



EDITORIALE / EDITORIAL

Scienza dell'insegnamento, formazione
e competenze metodologiche degli insegnanti
e dei formatori: dalla progettazione alla valutazione

Science of teaching, training
and methodological skills of teachers and trainers:
from design to evaluation

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“The whole of science is nothing more than a refinement of everyday thinking”
Albert Einstein (1950, p. 98)

This issue dedicated to methodological skills such as basic elements of the identity and the professionalism of teachers and trainers and quo terms for the development of “professional competence” and of learning to teach, can be considered a coherent repertoire of contributions, starting from introductory Essay “To promote and support the methodological skills of teachers and trainers for successful teaching and the quality of education”, offering the reader a path of reconstruction of the “methodological issue” below to the professionalism of those working in education and training, from which emanates a clamour in which elevated tone does not correspond to a real commitment of understanding it and an adequate preparation of the professionals. To an analysis of the literature, from which spring suggestions, recommendations and proposals, it would appear that no other professional competence is possible without there being the methodological and pedagogical qualification both in relation to the quality of teaching and learning ability. In other words it seems that no teacher and trainer are devoid of methodological competence or that all they actually need to become professional “experts”. In reality to teach in a formal situation is very different from doing it in an informal one, as in the first case it primarily means to intentionally promote learning relying on a set of adequate professional skills without which it does not seem possible to talk about quality of education and training and construction and transformation of knowledge; in the second case it deals with teaching something to someone having only experience, as happens every day when trying to take care of someone or explain to those who have to learn how to make a cake, how to brush teeth etc., without having the systematic acquisition aim of cognitive repertoires. The question arises as to why the dynamics of accretion repertoire of methodological skills in the training of teachers and trainers generally tend to block. A first answer is related to the fact that this happens when there is less functionality between learning of professional competence and the need for methodological skills. A second answer relates to the use that you can do of the “science of teaching”, which is the scientific background of the proper manifestation of the character exercised by the action of teaching that aims to acquire skills and knowledge to recipients. A third answer is in keeping with the scarce relationship between teaching and education research, which sees

the issue focused on the role taken on by educational research in creating innovation and the difficulties encountered by policy makers to use its results, as well as on appreciation by students going to be future teachers and teachers in-service of a sort of “prescriptivism pedagogical” that seems to put them in protection (a safe harbour) from uncertainty moving them away from the knowledge of research topics and methodological problems of the science of education. From this derives the scarce interest towards a direct research of effectiveness and the problems affecting everyday teaching, rarely addressed and resolved. It also follows that the prospects of a solid methodological preparation of teachers and trainers are significantly reduced as well as the considerations, from this point of view, with regard to the nature of the role and professional profile. It is not to be forgotten that the quality of higher education requires constant support to equip the teachers with skills, enabling them to meet the challenges of teaching and learning to read them and respond. In fact, there exists an undeniable relationship between the development of methodological skills and the construction of professional competence, as well as between methodological skills and educational success, even though it is equally certain that the needs of training in terms of “methodology” have today taken the shape of ideology, confirming the ability of the training to adequately prepare teachers and trainers in an educational sense by providing the cultural and instrumental equipment necessary to share interpretations and resolve complex problems. Methodological skills can therefore, in essence, be said to be central as they encourage the acquisition of that “thinking and pedagogical habitus” indispensable to imagine the transformations from which we should expect complying arrangements with quality aspirations and the ability to provide and strengthen the skills, knowledge and other benefits. The training constitutes an important junction for a teacher, because the working conditions and demands from society are constantly changing, and a strong preparation on technical and methodological level appears to be an indispensable way to be able to meet the training demand and the needs of the society. However at the centre of any discussion on the training of teachers / trainers there is always the age-old problem of the relationship between theory and practice and their necessary integration. Most of the studies debated the role that one or the other take-up on the level of the training. It is difficult to make the point of the situation in this sense, but it is obvious, however, that the practice itself (whatever the nature and the amount accumulated over time) does not provide in itself a sufficient basis to acquire the knowledge and skills needed to be able to deal with situations everyday in the classroom; it is equally certain, however, that placing the emphasis exclusively on the theory itself cannot produce an effective, critical and reflective teacher. This aspect on the methodological skills level is not only problematic but becomes even mystifying at the level of initial training of teachers and trainers, because the problem lies in choosing the approaches and models used in relation to the results, requiring, in this sense, the use of decisions, strategies, preferences and so on, knowingly and intentionally used and explicit in respect to conceptions concerning the theory / practice relation. We must therefore shift the focus of the debate on technical / pedagogical issues, on knowledge and skills to implement effective strategies of “training to teaching”, otherwise the vast majority of trainers-teachers will tend to ignore or even deny this. Some of the key objectives of training with regard to build and upgrade the professional skills that serve to prepare teachers and trainers to conduct new roles, to provide them with regard to the emerging knowledge and skills to curricular changes, make them aware of critical areas, to overcome the gaps and deficiencies of pre-service training and in-service etc., are all relevant aspects of the context of education. In this light, the contributions that follow in this issue, unanimously show how such training is attributable, directly or indirectly, to the skills and methodology knowledge which requires, in the most general sense, a process of clarification and conceptualization, especially the “properties” of specific domains such as the structural area, the communication of *educational* design, and of the *evaluation* and *assessment* and social order to allow the practitioner to act intentionally and rationally in contexts and learning situations, using approaches, methods, techniques, tools etc. appropriately. In order to develop cultural proposals and effective interventions, supported by models, principles, concepts and theories that are at the basis of teaching actions, it appears urgent therefore to focus on the character who takes on the training in terms of

