Towards a social science of the social: The contribution of praxeological research

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Abstract: Educational research developed initially using the natural science model based on the positivist tradition. Education was then seen as an application of the positivist science thus produced. This research could predict some effects but not explain the processes through which these effects came about. This exclusively numerical representation of educational social reality led to oversimplifications. The natural sciences paradigm is not adequate to conduct research in social sciences since the object of the research is not an inert raw material.

Pedagogical praxis as educational action ‘infused with’ theory, supported by a belief system and an ethical code needs an inquiry method that can take into account this complexity. Praxeological research in education has emerged recently as a powerful alternative for the change of pedagogical praxis, the transformation of educational contexts and the construction of empirical knowledge about complex educational realities. Praxeological research is inscribed in the movement of searching for a social science of the social.

Résumé: A l’origine, la recherche dans le domaine de l’éducation s’est conformé au modèle de recherche des sciences naturelles et elle a été conçue comme une science positiviste appliquée. Cette recherche voulait prédire des effets, mais ne pouvait pas expliquer leur pourquoi. Cette représentation exclusivement numérique de la réalité éducative sociale a mené à des simplifications exagérées. Le paradigme des sciences naturelles n’est pas adéquat pour la recherche en sciences sociales, comme le sujet de recherche ne consiste pas de matériaux inanimés. La « praxis » pédagogique, étant une action éducative infusé de théorie et supporté par un système de valeurs et une éthique, a besoin d’une méthode qui prend en compte cette complexité. La recherche praxéologique propose une alternative forte pour changer la praxis pédagogique, pour la transformation de contextes éducatives et pour la construction de savoirs empiriques sur des réalités éducatives complexes. La recherche praxéologique s’inscrit dans un mouvement de recherche pour une science sociale du social.


Resumen: Inicialmente, la investigación educativa usaba el modelo de ciencia natural basada en la tradición positivista. La educación era entonces considerada como una aplicación de la ciencia positiva. Esta investigación podría predecir algunos efectos pero no explicar los procesos mediante los cuales se llegaban estos efectos. Esta representación exclusivamente numérica de la realidad social educativa condujo a sobre-simplificaciones. Los paradigmas de la ciencia natural no son adecuados para llevar a cabo una investigación en ciencias sociales ya que el objeto de la investigación no es un material inerte. La praxis pedagógica como acción educativa abonó en teoría, apoyada por un sistema de creencias y un código ético, un método de investigación que toma en cuenta su complejidad. La investigación praxéologica en educación ha surgido recientemente como una alternativa potente para el cambio de la praxis pedagógica, la transformación de los contextos educativos y la construcción del conocimiento empírico acerca de realidades educativas complejas. La investigación praxéologica se inscribe en el movimiento de la búsqueda de una ciencia social para lo social.

Keywords: qualitative research, action research, social sciences, praxeological research.

1. FROM A NATURAL SCIENCE OF THE SOCIAL TO A SOCIAL SCIENCE OF THE SOCIAL

1.1. The natural sciences research paradigm

A scientific paradigm constitutes a general framework that organizes our understanding of the world, people, relationships, life and knowledge as well as the relationship between man and knowledge. Khun (1962) points out that research takes place within a taken for granted framework which organizes all perception and thinking, that is, within a
scientific paradigm. From time to time the paradigm itself shifts in a revolutionary fashion as a new perspective allows making better sense of the available knowledge. In the realm of social sciences we are going through a radical shift since new perspectives are helping us to make better sense of available knowledge and providing new ways of creating knowledge. The question about what is scientific knowledge thus becomes pertinent again.

A theory according to Socrates, must be explicit (presented clearly, in detail and completely), universal (serving in all places and at all times) and abstract (that it does not need concrete examples). Thus such a theory can be understood by all rational human beings without the need of interpretation or intuition, and it is independent of time and space and specific examples (Flyvbjerg, 1998).

Later philosophers such as Kant and Descartes added two more criteria for the regime of truth of theories: systematcity and discreteness (only encompasses context independent variables and excludes elements that refer to human interests, motivations, traditions, organisations institutions). The development of empirical science added another criterion – that of predictivity (Flyvbjerg, 2010).

The natural science model is based on all these criteria that have built the positivist paradigm. There is a logical simplicity to this paradigm and its success has been well documented by the achievements in the mastery of nature and technology and by the improvements in our conditions of life in the last two centuries. The progress in natural science is done by cumulative production of knowledge which can explain and predict natural phenomena. This cumulative knowledge is seen as universal and independent from the various contexts in which it was produced and can be applied.

