

## THE “OBSERVATION” IN TEACHING/EDUCATIONAL CONTEST

Rosanna Tamarro<sup>1</sup>, Vincenza Merlino<sup>2</sup>

<sup>1,2</sup>University of Salerno – Italy

<sup>1</sup>rtamarro@unisa.it, <sup>2</sup>zeniamerlino@libero.it

**Abstract** The aim of the paper is to discuss on the importance of the “observation” within the teaching/educational contest. The “observation”, borrowed from the experimental science, represents an integral part of the action of the teachers/educators, being one of the milestone of the professionalism of the people working in the educational field. Starting from the general definition of “observation” the features of its relevant reference elements, such as typologies, technics, instruments and paradigms, were outlined. Within the teaching/educational procedure the peculiarity and criticality concerning to the use of the “observation” were discussed, as well as the key results, able to improve, by means of the “Observation”, the teaching/learning process were highlighted. In conclusion the use of the “observation” as instrument to reduce the gap between theory and experience in order to create a virtuous network between experience and research is strongly recommended.

**Key words:** Observation, Observation research methodology, Educational context.

### INTRODUCTION

The term “observation” indicates the ascertainment or the verification of a fact, either of an occasional nature or of a methodic or planned nature (N. Abbagnano, Dizionario di Filosofia, p.788).

If we refer to former meaning, we have to oppose to the observation the experience or the experience or the experiment, as a methodic and deliberated ascertainment. On the contrary, if to observation is attributed the latter meaning, we must oppose to it the occasional or common, or ingenuous experience, and the contemporary scientific thought usually adopts exactly this meaning.

Assuming that the ascertainment of any fact, or spontaneous and natural, or methodical and projected, implies any procedure which makes its knowledge possible, through the description, the calculation, or its controllable prevision, and assuming that we can mean any object as a fact, a phenomenon, a real thing, which can undergo any cognitive procedure (“Conoscenza”, Abbagnano, *ivi*, p. 192), the observation can be conceived as one of these procedures, whose specific function is therefore to catch information on the considered fact, to describe its characteristics with the aim to know and comprehend it. Therefore, under the term, it is possible to comprehend both the meanings and distinguish: the natural observation, that is the one in which the conditions of the observation are not projected or able to be projected, and the experimental observation (or experiment) which is the projected observation, characterized by the variables.

In this second kind of observation, one can act on the independent variable and examine the behavioral correspondent of the dependent variable, that is connected variable.

As a consequence, the observation, if opposed to the methodical approach, a characteristic specific species of experimental research (study), can be defined a cognitive procedure directed to the only collection of data concerning the observed object and emerging from the observation, on the basis of the information collected by the object taken into consideration.

In this sense, the utilization of observation aims to describe the characteristics of an event, a behavior or a situation, in real life contexts (natural environment) and not artificially arranged.

On the contrary, if the observation has methodic and projected, systematic nature, it aims to get to know about it, to predictably modify it.

In these terms, the observation is backed up by scientific theories as reference paradigms on the basis of which the data collected by it are to be interpreted, insofar as it selects deliberately both the elaboration and the interpretation of the collected data.

In these terms, the observation can be defined as an instrument by which one can exert a function of knowledge and control towards the observed object, the purpose to intervene specifically for changing one more conditions surrounding the object in question, and assuming the peculiarity of the observative, systematic research (Magri, Rossi, 1998, p. 73).

As a consequence, the peculiar elements of observation can be defined the finality and the deliberatedness.

Whoever observes a fact, clearly knows the objective of the cognitive activity intrinsic of the observation, which is its finality, and is also aware of the intentionality which induces her/him to observe a fact, in relation to her/his particular interest, or curiosity or motivation. The intentionality, together with the necessity to understand the nature of the fact, and therefore put in relation with the finality, makes of the observation a cognitive technique directed to a fact, since it tends to construct with the fact itself a relation from which the effective characteristics emerge.

It is in these terms that the observation has been utilized in the field of experimental sciences. The experimental method, carried out by Galileo and Bacon, defined inductive method, starts or with the occasional observation (in the case of Fleming, for example, and the Penicillin) or with the systematic and programmatic observation (as in the medicine experimentation). Once the facts have been observed (physical, chemical, biologic etc. facts, occasionally or systematically observed), an interpretative hypothesis proceeds (II step). Then, the interpretative hypothesis is experimentally applied (experimental verification, (III step), in order to verify the result.

If it proves the hypothesis, one can affirm that the natural law governing the phenomenon has been “caught”.

