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The Primary School as a Playful Space

Theories and Practices in an International Perspective

Francesca Berti, Simone Seitz (Eds.)

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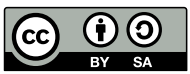

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A Playful Frame for Primary Schools

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1. Play and Primary School[1]

This volume explores the relationship between primary school and play from an international perspective. Play is widely recognised as a fundamental requirement, a pivotal cultural activity and an essential environment for peer-based socialisation for children of primary school age (Staccioli, 2008; Hamayon, 2016; Petillon, 2015; Sandberg & Heden, 2011). However, discourses and debates on play pedagogy in educational science at an international level (Bubikova-Moan, Næss Hjetland & Wollscheid, 2019; Pyle, De Luca & Daniels, 2017) predominantly focus on kindergarten with relatively few references to primary school education. Consequently, there is less research and knowledge on the latter regarding the integration of play within its setting (Paatsch et al., 2024).

Play is generally recognised as a fundamental form of child expression, and its contribution to personal development and the acquisition of relational competencies is acknowledged (Petillon, 2017). It is therefore important to consider how this manifests within primary schools, where children must negotiate social roles as peers and students, and educational processes are less free from teleological orientations (Seitz & Hamacher, 2024). At the same time, at an international level, childhood is increasingly being spent in institutions, and it is foreseeable that all-day education formats, in particular, will

1 The present paper is the result of joint research by the two authors. Both authors contributed to sections 1 and 2. Sections 3 and 4 are attributed to Francesca Berti.

become a decisive instance of socialisation for children of primary school age (Schüpbach & Lilla, 2019).

In the current discourse, when the relationship between childhood and primary school is made relevant, play is no longer contrasted with learning in a polarising way but is instead identified as a fundamental or anthropologically-given approach to exploring the world (Briggs & Hansen, 2014). This perspective echoes Dewey's philosophical considerations on education, in which as he was the first to recognise that play and work are based on the same fundamental, activity-based form of acquiring knowledge. He emphasised that play remains a primary form of experience — and therefore of education — even during the primary school years (Dewey, 1938).

In this introductory contribution, and based on these considerations, we align ourselves with approaches to play that do not consider play-based learning to be an "add-on" or a "complementary" teaching and learning method, but rather as a "way of doing" (Paatsch et al., 2024, pp. 71–72) with transformative potential for primary schools as institutions. Moreover, we propose integrating playfulness into education (Berti, Consalvo & Seitz, 2025).

We start from the assumption that children's opportunities for action and participation are interconnected with different forms of play and playfulness. This suggests that education and play are not opposites (Wood, 2022; Wilders & Woods, 2023, p. 18) but can complement each other (Hauber & Zander, 2020; Seitz, Consalvo & Berti, 2025). At the same time, we recognise that the main constraints in merging play and learning in primary schools, as often reported in the literature (Zosh et al., 2017; Weisberg et al., 2016; Farnè, 2005), are diffuse uncertainties that create frictions on the part of researchers and teachers alike. For example, it could be argued that play is a voluntary activity chosen by the individual, a quality that could be lost within the regulations and requirements of the school institution. Alternatively, it could be claimed that performance-enhancement objectives do not compel play.

Still, it is precisely from this sceptical starting point that we invite the reader to consider the relationship between play and primary schools — that is, between play and learning — as a fruitful one. In other words, we propose that they are not antinomic, but rather complementary, enriching each other and providing valuable insights for future conceptualisations of primary education. Indeed, both entail exploration and discovery as fundamental

modes of experience. Furthermore, both "deep" play and learning manifest in moments of flow: states of immersive concentration and intrinsic motivation (Seitz & Hamacher, 2024).

For educators, embracing a playful approach to learning requires trust in the potential of the playful framework, as well as openness to one's own teaching. The outcomes of playful learning cannot be fully programmed because they open up moments of encounter and observation of the world for both children and teachers (Biesta, 2022). From this perspective, play can contribute significantly to educational quality as a vehicle of "world-centred education": it is a valid way to develop high-quality primary education in a changing world (Biesta, 2022).

When it comes to play in a school context, though, theories and definitions such as play-based learning (Briggs & Hansen, 2012; Hassinger-Das et al., 2017) and playful learning and guided play (Zosh et al., 2017; Hassinger-Das et al., 2017) reflect pedagogical traditions. There is also no definitional consensus on a broader play-based pedagogy (Paterson, 2020). Furthermore, given the variety of approaches, there is a lack of comprehensive theoretical frameworks considering not only playful teaching and learning in the primary school context but also considering the school as a playful space for experiences and relationships (Berti, Consalvo & Seitz, 2025; Petillon, 1993). A broad perspective integrating play and playfulness within primary education should thus consider three key dimensions: playful spaces, teachers' perceptions, and children's perceptions.

2. Quest for a Broad Research Perspective

The concept of a playful space draws inspiration directly from kindergarten, an environment dedicated to play where play is recognised as the primary mode of learning. In relation to primary school, this context is seldom applied, but Pyle and Daniels' extensive investigations have generated a model called "A Continuum of Play-Based Learning" (Pyle & Daniels, 2017; Pyle, De Luca & Daniels, 2017; see also Schnuck, 2021; Berti & Seitz, 2024). Consisting of five steps — from free play to educational games — the model provides a comprehensive view of the kindergarten as a playful space and nurtures fur-

ther conceptual reflection on levels of children's self-government and the role of the teacher in supporting activities that are more or less directed by adults or developed together with children. The model concerns children aged 3–6, and it would be valuable to consider it within the context of primary schools as well, since the model provides an opportunity to explore how an extensive and varied range of play activities could be incorporated into primary schools. Similarly, Zosh et al. (2018) – referring more generally to young children, thus including the first years of primary school – propose a spectrum of play activities: free play, guided play, games, cooperative play, playful instruction and direct instruction. In this model, too, the six categories focus on whether the experience is initiated or directed by the child or adult (p. 4). However, even though the degree of guidance is a fundamental consideration when reflecting on playful activities at school, it does not necessarily directly impact the level of children's participation, which can be high even in activities that are heavily directed by adults, as demonstrated by educational games (Seitz & Hamacher, 2024).

A second dimension to consider when reflecting on play and playfulness in primary schools is teachers' perceptions of their own practices and how they reflect on them (Berti, Consalvo & Seitz, 2025; Petillon & Flor, 1997; Seitz, Consalvo & Berti, 2025). Teachers' attitudes towards play are indeed shaped by the pedagogical principles that underpin their daily educational practices. These ideas are not abstract; the way in which play is conceived translates into the teaching practices, attitudes, and learning tools that teachers choose. As Sandberg and Heden (2011) point out that teachers' beliefs implicitly reflect their ideas about the role of play in developmental and socialisation processes (p. 318). They perceive play as a space in which children can explore rules, roles, and relationships, thereby developing the ability to navigate complex social contexts. One shared belief is that learning awareness — the moment when a child realizes they have learnt something — is one of the most authentic forms of motivation, activating a virtuous spiral that fuels curiosity and the desire for more knowledge, as well as a sense of effectiveness. In this context, teachers recognise that activities such as experimentation, exploration, and independent discovery are expressions of playfulness (Sandberg & Heden, p. 324). Nevertheless, some teachers admit that they rely on play activities much more than initially thought, revealing the relational

and conflictual nature of the concept itself (p. 327). These tensions and recurring uncertainties give rise to a fundamental question: could play, in its most generative and transformative form, occupy a much larger space in everyday school life if it were legitimised as a professional practice and supported by an institutional context that recognised its pedagogical value?

If this perspective were fully recognised, it would open up a whole range of aspects relating to playful teaching and learning. For example, it would reveal the need for play literacy as a foundation for acknowledging learning opportunities in playful activities and games within one's own teaching practice. This would limit the widespread belief in the inherent effectiveness of play-based learning (Andreoletti, Tinterri & Dipace, 2024).

If attention to teachers' perspectives and strengthening their professionalism through a playful approach are essential for significantly including play in primary schools, the views of children and the contribution of Childhood Studies should also be taken into consideration (Melton et al., 2014). Literature already emphasises that the main motivation of primary school children for attending school is to socialise with friends and develop peer relationships (Petillon, 1993; Biffi, 2011). Play and playfulness therefore shape the way children engage with school. However, further investigation of children's primary school attitudes and experiences related to play is needed to gain a better understanding of the dimensions of wellbeing and playful learning, given that exploratory studies have already shown that children tend not to separate play from learning when describing activities that stimulate and engage them (Seitz & Hamacher, 2024; Seitz, Berti & Hamacher, 2023).

3. Thinking Through a Playful Frame

The aim of this volume, and in particular this introductory contribution, is to stimulate further research into the role of play in primary schools by exploring the concept of the "playful frame" from a theoretical perspective (Bateson, 1979; Pearce, 2024). In the words of Bateson:

> Let us place these data in a wider theoretical frame. Let us do a little abduction, seeking other cases which will be analogous to play in the sense of belonging

> under the same rule. Notice that play, as a label, does not limit or define the acts that make up play. Play is applicable only to certain broad premises of the interchange. In ordinary parlance, "play" is not the name of an act or action; it is the name of a frame for action. (Bateson 1979, p. 139)

For Bateson (1979, p. 142), abduction is a way of thinking and a method of identifying cases that adhere to the same rules despite their differences. The aim is to find rules and results that rebuild and expand initial premises. According to his epistemology, identifying potentially similar patterns through abduction by placing two objects, events or phenomena side by side requires narrative thinking. It is only through narrative thinking that the logic of our reasoning can take an "imaginative leap". John Dewey also uses the metaphor of a "leap" in *How We Think* (1933), suggesting that the entire process of thinking involves an inference. Implies a "leap", a "shift", or "going beyond" what is known towards something else that is considered equally valid (Dewey, 1933, p. 19). The strong resemblance between Bateson's abduction and Dewey's inference arises from the fact that both authors draw on the work of Charles Sanders Peirce, the founder of pragmatism. For both authors, thinking begins with the search for similarities and relationships that stimulate the imagination and offer a variety of possibilities and combinations.

Keeping this in mind, we invite readers to explore the publication through the prism of abduction. Rather than thinking about play as an act in itself, readers of this publication can consider it as a playful frame encompassing the full spectrum of playfulness, well-being, discovery and flow. Accordingly, rather than focusing on educational games per se, this volume explores how teaching and learning can be framed in a playful context to stimulate children's motivation and curiosity, thereby setting in motion an active and creative learning process (Sandberg & Heden, 2011, p. 319). The following reference model could be used to represent a playful framework for primary schools:

Figure 1 – A playful framework for primary schools

The model comprises four interconnected macro areas relating to the relationships and interactions between adults and children, and between children themselves. Regarding the approach to teaching and learning, we recommend maintaining the focus on discovery-based learning, which has already been implemented in primary schools and is therefore appropriate for a playful setting. In other words, we are not proposing the adoption of a distinct play-based approach or a taxonomy of play in relation to achieving learning objectives, particular subjects or acquiring competencies. Instead, we propose an integrated approach that facilitates the conceptualisation of discovery learning through a "playful" lens. This approach enables children to acquire a range of transversal skills, including both disciplinary and relational and emotional competencies. The playful framework also encourages reflection on competition and cooperation, as well as on individual and group contributions, reflecting the various forms of play.

All forms of play fall within the framework of playful learning. We recognise the following types of play: free play, guided play, and traditional forms of play, such as street and playground games, which form part of an informal learning context, such as children's play culture (Berti, 2023; Duncan & Duncan, 2023).

These include street and playground games, which are part of an informal learning context such as children's play culture (Berti, 2023; Duncan & Arnott, 2019). We also recognise structured games, which are characterised by rules and generally have educational objectives. These include fiction and storytelling, socialising, cooperation and sports.

A variety of materials are also required for the various types of play, ranging from structured materials such as play equipment and set games to unstructured materials that encourage children's free exploration and discovery (Berti & Seitz, 2024; Seitz & Berti, 2023). In this context, the entire school may be viewed as constituting a play frame. Classrooms, corridors, the gym, and the courtyard are all potential playgrounds and fields of exploration.

4. The Present Volume

Adopting a broad perspective on primary schools and play, this volume brings together a series of blind peer-reviewed contributions originating from the "Scuola Spazio Ludico/Schule als Spielraum/School as a Playful Space" Conference, held at the Faculty of Education of the Free University of Bozen-Bolzano, Italy, in November 2023.

The volume is divided into five sections, each of which invites the reader to reconsider primary school as a playful, fertile and transformative space by encouraging them to think outside the box. These sections are not intended as rigid compartments, but rather as intertwining thematic trajectories offering theoretical perspectives, practical experiences and methodological suggestions.

1. Conceptual Frameworks: This introductory section provides the theoretical tools necessary to understand playfulness as an epistemological and pedagogical concept.

2. Wellbeing at School: A reflection on wellbeing as an intrinsic quality of the school experience, closely connected to playfulness, motivation and participation.
3. Forms of Playful Learning: an exploration of various playful approaches to learning, including open teaching, exploratory learning and collaborative design.
4. Narrative Play and Storytelling: A detailed examination of the value of narration as an educational and relational tool that supports processes of meaning, identity, and playful learning.
5. Best Practices: A brief overview of school initiatives and research ideas, outlining potential scenarios for a more playful educational environment.

One of the challenges of this volume was to collect contributions mainly from German and Italian traditions and translate them into English, with the aim of encouraging greater scientific collaboration. It was necessary to acknowledge that play studies, initiated in the 1930s by the historian Johan Huizinga in *Homo Ludens*, remain a somewhat obscure field of research that is not widely recognised as a discipline in its own right. The reason for this is twofold. Firstly, play is interdisciplinary, covering subjects such as anthropology, history, philosophy, psychology, pedagogy, mathematics, computer science and biology. Secondly, and perhaps more importantly, play is elusive. Furthermore, specialist lexicons are not always easy to compare. Without a 'shared encyclopaedia' from linguistic and semiotic perspectives (Eco, 1984), it is challenging to develop a taxonomy that can systematically organise theoretical reflections on and practices of play in schools.

If we cannot use the word "play" without triggering conventional thinking, attempts to classify games or forms of play at school will also be limited. It is as if something slips through the cracks of a rigorous methodology and we ourselves become involved in play. Indeed, engaging in discourse about play leads to engaging in play itself. And so, as in Borges's famous "Celestial Emporium of Benevolent Knowledge", we too are tempted to agree that:

> Animals are divided into (a) those that belong to the Emperor, (b) embalmed ones, (c) those that are trained, (d) suckling pigs, (e) mermaids, (f) fabulous ones, (g) stray dogs, (h) those that are included in this classification, (i) those

> that tremble as if they were mad, (j) innumerable ones, (k) those drawn with a very fine camel's hair brush, (I) others, (m) those that have just broken a flower vase, (n) those that resemble flies from a distance. (Borges, 1942/1964)

In other words, we oscillate between a desire for scientific rigour and imagination, as if we were at the mercy of play itself. "This is play", observes Bateson, meaning that multiple dimensions are simultaneously at stake within play. He explains play in terms of metacommunication, which has two levels of abstraction and relates negative statements to other negative meta-statements (Bateson, 1979, as cited in Berti, 2023). Such ambiguity is also noted by Sutton-Smith (1997). So, embracing a fully embodied approach (Biesta, 2022) to play and playfulness, this book aims to stimulate further research and conceptual developments on the relationship between play and primary school.

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Section 1
Conceptual Frameworks

Germany and Scotland – Conversations on Playing and Learning in Transition to School

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Abstract

In this paper we present an informing background of theory and international research into the transition from preschool to school, before discussing the existing transition-to-school situation in Germany and Scotland. We are convinced that an understanding of the role of play is essential to inform developmentally and pedagogically appropriate practices for children in transition to school. Recognising attributes of play such as creativity and imagination means creating transition spaces in which children can exercise agency, feel good during the transition and move from familiar early childhood contexts to the newness of school. International professional conversations reflecting on these attributes in practice will complete this paper.

1. Introduction

The aim of this paper is to highlight the relative importance of play, agency and wellbeing in the transition-to-school process in the Federal State of Hesse (Germany), and in Scotland, and to discuss these concepts in the context of kindergarten and school experiences.

Sustaining engagement and a sense of belonging during educational transitions is central to pedagogically and developmentally appropriate practices in early childhood. It has been argued that positive early childhood transitions set children up for longer-term educational success (Dunlop, Peters

and Kagan, 2024). Educating children for life means enabling participative democracy and inclusive awareness for all children. Not a new concept, play has an important place in transition to school (Dunlop, 2003; Fabian & Dunlop, 2014). Recognising attributes of play such as creativity and imagination means creating transition spaces in which children can exercise agency, feel good during the transition and move from familiar early childhood contexts to the newness of school.

