

Educational innovation in physical education

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Abstract: The concepts of Education and Didactics in the field of Motor Activities are part of the process of social integration that allows the educator to create links with the outside world. Through movement the subject has the opportunity to integrate his gaps, learning to develop his potential, promoting new relationships with the body. The analysis of the most recent national guidelines for the school curriculum shows a particular attention to Physical Education as a vehicle of wide-ranging social values (Frabboni, F.,2015). The educational and social value of the movement is recognized and promoted internationally and is accompanied by a reconsideration of the concepts of health and well-being, becoming increasingly important in the lives of all human beings with or without disabilities. One of the main objectives of an inclusive learning approach is the need to ensure that all students achieve the highest possible level of learning and social participation. Motor activities represent the tool used for this purpose in compliance with the principles of innovative teaching actions.

Keywords: Educational Innovation, Inclusion, Sport Science

Riassunto: I concetti di Educazione e Didattica nell'ambito delle Attività Motorie si inseriscono nel processo di integrazione sociale che consente all'educatore di creare legami con il mondo esterno. Attraverso il movimento il soggetto ha la possibilità di integrare le sue lacune, imparando a sviluppare le sue potenzialità, promuovendo nuove relazioni con il corpo. Dall'analisi delle più recenti indicazioni nazionali per il curriculum scolastico si evince un'attenzione particolare all'Educazione Motoria quale veicolo di valori sociali di grande respiro (Frabboni, F.,2015). Il valore educativo e sociale del movimento è riconosciuto e promosso a livello internazionale e si accompagna ad una reconsiderazione dei concetti di salute e benessere rivestendo sempre più una crescente importanza nella vita di tutti gli esseri umani con o senza disabilità. Uno dei principali obiettivi di un approccio di apprendimento inclusivo è rappresentato dalla necessità di far sì che tutti gli studenti raggiungano il più alto livello possibile di apprendimento e partecipazione sociale. Le attività motorie rappresentano lo strumento utilizzato a tal scopo nel rispetto dei principi delle azioni di didattica innovativa.

Parole Chiave: Innovazione Didattica, Inclusione, Scienze Motorie

1. Construction and Design of Teaching according to Reference Models

Teaching means the science that deals with the epistemic relationship between subjects of learning, or the structures of the mind and cognitive objects, or the structures of cultural content. The teaching process is based on the educational relationship, defined as "the set of social relationships that are established between the educator and those he educates, to go towards educational objectives, in a given institutional structure, relationships that possess identifiable cognitive and affective characteristics, which have an unfolding and a history". Teaching as a science is called to indicate models, strategies and actions that can be expected to be effective. To do this it is necessary to

place and contextualize the didactic interventions by making design choices based on the deep reading of the contexts and the subjects involved. (Bruner, J.S., 2002) The design, in fact, is an essential device to create valuable teaching-learning paths, precisely because it is understood as a reflective moment of teaching practice that has as its object the activity carried out, the link between learning outcomes and experiences, theorizing and generalizing experiences. The main instrument to which reference is made in a didactic programming action is the curriculum (Bailey, R., 2006). It is introduced for the first time by Dewey (1902) in function of coherently putting in connection the dimension of the knowledge and the doing of the students. Within the international scientific debate, the term curriculum assumes different meanings that, on the one hand, focus on the process of developing the students' knowledge, on the other hand on the intentional structuring of educational experiences by teachers. According to Maragliano and Vetecchi "the curriculum is the complex of teaching/learning conditions [...]. It is precisely the notion of curriculum and its conceptualization in a field of educational design that allows to take into account in an overall perspective the social and psychological dimensions, scientific and environmental aspects, the institutional and material conditions in which the training process takes place" (Maragliano, R. & Vetecchi, B., 1978). The clear reference to the fact that the curriculum is the set of aspects that make up and allow the realization of the training process defines the complexity of the concept; It has occupied, since the seventies, a large space in the scientific debate on teaching. The pedagogical reflection on the curriculum in Italy sees in the front line the contribution of Pontecorvo (1973) who, although starting from a psychological plant, proposes an experimental approach to the definition of learning objectives that aims to go beyond the idea of an education in a reductive sense and recall the responsibility of teachers in the choice and organization of the training process (Pontecorvo, C., 1973). The curriculum design is structured, according to the perspective proposed by Scurati (1977), around three main criteria that concern adherence to the context, intentionality, collegiality-interdisciplinarity, transparency/verifiability: these principles help to define the curriculum as a systematic and methodological action (Scurati, C., 1977).

