



HAL
open science

Embodied and Enactive Creativity: Moving Beyond the Mind–Body Dichotomy in School Education

Anne Bertin-Renoux

► **To cite this version:**

Anne Bertin-Renoux. Embodied and Enactive Creativity: Moving Beyond the Mind–Body Dichotomy in School Education. *The Journal of Creative Behavior*, 2024, 10.1002/jocb.651 . hal-04682322

HAL Id: hal-04682322

<https://hal.science/hal-04682322v1>

Submitted on 30 Aug 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License



Embodied and Enactive Creativity: Moving Beyond the Mind–Body Dichotomy in School Education

ABSTRACT

This study explores the ways in which embodied creativity is conceived and implemented in french schools through the study of a corpus of professional articles published since the 1960s in a journal dedicated to physical education. The analysis focuses on pedagogical experiments to foster bodily creativity carried out in primary schools, as part of a wide-ranging educational reform during the 1970s. Those practices mark a radical break with the grammar of schooling whose worldwide spread is linked to the colonial expansion of western Europe. They revealed many similarities with indigenous pedagogies through the willingness to go beyond the mind–body dichotomy, to value a sensitive and intuitive body, to anchor knowledge in lived experience and to move from a top-down relationship between teacher and pupil to a more horizontal one. The 1980s marked a return to more traditional methods, but these pedagogical experiments nurtured a conception of embodied and enactive creativity that sought to go beyond a western vision of the body, of action and of the relationship with the world in school education. The convergences with non-western pedagogies underline the interest of these approaches to explore and foster embodied and enactive creativity.

Keywords: embodied creativity, physical education, mind–body dichotomy, enaction, experience.

The field of creativity research has not given much attention to the role of the body or its physical context, and most theories of creativity do not provide many elements relating to “action” (Glăveanu, 2014; Malinin, 2016). So, exploring domains in which creativity is fully expressed by the creator’s body could advance knowledge about embodied creative processes (Stevens et al., 2003) and extend our understanding of creativity. Indeed, researchers tend to consider creativity mainly in terms of products and product-oriented processes (Glăveanu & Beghetto, 2021). Furthermore, “commonly studied creative processes are related to non-embodied creative products that do not include the person creating as an outcome” (Torrents, Balagué, Ric, & Hristovski, 2020, p. 1). This approach can be linked both to a conception of action according to an instrumental rationality that has become sedimented in western culture (Joas, 2001) and to the persistence of the dichotomy between body and mind, thought and action. However, various western thinkers have attempted to go beyond this view of the world. Thus, the pragmatists, taking action as the starting point of their thinking, have highlighted the constant interactions between the subject and the situations in which he finds himself. Glăveanu and Beghetto propose to place research in this line of thought to redefine creativity beyond the four P’s (Rhodes, 1961) and their recent rewritings (Glăveanu, 2013) and to focus on creativity as experience (Glăveanu & Beghetto, 2021). Pragmatism also appears as a precursor of the enactive approach further developed by Francisco Varela (Borgé, 2017; Gallager, 2014). Nowadays, Malinin suggests adopting an enactive, embodied, integrated and extended (4E) conception of cognition to go beyond a vision of the mind located exclusively in the brain to also encompass the body and its situation in the environment (Malinin, 2019). This approach, on the fringes of western thought, seems likely to create bridges with non-western approaches. In educational terms, the pedagogical concept of learning through experience developed by John Dewey (1916) is the concept closest to the educational concept of the Aboriginal peoples, for whom it is a question of “ways of living” and for whom “learning” means “coming to knowing” (Ermine, 1998). From this perspective, knowledge is not a commodity that can be owned or controlled by educational institutions, but a living process to be integrated and understood (Battiste, 2002, p. 15). Experiential learning is also close to indigenous pedagogies, which have been developed outside the narrow framework of eurocentric thought, and whose way of learning is based on action and immediate experience (Aikenhead, 2006). Learning through the concrete experience of the body

interacting with its environment would therefore be more conducive to the expression and development of embodied creativity, as well as to its study, however this seems to lie outside the grammar of schooling. How, then, is embodied and enactive creativity approached by teachers?

EMBODIED CREATIVITY AND THE GRAMMAR OF SCHOOLING

The grammar of schooling, which became widespread in the twentieth century (Schneuwly & Hofstetter, 2017), appeared in the sixteenth and seventeenth centuries in the modern west (Chartier, Compère, & Dominique, 1976). This socio-institutional form of knowledge transmission favors the written form and the separation between “knowing” and “doing” (Vincent, Lahire, & Thin, 1994). In this way, the academic knowledge legitimized within the school is cut off from real life (Houssaye, 2014) and from experience. Intellectual education is always separated from physical education, perpetuating the Cartesian dichotomy between body and mind. From this perspective, the pupil’s body must be disciplined and neutralized (Denis, 1974; Maulini & Maulini, 1999). The grammar of schooling is thus rooted in a vision of action based on instrumental rationality. The actions expected of both pupils and teachers are defined and programmed, and must be assessable according to precise criteria. Everything is codified, from the knowledge taught to the teaching methods and the smallest aspects of the organization of school space and time, nothing is left to chance, everything is written down, broken down and fixed in terms of movements and sequences (Lahire, 2008). These rules, designed to ensure that practices are uniform across all schools, are part of the heritage of Christian schools. One of the founding texts of the grammar of schooling states that “man is so prone to slackness and even to change that he needs written rules to hold him to his duty and to prevent him from introducing something new and destroying what has been wisely established” (De La Salle, 1951, p. 5). To guarantee this control over action, schools have often implemented an authoritarian, even repressive educational method regarding the body (Dizerbo, 2016).

The worldwide spread of the grammar of schooling is linked to the colonial expansion of western Europe in the eighteenth, nineteenth and twentieth centuries (Akkari & Fuentes, 2021). By becoming hegemonic, uniform and exclusive, this model of education contributes to the failure of a part of the pupil, particularly those who are socially and culturally distant from it (Meunier, 2008) including indigenous pupils (Salaün, 2013). Numerous studies have been carried out on the grammar of schooling to clarify its characteristics, such as the separation of knowledge by disciplinary subject (Vincent, Courtebras, & Reuter, 2012) or the role of the teacher in traditional pedagogy (Houssaye, 2014). The figure of the master is central, guarantor of the transmission of values and knowledge built up by tradition, he incarnates knowledge. “The teacher has already developed the knowledge intellectually, allowing the pupils to dispense with this work. Pupils (...) must be ‘imprinted’ by exemplary social productions that conform to what society wants” (Houssaye, 2014, p. 11–12). Charged with enforcing order and discipline, he dominates and orders interactions; the pedagogical relationship is impersonal, top-down and non-reciprocal. There is no room for individuality and everyone conforms to a functional role. Emotions are suppressed by the adult’s authority, and punishment, order and judgment take precedence over exchanges. These characteristics do not reflect the reality of teachers’ postures in the classroom, which are more complex and more nuanced, but they do define an archetype of traditional pedagogy, inherited from Christian schools, at the foundation of the western grammar of schooling (Lahire, 2008; Vincent et al., 1994, 2012).

Despite all the limitations highlighted, it remains a reference model of the mass school, resisting countless attempts at reform (Tyack & Cuban, 1995). However, at the margins of this dominant model, numerous forms of alternative pedagogy have developed and influenced teaching practices. Therefore, even if grammar of schooling seems to have been designed to remove all embodied creativity from the school enclosure, this does not mean that it is not present in teaching practices.