In the field of experimental sciences, according to this procedure, the scientific procedure is therefore conceived as the reconstruction in mathematical terms of the relations among the things, and through “the experiments”, as active instruments, it can go on, examining the natural phenomena, gaining answers to attain the mathematical laws which govern it (Abbagnano, Fornero, “protagonisti e testi della filosofia” vol. B, Tomo 1, 1999, p. 61).

The experimental method consists in the systematic manipulation by who experiments (the researcher) of one more variables (called independent variables) in order to study how the other variables, which could depend from them (the so-called dependent variables) are modified (Gattico, Mantovani, 1998, p.22).

In these terms, the observation, rising to method of systematic investigation as a basic element in the scientific research progress.

## DISCUSSION

The human sciences also utilize the experimental method, borrowed from experimental sciences and opportunely remodulated, in the field of educational research. It is articulated into some steps, described as follows:

- The observation;
- The formulation of the hypotheses;
- The experimentation;
- The elaboration of data and the interpretation.

Being the observation the initial step, it is a very complex phase since it also comprehends the previous works and other experimentations review, in order to find information which can help to solve the problem object of investigation and to prevent possible difficulties (Notti, 2012, p. 18).

The formulation of the hypotheses is the consequent phase, in which, established the work hypotheses, the plan of research is formulated.

The experiment concerns the operational of the research, and it provides proofs as well as the carrying out of investigation.

The elaboration of the data and the interpretation is the phase of the validation and the possibility to generalize the data verified by the research.

According to this procedure, in the field of the human sciences, the scientific knowledge as a knowledge of the facts and the means by which they have established themselves.

The experimentation in education analyzes the individual and environmental variables of the educational process in order to give information which allow the educational operators, to abandon improvisation and fortuitousness in favor of a behavior orientated to the research which, instead, has the objective to individuate, collect and analyze data, in order to verify hypotheses, on sound scientific bases (Notti, *ivi*, p. 11).

By this setting, the educational research has, in fact, individuated different approaches to the knowledge of the facts, traceable to two models:

- The subjectivist model, based on the examination of the case;
- The objective model, based on the objectives.

The former has an holistic approach in which subjects, actions, relations and contexts are examined as a whole, in an exploratory logic which comprehends contexts, inter-dependence system and dimensions of processes within which the centrality of the person and its behavior has the priority.

This model is defined “qualitative”, since it enhances the value of intuition, the capacity to catch, the peculiarities of a fact in the various situations and behaviours, founding its study on the educational situation, on experience, utilizing different methods for the analysis of a single case.

The second model, has a technological-scientific approach, by which, besides the methodological rigour, it bases its action on all operations which utilize methods and instruments allowing the measurement of the variables under control, and on a statistical treatment of data. In this sense, this model is defined “quantitative”.

Human sciences utilize both the models.

The former, as a form of qualitative expression, is used in descriptions, colloquies, in the ordinary pedagogical communication; the latter, as a form of quantitative expression, is used in psychotechnique in tests and school evaluation (Laeng, 1992, p.52).

Within these models, observation can be numbered among the investigation methods used in the qualitative research, and it is the initial moment of the experimental procedure, as previously put in evidence, by which one can get to know the phenomenon object of examination and individuate its specific variables.

In these terms, observation can be defined a method of investigation if it is:

- Used for precise purposes;
- Systematically programmed and with a delimited field of investigation;
- Systematically recorded;
- Put in relation with the oretic and/or interpretative schemes.

In these terms, in the field of human sciences the first examples of observational research applied to the study of human behavior and development, in the field relating to educational psychology we find, authors such as Darwin, Pestalozzi, Strumpell, Tiedermann, Tayne, Preyer.

These authors, interested in their children’ development, reported as in a diary, the changes in the growth of their children. These kinds of “infantile biographies”, have not a scientific nature because they are not objective, being the result of non-systematical observations, therefore they cannot be generalized. Nevertheless, they are important documents for the research development, since they meet the purpose of identification and conservation of the progressive acquisition relating to human development.

Some aspects of infantile development, individuated by Darwin, have been confirmed by experimental researches one hundred later, proved to be surprisingly topical and accurate.

Afterwards, notwithstanding the importance of this observational method was recognized, some authors, such as, for example, Anderson and Murchinson, got to keep their distance from it, in favour of the experimentation carried out in laboratory, of the measurement of the examined phenomena and of the utilization of standard instruments such as the tests.