Transitions are known to further marginalise already marginalised children (Vandenbroeck, 2015): to challenge such marginalisation and promote equity we invoke the UN Sustainable Development Goals (SDG) 3, 4 and 10 – good health and wellbeing, quality education and reduced inequalities (United Nations, 2015). These SDGs are central to discussions of transitions in the context of education.

To elaborate these introductory ideas, we turn to international research on play in relation to wellbeing, agency and learning. We then focus on shared insights into transition to school in Germany and Scotland, drawing from our cross-national professional conversations and joint working during the knowledge exchange and knowledge acquisition sessions we have shared.

2. International Research on Play in Relation to Learning, Wellbeing and Agency

Currently and internationally, there is certainly a pressure on teachers to address quantifiable learning outcomes (Nilsson et al., 2018). Yet, there are many other aspects of education and of learning for life that might not be quantifiable or measurable in all educational contexts such as attitude towards learning or social and personal competences. Even when children are competent in terms of literacy and numeracy they might not be able to show their know-how in formalised testing formats.

In the context of the international debate on measuring (quantifiable) learning outcomes, there is also the international discourse on younger children's education that play is an important element of young children's learning: in our view they are in fact co-dependent and inseparable constructs in which children's wellbeing and agency are implicated (Hedges, 2020). In the

1970s and 1980s and in recent years, theorizing and researching on play became of interest again. From the classic theories Vygotsky's theory of play stays influential (Smith & Roopnarine, 2019). "Vygotsky stressed the role of pretend play as a means of organizing thought through verbal mediation, enabling self-regulation to develop." (Bergen, 2014, p. 12) The togetherness and the tension of play and learning in formal educational institutions such as kindergarten and school has become obvious in the 19th century, since the beginning of kindergarten in Germany with the Fröbel kindergarten tradition or the "infant schools" in Scotland.

International findings indicate that play leads children not only to gain social skills, communication skills and self-regulating skills (Pyle & DeLuca, 2017; Taylor & Boyer, 2020). Research also found academic gains through play such as oral vocabulary and mathematical competence (Pyle & DeLuca, 2017; Pyle & Daniels, 2017; Taylor & Boyer, 2020).

Moreover, in the dual context of the inseparability of play and learning in child development (Sahlberg & Doyle, 2020), and in transition to school processes, studies from the European context and from New Zealand show that a fracture between playing and learning (Gaches, 2023; Wilders & Wood, 2023) commonly occurs at school start. Such a fracture may be accompanied by a decrease in the joy of learning (Müller, 2014; Zumwald, 2011; Corsaro & Molinari, 2000; Peters, 2000). To exemplify this, Peters' research focused on the transition into formal schooling from the multiple perspectives of children, teachers and parents both before, and some months after school entry (2000), with examples of children noting the lack of time to play matched by an increase in "work".

A fracture between preschool and primary school also occurs in parts of the United Kingdom, where children enter school earlier than in Germany, but then experience a curricular fracture in the transition from play-related to formal learning (White & Sharp, 2007; O'Keeffe & McNally, 2022; Arnott & Duncan, 2019; Dunlop, Burns & McNair, 2023).

Dunlop's longitudinal study generated comparisons between times before school and in school which illustrate such fractures for children in Scotland: Jasmine and Rachel discussed the difference between the story books they had in their early childhood class and at home, by contrast with the lack of what they called "real books" in school. In another entry class five

of the study's focal children making the transition together from their early childhood setting into school were unequivocal at the end of their first year in school in articulating a strong wish to be back in ELC where "there were more books", "more things to play with" and "you could choose what to do" (Dunlop, 2020, p. 77).

A consequent movement towards playful pedagogies is necessary to facilitate developmentally and pedagogically appropriate transition approaches. The Early Childhood Research Review (BERA-TACTYC, 2017) links play and pedagogy, and Wood (2019) recognises that "play progresses in complexity, social organization and cognitive challenge": this links directly to observing play in both early childhood settings and Primary School to consider the degree of children's agency, reflection and collaboration involved in each (Bruner, 1996). As they potentially pursue their interests, develop their funds of knowledge (Hedges et al., 2010) and engage with their own working theories (Hedges & Jones, 2012), play offers children many opportunities for self-regulation and exploring personal identity. (Hedges, 2020). Hill and Wood (2019, p. 9) find this combination of funds of knowledge, children's interests and working theories conceptualise play and learning well, and underline "the complexity of children's life-worlds".

In summary, the existence of a fracture between the ethos of the settings before and after school transition, and between playing and formal learning appears to be an international problem (Dunlop et al., 2024). The following sections will concentrate on transition arrangements in Germany and Scotland.

3. Transition to School in Germany and Scotland in a Country Comparison of the Education Systems

In Germany, Early Learning and Childcare (ELC) and schooling are regulated quite differently in the 16 federal states. Preschooling is free in some, such as Lower Saxony (between the ages of 3 and 6). In others, parents have to pay for preschool facilities. The modes of attendance are quite flexible, yet they depend on the employment status of the parents. Across Germany, compulsory school age is around the 6th birthday. If a child is not yet 6 on the date of school start, parents and headteachers usually decide on a further year in ELC – every federal state has its own specific regulations.

In Scotland all children are entitled to two years of funded early learning and childcare (ELC) before they start school. This entitlement is for 1140 hours per year – this translates as 30 hours a week in school term time or 22 hours a week is spread throughout the calendar year. There is an increasing focus on providing this entitlement for "eligible twos": this will include children in low-income households and where families face other challenges. Modes of attendance are flexible which may be problematic for consistency of approach, friendships and personnel. Typically children start school between the ages of 4 ½ and 5 ½ years, but recent legislative changes mean that for any child whose 5th birthday falls after the start of the school year, parents can decide on a further fully funded year of ELC.

Explicitly in Germany, there is a fracture between elementary and primary education, both regarding the transition design in general and the design from playful to formal learning. After the publication of the first OECD's Programme for International Student Assessment (PISA) study results in the year 2000, there had been an intensive decade of back-to-school reforms as the German results were quite disappointing. For instance there had been a reduction of the binding enrolment age of three to six months in about half of the federal states which means that children had to start school a bit younger. All federal states had to develop curricula, so-called "Bildungspläne", for the transition from ELC to primary school. Even though there was a clear statement of all federal states to focus on education in ELC in 2004, there were no common national guidelines for these curricula. Consequently, the binding character of the curricula, the age range and the measures of evaluation differ between the federal states (Nagel, 2009). Additionally, there were initiatives for academic training of preschool teachers. Theoretical transition models were further developed and many research projects were conducted such as TransKiGs, BiKS, the Bildungshäuser and VELP (Fried et al., 2012; Faust, 2014; Arndt & Kipp, 2016; Müller, 2014). Since this nationally intensive period of attention in the years between 2005 and 2015, there is currently less specific consideration of the transition topic in Germany (Pohlmann-Rother, Lange & Franz, 2020; Müller et al., 2019). There are not so numerous and nationwide projects, one current example is ILEA-Basis-T (Liebers et al., 2024).

By comparison, the single Scottish curriculum governs the education of children from the ages of 3 to 18: the Early Level 3-6, which spans ELC and

early primary schooling with the aim of ensuring a smooth transition in what children have learned and also in how they learn. This will mean extending the approaches which are used in pre-school into the early years of primary, emphasising the importance of opportunities for children to learn through purposeful, well-planned play (Scottish Executive, 2004, p. 1). Further this curriculum documentation asserts that

> Active learning is learning which engages and challenges children's thinking using real-life and imaginary situations. It takes full advantage of the opportunities for learning presented by: spontaneous play, planned, purposeful play, investigating and exploring, events and life experiences focused learning and teaching. (p. 5)

There is much agreement in the work of researchers in Scotland that active learning, including purposeful play, has a positive and lasting impact on children's learning in ELC and the early years of primary school. However, there are two very different educational traditions visible in ELC and school in Scotland (Burns, 2022). Together these factors generated a resolution in 2022 which was passed by to the party of government in Scotland to raise the age of entry to school to 6 years of age. This has not yet been enacted though there is evidence that many parents are taking advantage of this change now that hours of term time attendance in both ELC and school are equivalent.

One of the initiatives to improve educational processes in Germany after the publication of the PISA results was that in about half of the federal states children started school 3 to 6 months younger than beforehand. In recent years some federal states such as Brandenburg and Lower Saxony changed their binding enrolment age a bit again as a lot of children had to repeat class 1 or 2. One issue of the problem might have been that younger children were obliged to go to school at younger age but the pedagogical approaches hardly changed to meet the younger children's needs to learn appropriately as curricula and teachers in class one stayed the some. Additionally, increased provision rates of children to enter school later (Landesamt für Statistik Niedersachsen, 2021) indicate that schools in Germany do not optimally adapt to the younger school children's needs. Moreover, slowing of learning progresses e.g. in the development of reading competences - in many countries and in

Germany also - make it obvious that this transition should be re-focused on in Germany (Betthäuser et al., 2023).

In Scotland new national practice guidance for children 0-8 years, Realising the Ambition (RtA) Being Me (Education Scotland, 2020, p. 6) underlines the importance of the earliest years in children's learning journeys. RtA emphasises there "needs to be a consistency between practice in early learning and childcare and early primary school so that the transition is as seamless as possible" (2020, p. 6). Play pedagogy is central to practice discussion in Scotland (Dunlop et al., 2023) and is currently more embedded in ELC/preschool than in early primary school, linking to reflection on wellbeing, attainment and readiness for school, and to the question of whether primary school teachers are ready for such a refocus (Burns, 2022). There is a potential conflict for practitioners as they navigate a focus on rights based perspectives in which children lead their learning, with testing of children as part of the drive to close the recognised attainment gap that exists for certain groups of children.

This growing policy focus on play and on transitions in Scotland was captured in the Transitions as a Tool for Change Project which ran from 2013 to 2016 and was followed by a seminar series which led to publication of the Scottish Children and Families Early Childhood Transitions Position Statement (2019), endorsed by Scottish Government. This Position Statement is informed by a shared understanding of the importance of transitions, the need to address the impact of transitions in children's lives and the idea that a shared agenda for action will afford the best possible start in new settings, which included considering the opportunities, expectations and aspirations of early educators, children and families at times of transition. This means understanding children's learning journeys, attainment and learning outcomes and the contribution of positive transitions.

Combined with the initiative to offer practice guidance for working with children from babyhood to the end of the Early Level (3-6) of the Scottish Curriculum, transitions in early childhood were firmly on the Scottish agenda. It could be claimed that curriculum and transitions are therefore intertwined. The impact of curriculum on transitions practices is complemented by a set of clear transitions principles articulated in the national practice guidance in which transitions are defined, guidance is informed by research and justified as an important aspect of practice improvement. Five sets of key features

are also illustrated, these are the key features of positive transitions practice: from home to an early learning and childcare setting; within and across an ELC setting; for babies and children accessing more than one ELC setting or provider; for babies, children and families who need additional support, and key features of positive transitions practice from an early learning and childcare setting to school.

4. Attributes of Play for Ensuring Learning, Wellbeing and Agency During Transitions

In such ways, in each of our jurisdictions, the combining of approaches to curriculum and transition can lead to reflection on a synergy between these constructs, ensuring that each influences the other. As authors we believe a commitment to play allows practice to foster children's learning, wellbeing, self-regulation, awareness of others, and facilitates the transitions which educational systems impose upon children. In Scotland the United Nations Convention on the Rights of the Child is enacted in law in 2024. In our shared work between our two nations we seek to explore how children's, professional and parental identity and voice intersects with children's play and learning in the transition to school.

As we focus on the intersection of play and learning at times of transition, and aspirations to create schools that are playful spaces, we revisit the idea that transitions can be a tool for change. Much transitions work aspires to greater continuity for children between what they experience in early childhood kindergarten settings and what they experience at school start. We have shown that in Scotland the boundaries before school and after school are becoming more blurred through the adoption of playful pedagogies (Education Scotland, 2020). We find that the nature of curriculum is also a major factor in determining not only learning and teaching, but in consequence, the nature of the transition.

Where curriculum before and after school entry is aligned, hopes of continuity, of a sense of belonging and of using the child's existing "know how" to navigate change is at its optimum. Where the gap in the "models" held of children are very different and the purposes of kindergarten and school are

not mutually understood, then children have more to adjust to, and planned curriculum expectations may not build consequentially on their previous experiences. Dunlop's research has interrogated the connections (Dunlop, 2013) between transitions practices and relevant curriculum change, as illustrated in the revised model in Figure 1 (Müller et al., 2023, p. 12).

Figure 1 – The impact of transition practices on curriculum change and the impact of curriculum change on transition practices

Here we emphazise that changes in children's curriculum experiences are linked to transitions practices in a virtuous cycle in which in turn transitions practices as they develop will have an impact on what children are offered day-to-day as part of their curriculum. Such a model invoked greater belonging, wellbeing and therefore agency for children. An understanding of play in young children is essential to the implementation of playful approaches in learning during the transition to school. We emphasise further attributes of play: attributes that are essential to children's wellbeing: play fosters creativity and imagination towards self-realisation (Talu, 2018), enables children to develop working theories (Hedges, 2014), and to draw on their funds of knowledge and identity (Hedges, 2020). Recognising such attributes means creating transitions spaces in which children can exercise agency, feel good in the transition and move from the familiar early childhood contexts to the newness of school. Hughes wrote of play defined as "incorporating free choice, personal direction and intrinsic motivation" (Hughes, 2012, p. 27). Provocations about how such a definition sits with the different pedagogies visible in early childhood and school education. Transition spaces exist both between settings, such as home and kindergarten, and kindergarten and school – and in the overlaps of experience in-between. Children engage with people, with objects and with symbol systems: in proximal processes with others they jointly create and share meaning and understandings.

Where connections are weak, the opportunity for such play and learning in transition spaces reduces and as suggested, children themselves may find difficulty in what they see as a fracture of play and of learning and their opportunities to play together at times of transitions (Gaches, 2023; Reinåmo Olsson, 2023; Wilders & Wood, 2023). This raises concerns about children's motivation and joy to learn (Müller, 2014; Zumwald, 2011; Corsaro & Molinari, 2000; Peters, 2000). Trevarthen (2018) reminds us of the natural joy visible in children's early learning and creativity, their zest for learning and their development of knowledge through play in the company of others: adults and children.

5. International Professional Conversations

Turning now to these across-nation conversations undertaken during three funded researcher exchanges in Germany and Scotland the opportunity to work together and to visit each other's countries has renewed our thinking about what matters in practice. In early childhood and primary contexts we have considered the ways in which play ease the transition to school, the value of playful spaces and approaches in the school context, and the desirability to carry play-based approaches on into primary education. We intend to explore this balance further to consider the degree to which it may be desirable to organise for play differently in pre-school and primary school contexts.

Our shared work and mutual visits move us towards some answers. In early childhood we find common ground between our Scottish and German kindergarten settings. A strong emphasis on play, self-determination, choice and respect for others was visible. Play outdoors is highly valued. We found contrasts in ideas about teaching and the balance between child led, adult led, negotiated and what Fisher (2024, p. 60) calls "adult-insisted" varied both between and within countries.

At school level the concept of play changes. Teachers may work "playfully" with children, they may create less formal class environments and in Scotland now specialized teachers are appointed to lead on play in Primary School. One such teacher (Thomson, personal communication, 2023) describes her new role of developing play in area primary schools:

> I was previously a Principal Teacher in a primary school and led and developed the Play Pedagogy for the first three years of school (for five to eight year olds). Prior to this I have taught across school, nursery and was a nursery assistant too. I am now a Visiting Teacher. My role is really varied but the ultimate aim is to ensure high quality Play Pedagogy for our children in Early level (first two classes) and beyond. To achieve this there are a mixture of parts to my role: planning, organising, supporting continuing professional learning, focussed intense support with schools (who apply – there is currently a waiting list), consultation with school leader teams to enable them to support the development of play in different areas. I currently have an informal "Play is the Way" group and work on tran-

> sition too. Part of this role is also looking at play as we move through primary school and planning for this.

By contrast schools also create and offer intensive play opportunities through outdoor play and forest school, or for example, in the case of the German team, through a week's intensive circus making, where every child had a part to play, where risky (and safely supervised) opportunities such as trying out flame throwing, acrobatics, juggling and circus tricks were incorporated into an immersion into circus performance with consequent growth in confidence, self-esteem and the opportunity to thrive in alternative skills and ways of being. The host school for the Circus immersive experience is also building stronger connections with its neighbouring early childhood centre (Pfeiffer, 2024).