In the XX century several social science researchers looked at natural science as the ideal for the study of human activity. Psychology, sociology, economy and other social sciences produced research under this positivist paradigm (1).

1.2. The applicationist perspective of the positivist paradigm in the field of education

Education was seen by these researchers as the application of the positivist science thus produced, as technology is seen as a mere application of natural sciences achievements. Scientists like psychologists, sociologists and economists discover and create knowledge; practitioners and policy makers apply in the field the knowledge thus produced. This sums up this applicationist view of social professional practice.

Thus the identity of the field of education was compartmentalised by the scientific domains that came to be more influential in its development. The very essence of education developed as cumulative processes of the various natures of the central scientific domains: psychology of education, sociology of education, economy of education, and also history of education, anthropology of education, and others(2).

Until the 1960s, research methods in education were dominated by large scale surveys, quantification and experimentation techniques (Bogdan and Biken, 1982). This positivist research could identify some cause-effect relationships – for instance, the relationship between socio-economic status and school success (in sociology of education), between developmental stages and cognitive behaviour (in child development research), between reinforcement and expected behaviour (in positivist behaviour psychology), between some biological characteristics and attention span (in educational psychology), between educational qualification and employment opportunities (in economy of education).

In all professions of human development, that is, occupations working with people in direct interpersonal contact (Formosinho, 2011), there was a movement to question the positivist applicationist processes that have been applied to improvement of professional activities and organisational change.

1.3. The inadequacy of the positivist paradigm

Education was seen by these researchers as an application of the positivist science thus produced, as technology is seen as a mere application of natural sciences achievements. As such its findings could not have significant use in improving educational practices, since there was scarce knowledge about which processes were involved in this improvement. These very processes are those which depend fundamentally on the human action.

This was an historical, epistemological and social misconception or misapprehension. An historical mistake since it persisted overtime (and still persists in some scientific groups); an epistemological one since it mistook the true nature of the scientific object; a social error since it pretended to give to quantitative research the monopoly of scientific truth. We need to listen to the voice of Gregory Bateson (1972) when he affirms that the most important task facing us is to learn to think in new ways.

1 For instance, it was the inspiration for functionalism in Sociology of Education or cognitivism in Psychology of Education.
2 Education as a field of action is much more that this accumulation of compartmentalised knowledge. It is a field per se, in its own right. Over the last ten years, in the field of Early Years Education, we have seen a call of attention to pedagogy as a field in its own right.
3 The concept of professions of human development includes professional occupations working with people in direct interpersonal contact, where this interaction process is an essential part of the very content of professional intervention (Formosinho, 2011. The concept covers a range of health and welfare (nurses, therapists, psychologists, nutritionists and other health workers), social work (social workers, family workers and other social workers), community work (community workers, cultural animators and other community workers), education (teachers, early childhood professionals, supervisors, trainers and other education workers).
This exclusively numerical representation of social reality led to oversimplifications of educational reality. These simplifications are very well accepted, even encouraged and bought, by policy makers across the world who generally need simple and quick fixes for the very complex problems they face. Many educational initiatives launched under a positivist assumption failed – teacher proof curricula, “developmentally appropriate practices” (DAP), stage acceleration (the misinterpretation of stage theories), many educational compensation strategies, etc. They failed since the knowledge about the context, the processes and the actor’s interpretations was absent from the positivist analysis, which made generalisations quite hazardous.

The reason why the natural sciences paradigm is not adequate to conduct research in social sciences is that the object of the research is not an inert raw material; it is a subject with cognition, sentiments and will; it is a social actor with agency; it is a person with a specific life story and singular projects. Many of the variables which influence the cause-effect relationship above described are process variables dependent on the agency of the persons involved and their life learning stories.

The predictions and explanations of the context-independent truths of natural sciences do not apply to context dependent action which is a characteristic of human activity. The problem for the study of human activities is that every attempt to create a context free definition of action, based on abstract rules and norms, may encounter a dilemma: the actors themselves in concrete situations may have different definition of actions. What counts as an action depends on context dependent skills which social subjects of the research possess and exert.

As Giddens (1982) writes

The technical language and theoretical propositions of the natural sciences are insulated from the world with which they are concerned because that world does not answer back. But social theory cannot be insulated from its “object-world”, which is a subject-world.

