

EDITORIAL

Pedagogical research between old and new challenges

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The pedagogical research is characterized today by several questions that are connected to its inner status, in the relationship among the different disciplinary areas of the educational polyedric complex system in Italy, and in relation with other fields that, today like in the past, interact in different ways with education and training.

Thus, we see “old” and “new” challenges that require at least a deeper awareness by Italian pedagogists and the need to rethink the scientific and procedural models applied till now in order to satisfy the requirements of the research’s evaluation and “quality” in our country, taking into account the due international openness to Europe and the world.

Considering disciplinary intertwining, ambiguity and continuous uncertainty that characterize, still today, the national pedagogical context, two interrelated specific “issues” need a responsibility assumption and a prospective vision that cannot be postponed.

We refer to the topics of “interdisciplinarity” and of the “research methodologies” to be adopted in both the diagnostic-investigative and prognostic-orientative (or “therapeutic”) work in the educational/pedagogical sector.

Interdisciplinarity is not rarely confused with a mere juxtaposition and “acritical” connection of investigation’s models without being theoretically or meta-theoretically mediated in the construction of a “new” reference pattern able to include them. Also they are confused with connection among hermeneutics that, beyond the “linguistic similarity” bring, instead, to meanings and teleological horizons that were always different for more than one aspect.

Interdisciplinarity is, moreover, a still open and never solved “problem” in the pedagogical field, both in reference to its “specific” epistemological definition and to the “translation” of contents and “languages” in which pedagogists are continuously involved with an approach that could not be

different from the polysemic and polysystemic one, typical of the bi-millennial “history” of the discipline.

When a pedagogist uses a word or a concept taken from other disciplinary contents he tries, in fact, to translate them in order to adapt them to his/her own finality: the way to make human what “human wasn’t” and still “is not”.

As always in such a “work”, the pedagogist also makes countless mistakes and creates misunderstandings – we are aware that misunderstandings are a worry for the translator, but also, and mainly, they are the final result of any translation.

A translation, in fact, is not simply a reproduction of certain contents in a different code, but is also an expansion of the meanings in the language they were originally transmitted. This is to say that the ambiguity of the translation is due to the fact that what has been translated acquires a richer connotation since it loses its boundaries and it becomes not univocal. When, for example, a bio-psychological phrase like “evolutive age” is translated into the language of pedagogy, this translation needs that the focus is not only on the biological and neuropsychic development, but if we can say that, is on his/her spiritual growth. It’s like saying that in this translation the pedagogist is not just worried about the phases of the evolutive process, but also needs to identify the target of such a process.

Interdisciplinarity, thus, is not even the “mixing” of the results of different disciplines, but the previous properly justified construction of a legitimate and innovative reference framework able to receive results and products such as new units of analysis to be submitted to continuous validations.

A different issue is the one related to the research methodologies to be adopted. The objective is to validate the theoretical framework with further deductions of synthesis and prospects highlighting the scientific and argumentative aporias of the existing literature on the logical-formal dimension, and identifying original research hypothesis, starting from the proposal of others, and different “conceptual connections”.

This is for example the so called “base research” also defined pure or fundamental, whose primary objective is the development of knowledge and the theoretical comprehension of the relations among different variables in a specific “research process”.

The approach, in this case, is “critical-historiographical” and the research is, anyway, “explorative”, and it can be run without a specific planned “prac-

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tical aim”, even if its results may have unexpected applicative returns. The word “base”, through the creation of new theories, offer the “basis” for further researches characterized by applicative results in medium-long term, or that kind of research is able to use the theoretical knowledge already acquired for practical aims.

This is the so called “applicative research” that is characterized by an empirical and/or experimental approach.

The boundary between basic research and applicative research can often be not so clear and appear more indefinite, and it may depend on the supposed time interval needed to the research itself before reaching specific applicative returns.

Applicative research, anyway, “uses”, in its proceedings, at least five different investigation models, or approaches, differently interrelated: empirical-quantitative, qualitative-phenomenological, quantitative-“mixed”, experimental and empirical-experimental.