methodological skills, the type of education search that is being developed in this regard and the experiences that are taking place in many areas, build, upgrade, improve these skills means increasing in its entirety the cultural and professional profile of those working in education and training, as well as in education and awareness of critical areas, variety and variability of education and training. So it is not only important to prepare teachers and trainers, but it is crucial to do so in consideration of the production of results of learning outcomes through methodological training. For this reason one of the ways is to think that there might be in research, especially empirical, an interest in exploring the teaching and learning processes in terms of qualifying skills and building mechanisms of professional competence, understood as the wide range of skills, knowledge, attitudes, postures and habitus, necessary to work effectively in a certain field of education and training. In this issue, insights from the composite character that accompany the methodological knowledge, the issues concerning the lexicon from teaching and from educational research, are becoming apparent. The contributions range from the analysis of the literature on the experiences, the insights, quite numerous and such as to provide an interpretative key and provide an insight into the culture of teaching and training.

The aim of this issue is to provide readers with an interpretive key starting from the idea that the methodological skills are the starting point and port of the variety of cultural experiences regarding the teaching, learning and training. With the establishment of a consolidated knowledge system around teaching and training, determined by the most ascertained scientific evidence, new scenarios open that lead to the birth of a contemporary educational thought that sees at the centre of debate the methodology, which domain that helps to follow the order in the educational knowledge, which allows rational capacity to re-take the different teaching and learning degrees, that is, ways of knowing. This idea of the methodology as a foundational structure of “the system of didactic action” of the teacher and trainer and as a prime factor for an effective training program and logical concatenation of learning, is the highest point of the professionalism and the construction of its identity, which circumscribes the field of teacher professionalism and the order of phenomena and which it regards abandoning other positions. The trainer and the teacher with their own projects tend to build an order aimed at learning of which demonstration must be given and that satisfies the drive to recover the quality. If the teaching-learning processes are tailored to the capacity of recipients of the training it is because teachers and trainers are able to integrate that which is in them is expressed through the use of peculiar strong skills that have indeed methodological ones. In other words, it appears very difficult to believe that these processes occur in congruence with the objectives to be acquired if you are not able to fill professional implicitly contained therein. The mediators in these processes qualify with the methodological contribution that teachers and trainers have to make explicit the elements of the didactic action system, which is responsible for conducting formulate concepts, giving a coherent and homogeneous vision, because they are the summary of many elements of the knowledge that these concepts are connected or constitute the basis. It derives that the “methodological issue” has its own characteristics, which differ substantially the skills referred to it whether it is necessary to carry out the teaching-learning processes with respect to the mode of organization of didactic messages, one that differentiates it from other kinds of expertise, which oversees precisely the elements that would need to be explained in the professionalism.

Starting then, from precisely taking on adequate methodological skills, of which broader aspects we find represented in this issue, some of the main issues addressed by the contributors range from Section *Voices across the border*, where are the essays by **Pawel Trzos** and **Ewa Parkita**, which focus on methodological aspects of music education at an early age, **Lan Li**, **Xiongyi Liu**, **Savilla Banister**, who offer an integrated approach to facilitate the formation of methodological skills in a teacher training program, to include the contribution by **Diane Leduc**, that addresses the issues of observation and results in higher education contexts with newly recruited professors.

