in empiricism, state that: explaining the phenomenon equals demonstration that it is a case of general law.

author). The role of qualitative research (its type is the analysis of individual cases) is uniquely determined: it cannot be the source of the theory - at most the source of hypotheses which must be checked in "relevant" studies⁵. The results may also be an example of implementing the previously identified regularities. They unquestionably play a secondary role.

A slightly different opinion about the qualitative research was expressed by a social educator R. Wroczynski (Wroczynski and Pilch, 1974). Subdisciplinary relation can be referred to, since in this case the reference point for assessment of the methodology of pedagogy was the achievements of sociology, not psychology. Wroczynski warned that "*failure or low efficiency* [he did not explain where they were expressed in DU-Z.] *of field educational research often result from a rather mechanical adoption of methodological patterns of sociology*" *And yet, the processes, "examined by the teacher are specific and to be fully explored require separate and adequate research methods and techniques"* (7). The specificity was expressed, in his opinion, mainly in the individualisation and dynamics of human psychological development and in the specific character of the goal to ascertain the pedagogy: identifying factors that would allow the desired changes. Hence, in the "*centre of interest of a teacher are specific situations (...) Cross-sectional studies have a wider use only in certain sectors of education such as educational policy, comparative education, etc.*" (26). Thus Wroczynski suggests that more specific methods for pedagogy should be qualitative methods. He proposes a "*method characterising the individual*" employed by JH Pestalozzi⁶ and the method of participant observation used by the Soviet scholars and F. Engels, exploring "*The situation of the working class in England*".

Attention should be paid to the way of reasoning, which is used by Wroczyński, because quite often it is used by other authors. A factor in favour of a given method is that it was in the past used by a recognised authority (it does not really matter whether the Soviet scholars were quoted since they were authorities or just to please the censors), and not as the knowledge gained through it, or theoretical arguments justifying certain behaviour. The argumentation in the example cited here is very modest - justifying why conducting cross-sectional surveys is not worthwhile, Wroczynski states that every person is a mental individual.

A. Kaminski (1974) has also worked on the research methods characteristic for education. Two of the methods mentioned by him are of qual-

⁵ In relation to sociology A. Piotrowski (1990, 30) noted, »*These studies [Qualitative DU-Z.] were moved away (...) to the margin of science. Here they might have gained approval as a preparatory, exploratory work useful for quantitative studies as a source of concepts adequate for the operationalization or initial hypotheses, or as a deepening study*».

⁶ He presented the characteristics of the 37 children brought up in the orphanage in Neuhof based on their careful observation.

itative nature (the study of the individual, education monograph of the institution) expressed in a limited size of attempt research, its lack of representativeness, and thus the inability to formulate generalisations of the range going beyond the studied community. He did not specify precisely whether, within these methods, it is recommended to use standardised or free techniques: an interview, observation, analysis of documents may be after all conducted in different ways. Perhaps the lack of specific indications result from Kaminski's understanding of the methods which should depend on research issues, flexible, submissive to the researcher's imagination. *"The strength of the test method is based on the researcher's intuition constructing from the well-known models of research methods the most appropriate for a given course of research and the research issues"* (55).

If we were to consider this statement independently of the dominant, then the methodological model - which admittedly was not directly cited, but which is expressed both in other pronouncements by this author and other texts contained in the report, which he co-authored (Wroczyński, Pilch, 1974) - it could be said that the suggested understanding of the method is characteristic of many representatives of contemporary qualitative research. It should be noted, however, that the way of research organisations recommended to teachers, presented by T. Pilch (1974) - in the same textbook, from which the above-quoted statements by Wrocławski and Kaminski come from - is close to classical empiricism characteristic of natural sciences, rather than humanities (hermeneutic research), which at that time could be an alternative to methodology. However, an alternative perceived from the current perspectives, could not have occurred at those times, because hermeneutics was not acceptable in our country as a method of empirical research, it was considered as a method of prescriptive pedagogy.⁷ Thus, the research methods indicated by Kaminski, which he considered qualitative, were placed in the "natural sciences research model", whose rules - due to the specificity of the studied reality - could be "softened". Apart from a determined organization of the research process (selection of variables, indicators, formulating hypotheses) the recommendation of objectivity of cognition signifies the adopted reference point, which would serve the best measurement. Kaminski himself suggested *"relatively simple in use measurement of urban families"* (1980: 110). In the cited textbook "Metodologia pedagogiki społecznej" (Methodology of Social Pedagogy) I. Lepalczyk (1974: 153) both discusses the monograph method in the educational research and also outlines a diagram of the measurement of the institution operations.⁸

7 H. Muszynski placed hermeneutics *"in the tradition of speculative inquiry having little in common with the empirical study of any reality"* (1967: 62).