Giddens speaks about “double hermeneutics” – what counts as relevant in social science is determined by the researched subjects interpretations and by the researcher’s interpretation of these interpretations. The fact that humans are self-interpreting beings is a fundamental difference from the dead objects of natural sciences which cannot answer back.

Social sciences research is always a science of interpreting the actors’ interpretations, a double hermeneutic process.

1.4. The emergence of the qualitative research paradigm in social sciences

The questioning of this positivist paradigm, both in terms of single regime of truth and of usefulness for the improvement of human activity, created momentum since the 1960s. There were new societal dynamics in the 1960s – student’s movements, black rights movements, women’s liberation movements, decolonisation demands and policies, questioning of authoritarian and totalitarian regimes by several societal groups. Universities and other science producing agencies were naturally included in this social change; as the regimes of truth in morals, religion, and politics were questioned the same questioning extended to science. We were on the verge of an historical social transformation.

In the 1970’s, alternative research methods evolved – interactionist perspectives, ethnographic methods, grounded theory, case studies, action research – which can be included under the umbrella concept of qualitative (naturalist or interpretative) research (Bogdan and Biken, 1982, Lincoln and Guba, 1985). With regard to education, the relative failure of the positivist applicationist view of Psychology of Education, Sociology of Education, Economy of Education and the failure of its main educational policy instrument Curriculum Development led to the emergence of these non positivist perspectives in educational research.

Before developing the consequences of this emergence, it is important to contrast the two paradigms with regard to what they consider rigour in research.

1.5. Comparison of quantitative and qualitative research paradigm

Merriam published in 1988 a still very useful contrast of quantitative and qualitative research which highlights many of the things already said.

| TABLE 1 | COMPARISON OF QUANTITATIVE AND QUALITATIVE RESEARCH PARADIGM |
|-----------------|-----------------|-----------------|
| **Characteristics** | **Quantitative Research** | **Qualitative Research** |
| Philosophical roots | Positivism, logical empiricism | Phenomenology, symbolic interaction |
| Associated phrases | Experimental, empirical, statistical | Fieldwork, ethnographic, naturalistic, grounded, subjective |
| Goal of investigation | Prediction, control, description, confirmation, hypothesis testing | Understanding, description, discovery, hypothesis generating |
| Design characteristics | Predetermined, structured | Flexible, evolving, emergent |
This research is quite different in the two paradigms. This perception is unreasonable constraints to the research work. Scientific practice along the research process; that is, it is not inherent to the process, is something else. This distance is sustained by the fact that the researched world "does not exist. There are interests inherent to the life of the research process in university or research centres. There are interests inherent to the life of researchers in their organisation – these come from intrinsic motivations like assertion of one’s own specific field of knowledge or desire to increase the weight of the investigated discipline in university curricula, but also extrinsic motivations due to competition for money, prestige, grants, scholarships, awards or career promotion. Positivist researchers have, as all human beings, beliefs, commitments and interests, egos and pride, which inevitably affect the research. As research is done by persons it cannot be free of values, commitments and interests.

1.6. Rigour and ethics in quantitative research

Rigorous research in positivist natural science is based on a strict neutrality of the researcher with regard to values, beliefs, and ideologies. Thus science was often seen as opposed to religion, to tradition, to politics and, in general, to all ideological or moral manifestations. This neutrality is based in two important assumptions - values are extrinsic to knowledge and morality is extrinsic to cognition. Thus research can be value free and context-independent. These two assumptions had been directly questioned by main philosophies and researchers in human and social sciences. The assertion being that natural sciences research is based in values, even when they are just implicit, and the work of researchers is conducted in context-dependent environments. That is, value and moral judgments are always present (implicitly or explicitly) in the very act of research in natural sciences. Some natural sciences scientists have said this during the apparently untroubled domination of the positivist paradigm Polanyi, a university professor of physical chemistry, said in 1946, in a pioneer contribution, that all knowing is personal, all knowledge, including the knowledge derived from rules, relies on personal judgements, all knowing, no matter, how formalised, relies upon commitments; a knower does not stand apart from the universe, but participates personally within it (Polanyi, 1946, 1958).

Another criterion of rigorous research is the neutrality obtained by the distance between the researchers and the object of the research. This distance is sustained by the fact that the researched world “does not answer back” (Giddens, 1982).