Afterwards, and from the thirties to the fifties of the last century, the observational method loses importance, since, in the field of development psychology, some themes were abandoned as objects or research, as they were not subjectable to the experimental method. Binet, for example, thought that if a problem could not be dealt with the experimental method, it had to be left out because its study did not assure any certainty. With the support of comportamentist approach, the experimentation has been considered the principal methodology for the study of learning behavior, since it has been defined the only one capable of providing for certain, objective, quantifiable which can be generalized.

In this regard, Watson (1914), thought that for scientific psychology, the experimentation in laboratory were the only way to go.

Afterwards, also the cognitive approach reinforces experimental research so that the experimental project becomes the main method to study the changes taking place in the cognitive functions connected to the age.

The current of research based on observation even if has not completely worn out, remains marginal, therefore, for a long period of time, to the central themes discussed in the field of development.

These themes concern the development models and the studying methods and animate the theoretical debate. The criticism on the exclusive utilization of the experimental method affects the methods of study; after the fifties, this criticism, also given the dissatisfaction with research led in laboratory, attribute to result of laboratory experimentation, lacking of external validity and generalizableness, as well as artificiality.

Besides, criticism is supported by new theories about behavior (for example, the first generation cognitivism) which assert its intentionality and not simply its responsiveness to external stimula, which implies that the same

action can indicate different things as regard to different contexts, and it is possible to indicate the meaning of the behavior only in the context (Mantovani, 1988).

As regard to the behavior, many uncertainties cannot be dealt with, through an experimental research in which many variables, extremely relevant in the reality, for the explanation of human development, cannot be controlled. In order to explain the result of an experimental research, it is not possible to consider exclusively the experimental procedure, but even the interaction that it can have with the normal course of the development. Only a longitudinal approach, can indicate the characteristic of the individual development.

This approach is mainly used in the observational research, exactly in relation to the methodological and practical difficulties it implies (R. Trincherio-Appunti del corso di Pedagogia Sperimentale Facoltà di Scienze della Formazione, Università di Torino, 2001).

In this field, in fact, to carry out an observational procedure implies various phases, which arranged in a consequential accomplishment logic, going to the definition of the observation aims to their realization, recall different theoretical reference paradigms, specific techniques and methodologies various typologies, times, modalities, different observation instruments and degrees of structuration.

### TECHNIQUES, INSTRUMENTS AND PARADIGMS

Assuming that the choice of each of these parameters depends on the objective than one wants to achieve or the problem to face, we think it right to highlight the observer's role, her/his survey instruments, the main different paradigms and theories which she/he can refer to, the various observational methods and their peculiarities.

The observer must be neutral as regard to the observed object, in order to avoid waiting that can influence the data objectivity.

The observer must be capable to cut herself/himself off her/his subjectivity, to suspend her/his judgment in order to prevent his thought categories from affecting the analysis of the reality which is observed. The observer, moreover, must have a precise observational intention, to be observe the object more neutrally possible, in order to make it more objective possible. To attain this objectivity, the observer must utilize observation as an investigation method, and systematically, that is leading it following the three main conditions of the scientific method. They concern the communicability, relating to the precision that is indispensable to describe one's action in the course of research, to allow the other researchers to follow closely the steps taken; the repeatability correlated to communication, which concerns the possibility for other researchers, to attain the same result, in a equal research situation; and objectivity, which concerns the possibility to give an only and univocal meaning to the result achieved without subjective interpretations (Notti, 2012, p. 54).

Moreover, a different involvement level or a different participation to the observation, by the observer, originates two operative procedures generally defined "participating observation" and "not participating observation".

The participating observation implies an implicit sharing of a common table of reference within a kind of accordance is realized between the observer and the observed; therefore they both know that they are "object of observation", of a research. The participant observation implies an active observer's participation into the situation in progress, an interaction into the observed group and an interaction with the observed groups participating in their turn, in a dynamic, involving dimension.

The observer, as an active part in the life of the group, commits himself/herself in "seeing a behavioural activity from the point of view of who is within a situation" (Mc Burney, 2002, p. 16).

The non-participating observation, instead, implies an external observer's position, therefore he does not interact and does not influence the situational context.

In according Wright (1960), we can subdivide the system used in a research based on observation, into "open System" and "closed System".

The open systems are those which codify the data without pre-defining categories of analysis.

The closed system, on the contrary, use pre-defined categories of analysis.

We can include, in the open systems:

- The descriptive observation "on paper" based on the observer's ability to describe the complexity of her/his observation, in a narrative form, by detailed report of the events and their relation (P. Lucisano, 2012, p.181; M. Castoldi, 2012, p. 70).

- The "shadowing, or being beside (somebody) is an observative modality by means of which the observer acts as a shadow of the observed subject, side by side with her/him.