THIS STUDY: EXPLORING EMBODIED AND ENACTIVE CREATIVITY IN PHYSICAL EDUCATION IN THE 1970S, AT THE FRONTIERS OF WESTERN CONCEPTIONS

In order to explore embodied creativity at school, this study focuses on the only school discipline devoted specifically to education through the experience of the body in movement and in interaction with its environment. Through a socio-historical analysis of articles published in a leading French professional journal, the *Revue EP&S*, this research aims to gain a better understanding of how the notion of creativity has been apprehended and implemented by physical education teachers. The period from the late 1960s to the early 1980s appears to have been particularly rich in terms of pedagogical experimentation with embodied creativity in primary schools, which represented a rather radical break with the grammar of schooling. It

coincided with a movement to challenge the western cultural and economic model, of which the events of May 68 were just one manifestation (Prost, 2005). They revealed “the evils of bureaucratic sclerosis and pedagogical anachronism, vainly denounced for years by groups of teachers who were too solitary and too ignored” (Citron, 1968). In the French school system, a broad reform movement that had been underway for many years was pushing for radical changes, culminating in the 1969 reform of the “tiers-temps pédagogique” (pedagogical third time) (Prost, 2013). This reform of primary education marked a break with pedagogical tradition and initiated a genuine renovation by advocating the introduction of active methods and the renunciation of intellectualism and encyclopedism (Kahn, 2008). The time dedicated to physical education increased from 2.5 to 6 h a week, and a further 6 h were devoted to awakening activities that involved learning about history, geography and science through observation of the environment. The remaining 15 h are spent on French and maths. These three groups give their name to the pedagogical third-time reform. This period also saw a flurry of enthusiasm among teachers for embodied and enactive creativity. The analysis of these teaching practices highlights how this notion involves going beyond a western conception of the body and school education, but also the inertia and resistance to change of this institution. It also reveals several features in common with non-western pedagogies such as indigenous pedagogies, underlining the interest of these educational conceptions regarding to embodied and enactive creativity.

METHODOLOGY

The socio-historical study is based on the *Revue EP&S*. This French bimonthly professional journal, published without interruption since 1950, is aimed at specialists in physical education and sport. It describes itself as a forum for exchanges rooted in the field (EP&S, 1950) and most of the articles are written by teachers or trainers who share their thoughts, questions and teaching methods. The publication is therefore an important resource for research, and a privileged medium for understanding the evolution of educational concepts and pedagogical practices in the field of physical education (Attali & Saint-Martin, 2014). Researchers have gradually identified it as a flagship journal (During, 2005), the reference professional publication (Lebrun, 2006), the showcase of the discipline (Vivier, 2000) and the periodical that no one can ignore (Attali, 2005). Numerous studies have been based on the analysis of its articles, notably on the place of didactics and teaching content (Arnaud, 1985), on the disciplinary fields supporting physical education (Barrué, 1996), on the knowledge conveyed by physical education teachers (Collinet, 1998), on gender (Attali, 2005) and on the status and spheres of belonging of the journal’s authors (Vivier, 2000). More recently, a thesis on the uses of the notion of pleasure in physical education was based on a systematic study of articles in the *Revue EP&S* (Morizur, 2019).

A search of the database of articles containing the term “creativity” revealed 302 references using the term at least once. The oldest document dates from March 1964, and the articles were analyzed up to September 2020. Among these documents, 28 announcements of publications or events were excluded from the analysis because of their insignificance in terms of representing a conception of creativity, and only articles relating to the teaching of physical education and sport were retained, making up the main corpus of 274 references. Quantitative analysis of the occurrences of “creativity” in the main corpus also revealed that, over time, more and more articles contain only a single occurrence of the term (more than 70% of articles mention the term only once). It also seems that the use of this neologism became commonplace in the 1980s and 1990s. To identify articles dealing more specifically with the notion of creativity, a sub-category (“specific”) was created, which includes 49 texts where the term “creativity” appears in the title or more than twice in the text. These documents were subjected to a qualitative analysis to gain a better understanding of how this concept is perceived by the authors and how it has evolved over time.

The articles in the main corpus were indexed by date of publication, school level concerned (primary, secondary, higher education), author’s name, genre, function, affiliation and location. An initial exploratory content analysis, aimed at identifying the main theme of the article and the physical sports or artistic activities it covers, was also used to divide the articles into different categories: “education” (articles on pedagogy and teaching practices in general), “expression” (covering gymnastic, artistic and expressive physical activities) and “sport” (other sports grouped into sub-categories). These categories were the subject of a qualitative content analysis (Bardin, 2013).

The results presented here focus mainly on the 1970s, when most of articles on creativity in primary schools were published. In fact, a special dossier entitled “Pour le tiers-temps pédagogique”, created in 1970 in the *Revue EP&S* and published until 1983, shared ideas and teaching practices to inspire teachers. In

addition to providing information, the magazine was used as a propaganda tool (Attali & Saint-Martin, 2014) among primary school teachers. In addition to analyzing these documents, further studies were carried out to situate this craze for creativity at school in the social and political context of the time. In specific terms, the primary school curricula published in 1969 were analyzed. Particular attention has also been paid to the photographs illustrating the articles. Most of them, provided by the authors of the articles, show children in the midst of “creative activity”. These images of bodies, in motion or relaxed, often in groups, in the classroom or outdoors, provide a wealth of additional information on teachers’ conceptions and implementation of creativity.

RESULTS

GOING BEYOND THE MIND–BODY DISSOCIATION IN LEARNING PROCESSES

Teachers’ interest in embodied creativity at school emerges towards the end of the 1960s, encouraged by the importance attached to the body and experiential learning in the reform of the pedagogical third-time. The importance given to physical education, which rose from 2.5 to 6 h a week, reflects a desire to move beyond a concept of learning centered on intellectual knowledge. The Minister of National Education at the time, Olivier Guichard, even goes so far as to describe physical education as “fundamental in the truest sense of the word: that on which the conquest of knowledge (first motor, then sensitive and intellectual) and the construction of personality are based” (Guichard, 1969, p. 22). This statement reflects a reversal, with the fundamental disciplines traditionally (and still today) representing French and mathematics, and a desire to overcome the dissociation between body and mind, by associating the motor, sensory and intellectual dimensions of knowledge. But promoting physical education is no easy task in a school system where most of primary school teachers already fail to provide the 2.5 h previously scheduled. It was a matter of “convincing teachers of the benefits of a subject that was still too often considered secondary” (Moret, 1971, p. 17), as one of the educational consultants responsible for disseminating the reform explained. Over and above the time devoted to physical education, the aim was also, and above all, to transform teachers’ pedagogical concepts. The activities that encouraged creativity and awareness were very different from those commonly practiced by teachers at the time. “Our daily bread was to find ourselves confronted with unexpected situations, such as old-fashioned gymnastics with a whistle and children working in rows of four” (Moret, 1971, p. 17). The reform of the pedagogical third-time took the opposite approach to this excessive discipline. It was no longer a question of imposing standardized behavior on children; there was no single model of a pupil but a multitude of personalities and bodies that must be allowed to move and express themselves freely.