But this neutrality of the researcher in regard to values and morals and with regard to the object researched is also extensive to interests - the absence of interaction between the researcher and the people connected with the research meant the freedom from any personal constraints or influences from interpersonal relationships. As morals are considered external to knowledge, the code of research ethic created by the scientific community under the positivist paradigm is something apart the research process; that is, it is not inherent to the process, is something alongside it. As such this code of ethics does not monitor adequately aspects which are intrinsic to the production of investigation in universities or research centres. There are interests inherent to the life of researchers in their organisation – these come from intrinsic motivations like assertion of one’s own specific field of knowledge or desire to increase the weight of the investigated discipline in university curricula, but also extrinsic motivations due to competition for money, prestige, grants, scholarships, awards or career promotion. Positivist researchers have, as all human beings, beliefs, commitments and interests, egos and pride, which inevitably affect the research. As research is done by persons it cannot be free of values, commitments and interests.

1.6. Rigour and ethics in qualitative research

In the qualitative paradigm values, morals, interests, interpersonal relationships and researcher’s commitments are incorporated into the investigation priorities in order to take them into account during the design of the study, during data collection, analysis and interpretation and during the writing. This is the more important since in qualitative research the person of the researcher is the very main instrument of research. Thus there is no researcher’s proof investigation, since research is a human activity and, as such, subject to unintentional error or even to misconduct.

<table>
<thead>
<tr>
<th>Settings</th>
<th>Unfamiliar, artificial</th>
<th>Natural, familiar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>Large, random, representaive</td>
<td>Small, non-random, theoretical</td>
</tr>
<tr>
<td>Data collection</td>
<td>Inanimate instruments (scales, tests, surveys, questionnaires, computers)</td>
<td>Researcher as primary instrument, interviews, observations</td>
</tr>
<tr>
<td>Mode of analysis</td>
<td>Deductive (by statistical methods)</td>
<td>Inductive (by researcher)</td>
</tr>
<tr>
<td>Findings</td>
<td>Precise, narrow, reductionist</td>
<td>Comprehensive, holistic, expansive</td>
</tr>
<tr>
<td>Focus of research</td>
<td>Quantity (how much, how many)</td>
<td>Quality (nature, essence)</td>
</tr>
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Source (Merriam, 1988)
The control of this qualitative research comes from different sources – internal and external regulation. First of all, the permanent self-awareness and self-regulation of the investigator; although external instances are very important, all begins in the disposition for self-vigilance of the researcher. The dispositions to act ethically can be developed in the context of research networks. The researcher should assert her/his beliefs, explicit his/her commitments and declare her/his interests. Secondly, there are various instances of socio-regulation of the research processes and results – the exchange of ideas with peer researchers, the dialogue with the researched subjects as social actors in the research process, the discussion within professional communities involved in the research and the socio-regulation of society through the analysis of the impact of the research.

To facilitate the socio-regulation of research, documentation of the overall research processes, research data and research analysis is important to allow openness to peer vigilance. In this sense the participants in the research, seen as social actors with agency, can have access to all documents and can react to the findings and present privately and/or publicly their agreement or disagreement.

As all qualitative research is meta-interpretation – interpretation by the researcher of the different social actors’ interpretations – this, if rigorously developed, may function as a quality control mechanism.

To develop a social science of the social we need to enlarge our reasoning to encompass experience based situated action and actors’ understandings of lived experiences

2. NATURE OF PEDAGOGICAL PRAXIS

As praxeological research is centred on investigating praxis, it is essential to define praxis. In this paper we are interested mainly in the study and research of pedagogical praxis in early childhood education. Praxis is not mere practice as mere doing. Praxis is a grounded and reasoned, situated and contextualised practice. It is a practice infused with beliefs and values, based on educational theories and situated in specific contexts with specific educators and for specific beneficiaries, thus including power relationships.

The concept of praxis unifies the process of developing theory and practice creating practical theories and theoretical practices. The practical theory is as a method of reasoning infused in doing and a method of doing infused on reasoning. The concept of praxis addresses the epistemological issue about the relationship between knowledge of universal and knowledge of particulars, between context independent and context dependent (situated) knowledge.

Pedagogical praxis is educational action infused with theory, supported by a belief system and an ethical code, conveying emotions and feelings. Teaching is organized around the (practical, technical) knowledge that builds on situated actions, together with the theoretical concepts (theories and knowledge) and with beliefs (beliefs, values and principles) which are translated into a specific ethics for the development of pedagogical action.