In her/him actions, within a stated period, making a note of his behavior (Castoldi, *ivi*, p.72).

- The “diary, a narrative and retrospective technique, consisting in the description, by means of the language habitually used, of one’s own and other’s activities.
- The “Journal” or “log-book” which, unlike the diary, is enriched with the observer’s further notes, in form of comments on factual data.
- The “technique of critical episode” (anecdotal record), which makes notes as rapidly as possible of the critical actions considered significant for the case in question. For example: audio and video recording, which allows a smaller loss of information and more complex analyses, given the possibility to listen, to see, or read again (if written) the observation, for distinguishing shades of meanings and details (Lucisano, *ivi*, p. 182).
- “Photos” or “slide”, which, as static images allow to observe non-verbal behaviours, such as the position and the posture.
- The “recording schedules” or “brief episodes”, aiming to point out a specific behavior in its habitual carrying out. This instrument the observation aims to the description of an event, avoiding evaluation or interpretations, which, anyway, can be additional information. These schedules are used when we cannot anticipate a precise list of behaviours or when we want to record freely what happens, and then elaborate observation grids.

The instruments relating to closed system are:

- The “observation grids”, a list of various aspects of a phenomenon, defined in operative terms. The observer has to take notes, by means of precise symbols as numbers, letters or defined signs, of the presence or absence of the phenomena-object of study, present in the list.
- The “check-list” are the most wide-spread observation-grids. For example, we can mention:
  - the “system” or “categories grids”, that is closed set of pre-defined categories relating to specific aspect of the behavior or the phenomenon object of observation;
  - the “rating scales”, which record or do not record not only or absence of the observed characteristic, but even to value its level.

In regard to the various observational theories which the researcher can refer to, as a theoretical, paradigmatic scheme, the most influential, for the research on human behavior and development, are:

the “ethological model”, the “psychoanalytical model”, centered on observation, the “clinical-experimental model, and the “ecological model.

According to the theory utilized, the observation will be defined ethological, psychoanalytical or almost experimental, clinical, ecological.

The ethological theory develops in the field of ethology, a science concerning the behavior or animals and its evolution.

Ethology, a naturalistic observational typology, implies an inductive observation aiming to point out the behavioral schemes both innate and genetically determined, which are characteristic of all the members of a determined species.

This theory, experimented and carried out by K. Lorenz and N. Tinbergen, was also to the human behavior analysis, with a special reference to the infantile behavior, and particularly used by the psychology of development.

In this field, the ethological observation provides for the study of the spontaneous behavior in habitual contexts of life without limits neither on the situation, nor on the response, without the utilization of instruments of survey, which can alter the spontaneous behavior.

As a consequence, the observer, using this kind of observation, must not interfere with the observed situation, but, rather, he must assume a non-participating, dissimulated observation.

If necessary, the observer, in fact, has to hide herself/himself, behind a one-way mirror or behind a screen which conceal her/him; if it is not possible, she-he must try to get into the environment in which she-he is interests. In this case, the observation starts only when the observer is aware to be ignored by subjects.

With this kind of observation, the description of the behaviours observed has to be carried out in the most precise and detailed way, without the conditioning of subjective interpretations. The final aim of this observation is the construction of the “etho-gram”, that is an inventory of all behavioural schemes, rigorously defined, which makes this kind of observation purely analytical (M. Postic; J.M. De Keetele, 1993).

The instruments utilized for this kind of observation are the dictation on recording equipment, the video-recording, the behaviours check-list.



The psychoanalytic model centered on observation, though arisen from the need to observe the mother-baby relation (infant-observation), provides a precious contribution also to the observation of relationships not belonging to the sphere of infancy. This model, even though it is founded on psychology, can be utilized in any context which includes an educational interaction. The accent is on the attention that the observer pays to the behavioural aspects and the situations, for the problem analyzed, towards the exterior but, above all, on the emotional reaction of the observer, toward the inside.

Since this observational method pays a lot of attention to the relational dynamics which take place in a stated context, also from the emotional point of view, the context also has a preeminent role. The observer, who is physically and emotionally present, must be careful about the repressed affectivity of the protagonists of the observed relation.

The psychoanalytical observation can be based on three fundamental principles:

- The great attention to every details; analysis and description of all details in the child's behavior;
- Observation of the context within which the behavior, object of the research, takes place;
- The research on genetic continuity, since behaviours are considered of human evolution (Mantovani, 1998, p.106).