The aspirations of these teachers are part of a period in which “mutations of the regard” towards the body were accelerating (Corbin, Courtine, & Vigarello, 2006). There was an “inflation of the body” (Denis, 1974, p. 19) in the concerns and publications of the time. Daniel Denis, a young physical education teacher, publishes *Le corps enseigné* in 1974, in which he denounced the prohibitions imposed on children’s bodies from an early age, which restricted their creativity. Michel Foucault analyzed the role of the educational institution, the legacy of nineteenth-century Christian schools and the rigidity of the exercises in the fabrication of submissive and docile bodies (Foucault, 1975). Three years later, Georges Vigarello published *Le corps redressé. Histoire d’un pouvoir pédagogique*, in which he shows how, since the Middle Ages, exercises have aimed to ensure the body’s rectitude, shape behavior and internalize social constraints (Vigarello, 1978/2018). At the same time, the magazine *Quel corps?* is conceived as “a theoretical instrument but also a basis for action for a new way of perceiving the body” (Brohm, 1986, p. 6). These claims were also reflected in numerous articles published in the *Revue EP&S*: “our entire education is, to a certain extent, the shaping of our bodies according to the demands of society” (Maudire, 1980, p. 39), noted a physical education teacher at the École Normale mixte of La Rochelle in introducing the article “Expression corps éducation”, in which she promotes freedom of expression through movement. The 1970s thus marked a real “cultural break” in terms of the perception of the body and spontaneity at school (Denis, 1974). An article written by a psychomotor practitioner working in pre-school reflects the transformations in representations of the body: “I came to the conclusion that the body does not exist; the ‘body on its own’, separated from affectivity and intelligence, is just an empty concept, an intellectual fantasy. Every movement, every attitude is necessarily the expression of the whole being, the result and support of a thought, whether conscious or unconscious, or perhaps both at the same time (...) But for the body to express itself, we have to give it the opportunity to do so and be attentive to this expression so that communication can take place” (Lapierre, 1977, p. 57). During this period, the representation of creativity was therefore impregnated by this conception of a body

in which the authenticity of being resides. Movement became a means of accessing this ignored or hindered richness. But to do this, it was first necessary to release the tensions generated by the many prohibitions to access a more sensitive perception of bodily activity.

PROMOTING A SENSITIVE, INTUITIVE, AND EXPRESSIVE BODY

In the articles on creativity that appeared in the *Revue EP&S* in the 1970s, there is a trend towards physical activities that encourage children to relax their bodies and express themselves spontaneously. Creativity is then associated with an internal source, with the activity that takes place naturally in the body without our being aware of it. The aim of relaxing the muscles is to reduce intentional activity and make the body available and receptive to these sensitive manifestations. These techniques are often associated with corporeal expression, which seeks to free the body from social conventions that prevent it from living, feeling and expressing itself freely. The body is seen here as the seat of thought, intuition and imagination; as an extension of consciousness where actions and sensations coincide (Vigarello, 2016). The aim of corporeal expression is to use movement to explore this in-between space, this place of passage towards self-awareness. This counter-cultural movement sets out to break with the institution, denouncing the “alienating” nature of sporting norms, and more broadly challenging traditional modes of education (Bonange, 1969). Claude Pujade-Renaud, a leading figure in this movement, published one of the first articles about creativity in the *Revue EP&S*, in which she outlined her approach to teaching: “We must avoid perpetual imitation of the adult by the child. (...) The teacher should not be a constraining model but should step aside when appropriate”. This stance can be destabilizing for the teacher, she emphasizes, and “it takes a great deal of courage and humility on the part of the teacher to dare to forget knowledge and skills; to dare to trust the child by encouraging them, boys and girls alike, to invent their own movement and thus discover their own bodies. (...) What we are trying to stimulate as much as possible is creativity. Creativity, like any other faculty, dies if it is not exercised”. To this end, “the existence in the child of spontaneous forms of movement must be the starting point for educational action” (Pujade-Renaud, 1966, p. 46). The promoters of corporeal expression are thus seeking to bring about a fundamental change in the way we think about the body to view the individual learner from an affective and creative point of view (Morales, Travailot, & Ferez, 2019).

Some stakeholders in the school system were impressed by the benefits of these practices, like the nursery school inspector who declared: “I’ve never seen children so spontaneous”, on discovering children aged 4 to 6 “oriented towards a personal search in physical education, energising their affectivity, their motor potential and their creative energies towards the liberation of their corporeal expression” (Dejaeger, 1971, p. 28). “That’s why we’re trying to capture a few processes of bodily creativity so that they can be passed on,” she explains. The expression and development of active creativity at school is a central concern for certain stakeholders involved in the pedagogical third-time reform. However, this educational approach involves major breaks with the traditional grammar of schooling.

ANCHORING KNOWLEDGE IN A PLACE, LEARNING THROUGH EXPERIENCE

The promoters of the pedagogical third-time reform criticized the prevailing intellectualism in French schools, the excessive compartmentalisation of disciplines and the reduction of education to the simple transmission of knowledge (Belbenoit, 1974). “Instead of letting children experience space and time, educators teach them to do so by means of a simplistic system of identification, a fixed and closed grid, a pedagogical space-time,” deplors Daniel Denis. “The child is thus led with his body into a rationalised space-time, deeply structured according to the imperatives of knowledge: time and grammatical logic, space and mathematical logic” (Denis, 1974, p. 52). Louis Legrand, a key figure of this reform, criticized the insane encyclopedism of the curricula and the fragmentation of isolated disciplines, and argues in favor of a “pedagogy of astonishment” based on children’s natural curiosity about the world around them (Legrand, 1971). The implementing circular published in September 1969 confirms the desire to “break down the watertight barriers that had been established between the various disciplines” (BOEN n°35, 1969) and combine knowledge in favor of a global vision of learning based on the child’s experience. Therefore, awakening activities should be taught through “the study of the natural and human environment” (BOEN n°35, 1969). History, geography, manual work, music and drawing are all approached through “exploration of the environment” and “experimentation” (Belbenoit, 1974, p. 25). Here, knowledge no longer comes from the teacher, but from the children’s observations and interactions with each other and with their environment. The aim is to reincarnate learning in direct experience. “When you leave the classroom, in the neighborhood, in the street”, explains a spokesperson for the Commission for the Renovation of Physical

Education, “this street has a certain number of characteristics that can be explained by geography. There’s a slope, a subsoil, elements that come under physical geography, or human geography” (Belbenoit, 1974, p. 47). In an article on school sport and creativity, a school headmaster set out his ambition to achieve “physical and sports education that serves the child’s overall education and where interdisciplinarity is really there without artifice” (Tillit, 1982, p. 39).

The discovery of the local environment is an important theme in this movement for pedagogical renewal and is giving rise to fundamental reflections on the characteristics of the environment in which children live. To enable children to act creatively, the environment must be open to change. Indeed, “when possibilities are limited, the child can only make do with using the gaps between the blocks of prohibitions, the neglected interstices. He will even lose the initiative to transform at times, so accustomed will he be to fixed, untransformable places, to over-equipped, institutionalised, over-determined spaces” (Chombard de Lauwe, Bonnin, Perrot, Mayeur, & De La Soudière, 1976, p. 337). During the 1970s, in the wake of the cultural and social upheavals introduced by the May 68 revolt movement, adventure playgrounds are created in various French cities (Raveneau, 2019). These spaces for invention and educational experimentation, which grew out of youth and popular education movements, use play as an educational tool and respond to children’s desire to be empowered to transform their environment (Bachelart, 2012; Besse-Patin, 2018).