Thus pedagogy is a constantly renewed triangulation of practices, believes and theories infused with feelings and ethics aiming to grounded, principled and deontological pedagogical action.

To understand praxis it is necessary to convoke Aristotle’s concept of phronesis (as opposed to episteme (reason), which is built in the search for situational understanding and can best translated by practical wisdom. Praxeology transforms implicit knowledge into explicit knowledge. Implicit knowledge is expressed in current language and enables people to live and coordinate actions; it has a taken for granted character. It is transmitted on a tacit basis in the process of inducing individuals into practical situations. Implicit knowledge is not used only in daily life but also in professional life. It enables professionals to develop their practices (practical traditions of teaching, for instance). It is organised and transmitted on a tacit basis, it is, a tacit knowledge. Novel situations arise often and new knowledge may be needed to address those novel situations; the tradition traduced in implicit (tacit) knowledge cannot address these novel situations.

This praxeological explicit knowledge implies the discerning of the particulars of a situation from the standpoint of an ethical agent emerged in the process. It is distinct from theoretical reason (episteme) which aims at the discovery of universally valid truths, essential and unchanging truths, which have value for their own sake through context independent relationships (Lyotard, 1979). It is also distinct from practical knowledge insofar as it is explicit and can be presented in its theoretical and ethical foundations, creating awareness of power relationships, position and distribution. Explicit knowledge about change processes is important for the transformation of praxis. The investigation of praxis in order to transform it, has the ethical intention of changing practices, in the context of reflexive committed action that is grounded in common sense theorising or in implicit theorising (versus scientific theorising). It aims for explicit theorising, fusing theories, practices and believes, recreating praxis, creating knowledge about change processes, thus creating knowledge about praxis.

3. NATURE OF PRAXEOLOGICAL RESEARCH

3.1. Origins of praxeological research - praxeological research as evolving action research

Some reflections on the origins of praxeological research as action research - and on where its stands today - will enlarge our understanding about what we can expect from it.

Action research is a very diverse, pluralistic field. In part that is due to its historical routes and to the different climates of the times where different waves of action research have been developed. As it may be impossible to write one congruent history of action research, it is better to see it, from the beginning, as a plural endeavour. As Reason and

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6 Polanyi (1966) and later Elliot (2000), among others, considered implicit knowledge as very important for the development of professional practical knowledge and for the life of organisations.
Bradbury (2001) point out, its sources of inspiration are promiscuous. As action research has been developed in the heart of the debate about scientific paradigms and the decline of the technical narrative of knowledge, there is not a single theoretical perspective from where it can be traced.

Reason and Bradbury (2001) acknowledge the movement of the critique of positivist science as a contribution for action research along with various approaches that seek to contribute to the understanding of new epistemologies of practice. This epistemological search is currently traced back to Aristotelian’s theorisation around concepts such as praxis and phronesis.

The rich movement of action research started with Kurt Lewin (1890-1947), the German-American psychologist considered by many as the “father” of action research. Lewin, then a professor at MIT, first coined the term “action research” in about 1944, and it appears in his 1946 paper “Action Research and Minority Problems”. In that paper, he described action research as “a comparative research on the conditions and effects of various forms of social action and research leading to social action” that uses “a spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action”.

Page number for quote needed

Kurt Lewin had been much influenced by Jacob Moreno, a Romanian-born Austrian-American, pioneer of group psychotherapy and of the study of group dynamics. Moreno (the other highly recognised historical figure) had then developed a view of action research in which action was about activism and not just about changing practices. Moreno’s view was of research as part of a social movement. Both views connected easily with the progressive movement ideals of the first half of the 20th century.

The 1940s and the 1950s in the USA were times of great social and educational controversies. Some explorations of action research were concerned about connections between action research and social activism, de-emphasising the link. Advocates of this link were few but firm; Stephen Corey of Teacher’s College Columbia stands among the ones that, by that time, emphasised the connection between action research and social justice movements.

The wave of American educational action research in the 1950s, 1960s and 1970s filtered some of the elements brought to action research by Lewin and Moreno, de-emphasised others and added new elements from the social and educational climate of the time; those new elements came from the positivistic paradigm, namely from the behavioural educational psychology of the time, and focused action research on methodological issues.