The instruments mainly used for this kind of data reporting are supported by recording techniques of non-structured type, that is by descriptive reports drawn up after every observational session.

The Piaget's theory, on which the almost experimental observation is based, has been carried out by Piaget in his research on pre-verbal intelligence. It is defined almost-experimental for three reasons:

- Some specific hypotheses lead this theory;
- The leading of the theory takes place in conditions which are from time to time modified by the researcher, as it happens in the classical experiment;
- The observation on which it is based are detailed continuative, and systematic as a diary.

In this kind of observation, set up by Piaget's research on babies, the subject who is observed is maintained in an habitual situation within which the researcher introduces a modification, as naturally possible, to examine the reactions that it provokes on the subject, and therefore the observer not-only examines the spontaneous behavior but also the behavior modified by some alteration.

The aim is to obtain an overall analysis of the case, in order to point out the external reality and allow the emerging of the processes characteristics, which lie below the observed behaviours.

The clinical method is used to analyze the internal logic of the "case" under examination, which is considered an individualized situation, with a story of its own, and not a "subject" with his peculiarities.

The aim of this method is the comprehension of the reasons, of the behaviours and the peculiarities of the "case", through the correlation between the collection of information of various genre and of the data obtained from it (Postic; De Ketele, 1993).

The ecological- theory at the basis of ocologic observation, centres its analysis on the relation among the living organism, and these and their environment also known as human ecology or behavioural ecology, it deals, in psychology, with the relation between the functioning of psychic apparatus and the characteristics in which the behavior is observed (D'Odorico, 1990, p.77).

By the expression "ecological perspective", we are used to indicate the dynamic interactions which occur among the researcher, the subject and the context of the research. Barker (1951), was the first to illustrate its these, by concentrating on the study of the behavior in concrete situations, persuaded that, in order to know the principles which stimulate the human behavior it is necessary to investigate the real situations of human life.

As the ethological approach, the ecological one limits itself to observe and measure the behavior without manipulation or intervention favouring the observation in natural conditions.

As regard to the structuring degree of the observation, we refer to the structured (or systematic) observation with a low degree of structuration (or from experience).

The systematic observation has a precise objective defined "a-priori" and it is carried out on pre-designated subject, and it provides for the realization of a planned system of collection and classification of information, which, afterwards, allows the application of statistical techniques of analysis of the gathered data.

The data collected by means of this system are immediately annotated by the observer, which takes part in the situation, and catalogued, with the help of special grids, which allow to define behavioural categories analyzed in

their peculiarity. This observational method is used in the educational sphere to observe the effects of an educational proposal to verify the effectiveness of intervention, to test new didactic materials.

This type of observation falls under the competence of the classic experimental pedagogic current.

In this field, the researcher pays attention in defining accurately the variables involved in its object of study and to the construction of an observational device which makes use of a guarantee of repeatability for other researchers (Postic, De Ketele, 1993, p. 80)

.In order to be systematic, the following characteristics are requested:

- The pertinence, which represents the correlation degree between the behaviours that we want to observe and the objective of the research;
- The validity, corresponding to what we are really observing and what we want to observe;
- The variability, referred to the degree which the results obtained through the observation, can reconfirm, through other observers which utilize the same instruments, at the same moment and under the same conditions.;
- The transferability, referred to the degree in which the results can be generalized, transferred from a cultural context to another, (transcultural transferability), from an observational situation to another (trans-situational transferability) or from a period of time to another (trans temporal transferability) (Postic and De Ketele, 1993).

The experiential observation, instead, focuses on the analysis of the observed subjects' attitudes, perceptions and belief, giving preeminence to the behavioural experience. The observer's action is not orientated to record the events in the very moment in which they happen, but to get, subsequently, the needed information, by means of interviews, diaries, questionnaires.

The subjects involved in this kind of research, are aware of its purposes and collaborate (Magri, Rossi, 1998).

The observer, according to the collected materials, draws up a narrative description. The peculiarity of this observational method is that of the great amount of observational data can be subsequently used for opportune classification and codification.

This kind of observation, moreover, is utilized with exploratory purposes for the collection of information in the field, in order to define more precisely, the hypotheses for a more structured research plan.

The modality of observation can refer to instruments and procedures that the observer can use to distinguish the data he is interested in.

As we have already put into evidence. There are many techniques and related paradigms of reference, according to their starting objectives and their suitability.