This first section follows the *Section Studies*, in which the different contributions pass to address a number of important issues such as the current entrepreneurial workshop for the training of teachers to entrepreneurship directed by **Daniele Morselli**, the analysis of the methodological skills from the point of view of the needs and didactic action of **Franco Bochicchio**, to the emerging challenges in “frontier” contexts as the juvenile penal institutions of **Marco Brancucci**, the development of capability contexts in-service in teacher training addressing, in particular, the look at phenomena such cooperation, agency, empowerment of **Piergiuseppe Ellerani**, to include issues pertaining to the sphere of emotional awareness of **Felice Corona**, **Filomena Agrillo**, **Tonia De Giuseppe**), and then finish the section with one of the key methodological skills, the project within an advanced interpretation of **Laura Agrati**.

In the *Research Section* they range from a research focused on the impact that has the form of a group of teachers in Italian Universities (**Monica Fedeli**, **Edward W. Taylor**) to a survey on the digital skills of lecturers of **Stefania Nirchi**, to the professional awareness of the teacher who sees resilience and self-regulation at the centre of the educational process by **Alessandra La Marca** and **Leonarda Longo** to the experiences of the teaching management regarding the Internship training Assets (TFA) by **Antonio Cartelli**, to the *assessment for learning* skills in the representations of the assessment and evaluation practices in teachers by **Laura Bellomo** to the professional vision and video-filming of teaching actions by **Maurizio Gentile** and **Giuseppe Tacconi**, to the analysis of the centres of teaching of practices and theories of the didactic by **Giancarlo Gola**) to individual factors, perception of disability and didactic strategies of inclusive teacher by **Anna Maria Murdaca**, **Patrizia Oliva** and **Patricia Panarello**, to the development of teaching skills in new employees in small schools by **Giuseppina Rita Mangione**, **Elena Mosa** and **Maria Chiara Pettenati**, up to closing with the specific aspects regarding digital behaviour of the teachers of the secondary school by **Samuele Calzone** and **Claudia Chellini**.

In the *Experiences and Perspectives Section* which opens with the contribution of **Silvana Calaprice** on the skills of the educator and the scholastic pedagogue, currently to the attention of the Italian pedagogue community, follow that: on the methodological skills and professional development of nursery and primary school teachers focused on an in-service training experience in the context of Salerno by **Rosanna Tamaro**, **Marika Calenda** and **Concetta Ferrantino**, on moments of distance learning for professional development of teachers from the point of view of CLIL and Technology in a Learning Event of eTwinning by **Letizia Cinganotto**, on the activities of knowing, observing and of teaching cognitive skills from the perspective of didactic disciplinary by **Cristina Vedovelli**, on an effective andragogy in-training dimension by **Barbara Todini**, **Carla Simeoni**, **Viviana Rinaldi**, on experiences of reflection on didactic practice in the laboratory of the tutors of Science of Primary Training by **Giuseppa Cappuccio**, on the possibilities of the training of teachers in a hermeneutical-existential didactic to strengthen the profile of the teacher by **Cristina Carnevale**, on the specificity of holistic skills and disciplinary by **Riccardo Mancini**, on the relationship between epistemology and experience new perspectives and professional competence areas by **Giorgio Poletti** and **Anita Gramigna**, on the new skills and training needs as the opportunities offered by the Think Aloud of **Stefania Carioli** and on the relationship between *methodological skills and intercultural skills* by **Carmen Tanzella**.

The *Section Reflection of context* closes the issue with two contributions on education context between integration and democracy by **Stefano Salmeri** and intercultural education as a “Global Education” by **Patrizia Panarello**.

In the numbers of the contributions the issue carries with it a meaningful way of looking at teaching and education emphasizing the essentiality of the content and practices of pedagogy sensitive to the culture of methodological expertise, dear both in initial teacher training and in service to all levels of education and training until reaching, building a con-