8 Many examples of measurement are presented in the "Elementy diagnostyki pedagogicznej"

To summarise: from today's perspective, it is clear that the concept of methodology of educational research contained in the first textbooks was placed in the positivistic model of science. This assignment is supported by the structure of the research process, valuation of methods and research techniques, the formal purpose of the research, the position assigned to a researcher (as well as mentioning the name of A. Comte). It is important that the philosophical assumptions of this model were not presented and therefore it could not become the subject of discussion - hence the subordination to the particular test procedure was presented as a rational necessity. A similar situation existed in Polish psychology and sociology. We can assume that it was a classic example of the period of normal science (T. Kuhn's terminology), when one epistemological paradigm was dominant (positivistic or neopositivistic learning model), whose power stemmed from the rationalism of the culture of modernity. No one reasonably questioned the validity of this model of science and any minor criticism was not treated seriously by the representatives of the mainstream.⁹ Therefore, the epistemological issues were beyond the interest of educators, they were self-evident, so they did not request justification.¹⁰ Methodological reflection focused primarily on the organisational and methodological dimension of the research process, and thus the scope of interest of the methodology was defined very narrowly. It was a common belief that "*Further progress of studies ... is dependent on improving the research workshop and research tools.*" (Wroczyński, 1974: 45).

At the same time the specificity of the research field of pedagogy was emphasised, which was supposed to express the complexity of the object of interest, in its variability and individuality - the uniqueness of individuals and groups and the tasks of pedagogy (causing targeted changes). Therefore, in pedagogic research qualitative methods of data collection and research on small samples were deemed acceptable.

As a result, a clear inconsistency emerged in the research practice of educators. On one hand, 'strict' rules, resulting from the positivistic model of science were provided, on the other hand they were relativised, which was vaguely justified by the specific nature of the research subject. For instance,

(*Elements of diagnostic teaching*) (1987).

9 Mokrzycki, in relation to sociology, points out that criticism of the 'empirical sociology' for many years was not even noticed by the majority of its representatives. »... *the arguments questioning the theoretical basis of the entire project [of empirical sociology in the positivist model DU-Z.] its intellectual qualities, have never been refuted*» (1980: 13) They were not refuted because they were not regarded as worth discussion. It appeared that "even the most fundamental and convincing arguments are powerless when they are against a popular trend and consistent with the spirit of the times." (14).

10 Kaminski informed directly that his article "has no ambition of epistemological insight into the methodology of empirical education as a set of means used in the scientific research. ... we will be focused on the basic methodological terminology." (1974: 52).

the measurements of states of affairs were performed (which would increase the objectification of knowledge), but mostly hypotheses were formulated without standardisation of measurement scales (see e.g. Lepalczyk and Bandura, 1987) and without specifying the conditions for their acceptance or rejection (Urbaniak-Zajac, 2009) individual life-like situations were studied, but with a recommendation for their objective assessment. In my view, this specific lack of research rigor did not decrease the specific consequences arising from the application of a model of natural science in pedagogy, while the 'softening' of research procedures meant that almost every research solution became acceptable without the need for theoretically justified argumentation. Thus, formal observation of rules, designed to organise the process of empirical knowledge (presented in textbooks) was accompanied by a 'liberal research' practice. Therefore, there was no discrepancy between quantitative and qualitative research amongst the Polish teachers. The former was recognised as fundamental in the positivistic model, although ancillary functions were attributed to the latter (data source for the formulation of hypotheses, or exemplification, thus confirming the well-known regularities), its importance was reinforced by the belief that it was more relevant to the subject of educational research and has practical significance. It should be noted that in the positivistic model of qualitative research has only technical characteristics, i.e. it is described as being conducted on small samples, usually non-representative, by means of non-standardised research techniques.