The scheme proposed by Magri and Rossi puts into evidence the three constitutive of the observational procedure which form an unifying element characterizing the considered concept:

- The focalization, which concerns the circumscribing of the observed problem, making explicit what we know about it, and specifying what we cannot comprehend about it, in order to decide what are instruments to be used;
- The collection of the data, that is the phase which foresees the behaviours recording and their codification, their transcription and classification into wide units of analysis, in order to analyze and measure the characteristics, the frequency, the duration, the intensity of the phenomena under observation;
- The data analysis, both qualitative and quantitative. The former is utilizable when it is possible to measure, by means of special scales, the frequency, the intensity degrees or the duration with which stated events have been recorded; the latter is utilizable when one can infer on tries process by means of which the observer provides a meaning to collected data, through a subjective interpretation of categories of events or observed behaviours.

As regards to the "times" related to the observation, you need to establish "a-priori" the duration and the frequency of the observations.

According Mantovani (1995), for example, with reference to the parameter in question, you can put into evidence two types of sampling:

- The temporal sampling, defined as a method used when the observer wants to collect information related to the frequency of one or more behaviours. In this case, one can observe subjected to intermittent intervals and uniform duration, during which the observer tries all that she/he sees;
- The events sampling, which is used when the observer is orientated to catch the aspects concerning to the sequence and presentation modalities of a stated behavior (what happens first, after, how it is structured and the characteristic of its context).

## METHOD IN EDUCATIONAL CONTEXT

Coming to the peculiarity of the educational method, and referring to the above, as regards to observation, we want to reason about the observational method in the didactic-educational context giving answers to questions such as: who/what to observe, and why to observe, at school or in the classroom, specifying instruments and typologies of observation.

As regard to the object of observation, it depends from the purpose of the research; outlining the object, it is possible to focus only on that given object and to obtain the most important data (De Monte, 2008).

The observation field has to be defined, or through the open techniques for example diary description, or events descriptions, when the objective is wide, the attentions is at long-range, and the times of observation are long; or through closed techniques, for example the observation by times or events sampling, used when the observation concerns one aim, the research field is limited, as regards to the time of observation and pre-selection of what one wants to observe.

In the educational field, the objectives of the research concern fundamentally the phenomena which arise from the teaching-learning process, that refer to the development areas of the pupil, such as the relational, communicative, self-awareness, cognitive, affective areas, and the context of the process.

In this sense, observation must provide information on the environmental circumstances, on the verification of physical and psychic development, on the development of the ego, on the affective state evolution.

To define the context/observational field related to the school setting, we need to consider the variables which come into play.

According the pattern for, the teaching process proposed by Dunkin/Biddle(1974), these variables can be distinguished into context/variables, process/variables and product variables.

The first variables concern the physical characteristics of school setting, the formation experiences of the teacher, as well as her/his capacities and motivations as regards teaching; the general characteristics of the pupil.

The other variables concern the teacher's behavior in the class, her/his relation with the class; the behavior of the students in the classroom, their learning, their relation with the teacher and the schoolfellows; the various contextual relations pupils/pupils, teachers/teachers, teachers/pupils, and, finally, the teaching-learning path, and all its variables, such as objectives, methods, instruments, space organizing.

The product variables concern the learning, the attitude towards school, the pupils development of relational capacities, the teachers' professionalism modification.

In order to describe completely the peculiarities of the setting of the teaching-learning process, you need to examine not only the school/class environment, but even the setting-cultural connotations which characterize the school and which are to be considered for the elaboration of specific formative paths.

In this way, an observational profile sets up; in fact the construction of an observational profile implies, the physical description of a subject, her/his way of presenting herself/himself her/his affective tone; (smiling, wary, taciturn, talkative) the description of the context of life, which must point out the environmental factors that can influence the subject's behavior as well as the familiar educational context and the educational context.

As regard to the verification of the psychophysical development, the observation concerns:

- The physical factors; for example sleep and hunger, in order to collect data about the instincts regulation and body functions;
- The kind and the level of affective relation that the subject has attained, in order to collect data on the development of social relations;
- The way the subject enhances her/his value or denigrates herself/himself, her/his way to put all her/his energies and abilities, which make her/him more autonomous, in order to point out her/his levels of self-esteem;
- The presence or absence of aggressiveness, if it excessive or different, in order to as regards to the ascertainment of the development of the ego, the observation concerns:
- The memory the capacity of synthesis, the language, the regulation of one's own actions the reality exam, the motricity control, in order to collect data about the level of these abilities, which can be socially acceptable, or acceptable only for the fulfilment of the pupil's immediate need;
- On the capability to bring some tasks of daily life to an end, in order to point out the data concerning general autonomy;
- On the capacity of bringing news tasks to an end, or acquire new abilities, for the ascertainment of the data concerning specific autonomy;



- On the reactions carried out by the pupil in unpleasant situations caused by her/his inner drives or by environmental situations, or really menacing or perceived as threats, in order to point out data the modality of defense.