TRANSFORMING THE EDUCATIONAL RELATIONSHIP, FROM MASTER TO ANIMATOR

Interest of teachers in developing children’s creativity reveals the negative effects of the educational relationship in the grammar of schooling: “Traditional education alienates and enslaves, encouraging passivity and blockages. The teacher sterilises all group life by cutting off communication, creativity freezes (...) his authoritarian stance results in the abandonment of spontaneity and dynamism” (Paillet, 1970, p. 19), states an article written by a teacher at the École Normale Supérieure d’Éducation Physique et Sportive which trains future teachers. The same observation can be found in various articles during this period: “Children are asked to adapt constantly to the teacher’s wishes (which are themselves conditioned by the sacrosanct curricula), thus destroying creativity, spontaneity and autonomy. (...) The child’s body then becomes an expression... of the desire of the adult who knows what the child should do” (Lapierre, 1977, p. 58), observes a psychomotor practitioner who works in a pre-school as part of a pedagogical third-time approach.

The emphasis on physical education and awakening outdoor activities also contributes to transform the relationship with the teacher. “When you leave the classroom”, explain two physical education inspectors, “there is no longer the fixed framework provided by the platform and the pupil’s tables. Teachers and pupils are on the same level, and relationships are immediately and unconsciously of a different order” (Delaubert & Gallot, 1974, p. 17). The Commission for the Renovation of Teaching also notes that when the teacher participates in the play with the pupils, “even if only as referee or coach”, his involvement “necessarily inclines his relationship with the pupils towards cooperation” (Report of the Teaching Commission, 1969, p. 24). But many teachers are destabilized by this reconfiguration of power relations, moving from a hierarchical view to a more horizontal relationship. The two inspectors offer some advice in an attempt to “transform the behavior of teachers” in regard to pupils’ actions: “In order to preserve spontaneity and creativity, imagination and invention”, they explain, “the teacher relies on the child’s aspirations, (...) he endeavors to place pupils in open-ended situations, in touch with the realities of life, rather than imposing exercises for which he himself would have defined all the processes and all the acceptable solutions” (Delaubert & Gallot, 1974, p. 18). The reform of the pedagogical third time thus aims to renew the functioning of a school system that does not allow pupils to take initiative and experiment on their own. A group of teachers from a school in the Jura region sums up the aims of educational action as follows: “to ensure safety; to encourage experimentation; to develop creativity and critical thinking; to respect freedom” (Équipe pédagogique du Jura, 1980, p. 33). Some authors consider children’s free play to be one of the “roots of creativity” and the foundation of learning (Schmitt, 1975). Teachers who are sensitive to this approach draw inspiration from children’s free play in the school playground to construct their teaching (Tillit, 1982). Experiential learning based on the child’s interests and the decompartmentalisation of disciplines are therefore key features of the pedagogical third-time reform, which encourages the development of pupils’ active creativity.

Non-directive teaching, which originated in the United States in the 1940s, find a strong echo in France in the social and cultural movement of 1968 (Haudiquet-Lamarque, 2018). Non-directive, meaning that there is no pre-established, unambiguous direction, the teacher guides the group while leaving it some room

for initiative in terms of organization and decision-making. There are many factors involved in determining this direction, most of which are subtle or invisible and intertwine in complex ways (Haudiquet-Lamarque, 2018). “It’s not a question of ‘letting it happen’ and passively waiting for the ‘creative miracle’”, stresses a psychomotrician working in a primary school as part of the pedagogical third-time, “children need to be guided, channeled so that they don’t get lost in sterile dispersion” (Lapierre, 1977, p. 58). But when this dynamic is well established, he continues, “we no longer know who is following who: whether it is the teacher who is following the children or the children who are following the teacher. (...) This does not prevent us from having objectives, but these objectives are not programmed: they remain floating, usable at any time depending on the circumstances that arise”. According to this author, this educational approach “is centered on the subject rather than on knowledge, on being rather than having”, and is based on “a new philosophy of the child, of man, of society. It is perhaps”, he concludes, “an approach to true democracy” (Lapierre, 1977, p. 58). In this way, embodied and enactive creativity is also that of the teacher seen as a “creative pedagogue” (Bertrand & Dumont, 1976, p. 46).

During this period, two books published by French sociologists, *Les héritiers* (1964) and *La reproduction* (1970), also help to reveal the extent to which the education system plays a part in reproducing relations of domination within French society. Educational action is described as “symbolic violence in the sense that an arbitrary power imposes an arbitrary culture” (Bourdieu & Passeron, 1970, p. 19). The reproduction of social hierarchies and power relations within society is seen by the authors as the implicit aim of the school system, through the pedagogical authority of the teacher imposing norms and habits derived from the dominant culture. This authoritarian conception of the educational relationship is profoundly challenged by the promoters of an educational renewal. At the Amiens symposium in March 1968, devoted to the issue of teacher training, the notion of “master” is rejected in favor of the function of “animator” (Robert, 2008, p. 35). This semantic evolution can be observed in the articles in the corpus concerning primary schools during this period, where the term “maitre” is gradually replaced by “éducateur” or “animateur”. According to one educational adviser, “the third-time is the transformation of the teacher into an ‘educator’ in the full sense of the term, i.e. one who provides a global education” (Samittier, 1972, p. 18). Other book published at the end of the 1970s, entitled *La relation éducative*, sums up this pedagogical desire to transform social relations through education, establishing between the generations “relationships of exchange rooted in a shared experience of social creation, and not in the reproduction of a previous order” (Postic, 2001).

A PARENTHESIS THAT IS CLOSING

These pedagogical experiments and the interest shown by the promoters of the pedagogical third-time reform in the activity and creativity of children and teachers are far from being unanimously supported. In fact, they represent a major break with traditional teaching and, although teachers are freed up for 3 h a week to train in these new methods, many of them feel powerless to offer awakening activities and triple the hours of physical education. The educational value of this discipline is also far from being universally accepted at political and institutional level. Members of parliament laughed out loud when the reform was presented by the Prime Minister (Belbenoit, 1973). The only argument that seemed to be heard at the time was that “these exercises in corporeal expression and creation designed to provide the child with bodily availability and mastery of the body were conducive to intellectual learning” (Belbenoit & Guillermin, 1971, p. 10). From this perspective, the body is seen more as a medium that needs to be exercised to be effective, and the child’s activity must above all be useful for learning at school: “when we triple the timetable for physical education lessons (...), it is because we know that by conforming to the demands of their nature, we will better instruct the children, we will ensure a better return on their efforts - in short, in a spirit of productivity” (Belbenoit & Guillermin, 1969, p. 22) states a report by the commission for the reform of the pedagogical third-time. These statements stand in stark contrast to the desire for change expressed by the promoters of the reform, and the ambition to encourage creativity is exploited to the benefit of a profitable, high-performance and intellectualist vision of education.

Faced with these numerous obstacles, the objectives of educational renewal struggled to gain any real ground and, in the early 1980s, more and more voices were heard calling for a return to traditional methods. In 1984, the Minister of Education “blew the whistle on the end of playtime” (Chevenement, 1984). The new curricula published in 1985 marked the failure of the pedagogical third-time reform and a return to the traditional division of school subjects, with the emphasis on French and mathematics. Five hours a week was still devoted to physical education, but a taste for effort and sporting performance took

precedence over creativity: “a lasting taste for sporting activities contributes to balance and health, reinforces the sense of effort, and accustoms pupils to collective action” (Order of 3 April 1985). Awakening activities, which emphasized the role of the body and the pupil’s experience of real-life situations, were abandoned.