The curriculum, understood as the "main building of the School", the "trump card" and the "heart of the process of schooling", would be supported by an architrave composed

of culture, methodology and teaching. The reflection on the curriculum assumes in Baldacci (2006) a perspective interconnected with the discourse on learning. The author, in fact, projects the articulation of the curriculum on several logical levels as proposed by Bateson (1997). Distinguishes the curriculum 1 (related to proto-learning), or the assimilation of knowledge and skills related to various disciplinary knowledge and related to the direct and immediate results of individual disciplines (course of study of school disciplines) and the curriculum 2 (referable to deutero-learning), that is, the formation of abstract mental clothing (skills, cognitive styles, etc.) and, therefore, the long-term formative effects such as mentalities, thought styles and skills. Following this articulation, curriculum 1 corresponds to education and is the object of teaching, while curriculum 2 corresponds to intellectual education and is the subject of the pedagogy of the curriculum. Faced with the change in the training paradigm that we are witnessing, Baldacci says that the curriculum 1 is in the process of obsolescence while increasingly taking a central position the curriculum 2 and, therefore, learning to learn for life. Another important aspect of the curriculum is its emotional dimension. The author promotes an integrated idea of education to reason and affectivity in support of effective educational relationships, precisely because they are designed in order to "produce positive and reasonable emotional clothing". There are several curricular models that explain the stages of the design process. The main ones are three: the model of Taba (1962), those of Nicholls and Nicholls (1976) and that of Pellerey (1994). The first is a sequential model with 7 phases (Fig. 1), the second a circular model with 5 cyclically repeating phases (Fig. 2) and, finally, the last one is a model with relations of reciprocity and interdependence between 4 elements (Fig. 3). The curriculum design theorized by Taba (1962) provides a sequence of actions that exhaust the process and outlines, for the first time in the literature, the essential elements to be taken into account. The model puts the concept of need first, but focuses its interest on the goal, becoming a precursor of subsequent teaching by objectives (Bateson, G. 1997).



Figure 1: Curricular design according to the Taba model (1962)

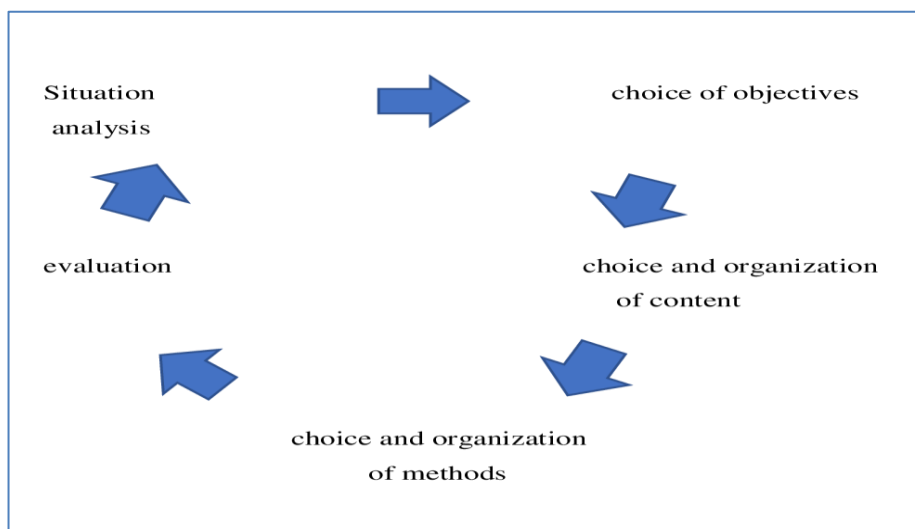


Figure 2: Curricular design by Nicholls and Nicholls (1976)