As we look forward to our future collaborations the focus developed through our knowledge exchange brings us to a new over-arching question on the intersections of play, learning, voice and identity in the transition to school. We have identified three broad areas of future work: the ways in which young children process and make meaning in transitional spaces; how transitions shape or re-shape professional identity and voice, and how parents are positioned in relation to their children's transition to school. Our pedagogical and research conversations continue. To that end workshop and knowledge exchange and knowledge acquisition between our two countries and reflected in pedagogical discussions in our workshop at the "School as a Playful Space/Spielraum" Conference has moved our work forward.

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Discovering Spaces for Play in Schools. Exploring the Role of Play in Primary School Education

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Abstract

This article examines how play influences educational processes in primary school students. Conventional playful learning concepts often distort the phenomenological essence of play in an effort to enhance children's learning outcomes. The primary focus of this paper is to argue that genuine play occurs when children are not constrained by external objectives, and instead engage in activities that emerge organically. This article presents critical theoretical perspectives that address the institutional forces at work within schools, which prioritize structured learning environments over spaces that are conducive to playful self-development. The role of an artist-in-residence-programme is emphasized because it is characterized by an open structure for exploring the school environment and the analysis outlines how this framework promotes learning objectives that encourage students to engage with and reflect upon their lived experiences rather than reflecting their learning achievements of the school curriculum.

1. Playing at School: Two Different Approaches

The concept of play is a multifaceted and significant topic, and has been an integral aspect of human experience across cultures and throughout history. This raises several pertinent questions: Where should the exploration of play begin? To what extent should its complexity be elaborated? Further, how can the educational environment be conceptualized as a playful space that is not limited to a playground during breaks? At the same time, the abundance of

potential avenues for explorations can be overwhelming, leading to what Simone Kosica describes as a "surplus of possibilities" (Kosica, 2020, p. 107) in the context of school space experiences.

This observation raises a critical question about the role of educational institutions: What opportunities exist for schools to redefine themselves as spaces conducive to play? To address these questions, I will present an examination of the concept of play with the aim of analyzing the educational framework through this theoretical lens. Before dealing with children's play and its theoretical classifications, however, I will give two examples to briefly outline the spectrum of thought processes to be examined: 1) experimental artistic interventions and 2) educational games in the conventional sense.

1.1 An Artist-In-Residence-Programme: "Embodied Experience in the Schoolyard"[1]

In recent research on artists' programmes in German schools, as reported in *Cultural Education Programmes*[2], a great emphasis is placed on the educational transfer that arises when artists work in schools with students (Rittelmeyer, 2017). They do so, both as artists and as teachers, crossing professional boundaries and representing a *double profile* (see also Ludwig & Ittner, 2019)[3] in the process. As Berner (2020) points out, arts education is also becoming increasingly important for educational issues: Arts education is being taken up more strongly again in the current education debate and is considered relevant for learning in the twenty-first century (p. 21). Artistic approaches are typically associated with playful experiences, that emphasize exploration

1 The title "Embodied experience in the schoolyard" alludes to the original title of the work of artist Willi Dorner, "Bodies in Urban Spaces". However, I am paraphrasing the title of the artist-in residence-programme described here, which originally was "Bodies in the Schoolyard" (Berner, 2020, p. 67). I feel that "Embodied experience in the schoolyard" is unambigious and clearly points to the core practice that the project initiated: experiencing the school with the body.

2 Cultural Education has been promoted not only by the Mercator Foundation in Germany but also by all 16 German federal states. Since 2022 the foundation has successfully completed its project. Schools having participated in the programme are adopting arts programmes such as the artist-in-residence-programme discussed here. (https://www.stiftung-mercator.de/content/uploads/2020/12/Stiftung_Mercator_Kulturelle_Bildung_2020.pdf

3 In a 2016 survey on the economic and social situation of visual artists the importance of the income field of artistic teaching was emphasized. Almost half of the visual artists of the representative survey were teaching in 2015. (Jebe, 2019, p. 67).

and creativity rather than adherence to a conventional pedagogical framework. This perspective invites a reconceptualization of schools as environments where the institutional objective of acquiring knowledge in specific subjects can coexist with opportunities for engagement through playful strategies. In this context, learning and personal development can occur concurrently, fostering an integrative approach to education that values both structured learning and experiential discovery.

The following section focuses on a collaborative cultural education project which was run by MUTIK gGmbH in partnership with Alanus University of Arts and Social Sciences and the University of Education at the University of Applied Sciences and Arts Northwestern Switzerland. The project, funded by the Mercator Foundation[4], was implemented from 2016 to 2019 as an artist-in-residence programme, in which artists spent a year working in primary school having their own arts space. The programme aimed to integrate artistic practices into primary education, fostering creativity and enhancing students' spatial awareness and body consciousness (Berner, 2020, pp. 21–51).

The project "Embodied Experience in the Schoolyard" began with minimal preliminary explanation rather than departing from its focus on experiential learning. Participating students were introduced to a short film showing a performance by Willi Dorner, which provided a conceptual framework for the subsequent activities. Willi Dorner, an Austrian artist, performer and activist, developed the performance series "Bodies in Urban Spaces", which has been staged in various cities worldwide. In these performances, local youth positioned their bodies in spaces that are not normally noticed by passersby, such as areas between columns of buildings or traffic signs and walls. In this way, public spaces were transformed for both the participating youth and the incidental observers. These performances prompted a re-evaluation of how individuals perceive otherwise overlooked spaces. Aesthetically, public space was both appropriated and simultaneously revealed in its unique aesthetic characteristics.

4 Over the past two decades, the Mercator Foundation has played an important role in the nationwide implementation of cultural education in schools throughout Germany. In addition, the Federal Ministry of Education and Research (BMBF) has provided substantial funding for projects over the past ten years. Also see https://www.bmbf.de/bmbf/de/bildung/kulturelle-bildung/kulturelle-bildung_node.html

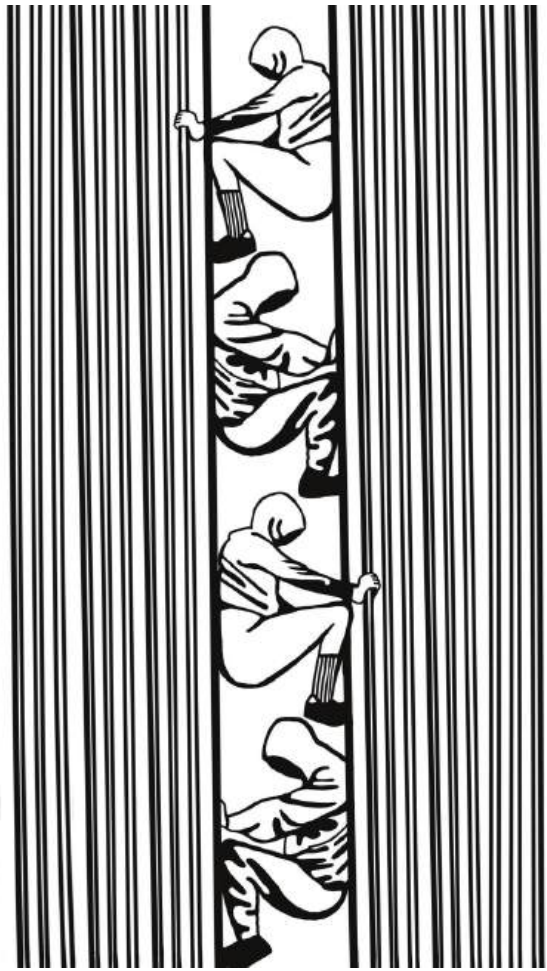

Figure 1 – Sketch of a video still “Bodies in Urban Spaces” https://www.youtube.com/watch?v=xxwXNLQW3ds. Copyright 2025 by Anna-May Lohfeld.

In the school-project, students were encouraged to follow the artists example: after a brief safety orientation, students were devided into small groups of three to four individuals and given tasks to explore their school environment from a new perspective. After a twenty-minute exploration phase, the groups met for a joint journey of discovery, documenting their artistic exploration of the school using GoPro cameras and other recording devices. In the process,

the students experienced their school in a different way through play. They focused on aesthetic perceptions and assessments of whether or not their bodies fitted into unfamiliar spaces, and how to integrate bodies into certain undefined, previously unperceived spaces and interstitial areas.

Figure 2 – Sketch of a printed photo in Berner (2020, p. 68). Copyright 2025 by Anna-May Lohfeld.

The lead artist in the project, Theresa Herzog, said in a post-project interview: "There was a lot of laughter, but also a great deal of focused work. And

what definitely happened was that the students walked around their own school with a completely different view and body awareness" (cited in Berner, 2020, p. 68). Moreover, the observations revealed notable changes in the students' perceptions of their educational environment, marked by increased body awareness and a shift in perspectives. The students' interactions with their educational space were transformed by playing within it, using artistic strategies under the guidance of an artist. Ultimately, the "Embodied Experience in the Schoolyard" project exemplified the potential of integrating artistic practices within primary education to enhance students' cognitive and sensory experiences. The findings based on the accompanying research of the artis-in-residence-program (including qualitative content analysis of interviews and questionnaires) suggest that such initiatives can foster a deeper understanding of one's environment and promote creative expression among young learners. (Berner, 2020, p. 231 ff.)

Willi Dorner commented on his work as follows: "I invite people to rediscover their city through this work, to see it again, to take time to look at the city again and to analyze it for themselves" (Dorner in DW Deutsch, sec. 0:26–0:36)

1.2 Learning Through Play – "I Spy With my Little Eye"

A significantly different scenario emerges when teachers engage students in interactive games designed to promote the acquisition of specific academic skills, such as numeracy, literacy, or, as exemplified in the following instance, vocabulary extension. In an observational study conducted in 2019 by a student as part of a research project on disciplinary strategies in primary education, a group of second-grade students (ages 7–8) participated in the game "I Spy With My Little Eye" during class[5].

> Observation Protocol:
> The children are playing the game "I Spy With My Little Eye" and have to describe objects that are lying in the middle of the circle of seats. The teacher mentions that they are looking for a blue object. A girl raises her hand but is not chosen and then remains quiet. Another child then describes an object.

5 See also Lohfeld (2019, 2022).

> The girl raises her hand again, is chosen this time, points to the object they are looking for and says that it is a bowl. The teacher agrees with her answer and mentions that the girl has already learned many new German words in a short time. The girl smiles. Then she is allowed to describe a new object. She mentions that the object is purple and immediately several children raise their hands. She passes the word on to another girl, who recognizes the correct object. The process of playing is continuously repeated.

An initial analysis suggests that participation in this activity promotes the improvement of both language development and observational skills in the children. This interaction highlights the importance of peer engagement and social recognition, as evidenced by a female student who was initially overlooked successfully identifying a blue bowl and then receiving positive reinforcement from her teacher. Not only is her self-confidence strengthened but her extended vocabulary in German is also evident. The collaborative nature of the game, where children take turns and help each other identify objects, encourages them to be intellectually playful by gently introducing them to learning, have fun competing, and show or hide their knowledge as well as their not-knowing. On the one hand, the game introduced by the teacher works as it should: it encourages the children to engage freely in the process. On the other hand, the context makes it abundantly clear to the players that they have to fulfil the goal of learning the vocabulary not as a game but as learning, or, in other words, as work.

2. Play: Approaches and Theories

In the following section, the discussion turns to various approaches that are concerned with a comprehensive exploration of the concept of play, particularly in the context of childhood and education. The underlying view is that play is a fundamental human drive, that is present in all cultures and throughout history. Stenger (2012) argues that certain games show remarkable longevity, persisting over time and appearing in different cultural contexts, while others are more closely tied to specific historical periods and may fall out of favour. For instance, activities such as ball games, swings, see-

saws, and pushing small carts were already popular in ancient Greece (see also Parmentier 2004, pp. 929–945). Additionally, mother-child role-playing games have a timeless quality that transcends cultural boundaries. Besides the obvious historical evidence for the phenomenon of "play" overcoming cultural and temporal boundaries, it will be of relevance for the subject of this paper to outline its impact on the development and nature of the individual, especially given the concerns of the educational system regarding the development of the individual. Therefore, this line of arguments highlights key characteristics of play such as 1) its distinction from work, 2) its nature as free action, and 3) its self-sufficiency. All three characteristics are derived from discourses on children's play in various disciplines, from phenomenology and cultural anthropology to developmental theory to psychoanalysis (see also Parmentier 2004).

A conceptual definition of play takes up almost 50 columns in the Grimm dictionary alone, which is why Michael Parmentier (2004) says that the term remains a "vibrant collective term" (p. 929). Generally speaking, the term *play* encompasses a wide range of meanings, from dance, music and acting to entertainment, amusement and pleasure. "People play to play," says Ursula Stenger (2012) from an anthropological perspective. She draws on a description by Frederik Buytendijk (1933) and states, "For him, the dynamics of play are just as important (…) as the transformational aspect, which occurs when the player not only actively engages with the game, but is also captured by the game with the images themselves» (Stenger, 2012, pp. 134–142) «As a player, the human being reaches beyond him/herself as an individual by participating in a greater event," she continues. This also means that the game has endured across generations and epochs. This is precisely what can be observed over time when games like *chess* or *playing with dolls* are repeated.

Moreover, in traditional educational science and pedagogy, play is mainly considered in terms of children's play, which, according to Michael Parmentier (2004), best represents "even the general cultural-anthropological dimensions of the phenomenon of play" (p. 930).

I will now summarize some thought on individual aspects, I am aware that this compilation is not exhaustive. Nevertheless, the most important characteristics of play will be explained below, which will in turn facilitate the classification of the initial two examples.

1.3 Three Key Characteristics of Play

1. Play versus work: In contrast to work, play occupies a unique ontological status. Johan Huzinga (1938/1997), in his seminal work *Homo Ludens* posits that play exists outside the process of the immediate satisfaction of needs (p. 16). This demarcation underscores the extraordinary nature of play, which serves to disrupt the routine activities of daily life. Moreover, play is characterized by its own distinct domain, separate from conventional reality, and operates according to its own set of rules. Jean Piaget (1966/2009), from a cognitive theoretical perspective, emphasizes this notion by asserting that play possesses a unique structure that differentiates it from other forms of human activity. He explains that specific characteristics from reality are imitated in play (p. 170). For Piaget, however, it is crucial that the composition of the characteristics is imaginary (p. 170). For instance, when a child pushes a box across the floor, the box serves as a symbolic representation of a car; nevertheless, it is an *imaginative* construct that embodies a car. Further, the child exercises autonomy and freedom in this process, engaging with the world and its objects in a manner that is uniquely his/her own. It is through play that the child constructs and organizes an understanding of his/her surroundings and the world, by using imaginative frameworks to reinterpret the environment and with it, his/her own relationship to it. Work, in contrast, repeats routines of everyday life, leaves the environment untouched, and is rarely reinterpreted. Work repeats the ordinary or real life (Huzinga, 1938/1997, p. 16) which, according to Huzinga, is *not* play.
2. Freedom in play: Play is characterized by freedom – and here, too, Johan Huizinga (1938/1997) aptly writes, as do many other authors, that all play is, first and foremost, a free activity. A game that is ordered is no longer a game (p. 15). In play, the child becomes the decision maker. There is agreement throughout the discourse on the freedom for self-determination associated with this; for instance, Sigmund Freud (1920/1975) emphasizes in his work that through play, children become masters of the situation (p. 226), which enables them to explore and navigate their experiences. Jean Piaget (1966/2009) further elaborates on this by outlining the child's empowerment in relation to the world by involving him or her in the process

of assimilation through play. He shows that role-playing activities, for instance, serve to freely reproduce and process observations and experiences. He asks, "Why does the child play being a shopkeeper, a driver or a doctor? Why does (a child) play at pretending being dead to represent a dead duck that was lying plucked on the table?" (p. 198). Most games would have the function of reproducing what has *impressed*, what has *pleased*, and they have the function of experiencing the environment as accurately as possible, in short, of creating a wide network of dispositions that enable the ego to assimilate the whole of reality, i.e. to incorporate it so that it can be relived, mastered or compensated (p. 198). And further: even playing with a doll is often less a preliminary exercise of maternal instincts than an infinitely nuanced symbolic system that provides the child with all the means of assimilation to relive the reality experienced (pp. 198/199). For the child, dealing with symbols is a way of making the world, which s/he cannot yet grasp with its thoughts and words, more tangible. Through play, s/he can approach the world free of external/practical purposes. The doll, for example, plays along; there is no effect on the child's real life when s/he plays with it. It is a game that is self-sufficient and does not require adaption to reality.