This seems to have had the effect of categorizing embodied an enactive creativity as a school utopia. Interest in this notion then partly abandoned the school world to take refuge in leisure activities, informal educational settings or marginal and experimental projects (Brasseur, 1993). In a thesis on the evolution of the discourse on creativity in schools between 1968 and 1985, the author concludes that creativity should be didactised to make it more “operational” and thus avoid discouraging teachers in the face of “this concept which is almost impossible to define precisely” (Brasseur, 1993, p. 407). In the same way, a physical education teacher considers that “in the absence of operational definitions and precise criteria for its evaluation, motor creativity remains a kind of chimera pursued by educators, allowing for all sorts of intuitions and extrapolations” (Bertsch, 1983, p. 46). He then undertook a thesis which involved adapting the creative thinking tests proposed by Guilford and Torrance (1966) to motor creativity (Wyrick, 1968). He defended a scientific vision of motor creativity and thus aimed to “combat empiricism with a rationalised approach” (Bertsch, 1984, p. 43), endeavoring to build intervention tools designed to facilitate a more rigorous conception. This led to a process of “school formatting” (Arnaud, 1989) and the didactization of creativity, as can be seen in the *Revue EP&S*, which saw a proliferation of grids and criteria for assessing motor creativity. Influenced by cognitivist learning theories, didactics is taking center stage in teacher training and changing classroom practices (Houssaye, 2014). This transition was accompanied by a reevaluation of technique in physical education, and the representations of creativity then took on different forms depending on the activity. In gymnastics, creativity becomes a kind of added value that is evaluated according to different criteria. The concept also attracted the interest of team sports coaches, who saw it as a lever for individual and collective performance. The 1980s thus marked a new departure in the way teachers approached embodied creativity at school. There was a sort of pendulum swing from an approach that focused exclusively on experience, spontaneity and expression in the 1960s and 1970s, to a reappraisal of instrumental rationality from the 1980s onwards, whereby creativity was put at the service of academic learning or sporting performance.

At the beginning of the twentieth century, when creativity was presented as a key issue for education and training in international recommendations and research (Capron-Puozzo, 2016; NACCE, 1998; OCDE, 2001; Taddéi, 2009), the number of articles in the *Revue EP&S* mentioning the term fell considerably. It is then mainly associated with artistic practices, which are taught very little in physical education compared to sporting practices. One explanation for this lies in the fact that artistic practices appear to be a somewhat separate area within the school, whose characteristics are more conducive to embodied and enactive creativity. But the association between creativity and art helps to keep this notion separate from ordinary experience and on the margins of the grammar of schooling.

DISCUSSION: SIMILARITIES WITH INDIGENOUS TEACHING METHODS

Pedagogical practices designed to encourage the expression and development of pupils’ embodied creativity, experimented with by teachers as part of the pedagogical third-time reform, highlight the limitations of western conceptions of thought and action in truly exploring this notion. The characteristics of these teaching experiments show many convergences with indigenous pedagogies that have developed outside the narrow framework of eurocentric thought (Battiste, 2002), in particular the fact that the way of learning is based on action and immediate experience (Aikenhead, 2006), that it is strongly rooted in its local setting and in a non-hierarchical relational approach with the teacher seen as a partner and guide (Campeau, 2019), or the fact that children are encouraged to make their own choices (Guay, 2015). These similarities between these alternative pedagogical approaches to the grammar of schooling suggest the richness of indigenous cultures in understanding a whole area of human action that remains unthought of and largely obscured in western culture. Indigenous pedagogies, based on relationships and concrete action, thus represent a heritage rich in possibilities for rethinking pedagogy and education in the 21st century (Akkari & Fuentes, 2021).

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study of articles published in the *Revue EP&S* deserves to be supplemented by an analysis of other professional publications relating to primary schools in France and other western countries during this period. Furthermore, as the results highlight the limitations of the western way of thinking in terms of truly understanding embodied and enactive creativity in education, it would seem important to work jointly with non-western researchers and educationalists, particularly indigenous ones, to develop future research on the

conditions that foster embodied and enactive creativity. This approach requires us to question many of the implicit assumptions about thinking and rational action that are sedimented in western culture (Joas, 2001) to find ways of respecting different eurocentric and indigenous ways of knowing (Battiste, 2002). For example, the very formal and linear way in which scientific results are formatted tends to leave out the sensitivity and originality that emerge throughout the creative process. In order to explore and try to account for the embodied, enacted and iterative nature of creativity, we need to imagine different forms of narratives (Richard, Glăveanu, & Aubertin, 2023) as well as different methodologies.

According to some authors, the pedagogy of place lies at the intersection of indigenous and western educational principles (Barnhardt & Oscar Kawagley, 2005; Gruenewald, 2003; Michell, Yvizina, Augustus, & Sawyer, 2008; Somerville, 2011) with place becoming a common space between western and indigenous thinking (Johnson & Murton, 2007). Knowledge is then acquired through action in the construction of a constant link with the territory, the source and result of all learning. It would therefore seem interesting to conduct research into embodied and enactive creativity in these place-based pedagogies at the interface of indigenous and western cultures. For example, “educational areas” are a form of place-based pedagogy that was created in Polynesia and has been developing throughout metropolitan and overseas France over the last 10 years. These educational spaces could be used as research areas about expression and development of embodied and enactive creativity by pupils and teachers, to explore in particular the influence of non-western educational conceptions and the ways in which those divergent approaches can contribute to genuinely transform the grammar of schooling.

CONCLUSIONS

The analysis of professional articles published in a French journal dedicated to physical education highlights teachers’ interest in embodied creativity during the 1970s. These years were marked by a profound questioning of norms related to the body, ways of acting and educational methods, perceived as obstacles to the expression and development of creativity. Numerous experiments in primary schools, promoted by the reform of the pedagogical third-time, aimed to better understand the processes of bodily creativity and to make them transferable. Various physical practices encourage spontaneity and release corporal tensions to enable the body to be available and receptive to sensitive manifestations, considered as sources of embodied and enactive creativity. These approaches, which represent a radical break with the grammar of schooling, reveal many convergences with indigenous pedagogies: the overcoming of the mind–body dichotomy to apprehend knowledge through experience in interaction with the environment; a learning process that embraces sensitivity and intuition; place-based knowledge and a more horizontal pedagogical relationship. However, this educational approach encountered a considerable amount of resistance within the educational institution and, in a kind of pendulum swing, the 1980s saw a return to a more traditional approach. Interest in active creativity at school remained but was transformed to adapt it to school requirements. Grids for measuring and assessing motor creativity and didactic procedures designed to make it easier for teachers emerged. In sport practices, creativity is seen as a factor of individual and team performance. Embodied and enactive creativity is used for various purposes other than creative experience itself. Since the 2000s, embodied creativity has been associated mainly with artistic practices in physical education, which provides a space within the school that is more conducive to challenging norms and codes (Bertin-Renoux, 2023).