As regard to the evaluation of the affective states development, observation concerns:

- affection and emotion such as cheerfulness, sadness, fear, the situation which causes them, the intensity and the stimula which provoke them, in order to point out data concerning the relation between progressive and regressive tendencies.

As regards to the observer, in the specific case of the class setting, it is the teacher which plays the role of the observer. Assuming that she/he is adequately formed for the competences implied in this role, she/he must develop the principal competence of the subject, that is objectivity.

There is no doubt that the dichotomy objectivity/subjectivity of observations in school setting represents an important problem. In her/his observation, the teacher privileges the collection of data with a low degree of structuring.

In this sense, the teacher by using an observation of experiential kind, supported by survey techniques, prevalently manual, exposes herself/himself to the risk of an excessive personalization and individualization of observation modality. Nevertheless, it is right to remember that “only the collection of information with low degree of structure can aim to the comprehension of the collected information since: the scientific nature is not only the structure, but even strict intersubjective control of observational procedures; and this control, even if is more difficult through a less structured information, is all the same possible” (R. Trincherio, 2002) the choice of the involvement during the observation, follows up the characteristic of observation.

Assumed “ex-ante” the objective of observation, the teacher can decide consequently if she/he must assume the role of participating or non-participating observer.

If the objective of observation is that of comprehending the educational situation from a point of view internal to the teaching/learning process, she/he will be a participating observer. The focus of this kind of observation are the relations.

In the school setting, it is used to observe the dynamic-affective elements.

The teacher can make use of this kind of observation, in order to:

- Consider the existence of affective elements into a pupil’s development;
- Consider if learning depends on affective, cognitive and motivational elements;
- Consider if the pupil establishes with the teacher and the other pupils relations which involve her/him from the emotional and affective point of view.

In the objective is, instead the relation between two pupils, the teacher will be the non-participating observer.

He/she, must catch useful elements as regards the situation in which the two pupils’ relation takes place, before her/him, but which does not involve her/him.

The focus of this observation is on the behaviours. It is used in order to observe interactive and social behaviours, linguistic, logic, mathematical abilities, and functions concerning memory perception and language.

As regard “why” one observes, the reasons are numerous; among them we can take into consideration, as concerns the observation at school:

- A descriptive function, used to describe the situation or the phenomenon in question;
- An heuristic function/or diagnostic function: the observation aims to the emerging of pertaining hypotheses and then to their further control;
- A formative function (an observation to act, on the basis of what observed, and an action, in order to form);
- An evaluative function: in order to evaluate and decide the action. The action, then, will be, on turn, evaluated and observed, for a new decision (Lucisano, 2002, p. 176).

In the evaluation sphere, the observation aims above all to point out the dynamics of formative process, as much crucial for the pedagogical quality as demanding a direct examination, and the context of acting (Castoldi, 2012, p. 76).

The observation with conoscitive aims describes the characteristics of examined object and the conditions in which it shows itself without alternation, in order to provide all the information concerning it, on a qualitative and quantitative level.

For example, in the educational praxis of a classroom, a teacher can make use of the observation to point out the data concerning the teaching context, in order to get information on the environmental, cultural and social features, which condition positively or negatively the learning or the behavior of a stated pupil's group.

The observation used methodically and systematically, instead, performs the euristic and verifications, since it adds the pure knowledge of the observed object to the intervention on it, in order to modify, in a controlled way, the entities of some features or variables, or to introduce news ones, for obtaining predicted, and in advance effects. A teacher, after observing, in a class, numerous aggressive behaviours in the group of her/his pupils, can ask herself/himself the causes of this problem and hypothesize that it can depend on some aspects which can influence it as possible concomitant causes of the observed behaviours, for example one's own communication style, class activities spaces and times.

Concentrating on these aspects, he/she can make use of observation, to allow the emerging of the reason of aggressiveness. If, through observation, an example of aggressive behavior emerges, in correspondence with a cognitive pressure, the teacher's intervention can modify the activity times, corroborating her/his hypothesis.

The observation used in order to point out adequate and effective relational modalities, and to project educational intervention within which the person plays a central role in the learning process, has a formative function.

The observation utilized for the knowledge of capacities and behaviours, based on the collection of behavioral, social, cognitive and effective data, has an evaluation function. The collection of these data and their consequent codification allows to have basic measurement of students.

