CREATIVE RESEARCH IN SCHOOLS: A METHODOLOGY FOR TEACHER-RESEARCHER

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Abstract

Creativity, expressed in terms of a complete process, allows supporting many different types of behaviour and predispositions, instead of focusing on only one process or only one skill; with it, it is possible to observe signs of creativity in many activities, in many lessons and in many contents (Runco, 2015), rather than making the children adapt to a single attitude. Runco, in collaboration with Lego Education, has written an article on the assessment of creativity in schools (2015) – mainly common in American research and practice – containing the Creativity Rubric, a check-list drawn up specifically for teachers for the purpose of tracking educational behaviour in activities proposed ad hoc. The paper presents and discusses the Italian adaptation of the Rubric, conceived for use in daily teaching practice and experimented in a curricular or extra-curricular project aimed at supporting creativity, in particular divergent thought: the activation of creative processes in the field of education trains children, especially in the cognitive area, proposing paths aimed at stimulating divergent thought (where an individual thinks of several possible options) rather than convergent thought (where there exists only one correct/conventional answer) (Runco, 2004). In both projects, the context privileged the use of open and flexible teaching methodologies, based on exploratory research, in order to foster positively observing the behavioural indices listed in the check-list. In the contribution, how this instrument can be of interest to be able to identify the creative attitudes of the subjects involved is highlighted, also providing a return to the teacher on the positive use of the educational strategies chosen.

Keywords: creativity, Creativity Rubric, teaching strategies, researcher-as-teacher, primary school.

1 INTRODUCTION

If referring to children as explorers appears immediate, thinking of their natural inclination to knowledge and their gaze interested in learning the mechanisms of what surrounds them and connotes them, referring this way to adults, in particular to educators and teachers, means placing these professions in an empirical dimension, oriented at interpreting their role in the form on investigation and discovery relative to their way of reading the learning processes of children and preparing the most useful settings for them [1].

This posture, for the child as for the adult, is closely connected with the topic of creativity and is situated in a very wide and highly structured literary panorama of definitions which produce a multifaceted and complex vision of it, understood here in terms of process which includes cognitive, conative, emotive and contextual factors [2]. The activation of creative processes in education trains children – especially in the cognitive area – keeping that exploratory gaze through soliciting divergent (according to which a subject, presented with a problem of varying nature, traces several possible options) rather than convergent thought (where, on the contrary, a single correct/conventional answer to the problem set is presented) [3]. We have to specify that cognitive convergence is not to be excluded or considered with a negative meaning, but to be included in a sub-process of the same creative process: divergence and convergence are linked in a cyclical and interdependent way, where one implies the other and does not exclude it. This way divergence becomes a primary cognitive attitude of forming scattered idea – which can be assimilated by way of example to mental brainstorming – whereas convergence intervenes, like a sieve, selecting the most pertinent and functional ideas for the situation [4]. Guilford [5] and many after him have identified divergence in terms of flexibility, fluidity and originality of ideas, emphasizing the importance of exploration [4] to observe its presence.

Production, including in terms of discovery, of ideas and options is the main focus of the creative attitude, but not only. Being explorer teachers, and therefore researchers [1] leads to structuring open settings that offer multiple possibilities of investigation, which can be defined as creating in their setting into motion many typical factors allowing a consequent creative attitude in children as well.
Creativity, expressed in terms of a complex process, would seem to complicate the school curriculum, but in fact it acts to its advantage: instead of focusing on a single process or a single skill, it allows supporting many and different types of behaviour and aptitudes; instead of making each child adapt to a single attitude, "signs of creativity" can be observed in many activities, in many lessons and in many contents [6].

Designing teaching paths implies various steps which are connected by a logical order following one another, which however leave room for the creativity of adults and children, proceeding from listening to and closely observing the subjects, to discussion in the teaching team, to defining hypotheses, creating a setting which brings out questions, to the documentation in progress of the experience to understand not only its trend but also the divergent and unforeseeable elements [1]. These are typical actions and tools borrowed from research, which therefore support the representation of the figure of the teacher as explorer and creative researcher who notices, experiments and keeps track of what is really happening in the educational-didactic practice. In particular, the tools of a qualitative type appear particularly coherent with the professionalism of the teachers, more than the use of tables or specific tests, for example of psychological nature, which require different skills.