3. Self-Sufficiency of play: The self-sufficiency of play is described by Immanuel Kant (1790), Eugen Fink (1960), Johan Huizinga (1938) and Hans Scheuerl (1954) as its end in itself[6]. This implies that play creates its own temporality and presents itself in reality as a structure distinct from time and space. For the psychoanalyst Winnicott (1971/1989), building on Freud (1920/1975), play functions as an intermediary between an inner reality and the external world. He refers to it as an "area of experiences into which both inner reality and external life flow equally" (p. 11). It constitutes a potential space whose dynamics allow creative engagement and expression. This process can be profoundly satisfying; however, as Huizinga (1938/1997) aptly states, it is superfluous (p. 16) and tends to absorb the players. This observation becomes understandable when you look at children, building a cave with enthusiasm and without regard for physi-

6 The article by Parmentier (2004), which serves as a basis here, presents the discourse contexts for the concept of play in detail. Therefore, only the main lines are briefly outlined here and no detailed conceptual classification in the discourse is undertaken.

> cal fatigue, hunger or similar needs: they carry materials, make arrangements, think about constructions and design, only to find themselves sitting in a structure that differs from the original plans, is shaky and that has to be dismantled by the end of the day, as external constraints are being asserted. However, the children were so captivated by the game that they continued their activities independently of all other concerns not related to the game itself. Moreover, the game transported them to a state outside of everyday tasks (e.g. homework, physical hygiene, going to bed). Rather, they felt an intense pleasure that was characterized by exhilarations and captivation.

These initial explorations of the phenomenon of play shed light on several additional aspects which will be briefly mentioned in the following paragraph:

Firstly, play has an enviable liberating effect in that it counteracts the pressure to act in reality. Secondly, it provides the opportunity to engage with reality through individual subjective lenses. Individuals may explore, discover and experience reality and their self-world-relation in unique and personal ways, or, alternatively, play may be used to compensate, modify, or align external reality to inner needs and desires. And thirdly, play is satisfying and open to new experiences, which was taken up by Winnicott (1971/1989) with the term "potential space". Other authors speak of play as a "wellspring of the new" (Sutton-Smith, 1973, p. 33) or as an existential basic phenomenon (Fink, 1957, p. 17). To complete the list of relevant authors, Friedrich Schiller should be mentioned, who, in his *Letters upon the Aesthetic Education of Man* (1794), wrote one of the most famous sentences about the relationship between play and human nature: Man only plays where he is fully human in the fullest sense of the word, and he is only fully human where he plays (15th letter). The importance of Schiller's *Letters upon the Aesthetic Education of Man* for pedagogy is generally recognized. In this context, the work of Christian Rittelmeyer (2005) is particularly noteworthy. In his view, children's play is a propaedeutic for later aesthetic competence (p. 11), which is why it would be a misconception to assume that the aesthetic alphabetization of the child takes place only in the practice of, for example, musical, drawing or acting activities and not also in children's play (p. 11).

4. School: Institutional Alienation of Play

In the following section the project "Embodied Experiences in the Schoolyard" in which students had the opportunity to explore their school environment and its alien spaces, will be examined more closely and compared to the second example, the learning game "I Spy With My Little Eye".

The artist Willi Dorner described his art project as an invitation to participants to re-engage with their city and analyze it for themselves from their own perspectives. Theresa Herzog, encouraged the students in a similar way to engage with their everyday environment: the school space. They explored the school playfully: running, testing boundaries and identifying areas that could serve as seating, where their own bodies could fit, and where spatial boundaries might be redefined. This approach not only guided the students through their institutional surroundings, but also functioned as a kind of embodied analysis in which they could reflect on the relationship between their bodies and the spaces they inhabit. The students were familiar with their school, its institutional rules, and its spaces. They walked daily through the corridors and doors, brushed against the walls, opened the lockers, etc. Through playful experimentation, as proposed by Willi Dorner, they experienced their habitual physical actions in school in a new way. Beyond that, the school environment could be recontextualized through the lens of the project and even transformed into a space where children can actively and critically obtain a position. Play, as well as the artistic exploration of space through embodied experience, eludes everyday life, which becomes clear when one considers the above-mentioned key characteristics of play. Projects like the one described, "Embodied Experience in the Schoolyard", are not part of school curricula in Germany as they are not readily compatible with the institutional goal of activities. Exploring the school space through artistic strategies, as shown here, only plays a role in extracurricular bonus programmes in the current landscape of the educational system, e.g. through funding for larger state programmes for cultural education. Therefore, there are no predetermined expectations or measurable outcomes that are subject to evaluation. Instead, what emerges is a sense of freedom: an open, exploratory process that fosters the creative potential and critical positioning of the students. As a result, students become empowered.

While Winnicott (1971/1989) asserts that play, as a potential space "naturally leads to cultural experience" (p. 123), Schiller (1794), as a key figure of the Enlightenment, had already laid groundwork for this notion. In particular, Schiller demonstrated that freedom can be experienced through and in the aesthetic. Given that the aesthetic dimension in Schiller's work has, in part, been absorbed into what I have previously described as play, it seems reasonable to argue that artistic activity and the reception of art have their origin in play. This insight thus underpins the development of classroom practices that incorporate artistic approaches, as exemplified in the project "Embodied Experience in the Schoolyard"[7].

Turning to the second example, I will argue in a different direction. The game "I Spy With My Little Eye" is a well-known game that is a familiar companion for many families on long car journeys. In the context of the previously mentioned observation, the game involves the students on a playful level, but instead of actually playing the game, the school's regulatory framework is applied. The practice observed by a student teacher as part of the research project shows that the rules mirror those of the classroom: rather than spontaneously announcing the object that they have identified, players must wait their turn and speak only when permitted to do so. Even if the children's inner excitement tempts them to shout, "I saw it! Yippie!", as they would when playing, the institutional context will simultaneously evoke the internalized social rules of the classroom during the game. We can see that the familiar game, typically used to pass the time and create excitement, is redefined and becomes a *patience* or *learning game*. In this process, the teacher changed the objective: it is to say the correct word, not to identify the object. Therefore, it is not the rules inherent to the game process that take precedence, but the institutional rules that govern the space and the game. This raises the question: What are the participants doing in this observed situation? Are they playing? Learning? Behaving? Learning to play? Or learning through play?

7 As early as 2008, the authors of *Learning Culture and Cultural Education* (Hill, B., Biburger, T., Wenzlik, A.) pointed out that aesthetic practice, which is at the heart of cultural education, would not only change school development but also learning cultures in the long term. After almost two decades of intensive funding of cultural education in Germany, cultural education, e.g. artist-in-residence-programmes, culture-school curriculums, dance and theatre programmes etc., has become widely established in the German school landscape (see also https://bildungsklick.de/anbieter/rat-fuer-kulturelle-bildung)

The answer, of course, is complex. However, one argument can be used: the game encourages active participation in which the children engage in play as well as deduction, combining the information from their peers with what they observe in the middle of the circle. This process allows for a mental space of free associations and evokes moments of "inner" freedom filled with imaginative impulses that are devoid of any specific external objective, which is play at its best.[8]

But at this point, external reality intervenes. Drawing on Winnicott's approach, one could argue that the intermediate space dissolves and external reality successively displaces elements of inner reality. With the shift towards external reality, a state of tension and imbalance disrupts the child's play experience. Due to overarching institutional regulations that play a role in the observed situation, this state of imbalance and tension arises, so that one can say that play is systematically alienated in the process. These regulations have nothing to do with play itself, but are deeply rooted in the school context, such as classroom structure, power dynamics and peer relations, all of which systematically restrict the freedom of play.

5. Conclusion: Identifying Alienation of Play in School

In conclusion, I will briefly address the educational relevance of play in the two examples discussed and attempt to draw on the thesis of the institutional alienation of play. As Parmentier (2004) summarizes, play is a free activity that disrupts the purposeful context of everyday life and, with no external material or other use, is self-sufficient (p. 930). This conceptualization highlights the tension between the inherent characteristics of play and the institutional structures that tend to restrict its autonomy.

Both examples take place in a regulated school environment and are subject to its rules and associated objectives. Even the artists in residence have to adhere to these institutional constraints.[9] While the game "I Spy With My Lit-

8 According to Hans Scheuerl (1954/1994), the game does not pursue any purpose outside itself (p. 67).

9 The shifts in the artists' self-perceptions, resulting from these constraints were taken into account in the evaluation of the project, as they were in another state project, "To every Child his Art" (see also Westphal, K., et. al., 2018). Bilstein (2018) also makes clear that artists

tle Eye" directly refers to the school context and incorporates into the game, the artistic work with the students can critically focus on the institutional framework itself. Therefore, the ability to break out of the conservative school context, to independently create new events and to engage in the free play of spatial relationships is of significant value in the educational process. In its structure, the freedom that is given and experienced resembles the essence of play, and, despite the confines of institutionalized education, offers a space for creativity and exploration.

Drawing on the anthropology of Schiller, Rittelmeyer (2005) concludes that play – as a free aesthetic state – represents the decisive stage from which comprehending thinking can first emerge automatically (p. 115). In other words, a genuine relationship to the world can only be experienced from the subject's own nature. In the project presented here, there is no mere reproduction of existing knowledge, since the students themselves are actively experiencing the field from their own playful state. Even if the project "Embodied Experience in the Schoolyard" in considered an imitation of the project "Bodies in Urban Spaces", it is still the children who actively participate shaping the topic. For Christian Rittelmeyer (2005), this reflects the importance of spontaneous, pedagogically uncontrolled children's play for the educational process of adolescents (p. 114) and emphasizes that this promotes independence in playful experiential learning.

Institutionalized play pedagogy has been criticized in German-speaking countries for a long time (see also Heinsohn & Knieper, 1975; Riemer, 1998; Lohfeld, 2012 & 2014; Stenger, 2014). Parmentier (2005), for example, concludes that play pedagogy, particul,arly that in which intervention in play is based on a complete misunderstanding of the nature of children's play (p. 945) does not exploit the potential of play activities. However, both examples also point to possible ways in which the school space can be opened up to recognize the potential of play, especially when it comes to implementing artistic strategies in class. When artists work in schools, they introduce their strategies to both teachers and students, encouraging them to play with new and sometimes surprising rules. Although they still operate within the boundaries of the in-

in particular are aware of the contradictions associated with working in the school system. He states, "They are well aware of the paradox that in artistic forms of expression, e.g. in dance, you have to produce spontaneity that you can't plan for" (p. 85).

stitutional framework, artistic strategies offer the opportunity to go beyond traditional pedagogical models and methods (Lohfeld & Schittler, 2014, p. 140). Artistic interventions initiate opportunities for play, as presented in the cultural-anthropological line of argument, which takes up the nature of children's play. They can create intermediate spaces and potentially transform the school environment into what can be described as a "potential space" (Winnicott, 1971/1989) – by conceptualizing artistic strategies to promote creative exploration and children's autonomy.

It should be noted, however, that the playful nature of unconventional rules and strategies fostered by artists when they apply their notions of play and arts in schools represents a real challenge to the system. The scientific evaluation of "Embodied Experience in the Schoolyard" as one of many art laboratories states, "It should not be neglected that a studio in the school challenges the system-related institutional boundaries and can thus question, break open and further develop system-immanent structures" (Berner, 2020, p. 131). This suggests that the question of play in schools extends beyond the educational processes of children and also has implications for the broader development of the school as an institution. Indeed, artistic strategies and play in educational settings can reveal unrecognized aspects of school culture and structure, as was evident in the game "I Spy With My Little Eye", and can function as a catalyst not only for pedagogical processes but also for school transformation.

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“What Game Shall We Play?” Interpreting Theoretical and Practical Insights From Education and Design Classics in Contemporary Contexts

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Abstract

In this paper, we examine the concept of play from a historical perspective. Many past authors have highlighted the diverse potentials of this multifaceted activity, which is often— though not exclusively— associated with childhood. We discuss the contributions of Carolina and Rosa Agazzi, Giuseppina Pizzigoni, Ettore Guatelli, Mario Lodi, and Gianfranco Zavalloni, who explored play through various lenses, offering a range of interpretations and applications within their own educational and pedagogical approaches. Our analysis also incorporates insights from professionals focused on children and design, specifically Bruno Munari and Riccardo Dalisi, to uncover additional dimensions of play. Finally, we examine contemporary educational contexts, including selected teaching practices and teacher training initiatives, to connect historical insights with current perspectives on the role of play.

1. Play and School: A Multifaceted Relationship

The vital role of play in children’s live (Bondioli, 1996; Braga, 2005; Bruner et al., 1976; Winnicott, 1971) is a well-established fact in contemporary society, although it is not always recognized as a fundamental right of childhood. Our understanding of the immense potential of play can be enriched by exploring its historical interpretations, uses, and applications in classic works by authors who were directly involved in education and schooling. Play has

sometimes been conceptualized as a spontaneous, independent activity that should remain separate from formal education. In other cases, on the contrary, it has been seen as a key component of innovative teaching methods designed to engage and inspire not only children but also young people and adults. To better understand these divergent perspectives, it is of value to revisit the ideas of key figures from the late 1800s and entire 1900s — namely, educationalists and teachers who developed innovative teaching and learning approaches during this period. Through their writings, we can trace a complex landscape rich with insights that illuminate contemporary educational approaches. These historical perspectives and experiences continue to inform our understanding of how we position ourselves as educators and teachers today, particularly in relation to our intentional choices about incorporating play into school settings.

In this paper, we examine a selection of authors who established key connections between theory and practice through their firsthand experimentation with play in teaching.

1.1 Rosa and Carolina Agazzi: Spontaneous Play and Educational Play

Consider the Agazzi sisters, Rosa (1866–1951) and Carolina (1870–1945) (Altea, 2011), whose writings frequently reference play with varying meanings and practical applications. Play entered their school from its earliest beginnings, as illustrated in this passage:

> The first days. Onwards… let us allow the children their freedom. Look how that carpet of leaves, both large and small, has already captivated them all! Wheelbarrows, baskets, and thick cloth bags are put into action. Some children prefer making bunches of large leaves, while others join with a classmate in piling them around a tree trunk; … It's a celebration, a competition to see who can gather the most. (…) For today, we have done enough taming, enough persuading that at nursery school we play. (Agazzi, 1950, pp. 34–35)

Play thus becomes a primary tool of engagement—the text uses the verb "tame"—to attract children to the world of school in a pleasant and fulfilling manner that is already known to them from personal experience. Instead

of rigid rules or imposed discipline, the games proposed at school offer a sense of freedom, supported by a varied selection of educational instruments which, though everyday in nature rather than sophisticated, are thoughtfully selected with specific educational aims in mind. The sisters emphasize a fundamental principle: children's natural preference for play. They harness this inclination to guide activities along trajectories increasingly oriented to the teaching-learning process: The teacher knows what children like: they like to play, especially circle games – all the better if the words are to be chanted in a singsong (Agazzi, 1950, p. 37). Indeed, as teachers and educationalists, the Agazzis presented play to kindergarten teachers as a valuable means of organically introducing children to the construction of academic knowledge, as in the following passage: From the exercise-game to the formation of habit: initially presented as play, the exercise gradually sheds its playful character, yielding to the educational dimension and thus marking the beginning of the habit (Agazzi R., 1950, p. 74) The Agazzi sisters, as many authors have noted, successfully integrated play into formal education via two distinct approaches. The first emphasized the necessarily participatory yet unconstrained nature of play, while the second leveraged play for educational purposes. As Francesco Altea (2011, p. 35) observes, the Agazzis presented play as a stepping stone to children's first work activities and their integration into the social environment.

1.2 Giuseppina Pizzigoni: Play at School

While the Agazzi sisters embraced play as an essential step in guiding children toward more structured school learning, Giuseppina Pizzigoni (1870–1947) approached it from a different perspective. As a teacher, school principal, and educationalist, she was concerned with a more protracted educational trajectory —from nursery school through vocational school—which allowed her to observe how the role of play evolved over time. Furthermore, her concept of school, encapsulated in the emblematic phrase "School is the world," completely redefined the role of play. Thus, the relationship between play and education extended beyond the interior of the school (although the building was designed based on an unconventional vision of teaching and learning), emphasizing and valuing the outside world as key to her educa-

tional offering. In her writings, Pizzigoni succinctly yet impactfully outlines the requirements for setting up a school with an alternative educational approach: Applying the experiential method in teaching demands a special environment, ample time, and adequate means (Pizzigoni, 1956, p. 31). The school's prospectus featured several outdoor spaces, each designed for a specific purpose. Notably, two of these were explicitly labelled as "playing fields."