Questioning the autonomy of test method

As already mentioned in Polish pedagogy, there was (and currently is) a clear opposition between quantitative and qualitative research. A different situation has begun to take shape since the late 1960's in Western Europe and the United States. In reaction to the criticism of the model of scientific research in the process of exploring the life and experiences of people, there was a development of new methods of empirical research - qualitative methods, aiming at the abolition of the inadequacy between the researched subject and the method of its exploration. Striving to eliminate this inadequacy was an expression of questioning its universality and thus the autonomy of the research method, which is an important feature of the positivistic model.

As we know, questioning the universality of the methods of modern natural science occurred much earlier. At the turn of the nineteenth and twentieth century, W. Dilthey argued that the humanities - sciences of the spirit in the literal translation (Geistwissenschaften) - differed definitely from the sciences concerned with nature and therefore requiring an adequate method. He recognised hermeneutics as such a method, allowing you to identify and understand the objectification of the human spirit. However

as already mentioned, hermeneutics was not considered in the People's Republic of Poland as a method of empirical research. The problem of the importance of exploration for the effect of this exploration was raised earlier. It was I. Kant who whilst considering the possibility of exploration, came to the conclusion that the condition for the formation of the researched object are innate 'dispositions' of the exploring subject. A human brain –in his opinion- is provided with priori categories, which are, considered a prerequisite for subordinating experience provided by the senses and thus a prerequisite for a meaningful experience.¹¹ A man finds out only what is within his cognitive abilities.

Citing the philosophical tradition, it is fair to say that these are not the creators of new qualitative research who first 'deprived' a cognitive method of autonomy. Their role was that on the level of empirical research (not philosophical reflection) deemed the domain of science, they showed the limitations of the so-called quantitative research, pointed out that the research procedures affect the shape of the tested reality, which is necessarily adapted to the capabilities of the method.¹² As a consequence, the methodological level of empirical studies cannot be confined to the technical correctness of solutions and the efficiency of research tools. A. Giza-Poleszczuk pointed out in relation to sociology, the theoretical criticism of empirical practices inspired by the qualitative research showed that "*none of the doctrine purely and solely methodological can legitimize the research practice (...)it can only be done by subject, substantial theory of social life* (Giza-Poleszczuk, 1990: 36). So to put this issue exemplary: there is a reciprocal relationship between the notion of specific test items (so-called ontological assumptions) and the notion of the ways of their exploration (the epistemological assumptions). The test method is a kind of conclusion of this relationship. This way, in the first place, allows the range of methodological considerations to clearly go beyond the technical dimension of the research organisations, secondly the assumptions that constitute the reality and the way its cognition form the framework within which the analysis and interpretations of the researcher and the results obtained are placed. Simultaneously cognition and its effects undergo relativisation.

11 Kant wrote about two ways of cognition: experience and mind. All learning begins with the sphere of senses - the result of stimulation of the senses by their direct contact with the things are impressions. Various impressions unite in a separate image of a given object. K. wondered what beyond the impressions created the image - he stated that these are forms of sensuality (space and time) and forms of reason (such as the notion of substance, cause, unity, plurality – there are altogether 12 a priori forms. Kant was convinced that, *what cannot be deduced from experience, is supplied by the exploring mind.*

12 It is worth noting that the majority of new methods came into being in research practice as an expression of dissatisfaction with the effects of cognition by traditional methods and not as a desire to use them in the study of philosophical assumptions. These assumptions have been cited post fact to justify the proposed solutions.