2 METHODOLOGY

Mark A. Runco, in collaboration with The Lego Group, has recently made a significant contribution to the evaluation of creativity in schools [6] – which has mainly circulated in American research and practice – by proposing a tool called the Creativity Rubric, drawn up specifically for teachers in order to track creative behaviour in education in activities which are proposed ad hoc.

The theme of the arrangement of the teaching setting clearly returns here, that can become a stimulator or inhibitor of the creative potential of the students [7]. The use of this Rubric in controlled situations – understood as arranged optimally by the teacher to allow the behaviour that he/she intends to observe to emerge – has the advantage of being able to consider a greater number of children in the same condition/situation and at the same time the limit that a certain artificiality of the circumstance may be created [8]. The strategy of sampling of the subjects most indicated for its use is by rapid scanning, i.e. the subjects are observed one after the other in short intervals of time. The logical consequence is a level of detail which at times is poor, but it is also true that it is the method indicated at the time when frequent phenomena distributed amongst several individuals [ibid.] in the same situation are to be identified.

Being a researcher teacher implies a direct and immersive participation in the observations, i.e. an active involvement which offers the unique opportunity of accessing opinions, feelings and attitudes of the subjects observed, allowing access to a plurality of material collected and to a multiplicity of sources of information. The disadvantage lies in the debatable objectivity of the observations recorded, for example due to a factor of distortion given by the selective memory, which keeps only some elements rather than others, subsequently risking straying into the subsequent halo effect [ibid.].

Reflecting in terms of potential offered by the tool, the Rubric is structured in the style of a behavioural check-list, i.e. a list of predefined types of behaviour in which to record the observations. Its being practical to use and the possibility of focusing attention on the type of information to be collected makes it a tool of great interest, but definitely needs parallel in-depth observations and not ones that are judging/binding.

The teacher has the task of observing, for each index presented, whether:

- The student shows the creative behaviour in question;
- Has the opportunity to do so;
- If so, if the student shows the creative behaviour rarely or regularly;
- If not, if the teacher encourages the specific indicator of creativity with adequate and targeted activities/paths.

The report is structured with the explicit objective of observing (and assessing) the different aspects of the creative process, with particular areas of interest on divergent thought, the capacity of combining and recombining ideas, the originality, the effectiveness and the awareness – understood as a fundamental part of creative learning aimed at authentic, significant and entertaining learning [6] –, self-expression- seen as one of the most important indexes and divided into individual and collective,
problem-solving capacity, preceded by the identification of the problem (problem-finding), the post-conventional decision-making process - i.e. the capacity of choice by the individual who ignores social conventions: the index refers to numerous theories of development, of which the author becomes a representative, which describe the pre-school age child as naturally disinhibited, whereas at the time when his/her brain matures, he/she becomes increasingly linked to social conventions; a conformism, in short, which seems to preclude the capacity of creative thinking -, flexible thinking, the fluidity of ideas, originality, thinking by combinations and by systems – in other terms defined as a combinatorial process where ideas are “put together”, combined in creative insights emerging [9] –, the ability to build new meanings, the ability of adaptation, the decision-making ability and awareness [6].

3 RESULTS

In the Italian translation and in the adaptation of the tool we used for direct use at school, we thought it was useful to simplify the indications for the teacher-observer – conceived by Runco only for the use of Lego bricks, but more widely used by us in the curricular planning -, which notes here exclusively if the situation in question presents or not the opportunities for a given behaviour and whether the child observed has shown it, without an immediate reference to an alternative path/activity or the constancy of the presence of the behaviour.

The object of our attention is the divergence of though with its indexes of the classic theory [5], [10], such as

- Flexible thought which indicates the possibility of the child to modify the perspectives, considering various conceptual categories when he/she reflects on a topic, as well as creating something that is personally new;
- The fluidity of ideas, which shows the production of a vast number of ideas, designs, forms;
- The originality which, on the other hand, refers to when something unusual or new is produced if compared with others. Runco suggests trying to ask “Try as many options as you can.” “Do something that nobody else will ever be able to do”; “Do something that you have never done before”; “Do something that your friends would not have thought of”; “Work as quickly as possible” [6, p. 11], in order to solicit this skill.