The importance of play was further emphasized in the curricula developed for this new school and innovative teaching method, particularly in relation to physical education. Pizzigoni writes: "For physical education: Outdoor life as early as possible. Play, preferably outdoors, after the midday meal. Free play and movement-based games: ball, skittles, ball and net, and hoop on the playing field" (Pizzigoni, 1956, p. 35). This emphasis on outdoor living, with opportunities for constant movement and a teaching-learning approach rooted in practical, individual, and collective experience, was a defining feature of the new program from its first announcement on September 8, 1911, which declared the opening of:

The Scuola Rinnovata based on the experiential method […] In two first-grade classes in the Ghisolfa district, the experiential method proposed by the Committee for the Scuola Rinnovata will be implemented with the permission and support of the school authorities, the City Council, and the government. […] In these two classes, the school day will run from 9 a.m. to 5 p.m., with a two-hour break for lunch and rest, spent on school premises. Attendance on Thursdays is optional. The curriculum is the same as that of other schools but is delivered using a different method. The children will incur less mental strain in reading and writing and will benefit from a scrupulous physical, aesthetic, and moral education. (Nicoli, 1947, p. 32)

This brief announcement implied that the proposed new school was not based on words and abstract teachings – indeed, Pizzigoni often advocated for "few words" in her writings – but rather on the constant hands-on experiences of each child and group of children. The longer school hours, the extensive time devoted to the different educational activities, and their constant interconnecting, along with an emphasis on nature, growing plants, and caring for animals, became defining features of Pizzigoni's method. Experience

and discovery displayed a characteristic trait that is reflected in some of Pizzigoni's observations about play:

> Games play a vital role in the Scuola Rinnovata, bearing great value for both physical education and moral development. A school without games not only lacks a powerful educational tool but might be compared, in my opinion, to a day without sunshine. And I quote from the chapter on "School Games" in the *Mannheim Elementary Schools Yearbook*, which states that youth games provide a proper outlet for the natural energy of children attending public schools. It has become evident that this is the only way, in the living conditions of a large city, to foster love of vigorous physical activity in the open air. This serves as an effective means to combat the dangers of idleness, alcoholism, tuberculosis, and more. (Pizzigoni, 1956, p. 43)

For Pizzigoni, it is crucial to attend to children's health and physical development, as well as offering a learning approach centred around the joyful discovery of knowledge as well as continuous movement both inside and outside the school - an approach that mirrors children's natural, playful behaviours.

1.3 Ettore Guatelli: Objects and Games as Learning Materials

While Agazzi and Pizzigoni are well-known to education scholars and practitioners, Ettore Guatelli (1921–2000) may be a less familiar figure. This author, who was a teacher, is particularly remembered and studied by researchers of both tangible and intangible cultural heritage because of the museum he created. His house-museum (Guatelli, 1999; Clemente & Guatelli, 1996), located in Ozzano Taro, Collecchio, and described by Guatelli himself as a "museum of the obvious" or "museum of everyday life," houses a collection of over 60,000 objects and stands as a landmark in contemporary museography. The humble objects, salvaged and displayed according to Guatelli's personal aesthetic principles—the hallmark of this space—are everyday items that preserve the imprint of those who, through daily use, have worn them down to the point of making them part of themselves (https://www.museoguatelli.it/museo-del-quotidiano/). An entire room of this museum is dedicated to games. These include old games fashioned from waste materials – often the sole means by which children from less privileged social classes could cre-

ate their own toys. Today, the toy/game room's exhibits inspire workshops for young visitors to the museum. However, examination of Ettore Guatelli's career as an educator reveals that these collected games and objects played a crucial role in his teaching methodology. What set Guatelli apart as a teacher was his practice of embellishing his lessons with these collected objects, which included both traditional and contemporary games. Within his educational approach, these items became catalysts for experience-based learning, encouraging children to themselves become creators. Guatelli particularly valued toys that children and adults had independently constructed by repurposing waste materials - objects that had long served other functions before being readapted for play and which he collected following their final abandonment. When brought to school, these objects were observed anew and played with, inspiring new creations. Thus, Guatelli's pupils, while discovering traditional games, learned to reuse them, build them, and experiment with them within their peer groups. This approach offers a different perspective on play compared to the other methods we have discussed so far. Specifically, it emphasizes the value of materials and construction, as well as the process and act of narrating the stories embedded in the games on display and in their building and use. As Mario Turci has observed:

> The spaces of the infra-ordinary are the spaces that Ettore Guatelli sought to explore and highlight through the museum he created. These are the spaces of everyday life, which to a distracted eye seem insignificant because they exist on the plane of the obvious [...]. Yet it is in these spaces that the "wonders of the obvious"—and therefore of life as it unfolds in the everyday—reveal the humanity of countless stories. (Pozzetti & Turci, 2021, p. 7)

1.4 Mario Lodi: Nurturing Children's Languages

To come back to a figure who is better known in the field of education, Mario Lodi (1922–2014) offers fascinating insights into the role of play in early childhood and beyond. These insights may be gleaned from the daily journal entries, notes, and annotations that this author - active in the Educational Cooperation Movement (MCE) – produced for the documentation and planning needs of the context where he taught. In these texts, play is attributed

with a different meaning – specifically, it is not just a way of engaging learners' interest, but is also one of children's fundamental languages, a medium through which they produce culture. On careful observation, Lodi noted the striking contrast between his students' natural vitality and joy, and their more constrained behaviour in the classroom: "One day, looking out of my classroom window at the children in the courtyard, roaming free, I couldn't help but compare them to how they seemed here, at their desks – obedient, resigned, and lacking ideas – while down there, they were full of life and imagination" (Casa delle Arti e del Gioco, 2016, p. 19). Hence, he began to focus on developing a different approach to teaching – one that allowed for greater participation in school life, especially in terms of accomodating children's creative languages, within which play is a key component. Even in terms of classroom layout, Mario Lodi emphasized the need to create multifunctional spaces, moving away from the traditional setup of desks arranged solely to face the teacher's desk and the blackboard. As he wrote: "We turned the corners of the classroom into small ateliers for painting, drama activities, reading, and printing." (Lodi, 1974, p. X) The new organization of the spaces and the alternation of different learning activities - which were based on the children's everyday lives and their natural curiosity - was aligned with children's natural way of discovering and learning. This approach combined serious effort with playful exploration and group work.

Mario Lodi's emphasis on play is attested by the founding of the cooperative, now an association, known as Casa delle Arti e del Gioco. This institution was established after Mario Lodi won the International LEGO Prize in 1989. He used the proceeds to set up a study centre dedicated to children's culture, and designed to host exhibitions, workshops, research, and training for teachers and educators. Among Lodi's writings, a small but invaluable book—the first in the Casa delle Arti e del Gioco series—is devoted to play: *Come giocavo* (Lodi, 2014). In these pages, his memories come to life, vividly evoking games played outdoors in nature with friends, marked by a sense of choice and freedom. He writes: "I reflect on the history of children's play worlds, now invaded by the profit-making industry that neutralizes fantasy with serial mechanical play. I wonder what would have happened if adults had convened us to play their games in organized spaces - fifty years ago, this would have been unimaginable. Now it is a necessity, as we wait for city or

countryside to revert to being places where people know and help one other, who share a common history" (Lodi, 2014, p. 4).
Some of Lodi's memories of his childhood play are worthy of mention, shaped as they were by the spaces where they occurred: the countryside, the road, the square, the courtyard, and even the kitchen—each brimming with a thousand suggestions and possibilities.

> Fifty years ago, it was the 1930s, and I was a child. […] Our world, outside of school, was made up of our friends, our homes, the street, the countryside. There we played with everything. Each season suggested ideas, which the collective imagination transformed into executable projects and into which we threw ourselves unreservedly. (Lodi, 2014, p. 7)

> The street and the square were also available as play spaces. In the square, we played spanetta around the tower […]. I preferred spinning my top […]. The street had its entertainment: the blacksmiths in the neighbourhood near the school […]; the farrier […]; old Marta with the sweets trolley. (Lodi, 2014, p. 12).

This play was conducted both outdoors and indoors, as an integral part of the children's relationship with their surroundings, where gangs of kids were free to roam and explore. It was total play: "Children's play has no breaks, no holidays. It is the continuous need to do, to know, to understand, or to create—it is the game of discovering the world and reinventing it through play. It is happy work that stimulates learning, organizes thought, and fosters sociability" (Lodi, 2014, p. 3). This vital aspect of childhood, so deeply ingrained in Mario Lodi's memories, was something he not only cherished but also successfully integrated into his teaching.

1.5 Gianfranco Zavalloni: Games, Toys, and the Natural Rights of the Child

Gianfranco Zavalloni's life (1957–2012) exemplified the integration of games, self-made toys, and puppets into education, even before he embarked on his professional career. He brought these creative tools into the classroom during his tenure as a nursery school teacher, and his dedication to this approach persisted as he transitioned through various roles: elementary school teacher, school principal in multiple Italian locations, and in Brazil.

Zavalloni's was a different teaching method that prioritized respect for children and their needs. He collaboratively developed his approach with students, other teachers, and the broader community. His enduring focus on games and toys is evident in many of his initiatives, including the notable exhibition "1 World, 10 Toys, 1000 Combinations," devised in collaboration with Roberto Papetti. This educational exhibition explored toys in different cultures, as well as instruments of education and understanding across societies. It sought to reveal the invisible thread connecting children's games worldwide by showcasing traditional toys collaboratively crafted by children and adults.

Starting from a list of the ten most-played-with toys in the world, countless variations were presented, with the combination of different pieces in order to generate ever new toys (Zavalloni & Papetti, 1997; Papetti & Zavalloni, 1990).

In his introduction to a text on creative games, Gianfranco Zavalloni reflects on the significance of building games, a practice that is now almost entirely lost: "Let us observe the eyes of boys and girls when they build a toy, when they receive a gift, when an adult guides them in using it and playing with it: they shine with intense emotion. These objects are the destination of their dreams, at the origin of their most daring fantasies, and behind all their the most passionate and contradictory desires for possession." (Papetti & Zavalloni, 1990, p. 3). This focus on children's independent construction of their own toys, as well as a deep appreciation for the toys and games of different cultures (Fenizi et al., 2017), aligns perfectly with Zavalloni's commitment to what he terms the natural rights of children. In relation to play specifically, these rights include: *the right to get dirty*, to play with sand, earth, grass, leaves, water, stones, and twigs; *the right to use one's hands* to drive in nails, saw and scrape wood, sand, glue, model clay, tie string, and light fires; *the right to the street*, to play freely in the squares and to walk along the streets; *the right to the wild*, to build a play shelter in the woods, to have reeds to hid among, and trees to climb (Zavalloni & bambini, 2006). Zavalloni invites adults to recall what they themselves loved to do when they were little, with whom, how and where they played and what their favourite games and toys were. This approach seeks to raise awareness about ensuring children's freedom of choice, the use of their hands and time, and the opportunity to awaken their senses

through both collective and individual play. For Zavalloni, too, attention to play is a cornerstone of an educational philosophy that views children as active participants in the creation of a society committed to reimagining how we use time and space (Zavalloni, 2019).

2. Design Projects Beyond the School Setting

Having presented a range of perspectives on play proposed by education specialists – selected based on this author's ongoing engagement with their work – it seems important to extend our discussion to include two designers who have specifically concerned themselves with children's play: Bruno Munari and Riccardo Dalisi. While many designers have contributed to this field, the focus here is on Munari and Dalisi because their approach to play offers a distinctive and particularly valuable perspective.

2.1 Bruno Munari: Playing with Art and Meo Romeo the Cat

Bruno Munari was an artist, designer, graphic designer, and writer who traversed various artistic movements, from Second Futurism to abstract art, the Concrete Art Movement, and kinetic art, continuously innovating within each. A core trait of Munari's multifaceted personality was his deep commitment to the world of childhood, resulting in a wealth of groundbreaking contributions. These included innovative book concepts such as the unreadable books (1949) and pre-books (1980), designed specifically for very young children; games and toys: the *Meo Romeo* (1949) and the monkey *Scimmietta Zizì* (1952); children's books (*Toc toc. Who's there? Open the Door* (originally published in 1945); *Little Green Riding Hood* and *Little Yellow Riding Hood* (originally published in 1972); book-objects; games for thinking and, in particular, artistic workshops, were designed to take place in museums, galleries, and schools. The first of these workshops – or rather the second, following that realized at the Galleria Blu in Milan in 1974 – was designed by Munari for the Pinacoteca di Brera in 1977, at the invitation of its director, Franco Russoli. The earlier workshop in 1974, titled "Children's On-the-Spot Creativity", introduced a novel way of engaging children with art – an experience that combined the characteristics of play and discovery: a model of a laboratory for

visual education and the production of images, designed for children aged three to eight. The children were provided with various techniques and tools, visual explanations displayed on the walls, and direct projections of materials, including slides prepared and projected by the children themselves. This was the first experiment to explore the practical possibilities of a laboratory for children.

The information available to the children on the walls was diverse in character: textures, modular components, and direct projections (which were highly engaging and captivated adults as well as children). There were also modular components that could be assembled to create three-dimensional constructions, alongside other techniques. Of course, this was not yet a laboratory designed for a specific function like that later created in Brera or at the International Museum of Ceramics in Faenza, or for the exhibition at the Beaubourg in Paris entitled *The Hands That Look*. It was a test of the method (Munari, 1981, p. 14). From that moment onwards, many cultural institutions invited Munari to design and implement laboratories for them, including the International Ceramics Museum in Faenza, the Natural History Museum in Milan, Museo Pecci in Prato, Mart in Trento and Rovereto, the Triennale, and others. This aspect of Munari's work is particularly intriguing to examine. Expanding on his concept, Munari described the workshops as "playing with art". They offered opportunities for children to experiment with the principles of visual communication, prioritizing hands-on activities in the laboratory before engaging with the artworks in the museum. One of Munari's guiding hypotheses was to foster the development of a new sensibility. He summed up this idea as follows: If we play with works of art as children, in twenty years we will have a different audience – one that not only considers what it means, but also understands all the constructive aspects, through play, as children do (Munari, 1981, p. 5). According to Munari (1981, p. 8) playing with art, therefore, is not about becoming artists, uncovering the secrets of the great masters, or learning the history of art. It is not merely about having fun or giving free rein to fantasy and spontaneity. It is not solely about learning techniques in drawing, painting, or sculpture, nor about looking at art with a different perspective. Rather, playing with art is about experiencing the discovery of the rules of creativity in a truly creative way. Here, play is understood differently from the perspectives presented

earlier—a playful and experimental approach, both personal and collective, based on discovering, learning, and having fun by engaging with the rules of visual communication. It involves exploring cultural spaces and entering them as active protagonists. In the words of Munari's son Alberto, it may be seen as a game of discovery in the realm of knowledge:

> If, instead, we consider artistic expression—or metaphorical expression in general—as a form of knowledge, then it no longer makes sense to distinguish activities done in a laboratory called "playing with art" from those that could be done in another place called "playing with knowledge. (Munari A., 1986, p. 76).

The same idea applies to the museum context: so, if "playing with art" is "playing with knowledge," then "playing with the museum" is also "playing with knowledge." The museum becomes a place for constructing knowledge, not merely a space for preserving it (Munari A., 1986, p. 77).

His revolutionary ideas, which introduced a new way of experiencing museums and engaging with works of art and compositional rules, also extended to rethinking the types of games offered to children. Especially because, as a designer himself, he had created a number of children's games:

"Games and toys must stimulate the imagination. They should not be complete or overly finished – like certain perfectly detailed models of real cars – because such perfection limits the user's participation. The ideal toy should be intuitive, allowing a child to understand its purpose and how to use it without any explanation. You should be able to place the toy in a child's hands, and they will grasp its essence and function on their own (Munari, 1981, *Da cosa nasce cosa*). Laboratories as spaces for play – conceived as activators of creativity and imagination (Munari, 1977) – and games as stimulators of thought were central to Munari's work. He consciously supplemented play with specific rules, covering the role of the adult, the adult's interactions with the children, the preparation of the physical setting, and the selection of materials and tools.

2.2 Riccardo Dalisi: A Designer in the Public Square

Delving now into the work of another exceptional designer, architect, and artist – Riccardo Dalisi – we see that his revolutionary approach also incorporated play, exploring themes of participation and shared creation. In the early 1970s, from 1971 to 1974, Dalisi's work in the Rione Traiano neighbourhood of Naples, which had been built in the late 1950s and was characterized by severe social marginalization, might be described as a laboratory experiment conducted with the participation of the children in the local area (Dalisi, 1975, 1978). Via the mutual exchanges between the children and a group of facilitators, Dalisi fostered creativity and play, using them as tools of transformation and emancipation. In his "animated architecture" project, Dalisi actively engaged local children in designing new structures for their community, encouraging collaboration and a sense of belonging. The children's playful actions occupy and modify the space, creating objects that were stable yet not permanent. Dalisi's approach prioritized playing with design game as a concrete tool of social transformation, capable of influencing and reshaping society (Parlato & Salvatore, 2020).