The rich movement of action research is soon recognised as the only path to simultaneously develop action (when new situations arise and new knowledge to address these situations is needed) and to research this development. The movement spread throughout the world and takes different expressions either at the level of world views or at the methodological level. This richness can be appreciated through many research sources. There has been a permanent challenge to quality development in action research.

Praxeological research is one of the emerging developments of action research that aims to deepen action research at the level of transformation of praxis sustained in participatory and emancipatory world views and conducted through congruent research methods (Pascal and Bertram, 2012, this volume)

3.2. The connections between research and change in praxeological research

There has always been different emphasis and a variety of advocacies for action research (Máximo-Esteves, 2008). The sharpest differences between variants of that patrimony had always been located in the understanding of relationships between research and social change. This tension between different contributions to action research is still present today in the complex field of praxeological research.

In the last twenty years there has been a renewed interest and debate about the potential of educational action research for addressing the problems, issues, questions, that school, classrooms, teachers, students are facing (Reason & Bradbury, 2001, Noffke & Somekh, 2010). There is a renewed hope about its potential for creating better schools, better classrooms, better teaching, meaning better learning situations, deeper respect for children and adults as having a voice in the contexts of praxis and of its research.

For some authors the focus of research change processes is merely centred in the improvement of practices, for others it is focused in social justice. Kemmis (2001) when analysing action research’s constitutive basis highlights three ways to understand the connections between action research and change: (1) action research aiming to change the work (practices, outcomes, achievements); (2) action research as aiming at the self-education of the practice through self understandings of practices and self; (3) action research as aiming to change the work place through the deconstruction of power relationships and political power.

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7 Kurt Lewin is also known as one of the modern pioneers of social, organizational, and applied psychology, often recognized as the “founder of social psychology” and was one of the first to study group dynamics and organizational development.

8 Jacob Levy Moreno (1889-1974) was a Romanian-born Austrian-American leading psychiatrist and psychosociologist, thinker and educator, the founder of psychodrama, and the foremost pioneer of group psychotherapy. During his lifetime, he was recognized as one of the leading social scientists.

9 Lewin from social psychology brings certain elements; Moreno aids others and educational psychology brings the focus of individual change.

10 Some sources to understand these different expressions are the two handbooks on action research: Reason, P., & Bradbury, H. (eds.) (2001), Noffke, S., & Somekh, B. (Eds.) (2010). Other source are:???
For us it is not an “either or” decision that will amputate praxeological research from one important aspect of it. We have a complex pluralistic understanding that speaks of the need of integrating the three levels: the work (practices), the worker (self), and the workplace (context power relations). A theory of complexity about change, and about the research of change processes, requires integration of the three levels, as can be seen in the following praxeological research example.

A group of teachers and a critical friend constituted in a praxeological research network is aiming at developing participatory practices of including children’s voices in the daily life of the activity of an early childhood centre (for instance, in planning with the children, in project work, in shared documentation processes). It is acting as a multilevel change process because the group is learning the technicalities of listening, documenting and answering (it is changing practices); simultaneously it is creating a renewed self through listening to children’s voices (it is changing self understandings); and is deconstructing power relations by sharing power with little children about curricular decisions, actions and reflections.11

The three constitutive bases to understand the connections between action research and change are being integrated in this process. This process cannot be said to focus either on the work or on social justice. Is there anything that speaks more to social justice than pedagogy of listening to very young citizens? The struggle to make real a participatory pedagogical approach for the education of young children (Pascal and Bertram, 2009) is grounded in democracy that respects human beings’ right to voice and participation. But that struggle will never be achieved without practical professional knowledge that helps the professionals’ self to commit her/himself and act accordingly in daily situations.

The last twenty years of research in Early Years has acknowledged children’s agency, power, competency and rights; this is an important gain. Another gain is the acknowledgement that this has not yet been recognized and taken into account both in research and practice. These two acknowledgements put together were the foundation for one of the more meaningful recent developments of research and practice in Early Years: the advocacy for a real participatory approach both in practice and research. (Oliveira-Formosinho, 2009, Oliveira-Formosinho and Araújo, 2011)

There is a renewed hope about the potential of action research for the fulfilment of the integration of action and research. In praxeological research the researcher is always involved in some manner in the transformation process – as direct practitioner, in the field, as supervisor, context based trainer, critical friend12 etc. It means that it has some role in the definition and monitoring of the transformation.