We have drawn up a descriptive table to read in parallel with the tool, detailing the specific types of behaviour: this key has turned out to be useful during the observations as the observation, like any activity whatsoever that implies understanding the other, requires practice to be able to be considered reliable, valid and coherent. In the research, the variable of error, which can be in the design and in the procedures, remains high, or on the observer who can perpetuate predictions which are self-fulfilled observing what is expected to be found, or even on the subjects of the research as at times the presence of an internal observer can produce consequent modifications in behaviour [8].

These fearful considerations are quelled when the survey is not an end in itself, but an additional and parallel tool in continuum with the didactic practice. The teaching profession teaches how to build up relations and knowledge with human beings on their processes of learning and development, in the awareness that an observational-documentary tool like this Rubric, as well as not being the only one, requires being reiterated in time and in proposals.

The LEGO Group, the context in which the Creativity Rubric was created and used, has the objective of providing learning experiences that are effective; their Manifesto [11] makes it clear that they want to rethink the educational models due to changes of modern learning styles, in the idea that twenty-first century learning is about providing children with opportunities to experiment with their surroundings as a form of problem-solving. It is about creativity and collaboration, motivation and self-direction. It is about improvisation and discovery, and interacting with meaningful tools that expand mental capacities [11, p. 6]. The multi-functionality traceable in the LEGO brick undoubtedly allows supporting the skills listed which, if transposed to school, also allow the explorer-researcher-teacher to (start to) trace infinite connections for any content whatsoever.

Their product is a model of use and observation of creativity, which it is possible to apply in any other field or thematic area whatsoever, given that creativity is a part of learning. By supporting creativity in your classroom, you help make learning authentic, meaningful – and fun: you can identify opportunities for the behaviours in all subjects, not just in areas that are easy to associate with creativity (e.g., The Arts), but subjects that are typically associated with logic and factual information
(e.g., Mathematics, Language Arts, History, Science, and Engineering), as well. The variety of practice leads to generalization, and LEGO bricks lend themselves to all subjects [6, pp. 19-20].

Our exploratory investigations used the Creativity Rubric in the daily didactic practice, following two projects aimed at supporting creativity in the classroom – with a particular attention to divergent thought –, in thematic areas commonly dealt with in primary schools (the ancient Egyptian civilization and the construction of an object, in the detail of a toy). Both settings were prepared to receive the use of open and flexible teaching methodologies, based on exploratory research, in order to foster a positive observation of the behavioural indexes listed in the checklist. This is a fundamental tool to be able to identify the creative attitudes of the subjects involved, and provided important feedback to the teacher-researcher on the positive use of the educational strategies selected and this feedback turned out to be interesting for the coherence that the analysis of the data collected showed with the theory [12], [13].

4 CONCLUSIONS

Planning, considering theories and tools, means seeking possibilities to structure a curriculum which gives each subject the chance to express him/herself in learning and which, as a consequence, supports motivation. Man moves, works, grows and seeks because he is guided by motivation and meets his needs [14]: his continuous exploring – both as a child and as an adult – contains the highest objectives of education.

In the same way, supporting the creative process means keeping together many factors, moreover expressed and requested by the same national, European and international indicators [15], [16], [17], [18]. Creativity develops the kinds of skills that young people will need in a rapidly changing and uncertain world and it can improve their self-esteem, motivation and achievement. In particular, it is not confined to special people or to particular arts based activities, it can however be generically defined as ‘a state of mind in which all our intelligences [19] are working together’ involving ‘seeing, thinking and innovating’ [20, p. 38], but also as ‘imaginative activity fashioned so as to produce outcomes that are both original and of value’ [21, p. 29].

Grainger and Barnes [22] trace creativity wherever human intelligence is actively engaged as well as deeming it an essential part of an effective education, a container in which all the subjects involved in school are present. In fact, it can be demonstrated by anyone in any aspect of life, throughout life [22, p. 2].

The interest in creative research in school in terms of the daily methodological practice of the teacher-explorer appears useful both as a support to his/her professionalism and for the development, as teaching by skills, of abilities that are advantageous for tomorrow’s adult. A teacher who takes on the role of explorer, and therefore of researcher, puts all the subjects involved in the teaching-learning process in the creative perspective of the state of the demand [1], [23], capable of supporting the search for original and divergent solutions and, with them, of significant leanings for all the subjects involved.

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REFERENCES