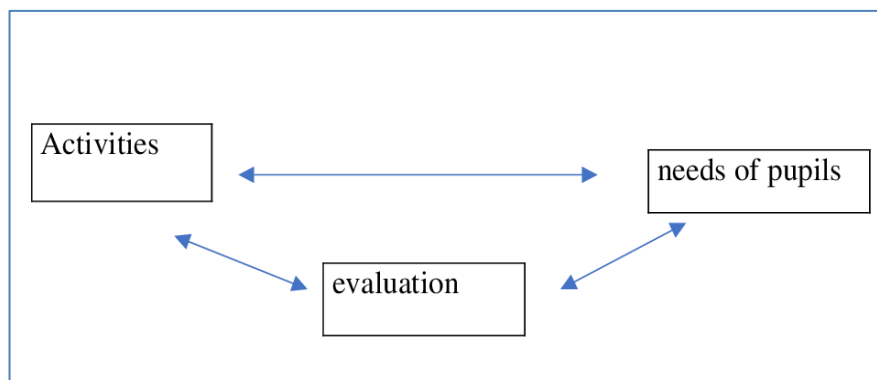


Figure: 3 Curriculum design according to Pellerey's model (1994)

In this regard, it is appropriate to make a brief parenthesis about how emotions play a fundamental role in the teaching-learning process, despite the fact that for many years in school contexts they have been left in transparency and, especially do not think and act consciously. Emotions play an important role in teaching and learning processes and school life. They are well established and specifically concern didactic aspects related to the construction of learning environments and the involvement of students (Bailey, R. 2006). In this perspective, it is of fundamental importance to leverage the centrality of the body and body in teaching, in particular in the teaching of Motor Activities.

2. Education, Teaching and Physical Activity

Teaching, through the body-motor activities is potentially capable of a wide and multi-sensory involvement, because the body, in teaching, allows you to combine the cold and repetitive information essential to the construction of knowledge, with stimuli capable of permeating and involving emotionally, affecting the mnemonic system (Frabboni, F.,1980). It is therefore necessary to make the body the protagonist of teaching and, starting from the inseparable combination of body-emotions, to structure teaching-learning paths. If body and corporeity are essential elements in the learning system, the experiences related to motor and sports activities are considered as links of connection between body, mind and environment. . In the practice of motor and sports activity, thought and action cannot rely on mental representations alone because concrete situations require a high body awareness thanks to which activate and implement effective motor behaviors, both to respond promptly to different environmental conditions, and to reflect on the effects produced by the choices made in the situation

(Taba, H.,1962). The awareness of oneself, of one's own body, of one's own action, becomes a determining element to be able to respond to the requests of the most varied situations, implementing adequate and effective behaviors. According to Ceciliani, the experience of each, in addition to its own sensorimotor history, becomes essential to create a distinction between actions performed and to be performed: the more one is master or has experience of a given ability, and the more one is able to discriminate it, for its effective use, thanks to the memory of situations experienced in the past (Kaleta, R, Et Al., 2007). In this regard, the motor activity represents an experience in which the sensory perception is phenomenologically embodied, that is, referred to the body as a starting point from which it is possible both to experience the concrete situations in the first person, both live the dialogue relationship between environment, body and consciousness. Motor education is part of the process of social integration as an important tool, which allows the educator to create links with the outside world; through the movement the subject then has the opportunity to integrate its gaps, learning to develop its potential, promoting new relationships with the body (Di Palma et Al., 2016). The analysis of the most recent national indications for the school curriculum shows that particular attention is paid to motor education as a vehicle of broad social values, as a means of fostering social cohesion and preventing or curbing the challenges facing society in the second millennium. The curriculum proposed by the Italian school, compared to that of other European countries, shows that Italy has accepted the European recommendations regarding the promotion of sport and motor education in the school, recognizing its educational and formative validity (De Anna, L., 2005).

Today, not only is the need to pay attention to the body strongly perceived, but it is now clear to everyone that one must, first of all, deal with the psychological and motor aspects that play a decisive role in the conquest of a good physical condition. Movement is an essential condition for living. The well-being of man then depends, also on a correct management of physical and psychic activity. Gardner talks about body intelligence dependent on the cognitive processes and experience of each individual. The "intelligent behaviors" are studied by the Embodied Cognitive Science (ECS) which supports the importance of corporeity in the development of cognitive and social processes, keeping constant the idea that body and mind are inseparable. According to the theories of the ECS every human cognition is such thanks to a body that allows the