This is the overall meaning of the present issue of “Education Sciences & Society”, titled: *Quando la ricerca pedagogica incontra altri territori - When Education Research meet other Topics*, and the meaning of this *Editorial*, jointly signed by Simone Capellini, Professor of the Department of Speech, Language and Hearing therapy and the Graduate Program in Education and Speech (São Paulo State University “Júlio de Mesquita Filho, Brazil), whom I warmly thank.

Before addressing the topics of the single contributions we would like to offer a further overall “explanation” of the present journal issue that had the aim to explore some “border fields” that are located between the pedagogical area – or Education – and other disciplines such as, for example, Biology, Information Engineering, Ecology, Medicine, Neurolinguistics, Economy, Ethics, etc. Pedagogists are present in all those fields – mainly in Europe and in the world rather than in Italy – whose value has not only been the contribution to the improvement of the educational models, but to have fostered the epistemological reflection in those different scientific fields.

Experts in those disciplines (e.g. Gero) have underlined that this “positive” result may have been connected to the typical “posture” of the educational world characterized by a multi-prospective approach.

This issue, thus, satisfies a double motivation.

On one side, in fact, “interdisciplinary” researches introduce a relevant epistemological problem since they seem not to be tied to a “specific” sci-

entific area, but they are more and more often located in unclear positions. For this reason the “analysis in action” is a central issue for them: a heterogeneous work where different competences are interwoven and that require the creation of paths characterized by multiple contributions.

A first “investigation’s aim” is to identify models and operational modalities useful for “researching” in such territories keeping, at the same time, the due inner consistency and adopting the proper methodologies.

Two consequent reflections are the following.

Firstly, no researcher is able to manage the different methodologies in a border “zone” among different disciplines: to be a “polyglot”, as Avanzini would state. Researchers, in fact, can find the validation of their own hypothesis and “investigation” in their epistemology.

But, there’s a need to “study” *at the same time* the same complex weaves within a “group” or “équipe” with experts in other fields in order to develop analogies that can create further developments.

The articles in this issue present arguments around those two specific questions: how to solve the ambiguity of the research in border fields and, at the same time, how to “use” methodologies of different scientific contexts.

The interdisciplinary research is also characterized by a deeper and more complex issue.

The need, in fact, of this specific prospective and investigation approach, that comes from the complexity itself of the reality and that is connected to the culture of our time, is the origin of a problem that is not only epistemological (what research method must be adopted), but also ontological, and that covers the model itself of the perspective used to set the research. This need requires a reflection on the relation (still ambiguous) between body as object (*Körper*) and living body (*Leib*) (following Merleau Ponty) when the topics of the human sciences are analysed. Also, there’s a need to reflect on the dualism of the technological artefacts that are, at the same time produced and producer of pure way of being, when the research is related to engineering field.

Interdisciplinarity is to be meant as a new “challenge”: to identify not only more and more appropriate research methodologies, but also to develop new modelling of the reality.

This is a “question” that brings us to another intriguing challenge for the educational field: what is the role of Pedagogy in this perspective? Is it just a “case”, in fact, that in many interdisciplinary researches the educational

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and training dimensions are present in the analysis and in the proposals? This does not merely apply the educational methods, but goes far beyond; it accompanies the whole reflection inside the other related discipline, and seizes, rather, how it is changing, as to understand how equally, in the same complex reality, even the identities of the various sciences get altered.

We propose contributions in the present issue that follow a “logical sequence” from the “general” to the “specific”.

The starting paper is *Interdisciplinarity: Rhetoric or the latest promising new Field?* by Laura Fedeli (PhD, University of Macerata, and currently research fellow) and Pier Giuseppe Rossi (Full Professor of General Didactics in the same University), where the concept of *interdisciplinarity* is addressed in its semantics in order to “overcome” the simple and obvious rhetoric connotations hidden in this word and reach, instead, a new concept of interdisciplinarity that focuses, for example, on the role of *codisciplinarity* with the aim of underlining the existing disciplinary synergies around a specific object of investigation.