3. A Reflection on the Contemporary Panorama

After this brief overview of the ideas of educationalists and designers about play and its potential applications, let us highlight a few key points that emerge from their perspectives. Many of the reviewed authors view play as an instrument of learning. Conversely, others emphasize the inherent freedom of play, and its independence with respect to constraints.

A survey conducted in 2024 on the role of play in school settings, with second-year students of Primary Education, confirmed that this dual perspective is also present among contemporary future infant school and primary school teachers. Of the 67 participants, 11.9% believed that play should always include an educational dimension, 86.6% responded that "it depends," while only 1.5% asserted that play should not have any educational dimension whatsoever. The responses provided to justify these choices offer key insights; a select few are presented here as examples: "It's not that play should

have an educational purpose, but rather that it can: in my opinion, it is possible to learn through play, both in more 'structured' situations organized by adults and in free, unstructured ones." "Play does not always need to serve an educational purpose. Sometimes, it is important for it to arise spontaneously among children, with the simple aim of having fun and sharing time together." "Some games can be designed with an educational purpose, while others exist purely as sources of entertainment and freedom for children. However, in my opinion, every game contains, whether visibly or not, an educational element." "Play should be free and spontaneous, not imposed." "Often, a child's spontaneous play inherently carries an educational value comparable to the planned objectives of a teacher. Therefore, play does not necessarily need to have a defined educational purpose, as it naturally enables children to explore, discover, and learn."

In terms of their own experience, particularly during periods of teaching practice at infant schools, all the participants had observed the significant role of play, often related to the use of specific materials or to symbolic and movement-based games in the school yard. However, only 44.6% had directly introduced a game to the children themselves. During their basic training, many student teachers design classroom activities centred on the use of play as a teaching tool. Notable examples include the work of two students: Manuel Anzi, whose undergraduate thesis titled *In Search of the Princess: The Use of Role-Playing Games in a Primary School Class* posed the following questions: Is it possible to design a learning path using the Role-Playing Game methodology? What skills must children deploy, and what forms of intelligence are enhanced by the use of this methodology in the classroom? and Francesca Pretari, with a thesis titled *A Journey Around Play: Meanings, History, and Play-Based Learning* – the starting point of her research project was board games, which she ultimately integrated across multiple disciplines. In conclusion, as evidenced by these examples, the role of play has become an essential aspect of school life – whether as free play or as activities intentionally designed with educational purposes. Key takeaways include the rich potential of play and the fact that explicitly educational games (Andreoletti & Tinteri, 2023; Berti, 2022; Hughes, 2010; Ligabue, 2020; Moseley & Whitton, 2014; Plass et al., 2019) can coexist with experiences that honour the free and untamed nature

of play. When designing games for learning, it is essential to respect key characteristics of play such as freedom, rules, autonomy of choice, and discovery.

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More Than Just Learning Games. For a Sound and Effective Pedagogy of Play

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Abstract

One of the most interesting and at the same time intrusive modalities of the pedagogical valorisation of play in the modern age has been found in the forms of "didactic games". Intriguing because it is in this direction that the research and production of play materials has developed with the aim of strengthening the link between play and learning: the ancient Latin expression *Ludendo docēre*, dating back to Marcus Fabius Quintilianus (1st century AD), is transformed into *Ludendo discĕre*, shifting the centrality of the function of teaching to the more natural one of learning. This is disturbing because the expansion of the market for the production of educational games over a period of about two centuries has led to a de facto colonisation of the pedagogy of games, which raises a prejudicial question: on the basis of what assumptions can a game be defined as "educational" and, by extension, which games are "educational"? A game that is labelled as "educational" or "didactic" would then be considered to have some kind of "added value", making it suitable to be used in schools. But is this really the case? How many of us would include educational games in our ludo biography, among the games that have contributed the most to our education? It is likely that there is an unresolvable conflict of interest in the relationship between school and play.

1. Playing to Teach

Linking pedagogy to play may sound like an oxymoron to those who see pedagogy as a science of education in a directive sense, based on precise guidelines or programmes. Sue Rogers (2011), indeed, in her essay, speaks of

a real "conflict of interests", to the point of asking: "What kind of pedagogy is a 'pedagogy of play'?"(p. 5), since the two terms refer to very different domains: pedagogy denotes an educational action designed by adults and oriented towards specific goals, while the word play refers to a wide range of activities and modes of interaction that have freedom as their essential principle. The widespread phenomenon that Rogers defines as the "pedagogisation of play", if on the one hand it has the characteristics of the recognition of play as an educational tool, on the other hand it is resolved in the absorption, in the colonisation of play by pedagogy. Gianfranco Staccioli (2008) speaks of a "confiscation", whereby the "conflict of interests" seems to be resolved, but in fact it is not.

One answer may be to consider this conflict as somewhat intractable: the two fields respond to different demands, and it is good that they stay that way, allowing for mutual influence and contamination. Sue Rogers proposes a reciprocal relational approach, a process of co-construction in which play also has the task of formally inhabiting education, to the point of defining some of its characteristics. In short, a kind of education played on equal terms.

Since the 17th century, two different orientations have developed in the field of play pedagogy. The first is based on play as a functional tool for learning processes. This model, based on the well-known principle of "ludendo docēre", was already known in ancient times. A classical point of reference is the *Institutio oratoria* of Marcus Fabius Quintilianus (1st century A.D.). That is, to make the activity of teaching enjoyable and to eliminate as far as possible the burden of suffering that it entails, has been an intuition since antiquity, aimed not only at improving the quality of learning but also at redefining the identity of the teacher.

In the modern era, this idea leaves the purely theoretical sphere and describes psychological and didactic procedures, tools and techniques. John Locke, in his work *Some Thoughts Concerning Education* (1693/1989), describes the possibility of designing and using toys as a means of making education enjoyable: "There may be dice, and playthings, with the letters on them, to teach the children the alphabet by play; and twenty other ways may be found, adapted to their particular temperaments, to make this kind of learning a sport to them" (p. 209).

In the mid-eighteenth century, the English cartographer John Spielsbury produced a dissected map for educational purposes. He glued a map of Europe to a wooden board and cut it into the various states, following the contours. The child would then have to reconstruct the map by putting the various pieces back together again. This was the birth of the jigsaw puzzle as a didactic game. It would later become extremely popular in its various versions. At the same time, especially between the 19th and 20th centuries, the "goose game", which originated in Italy and then spread to European courts, became a format on which many educational games were based. The dice are rolled over a kind of "curriculum", which can be historical, geographic, scientific and so on, which the child has to go through and follow, stopping at the different boxes and learning the contents by heart. Even today, the Goose Game scheme continues to be used to create pathways on current topics with educational purposes (Farné, 2019).

Manual dexterity, logic, aesthetics and visual construction are the most obvious features of the pedagogy of play contained in Friedrich Fröbel's *Gifts*, which became a kind of play matrix suggesting the production of large-scale games characterised by three-dimensional geometric pieces with which to build imaginative constructions (Brosterman, 1997).

Montessori materials have a different focus, which is on the practice and development of specific skills and sensitivities in the child. Montessori does not really speak of playing, but of the child being pleasantly attracted to the materials with which he or she interacts, "as if" it were playing. By "playing" with these rigorously structured materials, children think, make hypotheses and propose solutions which they immediately verify. Play encourages them to solve problems, to use the trial-and-error method, to classify, to acquire information. For Montessori, play is the work of the child, in the sense that the child plays where it finds activities in which to invest its energy, because it is moved by an interest, by the need to do something (Montessori, 1948/1999).

It is along these lines that the children's museums have come into being: the most structured and spectacular expression and extension of a pedagogy of play that developed during the 20th century, first in the United States and then in various countries around the world. Children's museums are institutions that are dedicated to putting into practice the principle of learning through play. They are characterised by different environments, each of

which has a theme (media, water, construction, electricity, printing, food, etc.); children have a particularly evocative "learning environment" with exhibits, i.e. tools, equipment, materials related to the theme, with which they are invited to play, simulate, build.

Based on the hands-on approach, i.e. the touching of things (the opposite of traditional museums, where the principle is "look and don't touch") and the learning by doing, on which active education is based, children's museums promote informal learning by stimulating the child's curiosity to manipulate, discover, make and unmake, thus promoting the idea of play, which is the primary source of knowledge in childhood and which, according to Montessori, goes far beyond games in the strict sense of the word: it is learning by direct contact with things, self-learning.

"Edutainment" is a neologism born out of the crisis between education and entertainment. It describes a wide range of multimedia products that make the child's playful activity not only fun, but also "productive" in an educational sense. A few years ago, the slogan of a large Italian toy industry was "Toys are food for thought". Turning on a computer screen for a child today means entering a "playground" where countless play scenarios can be opened up, whose limits are not objectively measurable, or an immense virtual toy library where one can find the most verisimilar and the most farfetched simulations.

The ancient principle of the *ludendo-docēre*, the truth of which is so generally exhortative that it is ultimately inconsistent at the level of pedagogical concreteness, is more appropriately redefined in the *ludendo-discĕre*, thus placing the emphasis on the human activity that, in its natural state, is most likely to take on ludic characteristics: that is, learning more than teaching. Learning enjoys a freedom and autonomy, as well as a biological basis that does not necessarily make it dependent on teaching, since the subject is naturally predisposed to learning by itself, in relation to the world, as an act of original intentionality.

2. Play as Anti-Pedagogy

This leads us to the other pedagogy of play, which stresses the ludic character of learning, the foundations of which are natural: the need to explore and to know, curiosity as a driving force, the desire to do and to experiment. This pedagogy of play has its reference point, which can be read as "anti-pedagogy", in Jean Jaques Rousseau's *Émile* (1762/1979). Here, as the natural field of experience in which the child builds the foundations of all its knowledge, play becomes, in a sense, the paradigm of education. Play itself is an educator. Rousseau's "paradox" is that nobody teaches children how to play, but it is through play that children develop their skills and knowledge. The adult should therefore do nothing more than "let the child play" in the most natural conditions, those that allow him to interact with the environment and its raw and natural elements through his body and movement, his senses, exercising his manual dexterity, imagination and intelligence. Rousseau expresses this with the concept of "negative education", an education that involves the least possible intervention of direct and formal instruction. He argues openly against those who, like Locke, try to make children learn by means of playful teaching methods and various tricks:

> A great business is made of seeking the best methods of teaching reading. Desks and cards are invented; a child's room is made into a printing shop. Locke's want him to learn to read with dice. Now is that not a clever invention? What a pity! A means surer than all these, and the one always forgotten, is the desire to learn. Give the child this desire; then let your desks and your dice go. Any be good for him. (Rousseau, 1762/1979, p. 117)

Rousseau's pedagogical provocation for the affirmation of the centrality of play in its natural expression and development is: "Dare I reveal to you the greatest, the most important, the most useful rule of your education? It is not to gain time, but to lose it" (p. 93). Yet how often has the child's play arrived at the age of school and its pressing obligations been seen as a useless, unproductive "waste of time"?

Children's play is all the richer as a formative activity the more the child can exercise it outside of any predetermined superstructure, in a space that

is as natural and free as possible. This space is filled by the child on the basis of his or her own playful project, using his or her imagination and the activities that his or her relationship with the environment suggests to him or her (Gill, 2021; Gray, 2013). The materials for play can be those of the environment itself, preferably natural ones such as water, earth, wood, stones, etc., or everyday materials that are recycled to be manipulated and transformed during play. Rousseau gives us one of the clearest examples of this approach when he states that the novel *Robinson Crusoe* will be the only book that Émile will have at his disposal, so that he himself will play at being like Robinson, imagining that he is on a desert island where he has to provide everything he needs for life and defence. His game will be one of searching and building (a hut, clothes, tools...), thinking about possible dangers and how to deal with them, experiencing adventures in fantasy but through concrete things that he will bring to life with his skills and imagination.

According to this model, the teacher doesn't "force" the child to "play", but rather offers the child a space, time and materials with the least amount of superstructure, allowing the child to fill in and shape the games according to their own active imagination. This means that it is up to the adult to create the minimum and essential conditions, the attitude and the methodological framework within which the child can operate, not following the path of a pre-determined play, but on the basis of his own playful intention. It arises from the naked and raw relationship with reality and its material equipment, whose apparent poverty is the condition of its richness, since it is ready to support a strong investment by the child.

In this way, a natural pedagogy of play begins to emerge, a holistic vision that places the child's intelligence in a close relationship with the body, with movement, with the senses. The child's freedom, no matter how "controlled" it may be by the adult, is the necessary condition for the child's play to nurture the psychomotor and intellectual capacities that lead to curiosity and questions that become knowledge. Knowledge, learning in childhood should not precede experience. It should not be independent of it.

3. To Play Means to Move

The question to be asked is this: when we talk about play and education, play and learning, which orientation are we referring to or tending towards? The first is the design and production of play equipment that is technologically advanced and highly interactive, and the second is the centrality of the body and motion, of play based on the naturalness of environments and materials, and the effortlessness that accompanies them.

An overly schematic division, one might say, a good play pedagogy should use both, everyone agrees, and the discourse would end there. However, if we look at the prevailing ludic culture, it is now the one that is oriented towards the first model: the idea of making didactics "ludiform", to use the effective expression coined by Aldo Vsalberghi (1988), makes effective use of technological apparatuses (interactive whiteboards, tablets, etc.), where forms of digital game-based learning or so-called gamification seem to be winning (Andreoletti, Tinterri, 2023; Fioretti, 2023). We have not yet found any scientific research showing that a school equipped with technology and oriented towards techno-game practices produces learning results and expresses an overall pedagogical quality superior to a school of the same level without these characteristics. In other words, we believe that technological environments and means can stimulate in students a desire to learn that they would not normally have, or that the teacher would not be able to stimulate through his or her own personal teaching skills.

The fact that there are machines and devices that are designed to facilitate learning, even in playful forms, is nothing new and is fine, provided that we know that it is a game that is in line with what the school wants to achieve, that it is designed to achieve its own didactic goals, which are prescriptive, in other words, it is a sterilised game. To be present in the school, play cannot bring into play the school itself in its institutional assumptions, starting from spaces and times, from the very concept of the curriculum, which does not belong to the sense of the game.

The reason why, between the two orientations of play, the former can usually find a place in the school, but not the latter, is precisely this: because there is nothing natural about the school; the school is a great artifice, one of the most powerful inventions of modern Western culture. School is a "great ma-

chine": *Didactica magna* is the title of the work of Comenius who, in 1657, built the model of the modern school, designed to make the process of teaching and learning effective and scientific for everyone.

I would now like to make a short digression. Research in the field of neuroscience tells us that the development of our brain, and of the nervous system in general, is primarily functional for the organisation and management of actions, and not for the accumulation of knowledge. Fausto Caruana and Anna Borghi, in a lively book titled "The Brain in Action", report on research on ascidians, a type of marine animal that can be compared to sponges. Born with a very simple brain and nervous system, they are light-sensitive and move around looking for a place to settle (a rock, a reef). As soon as they have found a place, they attach themselves to it and stay there for the rest of their lives. At this point, the two scientists explain, the ascidians "undergo a metamorphosis: as soon as they stop moving, they begin to absorb and reabsorb their brains. Without motion, perception becomes an unnecessary expenditure of energy". The conclusion is that if we did not have a motor system, not only would there be no point in perception, there would also be no point in thinking (Caruana & Borghi, 2019, p. 13).

So the question is: Is a "school" that keeps children sitting for a large part of its time, even with the use of sophisticated and suggestive techno-game devices, convinced that it is developing the intelligence of these children, or is it rather unaware that in addition to the static nature of their bodies, their brains are also static? Receptive, but not necessarily active.

A century ago, in Calais in 1921, the *Manifesto of the Active Schools* defined what the sciences of education had been working out (Lucisano, 2021). The references were to Dewey, Montessori, Piaget, Claparède, etc. Play, motor and sports activities, crafts and open-air activities have become an integral part of this new education, which, in addition to quality learning, aims to create active citizens and a culture of peace. Nowadays, those who are preparing to become teachers study and pass exams on this scientific knowledge, on the importance of play and active didactics, but then, when they enter the school, they do not apply it and adapt themselves to the practice of a school pedagogy, even if it is technologically advanced. We could speak of a "counterfactual pedagogy" (Farné, 2022). As if a doctor, trained and specialised in medicine and surgery, treated his patients with bloodletting and enemas.