Contemporary qualitative research

Different meanings are attributed currently to a notion of “qualitative research”. In the introduction to the textbook “Methods of qualitative research” published in Poland in 2009, NK Denzin and Y.S. Lincoln (2009: 14) repeat the sentence formulated several years ago (1997): “*the term qualitative research means different things to different people.*” So the extending period of the practice of qualitative research has not led to its order or even more to uniformity. I have already mentioned that at the core of contemporary interests in qualitative research lay the pursuit of relevance between the socio-cultural reality and the way of exploring it. And since the ideas concerning that reality adopted by the researchers as well as the abilities of exploring it were not and are not homogeneous, then qualitative research is understood in many ways. Its orderly description is so difficult as there is no single criterion that would allow for disjoint grouping of methodical and methodological solutions which is adopted in the research practice. The methodological feature of the contemporary debates is the tendency to dichotomize the attitudes, based on the number of ‘sub-criteria’¹³. The interpretive paradigm is contrasted with the normative, humanistic with positivistic,¹⁴ objectivity is contrasted with constructivism or subjectivism, naturalism with anti-naturalism or constructivism, nomothetic sciences with idiographic sciences, field research with experimental research, standard with non-standard (open, free), interactionism is contrasted with structuralism and functionalism, the attitudes of pre - ‘linguistic turn’ with the attitudes after this turn etc.

The criteria on the basis of which the opposition cited above is formed refers to different kinds of assumptions, constituting different levels of the research process- evoke a different orders of things. To indicate the range of the problems that accompany the intention of the overall characteristics of qualitative research, only some factors or levels on which the differentiation of researchers’ approaches is made will be referred to. These are: a) philosophical approaches, adopted as a starting point for the constitution of the image of the researched field, b) a way of understanding the term ‘method’, c) access to the tested reality, hence the status of the collected data is derived, d) the objectives.

Phenomenology and hermeneutics are the most frequently quoted philosophical concepts, but also the philosophy of language, philosophy of dialogue, post-structuralism. Bringing order to qualitative research on the basis of adopted philosophical assumptions does not clarify the situation as

¹³ This trend has been going for a long time, it was already noticed several years ago by M. Malewski (see 1997).

¹⁴ As I wrote earlier about the positivist model of science, I reluctantly use the term ‘paradigm’, since its content has become uncertain, we do not know in what sense it is used.

none of the cited approaches is homogeneous. For instance E. Husserl's phenomenology carries very different implications for empirical research than A. Schuzte's phenomenology, similarly W. Dilthey's and H. G. Gadamer's hermeneutics cannot be standardized.¹⁵ Thus, for example, the declaration of conducting phenomenological research does not provide the information about the decisions taken at the level of detailed assumptions and methodology of empirical research.

The perceptions of the specificity of the qualitative research also differentiates the concept of the method. For some researchers, the method is regarded as a perspective (frame) presenting the researched subject, which determines its character, as well as the rules of its cognition, including the position of the researcher. The ethnographic and biographical method, together with the 'humanistic paradigm', are understood in this way. Under this paradigm, specific attributes are assigned to human beings, the most important of which are their uniqueness, potential of development, the right to freedom. An autonomous and unique existence cannot be explored in at least a partially standardized way, and therefore any research process is consequently unique. This uniqueness also stems from the fact that "*the primary instrument of learning*" is a researcher and the organisation and the results of the research process depend on him. They should only obey the rules which guide the pedagogical and humanist way of thinking, and they should be: axionormative, principled, holistic, syncretic, contextual, diachronic, alternative (see more Kubinowski 2006: 177-179).

The second way of presenting the test method is closer to its understanding in the positivistic model - it is regarded as essentially a repetitive way of behaving, leading to a solution of a specific research problem. The method in this approach has both theoretical, as well as instrumental and technical dimensions. The first involves a set of assumptions which constitute the perspective view of perceiving the object and the principles of its research. Instrumental dimension refers not only to the method of data collection, amuch greater emphasis is placed on methods of data preparation. To put the matter slightly differently, we can say that the method in the second approach has theoretical-methodological and methodical dimensions. The method understood in this way involves both the narrative interview depicted by F. Schütze, and U. Oevermann's objective hermeneutics (as well as conversational analysis, the documentary method).

¹⁵ Among others, Giddens (2001, see also Zakrzewska, 1992) notes that hermeneutics understood in the tradition of Dilthey and Ricoeur (recognized as a method) is not synonymous with the tradition of Gadamer (understanding as a way of human life). Transcendental phenomenology derived directly from Husserl (the objective of the research is to explore the nature of the studied objects) has very little to do with existential phenomenology (the study of the natural attitude of participants in social life).