But the 1970s also saw a growing awareness of ecological issues, and numerous environmental associations in France were founded during this period (Vrignon, 2012). However, despite countless warnings from scientists and ecologists over more than 50 years, human actions in western societies have largely continued to destroy ecosystems, reduce biodiversity and contribute to climate change. We are currently facing an unprecedented ecological crisis and the need for a profound and radical change in the way western societies act. The characteristics of embodied and enactive creativity highlighted in this study contribute to shaping a non-standard conception of creativity (Glăveanu & Beghetto, 2021). This associates an instrumental dimension of action (measurable, programmed, linear, teleological) and an experiential one (spontaneous, intuitive, sensitive, neither programmed nor measurable, autotelic) which articulate according to a genuine instrumentality (Dewey, 1916) meaning that has no other purpose than the creative process itself. The concept of experience developed by John Dewey is close to the educational concept of the Aboriginal peoples, for whom it is a question of “ways of living” and for whom “learning” means “coming to knowing” (Ermine, 1998). This conceptual shift, connecting creativity not as much with the outcomes people produce but what they do and how they live their lives, is probably more ecologically valid (Glăveanu & Beghetto, 2021). It is based on a conception of the creative process that relies on the intuitive and sensitive

search for a balance between the human being and the ecosystem to which they belong and contribute. This balance, precarious and dynamic in an open system, goes beyond what can be programmed, controlled and measured objectively by humans according to a linear and instrumental rationality. Embodied and enactive creativity thus hold potential to transform the way in which action is conceived in western societies, particularly in education, to take greater account of the complex interactions with living ecosystems. But embracing the sensitive, intuitive, embodied and enactive dimensions of creative action means moving beyond the western mindset of mind–body dichotomy to consider thought and action as inseparable. We must therefore continue to forge links with non-western conceptions of creativity in order to enrich and broaden our vision of embodied creativity.

In the field of education, the desire to transform the grammar of schooling, although marginal, is still present in teaching practices. A movement for teaching outdoors in nature has been growing in many western countries over the last 10 years, driven by people “on the ground”. The move from the classroom to a forest, park or beach is generating far-reaching educational changes, some of the characteristics of which are similar to those highlighted in this article: a desire to anchor knowledge in the experience of children interacting with their environment, to mobilize the body and all the senses, transforming the pedagogical relationship and the understanding of learning. These teaching methods can be described as place-based pedagogy, which is the western form that comes closest to indigenous pedagogies (Campeau, 2016). It therefore seems worthwhile to conduct research–action with these stakeholders to examine the extent to which education in and with nature helps to overcome the mind–body dichotomy and to express and develop an embodied and enactive creativity.

CONFLICT OF INTEREST

The author declares that there are no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are derived from public domain resources and available from the corresponding author, A. Bertin-Renoux, upon reasonable request.

REFERENCES

- Aikenhead, G.S. (2006). Towards decolonizing the pan-Canadian science framework. *Canadian Journal of Science, Mathematics and Technology Education*, 6(4), 387–399; doi: [10.1080/14926150609556712](https://doi.org/10.1080/14926150609556712).
- Akkari, A., & Fuentes, M. (2021). *Repenser l'éducation. Alternatives pédagogiques du sud*. Paris: UNESCO. Available from: <https://bit.ly/3Je9CBz>.
- Arnaud, P. (1985). La Revue EP&S et l'innovation didactique. *Revue EP&S*, 192, 30–37.
- Arnaud, P. (1989). Contribution à une histoire des disciplines d'enseignement. La mise en forme scolaire de l'éducation physique. *Revue Française de Pédagogie*, 89, 29–34.
- Attali, M. (2005). Le genre dans la Revue EP&S. In J. Saint-Martin & T. Terret (Eds.), *Sport et genre. Apprentissage du genre et institutions éducatives*, vol. 3 (pp. 283–302). Paris: L'Harmattan.
- Attali, M., & Saint-Martin, J. (2014). *À l'école du sport, Épistémologie des savoirs scolaires du XIX siècle À nos jours*. Louvain-la-Neuve, Belgium: De Boeck.
- Bachelart, D. (2012). « S'encabaner », art constructeur et fonctions de la cabane selon les âges. *Éducation Relative à l'Environnement*, 10, 35–61; doi: [10.4000/ere.1029](https://doi.org/10.4000/ere.1029).
- Bardin, L. (2013). *L'analyse de contenu*. Paris: PUF; doi: [10.3917/puf.bard.2013.01](https://doi.org/10.3917/puf.bard.2013.01).
- Barnhardt, R., & Oscar Kawagley, A. (2005). Indigenous knowledge systems and Alaska Native ways of knowing. *Anthropology & Education Quarterly*, 36(1), 8–23.
- Barrué, J.P. (1996). L'EPS et ses références. Regards à travers la Revue EP&S 1950-1992. *Revue EP&S*, 258, 71–74.
- Battiste, M. (2002). *Indigenous knowledge and pedagogy in first nations education. A literature review with recommendations*. Ottawa, ON: Indian and Northern Affairs Canada (INAC).
- Bertin-Renoux, A. (2023). Le cirque, une hétérotopie dans l'école. *eJRIEPS*, 52, 30–59; doi: [10.4000/ejrieps.8409](https://doi.org/10.4000/ejrieps.8409).
- Besse-Patin, B. (2018). Loisirs et éducation. La formalisation éducative des jeux dans un accueil périscolaire. *Revue Française de Pédagogie*, 204, 5–16; doi: [10.4000/rfp.8316](https://doi.org/10.4000/rfp.8316).
- Bonange, J.-B. (1969). L'activité “expression corporelle” à l'Ireps. *Les Cahiers du GREC*, 1, 4–7.
- Borgé, N. (2017). John Dewey, précurseur du paradigme de l'éducation et de la cognition incarnée pour l'expérience et l'éducation esthétiques en didactiques des langues ? *Revue Triages*, 29, 136–139.
- Bourdieu, P., & Passeron, J.-C. (1964). *Les héritiers. Les étudiants et la culture*. Paris: Éditions de Minuit.
- Bourdieu, P., & Passeron, J.-C. (1970). *La reproduction. Éléments pour une théorie du système d'enseignement*. Paris: Éditions de Minuit.