So the "conflict of interests" between play and pedagogy in schools is not resolved by games, but by the "sense of play", the culture of play that the teacher either has or does not have, like the question of Don Abbondio's courage in the Italian novel *I promessi sposi:* when Cardinal Borromeo asks him why he did not unite Renzo and Lucia in marriage and reminds him of the courage needed to carry out his function, the poor priest replies: "Courage, if you do not have it, you cannot give it." That is to say, in conclusion, that courage is not needed to introduce a little technology or ludic strategies into the school. It is needed to bring in a culture of play, a sense of play, which can transform, to some extent, the experience of teaching and learning.

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Section 2
Wellbeing at School

Lifeworld Experiences of Pupils during Play

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Abstract

Situations in which pupils play freely can promote interaction about their lifeworld. According to Flitner (2009), social issues can be better addressed in play situations and pupils can open up their own peer-cultural and meaningful aspects in play than in school lessons (Flitner, 2009; Heimlich, 2023). Games are didactically convincing because cognitive aspects are promoted in a motivating way. Nevertheless, it should be noted that less importance is attached to free play in particular than to guided play, although it is favoured by the children (Ceglowski, 1997; Jäger, 2011). This article looks at free play and asks how lifeworld experiences are used for interaction. To this end, it examines a play situation during break time in which pupils are engaged in construction play. Video material from my doctoral project is used to present initial findings from an inclusive primary school, analysed using the documentary method (Martens & Asbrand, 2022; Bohnsack, 2021). In this way, verbal and non-verbal interactions as well as spatial and material aspects are included in the analysis. The situation shows that there is a connection between lifeworld references and non-verbal behaviour during play. Despite the different orientations of the players, there is agreement about their social roles. Lifeworld experiences and references are used as a connecting element in play.

1. Introduction: Theoretical Perspectives on the Activity of Playing

For Dewey (1916/1993), play is a central form of school activity that should not be reduced to a form of recreation or amusing distraction. Rather, it is an engagement with the environment that serves as a basis for experience (Dew-

ey, 1916/1993). Caillois (1960) also describes play as a free activity in which mimicry underlies every game. By this he means that an illusion or fiction, i.e. "a reality beyond reality" is assumed or feigned for a certain period of time (Caillois, 1960). Thus, although as-if games and imitations represent a disguise or mask, they always draw on life and its experiences(Caillois, 1960). According to Wulf (2016), play resembles a ritual in which collective experiences and practices are performed and practised. Games can be both community-building and shape cultural and social differences (Wulf, 2016). According to him, play performatively expresses the construction of reality (Wulf, 2016) and through a repetitive character, playful practices are practised and incorporated (Weiß, 2020). Playing thus shows an engagement with the lifeworld, i.e. what is taken for granted in everyday life (Schütz & Luckmann, 1975/2017), by relating one's own experiences to play, other actors and experiences. In the school context, a positive framing of play is evident in two respects: on the one hand, play is considered to be conducive to learning and, on the other hand, the reference to the world of life is seen as important for linking school and extracurricular knowledge. Free play understood as an internally motivated activity (Dewey, 1916/1993) thus offers the opportunity for pupils to create their own references to their lifeworld. However, free play is a rarity in school discourse and is often only thematised in pre-school education. For school learning, guided play, i.e. a guided form of play, is seen as a way of acquiring subject-related skills through play. The start of school in particular marks a turning point in which free play is seen as less central and devalued against the background of learning (Leuchter, 2013; Weißhaupt & Campana, 2014). Leuchter (2013) sees the reason for this in the fact that free play does not harmonise with the goal-oriented view of knowledge transfer. This leads to a separation between learning and playing, whereby other forms of knowledge transfer are seen as more relevant. However, the reference to the reference to reality as a criterion of play is also evident in the school context (Flitner, 2009; Heimlich, 2023; Oerter, 2007). This transformation of reality is seen as a way for children to react to their own needs and emotions in their environment and to solve problems that they cannot manage in everyday life (Oerter, 1999) or to distance themselves from the everyday world (Weiß, 2020). Play therefore always represents a confrontation with one's own world and enables the development of new experiences through

active engagement. By imitating or playing pretend, children utilise and incorporate practices from their living environment and are also enabled to transform and shape them (Weiß, 2020). Play can provide an opportunity to try out new things and transform relationships with the self and the world. (Weiß, 2020). Play situations can therefore be seen as favouring lifeworld interaction. In summary, it can be said that the activity of playing is seen as a central aspect of socialisation that encourages children to engage with their own world and deal with it productively. However, the implementation in everyday school life is less consistent here, in which the teaching of skills is prioritised at the expense of play due to school enrolment. The fact that free play is also relevant for everyday primary school life can be seen, for example, in break times or free learning times. It remains unclear how lifeworld references are made by pupils in play situations.

2. State of Research on Playing

Above all, studies in developmental psychology in particular attribute positive effects to play for children's development and learning processes. For example, it has been shown that children interact and verbalise more in play situation and develop a higher level digree of cognitive distance than in supervised situations (Lesemann et al., 2001) and that free play promotes motivational, social and cognitive aspects in preschool (Stipek et al., 1998). Wegener-Spöhring (2011) shows that historically, school learning and play were constructed as opposites and that it was only over time that the potential of play for teaching and learning contexts were understood. It is evident that there is a paucity of contemporary research in this area.

Similarly, research on the influence of games on elementary school children has predominantly concentrated on the learning-enhancing or motivational effects of games (e.g. de Freitas, 2018, Einsiedler, 1999; Sylva et al., 2007), while the playing habits of this age group have received comparatively less scrutiny.

The motivational aspect of games, which should be used didactically to achieve positive cognitive effects, is also more popular. In didactics, for example, the motivating aspects of leisure games or game-based learning or

gamification approaches are used to promote learner motivation.Game-based learning and gamification approaches in particular are becoming more popular. While greater attention is also paid to social processes, e.g. group dynamics (social play) during play in the preschool sector (e.g. Robinson et al. 2003), there is a gap in research into social learning content and the reduction of learning to subject-specific skills in the school sector (Hainey et al., 2016). Guided play is more effective than free play when it comes to acquiring subject-specific skills (Pianta et al., 2009; Fuller et al., 2017). However, social effects can also be observed in free play. By focussing on promoting performance in play, play is also subject to a school logic that can also be viewed critically. Wegener-Spöhring (2011) criticises the pedagogisation and didacticisation of play, as free play should also have its place in school and be developed independently by the pupils. It has also been shown that guided games are less associated with play by pupils (Ceglowski, 1997; Cooney et al., 2000; Walter-Laager & Pfiffner, 2009; Sylva et al., 2007) and that children prefer free play to guided play (Wiltz & Klein, 2001). Children talk about play when it is a freely chosen activity (Ceglowski, 1997; Jäger, 2011), while learning environments initiated by adults are perceived as work (Ceglowski, 1997). In the school context, play is primarily used to engage with peers (Jäger, 2011). Compared to kindergarten, pupils perceive the challenge of organising their play within the temporal and spatial structures. Free play generally shifts to the spaces in between the school day, especially during breaks (Jäger, 2011). Lesemann et al. (2001) found, for example, that the children's co-construction in free play is more differentiated than in a guided craft lesson. Beyond this, however, there are only a few recent studies that deal with the free play practice of primary school children without focussing on the effects of games. One of the few examples is the study by Nentwig-Gesemann (2010), which looks at the behavioural practices of 5- to 10-year-olds in relation to their communication, coordination and communitizing processes. She reconstructs various forms that can be described as rule-led, habitual and actionist play (Nentwig-Gesemann, 2010). Overall, it can be stated that the nature and type of free play in school, in particular the theoretical assumption that free play favours the confrontation with life-world experiences, is hardly considered empirically.

3. Research Design

There is a paucity of studies that address the social practice of free play in the context of everyday school life. The role of references to the pupils' lifeworld in play situations and their potential for facilitating problem-solving is rarely considered empirically, particularly in the context of primary education. In this study, play practice is now to be considered in relation to the interactions with reference to lifeworld of primary school pupils in free play. Therefore, the research question arises as to how they interact in school play situations via lifeworld experiences. The data to answer my research question is taken from my doctoral project "Lifeworld as a dimension of School Teaching and Learning". The data was collected from two primary schools with different profiles and a special school for intellectual development. Different teaching and learning situations were videotaped, such as group work, morning circles and play interactions. The video recordings were analysed using the Documentary Method (Martens & Asbrand, 2022; Bohnsack, 2021). The high degree of contrast between the samples allows for the differentiation between various situations. While this article focuses on play situations in a mixed-grade primary school class and reconstructs orientations of lifeworld interaction, a comparison can be made below between other lifeworld interactions that occur in other school cultures or other teaching and learning situations. As an example, a free play situation of two pupils is interpreted here and then discussed in terms of how lifeworld interaction is shown in comparison to didactically structured situations.

4. Reconstruction of a Break Situation

The situation takes place during a long break, when pupils can choose to stay indoors, play in the playground or to have lunch. There is also a period of two hours in which they can organise their time freely. The following pupils (school beginners) first spend time in the classroom and then in a break room where they play with Lego bricks.

4.1 Sequence 1: Different Building Projects

Elena and Luca are sitting on the floor in a play corner in the classroom. Both children are engaged in construction activities with a Lego board in front of them. As will become clearer in a moment, Elena is building a house and Luca is building a tower. There is a toy box of Lego bricks between them. On Elena's Lego board, two walls have been constructed together from bricks of varying colours. The interior of the walls contains a table, a chair, and a door. In front of Luca is a tower, which is constructed from a variety of coloured bricks. Additionally, there are some unassembled components in front of him. The pupils are sitting almost diagonally opposite each other, but spend most of their time looking at their construction.

Elena	just a moment there are two windows in there these this one dosen´t go out (4) it says invitation blah blah blah. blah blah oh yeah yes yes (2) here comes mine ( ) (3) like this (2) here´s another one ( ) (4) here´s the window (7) look Luca it looks like the Ukrainian colours	#00:01:04-0#
Luca	yes	#00:01:05-3#
Elena	look at that	#00:01:07-1#
Luca	yes that´s it	#00:01:10-4#

Figure 1 – #00:00:32-22#

Elena holds a Lego figure in her hand and lets it walk through her building by tapping it several times on the Lego plate. Subsequently, she removes a block of Lego bricks from the constructed house, shakes it back and forth and articulates that the bricks cannot be removed. Luca observes her construction for a moment and then directs his attention back to his tower. She takes one of the Lego bricks in front of her and holds it in front of the Lego figure's face. Subsequently, she places additional bricks on the exterior walls of her structure. She situates the brick, which she has designated as the invitation, on a table (comprising several Lego bricks constructed into a block) at the centre of her construction. Then she builds more bricks on the outer walls of her house. She takes a blue brick and places it on the yellow brick base. She reaches towards the box, then cancels the movement.

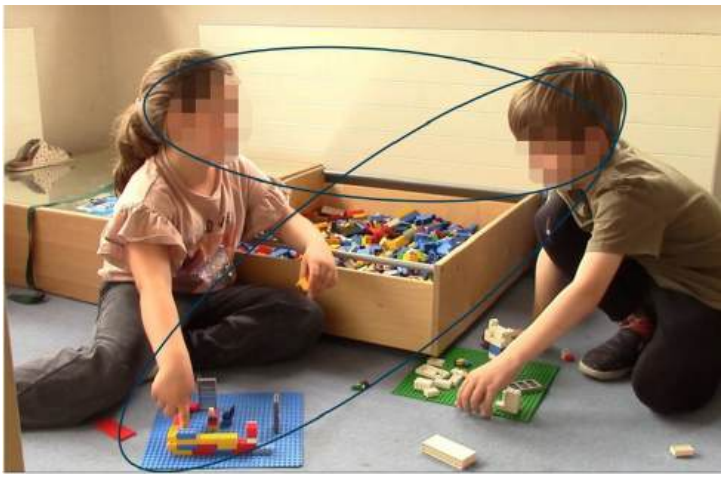

Figure 2 – #00:01:04-08#

She points to the stones that have just been added and addresses Luca, pointing out that the stones look like the Ukrainian flag. She then looks at Luca, who in turn observes the wall she has shown him and confirms her observation. Elena turns her house around so that the wall with the Ukrainian-coloured stones is directly in his line of vision and repeats that Luca should look. He replies and confirms that it is the Ukrainian flag.

Elena's play shows parts of a construction and role play that merge into one another and are reciprocal contexts for one another. She creates a material environment that she uses as a backdrop for her role play. An "as-if game" takes place in which she ascribes a meaning to Lego bricks and symbolises this. Elena's soliloquy shows an associative game in interaction with the objects. An everyday topic also becomes relevant in this role-play interaction - the practice of receiving and understanding the invitation. It can be seen that an everyday practice is transferred to the character and the reference to the lifeworld is made by playing with the material. The play and the material are the occasion for dealing with a lifeworld topic. In the further course, Elena uses her building as an occasion for a conversation on a current topic that has a strong media presence. Here, Elena is the person who sets the scene, opening up a reference to the lifeworld through a conversation about the material. Elena shows an orientation towards interactive play by linking her play with lifeworld references - playing already has a lifeworld realisation for her. Luca is constructing his building and shows brief moments of reference to Elena's play and her discovery, initially through glances, then through short answers.

The following situation then occurs:

Luca	mhm (3) building a tower all the time ( ) and it fall- breaks (1)	#00:01:24-7#
Elena	I don't know either	#00:01:27-1#
Luca	it falls over there all the time	#00:01:29-2#
Elena	what falls over all the time?	#00:01:31-8#
Luca	└the protect tower	#00:01:33-3#
Elena	ah	#00:01:33-6#
Luca	that is going to be a protection tower okay (8)	#00:01:38-5#

Figure 3 – #00:01:30-10#

Luca begins to rebuild his tower. To do this, he removes some bricks and puts them back in another place. Elena looks over at Luca's building as she asks, but then looks back at her building.

In Luca's building process, it becomes clear both verbally and non-verbally that he has difficulties putting the bricks together to form a tower. He verbalises this by describing the process as lengthy. This documents a sense of purpose in his building process. This also shows typical developmental characteristics of a construction game, such as striving for a specific goal. He shows a situational reaction to the current challenges of the construction process. His lifeworld references "tower" and "protective tower" are linked to the naming of the objects, i.e. they are part of his construction process. Unlike Elena, Luca's focus is on the activity of building, i.e. on the construction process as an independent and complete process. A different type of play is documented, to which they refer and to which they attribute different meanings. In the joint activity of building, the pupils show different or divergent orientations, in which the game largely takes place in parallel. In terms of lifeworld interaction, it becomes clear that the game and the material are used to enter into a thematic exchange with each other. In both cases, the building symbolises an object from the lifeworld and the lifeworld context is part of their play or is immanent to the game. Elena also uses the game and her material to address current topics and initiate a conversation.

4.2 Sequence 2: Joint Construction Process

The following sequence shows another play situation for the two children. They had to change rooms due to a break regulation and are sitting in a break room. They both start building new constructions. Elena builds another house and also a pool, while it is not clear what Luca is building. Later, they build the house that Elena started together. This situation shows a construction play, but in contrast to the previous one, on a shared object. There is an increased process of rapprochement, which now takes place in both a structural and a lifeworld form. I have described the following scene as a "joint construction process" and should be used as a comparison to the construction process of two buildings.

Elena	a sto::ne is missing here	#00:32:49-0#
Luca	like this	#00:32:49-5#
Elena	no no no not here, hold on a minute (5) he:::re (4) and now (6) we have to (7) and another very small block °has to go in there° (.) shit (.) I will find one quickly, ok?	#00:33:23-1#
Luca	you don't have to anymore, already build	#00:33:27-6#
Elena	here I already ha-, oh well @ (.) @ (7) that looks really co::::ol, or Luca?	#00:33:40-4#
Luca	°yes° (.) if it collapses, I have build something else here	#00:33:45-6#
Elena	yes that is good (7) but it still has to go all the way up here (.) all the way to the top	#00:33:58-8#
Luca	I know something	#00:34:00-0#

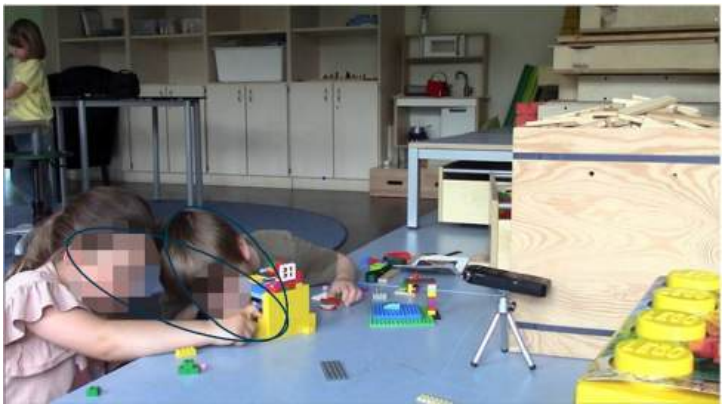

Figure 4 – #00:33:53-03#

Both are sitting with their upper bodies bent over the building, fixing stones to the house. The children are rebuilding the previously collapsed house and adding stones at the building. Elena gives instructions that stones are missing in a certain place, while Luca attaches the missing stones to the building. Elena removes the upper part of the house and gives it to Luca, while she adds more stones to the exposed base. Elena realises that one more stone is missing and gets up and goes to the box with the Lego bricks and rummages through it. Luca interrupts her search and Elena sits back down.