As Urie Bronfenbrenner said, quoting Prof. Dearbon, one of his teachers at Harvard University, *If you want to understand something, try to change it* (Bronfenbrenner, 2006). We could say, if we want to develop knowledge about change, we need to practice change.

**FIGURE 1: PRAXEOLOGICAL RESEARCH AND CHANGE**

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11 Praxeological research envisages the transformation of pedagogical praxis in all dimensions – meaning that change in attitudes and believes is important but it is not sufficient to benefit children and their families if it is not followed by changes in direct interactions and pedagogical practice with children and their families. Change processes need to bring closer words and deeds, believes and theories, cognitions and emotions.

12 Even an academic supervisor can be a praxeological researcher if he is involved in the context supervising the field work.
4. METHODOLOGY OF PRAXEOLOGICAL RESEARCH

4.1. Criteria of rigour and ethics in qualitative research

Praxeological research in education is part of this movement for a more meaningful and useful social research connected to the social practice in natural educational contexts. For such endeavour it has to follow also criteria of rigour and ethics which are different but as demanding as those of quantitative research. We will present some of these criteria.

**Detailed description of actions and contexts** is an important principle for rigour in praxeological research. It is necessary to describe in detail the settings of the action researched – context, actors. The context implies a description of the local research context and its interaction with meso and macro contexts. This detailed description is important to emphasise the context dependent nature of this type of research. This is important for the research itself and for the dialogue with other researchers.

The detailed description of actions and contexts as a principle for rigour in research is essential for this mechanism of transfer of knowledge, since it is necessary to provide the interested researchers, practitioners, policy makers, trainers and other educators that may import the findings to their contexts if dense enough information is provided. Positivist generalisation is only possible in positivist research which pretends to be context independent. In qualitative context-dependent research the process of transfer of knowledge is in charge of the readers of the research, it is not mainly the responsibility of its producers.

In praxeological research the person of the researcher is the very main instrument of research. So researchers’ declaration of beliefs, commitments and interests is also an essential principle for ethics in research. The researcher should assert her/his beliefs, explicit his/her commitments and declare her/his interests. This same declaration is also important for the main actors of the transformation. For example, ideological affiliation or choice of explicit pedagogies should be presented. This is essential also since the core of praxis is the triangular relationship/interaction between values/beliefs, theories and practices.

**Sharing of research findings with peers** is a natural stage in the development of research knowledge.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Quantitative Research</th>
<th>Qualitative Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigour and ethics</td>
<td>Detachment</td>
<td>Attachment</td>
</tr>
<tr>
<td>Rigour</td>
<td>Characterization of sample size and selection</td>
<td>Detailed description of actions and contexts Documentation of research</td>
</tr>
<tr>
<td>Rigour</td>
<td>Strict neutrality of the researcher in regard to values, beliefs, and ideologies</td>
<td>Disposition for self-vigilance of the researcher Deep acceptance of socio-regulation of the research processes and results</td>
</tr>
<tr>
<td>Rigour</td>
<td>Distance between the researchers and the object of the research.</td>
<td>Proximity between the researchers and the actors seen as subjects with agency.</td>
</tr>
<tr>
<td>Rigour and ethics</td>
<td>Neutrality in regard to interests</td>
<td>The person of the investigator is the main instrument of research Thus researchers should make a declaration of interests</td>
</tr>
<tr>
<td>Ethics and rigour</td>
<td>Values are extrinsic to knowledge</td>
<td>“All knowing is personal knowledge” (Polanyi)</td>
</tr>
<tr>
<td>Ethics and rigour</td>
<td>Morality is extrinsic to cognition</td>
<td>The person of the investigator is the main instrument of research Researchers should make a declaration of beliefs, commitments and a declaration of interests</td>
</tr>
<tr>
<td>Mechanism of transfer of knowledge</td>
<td>Generalization Export of knowledge</td>
<td>Transformation and understanding Import of knowledge</td>
</tr>
</tbody>
</table>

(Formosinho and Oliveira-Formosinho, 2012)
4.2. Rigour as attachment in qualitative research

The emergence of praxeological research is based on the principle that detached positivist rationality cannot be elevated to the only logic. Proximity, relationships, care, sensitivity to local contexts and local social actors may engender rationality - a rationality of listening and care that may prove to explain phenomena in depth.