- Brasseur, C. (1993). Étude sur l'évolution d'un discours éducatif. La créativité à l'école durant la période 1968–1985. Thèse en vue du doctorat en Sciences de l'éducation, Université de Strasbourg.
- Brohm, J.M. (1986). *Quel corps?* Paris: Éditions de la Passion.
- Campeau, D. (2016). Valeurs autochtones en salle de classe: Recours à la pédagogie autochtone et à la pédagogie du lieu pour favoriser une interface culturelle. *La Revue de l'AQEFLS*, 32(1), 23–40; doi: [10.7202/1090209ar](https://doi.org/10.7202/1090209ar).
- Campeau, D. (2019). Pédagogie autochtone et pédagogie du lieu: Démarche hybride pour l'intégration de dimensions culturelles autochtones dans l'enseignement au primaire au Québec. Thèse de doctorat de l'Université de Sherbrooke.
- Capron-Puozzo, I. (2016). Du concept de créativité à une pédagogie de la créativité: Un défi pour le XXI^e siècle. In I. Capron-Puozzo (Ed.), *La créativité en éducation et en formation. Perspectives théoriques et pratiques* (pp. 13–29). Louvain-la-Neuve, Belgium: De Boeck.
- Chartier, R., Compère, M.-M., & Dominique, J. (1976). *L'éducation en France du XVI^e au XVIII^e siècle*. Paris: CDU et SEDES.
- Chombard de Lauwe, M.J., Bonnin, P., Perrot, M., Mayeur, M., & De La Soudière, M. (1976). *Enfant en-jeu. Les pratiques des enfants durant leur temps libre en fonction des types d'environnement et des idéologies*. Paris: Éditions du CNRS.
- Collinet, C. (1998). Évolution des savoirs privilégiés par les enseignants d'EPS depuis 1950 à partir d'une mise en évidence des courants dominants dans la Revue EP&S. In G. Klein (Ed.), *Quelle science pour le sport ?* (pp. 175–192). Toulouse, France: AFRAPS/LARAPS.
- Corbin, A., Courtine, J.-J., & Vigarello, G. (2006). *Histoire du corps, tome 3. Les mutations du regard. Le XX^e siècle*. Paris: Seuil.
- De La Salle, J.-B. (1951). *Conduite des écoles chrétiennes. Introduction et notes comparatives avec l'édition princeps de 1720* (1^e éd. 1720). Paris: Procure Générale.
- Denis, D. (1974). *Le corps enseigné*. Paris: Éditions Universitaires.
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: MacMillan.
- Dizerbo, A. (2016). Être et avoir un corps à l'école: Enjeux biographiques du contrôle du corps dans l'institution scolaire. In C. Delory-Momberger (Ed.), *Éprouver le corps: Corps appris, corps apprenant* (pp. 69–79). Toulouse, France: Érès.
- During, B. (2005). L'éducation physique, une discipline en progrès ? *Carrefours de l'éducation*, 20, 61–87; doi: [10.3917/cdle.020.0061](https://doi.org/10.3917/cdle.020.0061).
- Ermine, W. (1998). Pedagogy from the Ethos: An interview with Elder Ermine on Language. In L.A. Stiffarm (Ed.), *As we see it... Aboriginal pedagogy* (pp. 9–28). Saskatoon, SK: University Extension Press.
- Foucault, M. (1975). *Surveiller et punir. Naissance de la prison*. Paris: Éditions Gallimard.
- Gallager, S. (2014). Pragmatic interventions into enactive and extended conceptions of cognition. *Philosophical Issues*, 24, 110–126; doi: [10.1111/phis.12027](https://doi.org/10.1111/phis.12027).
- Glăveanu, V.P. (2013). Rewriting the language of creativity: The Five A's framework. *Review of General Psychology*, 17(1), 69–81; doi: [10.1037/a0029528](https://doi.org/10.1037/a0029528).
- Glăveanu, V.P. (2014). Distributed creativity: What is it? In *Distributed creativity: Thinking outside the box of the creative individual* (pp. 1–13). Cham, Switzerland: Springer International Publishing.
- Glăveanu, V.P., & Beghetto, R. (2021). Creative experience: A non-standard definition of creativity. *Creativity Research Journal*, 33(2), 75–80; doi: [10.1080/10400419.2020.1827606](https://doi.org/10.1080/10400419.2020.1827606).
- Gruenewald, D.A. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3–12.
- Guay, C. (2015). Les familles autochtones: Des réalités sociohistoriques et contemporaines aux pratiques éducatives singulières. *Intervention*, 141, 17–27.
- Haudiquet-Lamarque, X. (2018). Repenser la non-directivité au regard du paradigme relationnel. *Approche Centrée sur la Personne. Pratique et Recherche*, 26, 64–89.
- Houssaye, J. (2014). *La pédagogie traditionnelle*. Paris: Fabert.
- Joas, H. (2001). La créativité de l'agir. In J.-M. Baudouin & J. Friedrich (Eds.), *Théories de l'action et éducation* (pp. 27–43). Bruxelles, Belgium: De Boeck Supérieur; doi: [10.3917/dbu.baudo.2001.01.0027](https://doi.org/10.3917/dbu.baudo.2001.01.0027).
- Johnson, J.T., & Murton, B. (2007). Re/placing native science: Indigenous voices in contemporary constructions of nature. *Geographical Research*, 45(2), 121–129; doi: [10.1111/j.1745-5871.2007.00442.x](https://doi.org/10.1111/j.1745-5871.2007.00442.x).
- Kahn, P. (2008). La pédagogie primaire entre 1945 et 1970: l'Impossible réforme ? *Le Télémaque*, 34, 43–58; doi: [10.3917/tele.034.0043](https://doi.org/10.3917/tele.034.0043).
- Lahire, B. (2008). La forme scolaire dans tous ses états. *Revue Suisse des Sciences de l'éducation*, 30, 229–258; doi: [10.25656/01:4217](https://doi.org/10.25656/01:4217).
- Lebrun, B. (2006). Les revues professionnelles: Entre débats et orientations. In M. Attali (Ed.), *L'univers professionnel des enseignants d'éducation physique de 1940 à nos jours* (pp. 38–61). Paris: Vuibert.
- Legrand, L. (1971). *Une méthode active pour l'école d'aujourd'hui*. Paris and Neuchâtel, Switzerland: Delachaux et Niestlé.
- Malinin, L. (2016). Creative practices embodied, embedded, and enacted in architectural settings: Toward an ecological model of creativity. *Frontiers in Psychology*, 6, 1978; doi: [10.3389/fpsyg.2015.01978](https://doi.org/10.3389/fpsyg.2015.01978).
- Malinin, L.H. (2019). How radical is embodied creativity? Implications of 4 E approaches for creativity research and teaching. *Frontiers in Psychology*, 10, 1–12; doi: [10.3389/fpsyg.2019.02372](https://doi.org/10.3389/fpsyg.2019.02372).
- Maulini, L., & Maulini, O. (1999). Le corps à l'école: Élément neutre des apprentissages ? *Pratiques Corporelles*, 126, 13–17.
- Meunier, O. (2008). *De la démocratisation de la société à celle des formes de connaissance. Vers une ouverture de la forme scolaire aux savoirs socioculturels ?* Paris: L'Harmattan.