Following we have the contribution by Gregory Sandstrom, *Higher Education and Science for Development: the historical and conceptual Foundations of Mode 3 Knowledge*, that connects to the scenario already defined in the essay: “*The new Production of Knowledge*” (Gibbons et al., 1994), in which the author discusses the traditional way of knowledge construction (*Mode1*), typical of the classical scientific research. He, then, debates over a new modality, called *Mode2*, highlighting its interactive aspect and the socially oriented dimension of the research. But, the reflection made by the author also goes beyond this vision proposing *Mode3*, whose state of the art is presented from a theoretical, methodological and practical viewpoint – and that is currently at the centre of a relevant interdisciplinary research and also used for different aims. The author offers a rich international and interdisciplinary overview on the topic deepening this “emerging” perspective both in the *philosophy of knowledge*, in the *higher education*, and in the *management* field.

Roberto Trincherò (Associate Professor of Experimental Pedagogy at the University of Turin) is the author of *Five Research Principles to overcome the Dualism quantitative-qualitative* in which he analyses the issue of the division or interdependence between *qualitative and quantitative research methods* and proposes five research principles useful to avoid a too firm “distinction” between the two approaches, specifically in the educational research. The principles are: a) the research planning, b) the statement of

the theoretical “lens” with which the researcher “see” (or interpret) his/her own “object”, c) the design and documentation of the research plan, d) the analysis of the collected data, e) the expansion of the results of the research.

The paper by Catia Giaconi (Researcher in Special Needs Education at the University of Macerata), Sergio Labate (Researcher in Theoretical Philosophy at the same University), and Pier Giuseppe Rossi titled *La relazione tra Leib-Körper nell’analisi dell’azione didattica - The Leib-Körper relationship in the analysis of the teaching action* is a methodological contribution characterized by an interdisciplinary approach even in its creation process. The authors, in fact, address the topic in relation to the didactical action experimenting their different processes and methodologies in order to study first, in a separate way, *Leib* (living body) and *Körper* (body as object) and, thus, they succeed, with a strong and convincing interdisciplinary rationale, in making the two perspectives interact.

The last five contributions report researches run in border fields between Pedagogy and other areas.

The first is authored by Valerio Ferro Allodola (Research Fellow at the University of Florence): *Metodi di ricerca qualitativa in Medical Education: approcci, strumenti e considerazioni di rigore scientifico - Qualitative Research Methods in Medical Education: Approaches, Tools and Considerations of Scientific Rigor*. The author analyses the topic of *Medical Education* with a specific reference to the methodological aspect. He focuses on the qualitative research methodology in the interdisciplinary field of Medicine and Education. After presenting a collection of existing approaches and tools, the papers concludes with a significant remark on the fundamental issues of *reliability* and *validity of interdisciplinary researches*.

Two articles, framed on a pedagogical-educational perspective, focus on “environment and consumption”. Sara Bornatici (PhD at Catholic University of the Sacred Heart of Milan) is the author of the contribution: *Reviewing Consumption Patterns: an educational Commitment* – in which the consumption models are presented with an educational perspective, and concepts such as social *responsibility* and *sustainability of marketing practices* are analysed. Starting from interdisciplinarity the authors “highlight” new and possible consumptions focused on social, ethical and ecological aspects that aim at appraising the concept of intra- and intergenerational justice. While the second contribution by Simona Sandrini (Research Student in Agrisystem at Catholic University of the Sacred Heart of Milan) and

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Emanuele Cabini (Research Student in Occupational, Environmental and Social Medicine in the same University) is titled *Multi-subject training for a sustainable farming and Food System*, and develops the topic of *interdisciplinarity for a sustainable farming and food system*, strengthening the “heart” of the relation between Medicine, Food Science, Economic Engineering, Urbanistic and Agricultural Sciences considering the field of *Environmental Pedagogy*. The objective of such synergy is to encourage the continuous contribution of the single epistemologies, guaranteeing the consistency of the research on the heuristic sustainability, cooperation and management for the survival and prosperity of the human being.

The *Pedagogical Lexicon* and the *Bibliography Section*, that conclude the issue, were written by Silvia Biondi (PhD at the University of Macerata); the pedagogical lexicon focuses on the concepts of *interdisciplinarity, qualitative research and quantitative research* and is supported by a specific and rich bibliography.