Another level of the differentiation of qualitative research is a way to answer the question about the possibility of researcher's access to the explored reality and the consequent status of scientific statements. Naturalists believe that in principle – after meeting certain conditions - access to the explored reality is possible. Constructivists question this opportunity and indicate so many types of mediation occurring in the cognitive process that its effect may be merely theoretical constructs, not a reflection of the explored reality.

The last of the levels mentioned here differentiating approaches within the qualitative research is the diversity of stated cognitive objectives - that is an answer to the question, what is the purpose of the research and its results? The most general answers to this question are twofold: 1) the empirical study is primarily used to explore, understand a fraction of social reality, albeit in relation to educational research. It is stressed that the gained knowledge should also convey a practical message, 2) the research process itself, as well as its results, should primarily cause the desired social change.

The first is a way to determine if the test can be called traditional (description, explanation and prediction as the main objectives of the study), while the second is most frequently cited by the representatives of the so-called critical studies (e.g, Marcus and Fischer, 2010) and especially by supporters of the participatory paradigm (Fals Borda, 2010; Reason and Torbert, 2010). The difference between these two approaches may seem small, if you take only a change in emphasis into consideration: both approaches include the theoretical and the practical as well as the cognitive dimension of the tests, and the difference would have to rely solely on the rank attained by each of these dimensions. In fact, the difference is much deeper, it is a consequence of criticism of the Enlightenment model of science, which shows that science plays a number of functions unacceptable by representatives of this model. The issue of real not only postulated functions or tasks of science is raised not only in the context of qualitative research or more broadly social research, but also all scientific endeavours. For example, M. Sikora considering the 'circle of competence of science' in the context of the natural sciences, notes that today, "*what one can see in science is not so much knowledge, but practice you can use to intervene in the world, in order to change it*" (1999: 197). The above mentioned criticism of the assumptions and possibilities of the Enlightenment model of science also applies to the theory of representationism.¹⁶ If we do not know what the relationship between the empirical world and statements about it is, it is unquestionably difficult to deter-

16 It was initiated by P. Duhem and W.V.O. Quine by the undefined thesis of the theory through empirical data. *"One and the same concrete empirical fact can be captured in many different ways. There is no theoretical unambiguous relationship between it and the fact but multi-ambiguous relationship.* ("Sikora, 1999: 206) T. Kuhn's analysis also shows that there are no objective criteria for selection of the theory divided by a scientific revolution.

mine what the statement represents. The response to these uncertainties is, cited above, constructivism - the scientific knowledge does not represent the world, but builds upon it, and what is important, these structures are not neutral, but they serve something or someone.

N. K. Denzin and Y. S. Lincoln note that in the American qualitative research *the crisis of representation* was clearly felt in the middle 80's of the twentieth century (2009: 45). It is expressed in the fact that "*a direct relationship between experience and the text becomes problematic.*" (ibid. 47) According to the authors cited this doubt stems from the inability to identify the source experience. The version of reality, which someone presented in an interview, does not have to match the version which he formulated earlier in front of other people at different times than the events had been previously spoken about. It does not have to agree with the version presented to the next investigator, who formulated the question in a different way. The researcher, who interprets an interview and presents it as a derived result, creates another version of the reality. Furthermore, the published text is interpreted by readers, building its further versions (Flick, 2002: 25). Each of the participants in this communication process is guided by the motivation or the intention of their specific socio-cultural location, which has to differentiate the presentation.

In this situation, the issue of assessment of the results submitted by the researchers has a special significance. Despite many debates devoted to this discussion, however, there has not been developed a universally accepted criteria for this assessment, which is the ground of another crisis of modern science - *the crisis of legitimacy*. It is expressed in the absence of an agreed response to the question, which justifies the test results submitted to the readers?

Denzin and Lincoln pay attention to the third dimension of the crisis, particularly importance is paid in relation to critical qualitative research - the crisis of practice.

They ask: "Is it possible to change the world, if society is always and solely just a text?" (2009: 47). This question is a consequence of the crisis of representation (how far can test results reflect the specificity of the society?), it also indicates the need to change the world in which we live. This world is created by humans, so people can change it. At least some of the researchers of social phenomena feel responsible for the change, for "*dealing with inter-racial relationships and inequalities in a globalized, capitalist and democratic world*" (Finley, 2009: 68). Denzin and Lincoln (2009: 38) explicitly formulate their expectations of the social sciences: "*We want social sciences which are involved in the defence of social justice, equality, non-violence, peace and universal human rights. We do not want social sciences which claim that they can deal with these matters, only if they want*".