Embodied and Enactive Creativity

- Michell, H., Yvizina, Y., Augustus, C., & Sawyer, J. (2008). *Learning indigenous science from place: Research study examining indigenous-based science perspectives in Saskatchewan First Nations and Métis community contexts*. Saskatoon, SK: Aboriginal Education Research Centre. Available from: aerc.usask.ca/downloads/Learning-Indigenous-Science-From-Place.pdf.
- Morales, Y., Travaillot, Y., & Ferez, S. (2019). Le GREC (1968-1976), une contestation « par corps » de la formation des enseignants d'éducation physique et sportive. *Sciences Sociales et Sport*, 13, 57–83; doi: [10.3917/rsss.013.0057](https://doi.org/10.3917/rsss.013.0057).
- Morizur, Y. (2019). *Le plaisir en Éducation Physique de 1882 à 2010: Usages d'une notion, mythifiée et clivante*. Thèse en Sciences de l'éducation, Université de Montpellier.
- National Advisory Committee on Creative and Cultural Education. (1998). *All our futures: Creativity, culture and education*. London: DFEE.
- OCDE. (2001). *La société créative du XXI^e siècle, enquêtes prospectives*. Paris: OCDE.
- Postic, M. (2001). *La relation éducative* (1^{ère} éd. 1979). Paris: PUF.
- Prost, A. (2005). Les Héritiers et le contexte privilégié des années 1964-1968. In J.-M. Chapoulié, O. Kourchid, J.-L. Robert, & A.-M. Sohn (Eds.), *Sociologues et sociologies. La France des années 60*. Paris: L'Harmattan.
- Prost, A. (2013). *Du changement dans l'école. Les réformes de l'éducation de 1936 à nos jours*. Paris: Seuil.
- Raveneau, G. (2019). Les terrains d'aventure en France dans les années 1970 ou la contestation en acte de la notion d'équipement socioculturel. In L. Besse (Ed.), *Des lieux pour l'éducation populaire (1930–1970) Histoire des équipements socioculturels. Villes et territoires*. Tours, France: Presses Universitaires François-Rabelais.
- Rhodes, M. (1961). An analysis of creativity. *The Phi Delta Kappan*, 42(7), 305–310.
- Richard, V., Glàveanu, V., & Aubertin, P. (2023). The embodied journey of an idea: An exploration of movement creativity in Circus arts. *Journal of Creative Behavior*, 57(2), 221–236; doi: [10.1002/jobc.571](https://doi.org/10.1002/jobc.571).
- Robert, A. (2008). Autour de Mai 1968, la pédagogie en question. Le colloque d'Amiens. *Les Sciences de l'éducation – Pour l'Ère nouvelle*, 41, 27–45.
- Salaün, M. (2013). *Décoloniser l'école ? Hawaï, Nouvelle-Calédonie. Expériences contemporaines*. Rennes, France: PUR.
- Schneuwly, B., & Hofstetter, R. (2017). Forme scolaire, un concept trop séduisant ? In A. Dias-Chiaruttini & C. Cohen-Azria (Eds.), *Théories-didactiques de la lecture et de l'écriture: Fondements d'un champ de recherche - en cheminant avec Yves Reuter*. Villeneuve d'Ascq, France: Presses Universitaires du Septentrion; doi: [10.4000/books.septentrion.15254](https://doi.org/10.4000/books.septentrion.15254).
- Somerville, M. (2011). Becoming frog. Learning place in primary school. In I.M. Somerville, B. Davies, K. Power, S. Gannon, & P. de Carteret (Eds.), *Place pedagogy change* (pp. 65–80). Rotterdam, The Netherlands: Sense Publishers.
- Stevens, C., Malloch, S., McKechnie, S., & Steven, N. (2003). Choreographic Cognition. *Pragmatics & Cognition*, 11(2), 297–326; doi: [10.1075/pc.11.2.06ste](https://doi.org/10.1075/pc.11.2.06ste).
- Taddéi, F. (2009). *Former des constructeurs de savoirs collaboratifs et créatifs: Un défi majeur pour l'éducation du 21^e siècle*. Paris: OCDE.
- Torrance, P. (1966). *Torrance tests of creative thinking. Norms technical manual*. Princeton, NJ: New-York Press.
- Torrents, C., Balagué, N., Ric, À., & Hristovski, R. (2020). The motor creativity paradox: Constraining to release degrees of freedom. *Psychology of Aesthetics, Creativity, and the Arts*, 15, 1–12; doi: [10.1037/aca0000291](https://doi.org/10.1037/aca0000291).
- Tyack, D.B., & Cuban, L. (1995). *Tinkering toward utopia: A century of public school reform*. Cambridge, MA: Harvard University Press.
- Vigarello, G. (2016). *Le sentiment de soi. Histoire de la perception du corps XVI^e-XX^e siècle* (1^{ère} éd. 2014). Paris: Seuil.
- Vigarello, G. (2018). *Le corps redressé, histoire d'un pouvoir pédagogique* (1^{ère} éd. 1978). Paris: Éditions du Félin.
- Vincent, G., Courtebras, B., & Reuter, Y. (2012). La forme scolaire: Débats et mises au point: Entretien de Guy Vincent avec Bernard Courtebras et Yves Reuter. *Recherches en Didactiques*, 13, 109–135; doi: [10.3917/rdid.013.0109](https://doi.org/10.3917/rdid.013.0109).
- Vincent, G., Lahire, B., & Thin, D. (1994). Sur l'histoire et la théorie de la forme scolaire. In G. Vincent (Ed.), *L'Éducation prisonnière de la forme scolaire ? Scolarisation et socialisation dans les sociétés industrielles*. Lyon, France: Presses Universitaires de Lyon.
- Vivier, C. (2000). Statut et sphère d'appartenance des auteurs de la *Revue EP&S* (1970–2000). In T. Terret (Ed.), *Éducation physique, sport et loisir (1970–2000)* (pp. 87–120). Clapiers, France: AFRAPS.
- Vrignon, A. (2012). Écologie et politique dans les années 1970: Les Amis de la Terre en France. *Vingtième Siècle. Revue d'histoire*, 113, 179–190; doi: [10.3917/vin.113.0179](https://doi.org/10.3917/vin.113.0179).
- Wyrick, W. (1968). The development of a test of motor Creativity. *Research Quarterly*, 39, 756–765.

SOURCES

OFFICIAL TEXTS

- Circulaire n°IV 69–371 du 2 septembre 1969, BOEN n°35 du 18 septembre 1969.
- Circulaire n°IV 69–499 du 5 décembre 1969, BOEN n°47 du 11 décembre 1969.
- Programmes et instructions pour l'école élémentaire, Arrêté du 23 avril 1985.
- Rapport de la Commission de rénovation de la pédagogie pour le premier degré. *L'Éducation*, n°41 du 16 octobre 1969.

REVUE EP&S ARTICLES

- Bertrand, M., & Dumont, M. (1976). Les espaces du corps, Essai sur la création. *Revue EP&S*, 138, 44–48.
- Bertsch, J. (1983). La créativité motrice. *Revue EP&S*, 181, 46–48.
- Bertsch, J. (1984). L'EPS demain *Revue EP&S*, 186, 42–45.
- Dejaeger, O. (1971). Voir comprendre permettre. *Revue EP&S*, 111, 28–31.
- Delaubert, R., & Gallot, C. (1974). L'éducation physique, dimension nécessaire de l'éducation totale. *Revue EP&S*, 128, 17–18.
- Editorial. (1950). *Revue EP&S*, 1.
- Équipe pédagogique du Jura. (1980). La natation à la maternelle. Des enfants qui ne nagent pas comme nous. *Revue EP&S*, 161, 33–38.
- Lapierre, A. (1977). Le concept de psychomotricité et son évolution. *Revue EP&S*, 145, 55–58.
- Maudire, P. (1980). Expression corps éducation. *Revue EP&S*, 161, 39–41.
- Moret, M. (1971). Dossier tiers-temps. *Revue EP&S*, 112, 17–18.
- Paillet, P. (1970). Autour du non directivisme. *Revue EP&S*, 102, 15–20.
- Pujade-Renaud, C. (1966). Modern-Dance aux USA. *Revue EP&S*, 82, 39–48.
- Samittier, A. (1972). Introduction du dossier « Pour le tiers-temps pédagogique ». *Revue EP&S*, 117, 17–18.
- Schmitt, A. (1975). L'activité ludique dans le développement moteur des enfants. *Revue EP&S*, 134, 11–14.
- Tillit, J. (1982). Sport scolaire et créativité. *Revue EP&S*, 177, 39–40.

OTHER DOCUMENTS

- Belbenoit, G. (1973). *Le sport à l'école. Renouveau de l'éducation*. Paris: Casterman.
- Belbenoit, G. (1974). Réflexions d'un profane sur l'éveil. Conférence du 13 février 1974. *Bulletin de la Société Française de Pédagogie*, 179, 25–56.
- Belbenoit, G., & Guillermin, G. (1969). *L'Éducation*, 41.
- Belbenoit, G., & Guillermin, G. (1971). *L'Éducation*, 93.
- Chevènement, J.P. (1984). *Le Figaro*, 5 septembre.
- Citron, S. (1968). *Le Monde*, 25 juillet.
- Guichard, O. (1969). *L'Éducation*, 41.

Anne Bertin-Renoux, Université de Bretagne Occidentale, École Normale Supérieure de Rennes

Correspondence concerning this article should be addressed to Anne Bertin-Renoux, Faculté des Sciences du Sport et de l'Éducation, Université de Bretagne Occidentale, Brest, France. E-mail: anne-renoux@orange.fr