decoding and this is most supported by the recent discovery of mirror neurons that recognize motor activity is when the same person does the activity, this is possible thanks to the existence of motor knowledge. In the light of these considerations, pedagogical intervention in the process of education to the movement is considered necessary (Carraro, A., 2004). The latter promotes growth on the intellectual, affective and social level of the subject. If the motor component is so important for the proper development of the person and will allow him to acquire psychophysical balance, it cannot be left to chance. At school, more than elsewhere, those conditions are created in which the subject can know himself, can differentiate himself from others and socialize (Bailey, R., Et Al 2009). The motor activity and recreational-sports, is a tool of considerable learning effectiveness and, when used in teaching, allows multi-sensory activation that stimulates memory, essential in learning cold knowledge. It plays a decisive role, in fact it simplifies the process of awareness of one's own body, with its limits and its potential, allows the development of the sensory and expressive apparatus thus favoring the acquisition of increasingly complex skills and competences. (Foucault, 2009). In the educational process, the active role of the subject is essential, educating that interprets subjectively reality and does not assume the role of passive receiver; it is therefore necessary a commitment and involvement on the part of both the educator and the educating (Taba, H., 1962). The final outcome is the acquisition of identity and self-awareness, the definitive construction of the self, capable of perceiving in a coherent way its potential and its limits in relation to the environmental system. In educational practice, however, it is indispensable that the educating subject is himself aware of the process of change that he is experiencing. An effective teaching method is one in which the student is always involved and motivated (Alesi, M., Et Al 2014). Motor activity should create an atmosphere of cooperation between peers and fair competitiveness in order to encourage the student to improve continuously. In the light of the above, in the field of the teaching of motor activities, it emerges the need for a look that goes beyond a simply functional/biomechanical approach. We must take into account not only the concept of motor program according to the cognitive approach (which assumes central mechanisms of the motor control system structured hierarchically that regulate the movement in a programmed way), but also the process of "self-organization" of movement as a function of the physical constraints imposed by the periphery of the

body and the environment. In this sense, the pupil, suitably stimulated also through the variety of the didactic proposals, will be "forced" to reorganize every time the motor behavior in different and new way even if he had not programmed it. This is Bernstein's dynamic approach, which consists in progressively finding the best motor solution to a given task in a given context, that is, repeating the solution process of the motor task over and over again. It refers, in particular, to heuristic learning: that is to stimulate the emergence of spontaneous solutions (heuristics) Motor problems to make the pupil progressively able to perceive what the environment allows him to do taking into account his physical abilities, motor, according to his age and his motor experience. In this direction it is important to encourage the pupil in the autonomous search for motor solutions and to exploit the variability that is to systematically vary the constraints imposed by the organism, the task and the environment.

2.2 Innovative Teaching & Inclusion

As stated in the previous paragraphs, sport and physical activity have a formative, educational and above all inclusive value for every person, regardless of age, gender and the presence or not of a disabling physical or mental condition. In this regard, it is increasingly important that these activities be read in an educational key in order to support a process aimed at the social inclusion of any form of diversity, ranging from disability to the socio-economic conditions of the individual (Zanelli, P. 1986). In this perspective, the same sporting activity, as well as motor activity, become a tool that can both stimulate inclusion education and promote a series of social benefits, psycho-physical, educational, relational, etc. for those categories considered, for any aspect, "weak". Socio-cultural and pedagogical development leads to a new vision of disability and "diversity" in its broadest sense, focusing on the potential of each individual. In May 2001 the International Classification of Functioning, Disability and Health was presented (International Classification of Functioning, Disability and Health, ICF), classification complementary to the ICD (International Classification of Diseases, ICD) and to the ICDH (International Classification of Impairments, Disabilities and Handicaps). Its innovative aspect lies in the proposal of a "biopsychosocial model" that integrates, sometimes overlapping, the exclusively medical model of the ICD. In this model the social, psychological and biological spheres create the environment