Conclusion

The answer to the seemingly simple question - about the functions of qualitative research and its cognitive abilities - appeared difficult. As signalled in the introduction, answering this question requires a reference to the model of the method and tasks of methodology, and thus it also affects the model of science. The problem is that currently each of these models can be questioned, in other words, there are no models that would be accepted by the community of scholars. In the past, when by far the most dominant was empirical research pattern justified by a positivist empirical model of science, defining the role of qualitative research did not cause problems. Its role was limited to the initial phase of research (as a source of building hypotheses), or its results were treated as a specific verification of quantitative verification of test results - as an exemplification of identified patterns. A typical feature of empirical educational research conducted in the framework of this model in Poland is specific methodological inconsistency. It is expressed in the fact that on one hand, methodological rigor is recommended in textbooks, on the other hand, it is relativised, arguing that the subject of education is complex and variable, therefore, exceptions to the diagram method (understood as a set of activities) are permissible. In this assessment, there are two consequences of this state of things: a) the restriction of specificity of qualitative research to the level of organisation of studies (deliberate selection of the sample, smallsized, non-standardized research techniques, etc.) b) the absence of opposition between the advocates of the quantitative and qualitative research.

This opposition was evident in Western Europe and the U.S. in the 1970's – 80's, when supporters of qualitative research fought for a cognitive status of new methods. Currently it has lost its significance because qualitative research is very diversified. Its overall characteristic is basically impossible, it is even unknown as to how to organise the research. The organisation provided by myself is as partial as any other and equally non-committal (I do not claim that it is the best). It has been prepared on the basis of the recent publications in our country of translated textbooks on qualitative research from Western Europe and the United States. The lack of indigenous textbooks in this area is a confirmation of my previous conclusion.

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metoda in primer takšnega razvrščanja na podatkih o Sloveniji iz mednarodne raziskave merjenja matematičnega znanja med dijaki pred vstopom na univerzo, TIMSS za maturante.

Ključne besede: zahtevnejši program preduniverzitetne matematike, indeks pokritja, razvrščanje, dejavniki dijakovega okolja, učno okolje

Danuta Urbaniak-Zajac

Empirical studies in Polish pedagogy – between quantitative and qualitative research

The first textbooks in the field of methodology of educational research appeared in Poland in the late 1960's and 1970's, and by the end of this century, they did not have any competition. Only at the beginning of the new millennium were new studies published (but those previously issued are still widely used, especially by students). It can be assumed that the general 'methodological approach' of several generations of educators was formed by the research scheme postulated by the authors of those first textbooks. From today's perspective, it is clear that the concept of methodology of educational research contained in the first textbooks was placed in the positivistic model of science. This designation is supported by the structure of the research process, valuation of methods and research techniques, the formal purpose of the research, the position assigned to a researcher (as well as mentioning the name of A. Comte).

Key words: methodology, educators, positivism, textbooks, research

Danuta Urbaniak-Zajac

Empirične študije v poljski pedagogiki - med kvantitativnimi in kvalitativnimi raziskavami

Prvi učbeniki s področja metodologije pedagoškega raziskovanja so se na Poljskem pojavili v poznih šestdesetih in sedemdesetih letih in so bili do konca tega stoletja brez konkurence. Šele na začetku novega tisočletja so bile objavljene nove študije (vendar že prej izdane še vedno predvsem študentje pogosto uporabljajo). Lahko domnevamo, da je splošni 'metodološki pristop' več generacij pedagogov je oblikovala raziskovalna shema, ki so jo postulirali avtorji prvih priročnikov. Z današnjega vidika je jasno, da je bil koncept metodologije pedagoškega raziskovanja, vsebovan v prvih priročnikih, umeščen v pozitivistični model znanosti. To ugotovitev podpira struktura raziskovalnega procesa, vrednotenje metod in tehnik raziskovanja, formalni smoter raziskovanja in položaj, ki je pri tem dodeljen raziskovalcu (kot tudi navedbe imena A. Comta).