These measures can be a starting point of didactic activity, as well as the basis for the evaluation of learning, maturation and mental processes development.

## CONCLUSION

In the educational praxis, observation allows to increase the level of knowledge of the pupils' behavior, following precise hypotheses; to comprehend the meaning of stated behaviours, to abandon randomness and improvisation in favour of an attitude towards research; to carry out more conscious, educational and didactic proposal as well as precise didactic and educational strategies of intervention; to avoid that personal expectations or preconceived ideas may condition the interpretation of events; to distinguish facts from comments, judgment, evaluation; to make use of more objective information, to have a confrontation with the colleagues on the research hypotheses, on what and why is to observe, on the sharing of data; to acquire or share an intellectual language.

And notwithstanding the great bulk of knowledge implied, the didactic-educational context cannot ignore observation.

Carrying out an observation in the didactic-educational context implies, in fact, the knowledge of the theoretical paradigms of reference, the capability to choose among them, a model to follow for each prearranged objective, techniques and methodologies for every chosen modes. For the formation of a teacher, the knowledge of a theoretic establishment and the acquisition of operational techniques for the work in the educational field cannot be set aside.

In these terms, observation occupies a fundamental role in the educational field, since it is also one of the aim elements of the educators' professionalism.

With reference to presidential decree 8 March 1992 n. 275, about the accomplishment of didactic autonomy in the school field, teachers are, in fact, personally involved in the formation project, which implies a specific professionalism of theirs, since, starting from the directions delineated in the phase of the central planning, they must interpret and adapt them to the subjective needs of pupils, and to the reality of the context in which they work, projecting didactic courses.

To their institutional task, traditionally conceived as "transmission of that given knowledge", indispensable for the personal and cultural formation of students (Capperucci, 2008), we must add the task to program, project and plan the didactic experience, in order to convert the educational aims into operational possibilities which are didactically controllable, measurable and conductible (R. Tammaro, 2011).

Projecting educational intervention, carrying them out by means of adequate instruments and methods, verifying the result achieved, and if necessary, re-project the works, with new hypotheses and objectives; these are the actions that a teacher/educator must perform concretely, nowadays, in order to guide the pupil in her/his growth. This implies the necessity to master the observational techniques, and the capability to apply them to the situations that teacher must face from time to time, when a choice is requested.

It is evident that, in a systematic research context, after establishing times and modalities for survey and codification, a plan of observation is drawn up, and after a training on the utilization of the more or less instruments for survey, we can foresee that the observational work will go on without great obstacles. On the contrary, it is also evident that carrying out a continuative, dynamic operation in the didactic context, implies a number of variables, many of them unpredictable, which have inevitable repercussion on recording procedures and data cataloguing, that escape often to scientific criteria. In fact, the object under observation is not inert, but, it has a life of her/his own, a mind of her/his own, an individuality in relation, in its turn, with the sociological context conceived as the whole of circumstances and actions into which the pedagogical action gets.

Nevertheless, in this context, a scientific method cannot be excluded and teacher and educators must come into possession of it.

It is self-evident, therefore, to propose the utilization of research-action protocol, in the didactic context.

If, on the one hand, the rigour and the systematic nature of the research lead to the certification of reliable data, on the other hand, the experience acquired by teaching, plays a fundamental role in education.

The knowledge of the main techniques and procedures for a formative intervention cannot be sufficient if they are not applicable to practice.

Therefore, insofar as the research-action is involved in the empiric knowledge of problems provided by the didactic-educational operators, as regards to what takes place in the context; and to involve the subjects protagonist acquainting them with an attitude which assumes the research as a professional approach, it is structured as an operational context where it is possible to bridge the distance between experimental research and didactic action. In these terms, the research-action represents the practical and privileged place where one can apply the scientific knowledge. If, on the one hand, it maintains a classical scheme of pre-experimental research which justifies its legitimacy, on the other hand, its nature of applied research, which feeds on the relation among researchers, teachers and interaction environment, that are enriched, in this way, with a possibility of situations discovery, encourages the achievement of new result (A. Notti, 2012).

Following this perspective, we consider that the guarantee of the scientific nature of collected data is not given by a series of accurate and methodical information, denoting their statistics meaning, but we need to pay attention to the use of their results in a context which continually evolves.

It is again implied, the need to shorten the distance between theory and practice, remodulating their meaning for a context within which it is difficult to draw their lines.

Therefore, observation can be a precious contribution insofar as it, carried out in the context, can refute scientific propositions and approach to the problems faced daily by those who operate in the field, so nourishing a virtuous circle between experience and research.

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