(favourable or unfavourable) for living in health. This allows the correlation between the state of health and the environment, defining the disability as "a health condition in an unfavorable environment". In this perspective, it represents a reversal of logic, where the quality of life is central. We no longer speak of a disabled person (or disabled person) but of a person with a disability, where the disability is the result of a complex interaction between the health conditions of an individual and the environmental factors in which he lives: Disability is not in lack but in the interaction of the individual with the world (Bernstein N.A., 1980). The general purpose of the ICF classification is to provide a standard and unified language that can serve as a reference model for the description of Health and its related states, in different areas of application. In this *model*, the social, psychological and biological spheres create the environment (favourable or unfavourable) for living in *Health*. This allows the correlation between the state of *health* and the environment, defining the *Disability* as "*a health condition in an unfavorable environment*". In this perspective, it represents a reversal of logic, where the quality of life is central. The reading of the situation of the subject that emerges from the ICF plant is indeed characterized by its ability to foster a knowledge that is not limited to the identification of the deficit of the subject, but research the way it works in a vision oriented to the maturation of its identity within the participation in life contexts. At the basis of this new vision of the teaching-learning approach are precisely the "motor activities and corporeality that, starting from what a person is able to give or do, stimulate the consideration of himself and his existence" (Gianfragna, 2005). Starting from this dimension in an Inclusive School, the Motor Sciences represent the "elective space" in which to experience oneself and at the same time become the "privileged means" through which to develop and consolidate identity in people, self-efficacy, self-esteem, personal autonomy, ecological relations favoring the development of psychosocial skills of the personal, social, interpersonal, cognitive and affective area of each individual (Tafari et al., 2020). The educational and social value of the movement is recognized and promoted internationally and is accompanied by a reconsideration of the concepts of health and well-being, playing an increasing importance in the lives of all human beings with or without disabilities (Zanelli, 1986). The new concept of educational culture is aimed at enhancing every diversity to support the process of development and growth of each individual and the community that is enriched through

the knowledge and inclusion of the heterogeneity that lives as a group. The object of the investigation is the person, in its entirety and in its multidimensional system of relationships. The goal is to discover the potential of individuals in their way of facing the environment of life: each person has resources and abilities that must be discovered so that they can develop and manifest themselves. Educational and educational interventions must be designed to make the subject able to acquire self-consciousness, through the development of its potential related to the socio-cognitive, emotional and affective dimensions. This is the prerequisite for the realization of the project of personal life, understood as the need to live, to give meaning to existence to self-design or self-choose independently through their own identity. The development of one's own life plan is multidimensional in that it includes all aspects of the subject's life: family, school, education, culture and social relations (Donati A., 2006). "Special Epistemology" aims to identify Special Needs by elaborating strategies to develop learning for an effective school and training processes based on social inclusion, avoiding the creation of special places separated from lived contexts. A form of disability may include disorders affecting different areas of cognitive, psychomotor or affective-relational development. For this reason, an effective working method must include a series of interventions and professional and competent training figures with the aim of supporting the student in the realization of his life project according to an experimental approach, always ready to reshape himself and adapt to special needs, but always preserving consistency with the educational and learning process of the whole peer group. One of the main objectives of an inclusive learning approach is to ensure that all students achieve the highest possible level of learning and social participation. Obviously, in this perspective, it is not possible to ignore the enhancement of diversity within the group, regardless of its nature (Brunetti G, 2016). Sport and physical activity have a formative, educational and above all inclusive value for every person, regardless of age, gender and the presence or not of a disabling physical or mental condition (Tafari et al, 2017). In this regard, it is increasingly important that these be read in an educational key in order to support a process aimed at the social inclusion of any form of diversity, ranging from disability to the socio-economic conditions of the individual. In this perspective, the same motor-sports activity becomes a tool able both to stimulate education to inclusion. New models of education research have long insisted on the

need for a complete formation of the individual on the intellectual, motor, affective, social, physical and bodily levels.

3. Conclusion

Physical education and sport should not be considered solely as conditions for a better psychic life or as actions necessary for the proper functioning of the brain. These are training components that must be integrated with the other educational actions of the special pedagogy, able to develop inclusive processes. The education to the practice of motor/ sports is a path that runs at different levels, from the initial education of the motor up to the introduction to sport and its specialized practice, on a continuum that allows everyone, without prejudice and distinction of any nature, to position itself and proceed according to the maturity of its motor function. If the promotion of a motor-sports activity for "everyone" is rooted in a conception that goes beyond the purely competitive-professional, the motor-sports practice of people with disabilities, or any other form of physical, social, economic or mental "deficit", needs a recognition that lays the foundations for the recognition of a process of total social inclusion. The performance of motor and sports activities for the disabled person represents the exaltation of his abilities, albeit residual, and what he can do, in a world that always reminds him of what he is not able to be and what he lacks.

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