ceptual bridge, with all the experience including in-house training. When speaking here of experienced teachers and trainers and adequately trained it is mostly intended therefore with professional competence at different levels. The effectiveness of the training of teachers and trainers also covers transfer challenges of their knowledge and skills within the classroom contexts. But we cannot talk about training of teachers / trainers or education as well as education, without adequately reading the conditions of teacher training. This is always a date present in this issue. The training and professional development of teachers foresees a continuous upgrading of knowledge and skills that last a life and teaching that involves a commitment to programs and training practices of teachers who require a shift of focus from what teachers know and they believe in what teachers do. This aspect moves several problems related to the knowledge of the transmission, which depends on the transfer of knowledge and skills from teacher training in context in order to improve teaching. This does not mean that knowledge and beliefs have no value, but rather that knowledge and beliefs act as a substrate for practicing behaviours and taking positive professional attitudes. A working knowledge generates tasks and involves professionals in practice. But, a curriculum focused on learning teaching, must include significant attention not only to methodological skills, but also their application in relation to real tasks and to specific activities. In conclusion, the initial training and in-service of teachers and trainers is advancing, precisely from the point of view of the methodological training, many obstacles, many of which now seem urgent; while efforts still seem to appear insufficient especially regarding a situation of high level complexity, and when the teaching regards highly specialized figures, such as the university. This complexity is very clear to the attentive reader when reading several essays, that through the need for an experienced professional without ever being able to suppress the elements that make understanding demanding. It is therefore evident that the methodological skills must be described accurately and specifically built, because in building, you build the expertise of those who teach and those who shape. They are situated well at the heart of professionalism and discourse, meta-discourse and of pedagogic action especially when they emphasize the artificial character and intentional teaching, namely the need that it is the result of a project formulated explicitly and consciously created. Without claiming to be exhaustive, to take a look and a critical distance on the positioning of methodological skills in teaching and training, the issue puts the eyes on the most advanced pedagogical debate and offering an overview of the multiplicity of meanings and roles that such genres take on in different contexts and environments. The first content serves as a critical container and has an introductory and theoretical nature that with the remaining contributions are due within a conceptual circularity that focuses on the background and the evolution of the “methodology” as a factor of propulsive innovation, even when, to build a solid education, it takes into account shifts and differences, perspectives and integrations. From the first to the last Section the authors trace a path that runs through the meanings and multiple roles assumed by methodological skills, that recall shades, variations, contexts and sense, also in terms of their semantic differential, showing the commitment, the need and urgency that leads us today to deal with the “methodological issue” to bring to life the pedagogical professionalism. Shy away from the desire semantic clarification to give way to a new parody that leaves inventive arbitrariness is certainly not effective nor wise. If, then, in the first section of the three contributions by foreign authors offer a glimpse of the debate that takes place across borders, helping us to frame the debate at the international level, the last two represent the frames and the fundamental topos of a changing educational world.

The final purpose of this issue was therefore to provide proof of the meaning and nature of the role played by methodological skills to different degrees and levels of education and training. It applied an interpretative approach to the methodological skills by going through the relationship between research / training / teaching, trying to clarify the meanings assumed by the methodological and technical skills as a cultural phenomenon suggested by the most advanced pedagogical literature, in order to demonstrate how these skills constitute the key of time of the above mentioned to that of such a triangulation. Here, then, the operation relating to conceptualizing methodological skills can be represented, compared and discussed using a language through which the pedagogical field, graphically represented by a

triangle, supports and clarifies various relationships and meanings of discourse and meta-speech of teaching sciences. It allows in particular to portray the sense of the collective knowledge of the broad spectrum of knowledge and methodological skills necessary for professionals in the pedagogical area, suggesting a meeting between science, research and teaching able to positively influence the “DIY training” prevalent in the nature of methodological skills and remove the obstacles that interfere with the full emergence of the science of education. The creation of a methodological skills theory as a distinctive teaching science and the science of education serves as a meta-language for the teaching of a science of teaching, just as the methodology of science is meta-language of science. In addition to its heuristic importance, this meta-language would facilitate in training professionals to build scientific education pedagogy. Science is distinguished by its methodological character and its purpose, as stated by Einstein, of “to make the chaotic diversity of our sense-experience correspond to a logically uniform system of thought” (1950, p. 98). In this sense, the methodological skills contribute to accumulate and systematize learning in general and help to use empirical observations to obtain results in the formation of the relationship and constant feeding of the intersection between science, concepts, theories and experience, which are subject to continuous modifications “in relation to and in the light of” further empirical observations. The body of knowledge and methodological skills live within teaching and training in a constant process of acquiring knowledge and its continuous refining. It becomes the means of a continuous pursuit of knowledge in training, taking on a broader connotation as possible so as to indicate the nature of the pedagogical knowledge. Based on what was said these kinds of competence stimulate a study of the phenomena of teaching and training from within and externally calling on to a togetherness organized and systematized both by teaching and learning.

Einstein, A. (1950). *Out of my later years*. New York: Philosophical Library.

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