The search for a **reflective attached commitment** is an important principle for both rigour and ethics in qualitative research. The main methods and techniques used in praxeological research include a commitment for an attached research. This attachment includes extended immersion in the research contexts, continuous contact with the local actors which naturally leads to a certainly degree of complicity with them, being the researcher the main instrument of research incorporating in the design that the person of the researcher is the most important inquiry tool.

In praxeological research this relationship is more intense and the roles are more diluted.

Table 2 summarizes all the information:

<table>
<thead>
<tr>
<th><strong>TABLE 2 – ATTACHMENT IN QUALITATIVE RESEARCH</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIFE STORY</strong></td>
</tr>
<tr>
<td>Extended immersion in the context</td>
</tr>
<tr>
<td>Continuous contact with the actors</td>
</tr>
<tr>
<td>Commitments and complicity with the actors</td>
</tr>
<tr>
<td>Detailed description of actions and contexts</td>
</tr>
<tr>
<td>The investigator as the research instrument</td>
</tr>
</tbody>
</table>

4.3. Praxeological research as an approach which uses different methods and techniques

Praxeological research uses distinctive method of inquiry and respective techniques: it uses ideographic methods aiming at knowledge of particulars. However it is aware of nomothetic methods that aim at universal knowledge of norms. It is a very open and flexible approach that does not have an a single method or specific techniques. On the contrary, it is centred on the change problems and connected questions to be studied and convokes different methods and techniques on the condition of being coherent with the subjacent participatory paradigm (Pascal and Bertram, 2012).

It can use the **main qualitative methods** which study particular realities - life stories (and other narrative methods), case studies, ethnographic studies, phenomenological studies, grounded theory studies.

Case study is an important method used often since it focus on a particular situation, describes it completely and in detail and tries to illuminate the understanding of the phenomenon under study, all characteristics needed for the educational change. Case study is also important since it is often combined with other qualitative methods, such as the ones mentioned above.

The use of **multiple techniques of data collection** is current in praxeological research Local actors emerged in situated actions assume local questions as objects for research. The choice of techniques is determined by the evolving situations and problems. It is not as pre-determined as in quantitative research designs, since the techniques should serve the object of inquiry and not the reverse. Often positivist research designs condition heavily the scope of the research looking to the areas where there is light, meaning the situations that can be measured by standardised instruments and other pre-existing scales and tending to avoid areas of shadow.

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13 We are aware that this type of table represent always some simplification, but are still very useful.

14 The wide range of methods and techniques is also presented in Pascal and Bertram, 2012 (this volume).

15 The interviews remain one of the best research instrument for hearing the participants’ voices, as co-constructors of their own new knowledge and learning journey. Only self reported changes can elicit the deep link between processes and outcomes, can connect specific changes with specific aspects of the context and make explicit the informant’s theory of professional and organisational change.
5. META-ANALYSIS IN PRAXEOLOGICAL RESEARCH: A CHALLENGE TO BE ANSWERED

A common practice for natural scientists and positivistic social scientists is to review their research and produce review studies, meta-analysis and empirical meta-analysis. This is a desirable practice that has created standards to be achieved and aggregated knowledge.

The same is not true for qualitative studies, in general and for praxeological studies. These reviews need to be a priority for our research community in order to create knowledge and achieve standards to conduct the reviews. It is needed to make available review studies that are conducted by knowledgeable and experienced researchers from within the field Quantitative meta-synthesis a specific type of study in which the results of qualitative studies of a specific field are combined\(^\text{16}\). The result is an interpretative product of analytical processes that unite, resume, aggregate and integrate the available studies. The challenge is the production of a qualitative meta-synthesis of the studies that still guarantees to be “faithful” to each specific study.

It is a hermeneutic process, an interpretation of many interpretations – a generalization about particularities that can originate a multivocal interpretation of the studies’ phenomena.

The analysed data allows unpicking the commonalities in perceptions and understandings about the change processes; what becomes salient because it is shared. The intention is not to generalize but to unpick what becomes salient because it is shared. The identification of shared saliencies is then open to debate about meaning and allows dialogues with other contexts, contributing to awareness raising about the development of praxis.

REFERENCES


Formosinho, J. (2011)


\(^{16}\) Since the middle 1990s, in the ambit of health studies, this is a central focus for projects development. In 1998, in England, Cochrane Foundation established the Qualitative Research Methods Working Group. In the USA, the University of North Carolina, Chapel Hill School of Nursing, created the Qualitative Meta-synthesis Project.