This sequence shows that the children take on different roles in the construction process, such as "holding" the building or "searching" for a stone. In the context of meta-communications, instructions and verbalisations of action steps can be seen, which can be understood as an approach to a joint construction process. The forms of building and problem-solving here take the form of a division of labour. This shows that Elena is also the initiating person here, who structures and instructs the building process - i.e. assigns roles, but also acts as an opinion seeker and reassurer, e.g. by asking whether she should look for the stone. There is also an acknowledgement of Luca's work on the building project. Luca's announcement that he has already built and thus found a solution to the problem shows that Luca frames himself as the construction manager because he has "already built". Luca also demonstrates his expertise in building through his foresighted behaviour (if this collapses, I've built something else here) and knowledge (he knows that it

still has to be built to the top). The two students building show a common point of view and focus on the construction project. The rapid action through the house in danger of collapse leads to hectic and actionistic, situational behaviour. The approach process is shown here via the building and not via real-life interaction.

The following interaction continues to take place in the joint construction process.

Elena	be::cause whenever I sleep in my room, I always play in secret.	#00:36:45-2#
Luca	how secretly? so what do you play?	#00:36:48-3#
Elena	└so that mum and dad do not notice	#00:36:51-2#
Luca	they what, how do you play?	#00:36:54-4#
Elena	└well it is like this, I pretend to be asleep	#00:36:57-3#
Luca	okay	#00:36:58-5#
Elena	then I get up (.) and then I just play	#00:37:06-5#
Luca	with this, with your toys?	#00:37:09-4#
Elena	yes	#00:37:10-7#
Luca	mmm	#00:37:10-8#
Elena	do you do that to::o?	#00:38:13-8#
Luca	nope I just go to bed and get up again, (usually inside)	#00:37:19-3#
Elena	└do you even have a bunk bed?	#00:37:20-1#
Luca	no, but I have a normal bed.	#00:37:22-9#

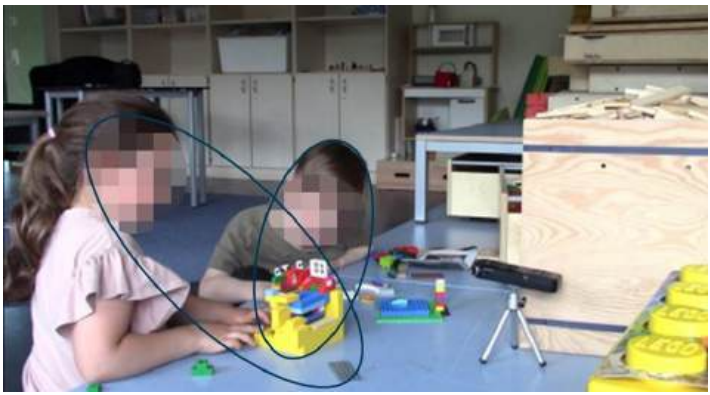

Figure 5 – #00:36:46-12#

The children both look at the building and add bricks. Elena's posture is slightly open towards Luca. Luca looks at his building during the conversation.

Figure 6 – #00:36:57-05#

Elena pushes herself up on the gallery with her hands so that she is squatting on her lower legs, looks at Luca and begins to report. Luca continues to look at the building. Elena sits back down on her lower legs and looks at the building again.

Elena initiates a conversation about her secret playing at night. While Elena creates moments of rapprochement by talking about situations and later asking questions, Luca creates moments of rapprochement by asking questions. It becomes clear that Elena's stories represent something new and different for him. While what Elena plays at night and whether she does this with toys is central for Luca, it is relevant for Elena that she does it secretly without her parents noticing. Elena also documents the importance non-verbally by pushing herself up, making herself taller and looking at Luca. Luca's "okay" or "mhm" frames the topic as finished. Elena continues to initiate the conversation. While Elena's question "Do you do that too?" initiates a community-building moment, Luca's denial reveals a divergence. With regard to the lifeworld interaction, it can be seen that the circle of topics is changing; the topic is no longer an immananet part of the concrete building process or the material used. Communicated experiences move away from the building process. In the joint construction process, separate lifeworld experiences become apparent beyond the construction process. Here too, the divergent experiential spaces of the players in relation to the lifeworld interaction become visible. Elena shows a conversational orientation, while Luca frames the conversation as secondary. Nevertheless, it can also be shown that in the performative practice, the players have a shared orientation framework, which is demonstrated by the harmonious play, in the unity of the social roles.

5. Conclusion

In the play situations, different developmental psychological processes, such as an as-if game, the role-playing and construction game (or a mixture) and the parallel game, became visible. There was also a shift to the meta-level of play. Moments of rapprochement were documented by assigning roles and verbalising actions. Spontaneous and actionistic behaviour (especially in relation to the construction process) was also demonstrated. Nentwig-Gesemann (2010) was able to demonstrate spontaneous and actionist behaviour as the creation or re-establishment of a shared practice in a conjunctive, habitualised game. At the level of performative play practice, an orientation framework is also shared here, which is shown by actionistic but joint play. How-

ever, this does not manifest itself at the level of lifeworld references, which show divergent spaces of experience for the players. Returning to the question of how lifeworld interactions manifest themselves in play situations, different aspects can be reconstructed. The first situation shows that the play and the material give rise to lifeworld interactions that are part of the play or immanent to the play. While in shared play, lifeworld references emerge beyond the play and other experiences are communicated. Self-initiated play can be described here as a lifeworld practice in the context of school and is not just an opportunity for exchange. The realisation of lifeworld practice plays a central role both in the construction process and in the interaction. It can be seen that an orientation framework is shared at the level of performative practice, which can be seen in the harmonious coexistence and interaction as well as in the unity of social roles. At the level of lifeworld references, however, there are divergent spaces of experience. Playing enables socialisation despite divergent lifeworld orientations. The fact that play situations can emphasise lifeworld experiences differently and more freely (Flitner, 2009) can be shown in the two play situations, but can also be enhanced by the fact that play situations themselves are also lifeworld references in the school context. They show themselves through communication and performance as two levels of social events. It is characteristic of a didactic lifeworld reference in the classroom that it tends to be at the propositional level, i.e. thematic. This can be seen, for example, in morning circles in the sequence of everyday life experiences in which the lifeworld references are adapted to the lesson structure and show a strong rhythmisation. There are also repeated ambivalences in various teaching settings between lifeworld references and the didactic course and objectives of the lessons. While references to the real world are also evident in the performance when playing, they often remain at the thematic level in classroom settings. It is often the case that pupils only pick up on selected moments from their lifeworld and adapt them to classroom expectations (Brenner & Martens, 2025). A free exchange of life-world experiences is rarely found in lessons and is often labelled by the teacher as a disruption to the lesson (Brenner & Martens, 2025).

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PALS – Play and Life Skills
Play as an Opportunity for Developing Life Skills

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Abstract

In free play settings, children from four to eight years of age acquire, in addition to concrete situational play competencies, a series of generic skills that can be summarized under the keyword of *life skills*. Three concepts are central to the theoretical framing of the concept of these life skills: the OECD Learning Framework 2030 (2018), the United Nations' perspective (2006), and the World Health Organization's understanding of life skills (1999). The skills as described by UNICEF, UNESCO and the WHO can be further broken down into concrete skills: problem solving, critical thinking, effective communication, decision making, creative thinking, interpersonal relationships, building self-awareness, empathy and coping with stress and emotions (United Nations, 2006, p. 1). The PALS project explores the life skills that children acquire in different play settings on various levels. Free play is understood as an act of intrinsic motivation of a voluntary nature with the actual play process itself and the positive emotions that are connected. The project incorporated the development of various elements for teacher training in co-creation with universities in Serbia, the Republic of North Macedonia, and Switzerland, producing manuals for students, lecturers and teachers, and creating a series of teaching videos and training modules for the University. An accompanying study investigated the underlying attitudes and learning processes at the level of participating students, lecturers and teachers (and, to a certain extent, pupils and parents) both quantitatively and qualitatively.

This article will provide an insight into this international collaborative project and its various constituent elements. Significant issues regarding the different understandings of play and its practice will be highlighted and discussed.

1. The Connection Between Play and Life Skills

> The child is free to determine his own actions according to the laws and demands of the play he is involved in. Through and in his play, he is able to feel himself to be independent and autonomous. (Friedrich Froebel, 1782–1852, pioneering educator, who recognised the importance of play when he opened the first kindergarten for children under the age of 7 in 1836).

Childhood and play have changed over the past few decades as the result of various social phenomena. Changing family forms, digitalisation, changing play spaces, an increasing fear resulting from regional conflicts or climate change, and a different view of how children should grow up influence the play competencies of children (Damovska et al., 2023, p. 85; Grieper, 2012; Zimmer, 2014). Bearing in mind that play is the central mode of learning for young children, schooling and education must deal with the described phenomena and need to adapt to these challenges. Children in kindergarten and lower primary school settings learn through many different situations. The younger the children are, the more implicitly learning takes place, and the more unconsciously learning processes happen. Children constantly learn, no matter where they are – in family life when playing with other children, at school, and in childcare structures. Both family and school represent living and learning spaces for the child.

1.1 Play as the Central Mode of Learning for Children

Everyday situations and opportunities that are closely oriented to needs and interests provide a scenario to experience, discover, play and learn (Lieger, 2020). Play and the associated experience-oriented play projects with a strong participatory character prove to be age-appropriate and meaningful at the elementary level (Lieger, 2014). Play is the "profession" of every child (Krenz,

2004). The central mode of learning for children in the elementary sector is therefore incidental learning – children at this age experience play and learning as one. Especially in free play, which can be seen as an act of intrinsic motivation and voluntariness, as well as the play process and the positive emotions therein (Einsiedler, 1999), children are actively engaged and motivated to test and expand their abilities. In doing so, they learn through feeling and experiencing with all their senses. Play as a form of learning runs parallel to a child's development in this elementary school age group and is associated with positive emotions. With increasing age, incidental learning gradually progresses into conscious learning (Lieger, 2014).

In play situations, children do not just learn subject-specific content or acquire competencies related to particular processes: they need to solve maths problems, formulate sentences and gather knowledge about grammar or words or special concepts about nature and society. They also learn how to interact with others, solve problems alone or in a group, analyse situations critically, deal with their emotions and use their creativity in different situations. In short, they acquire the necessary skills that will serve as a foundation not only for subject-related questions, but also for various life situations in kindergarten and school as well as in their future careers: it is in play situations, therefore, that children acquire future life skills. The period in which children not only master most of their skills (movement activities, motor skills, creative thinking, social skills, emotions and how to express/master them, etc.), but also acquire basic knowledge, is the time up to the age of twelve. The easiest way to achieve these skills is for children to learn through play, because play is the most natural way of learning for them. It is also necessary to adapt the educational and teaching process to a child's development and to base it on experiential learning, i.e. to connect play and learning in a meaningful way.

1.2 Life Skills and Their Importance for Future Learning

In addition to subject-specific experiences (language, science, etc.), children acquire many generic competencies – life skills – during play. Discussions on these necessary generic competencies is currently being conducted not only in educational policy discourses in individual countries, but also at an international level. Against the backdrop of rapidly changing societies in ecolog-

ical, economic and social terms, the *OECD Learning Framework 2030* supports the need for broader educational goals (OECD, 2018). Both individual and collective well-being is the focus of this vision of the future, which assigns a critical role to education in moving toward these goals: education plays a crucial role in developing the knowledge, skills, attitudes and values that enable people to contribute to, and benefit from, an inclusive and sustainable future. Learning to set clear and purposeful goals, collaborate with others with different perspectives, find untapped opportunities and diverse solutions to more major problems will be essential in the years ahead. Education must aim to do more than just prepare young people for a future in the workforce; it must also equip students with the skills they need to become active, responsible and engaged citizens (OECD, 2018).

It is thus the demand for an inclusive education that places children at the centre of their learning, a personalised environment that supports and motivates each learner, makes connections between different learning experiences and allows children to shape their learning processes in collaboration with others. The competencies and skills that students should acquire for the development of their personality are transversal skills or life skills that become necessary in different disciplinary and non-disciplinary learning situations. In 1998, the World Health Organization (WHO) defined life skills as the adaptive and positive behaviour skills that enable individuals to cope effectively with the demands and challenges of daily life (WHO, 1999). These WHO life skills are therefore found in the areas of decision-making, problem-solving, creative and critical thinking, communication and interpersonal skills, self-awareness, empathy, managing emotions, and coping with stress (p. 1).

The United Nations agency UNICEF places children in the focus of their activities and defines life skills similarly, placing them in an A-S-K (attitudes, skills and knowledge) model of competencies: "an approach to behaviour change or behaviour development that aims to balance the three domains of knowledge, attitude and skills" (United Nations, 2006). Broken down specifically, the skills described by UNICEF and WHO are listed as the following ten core life skills strategies and techniques: problem solving, critical thinking, effective communication skills, decision making, creative thinking, in-

terpersonal relationship skills, self-esteem-building skills, empathy and coping with stress and emotions (United Nations, 2006).
The materials for teachers and students developed as part of the "PALS" project addresses these findings and are aimed at the future key players in children's educational biographies who can make a significant contribution to this: prospective teachers of 4–8-year-old children and the current teachers of these students (Kuhn & Weidinger, 2021). The PALS project uses the described ten life skills in their respective domains as a competence-oriented framework for development and research.

Table 1 – Life Skills and their domains in PALS, adapted from WHO (1999)

Cognitive competencies	Social competencies	Emotional competencies
Problem solving	Effective communication	Self-awareness
Creative thinking	Interpersonal	Coping with emotions
Critical thinking	relationship skills	Coping with stress
Decision making	Empathy	

It becomes evident that all life skills overlap and can best be supported using a holistic approach (Weidinger 2023, p. 16). Life skills education can already start the moment a child enters the school system at kindergarten level and should ideally last for that child's entire lifetime. Due to curricular subject-specific regulations and general overload, life skills are taught in a cross-curricular way through a spiral curriculum in most school systems, introducing key concepts at an early stage and repeating them with greater levels of complexity gradually each school year (Weidinger 2023, p. 16). Unlike specific subjects, play settings in kindergarten and school have a much higher degree of freedom and autonomy to be used by kindergarten or schoolteachers for deliberately integrating and training life skills. In PALS, various possibilities and play-oriented teaching and learning sequences are developed and implemented following the most prevalent aim of shifting the attitudes of teachers towards an openness for innovative and playful teaching and learning without losing focus.

1.3 Life Skills Development in the Continuum of Play

As widely known from developmental psychology, children display different types of play during their development, and understanding the various phases where new types of play occur is crucial for kindergarten and schoolteachers. Heimlich (2015, p. 34) defines the different types of play as follows:

- functional play/exploration play (first type of play, age 0/1 and onwards);
- symbolic/imaginative play (ages 2 and onwards);
- role play/social play/sociodramatic play (ages 4 and onwards);
- constructive play (ages 4 ½ and onwards) and
- games with rules (ages 5 and onwards).

All types of play are important for individual development between the ages 4 and 8. Considering the high heterogeneity in child development within a classroom, the learning environment must provide a good balance of different types and forms of play (Geiger et al., 2023, p. 135).

One way of supporting children within their play and planning play sequences in class is to work with the continuum of play-based learning (Geiger et al., 2023; Pyle & Danniels, 2016; UNICEF, 2023), which differentiates forms of play according to the levels of steering and control in them:

- child-directed forms of play: open play, free play, or inquiry play;
- collaborative forms of play: collaboratively designed play or guided play and
- teacher-directed forms of play: instructional play, extended play and learning through games.

The PALS project aims to support child-directed, as well as collaborative, forms of play. The authors of the PALS teaching and learning materials offer a more detailed description of these forms (Geiger et al., 2023, p. 139).

> In free play, children have the freedom to decide what they play, with whom they want to play and where they play (UNICEF, 2023), whereas in open play the environment is prepared through the teacher which can be helpful to give structure and inspiration through room design and material or specified play areas. A combination of free and open play can be reached if children

> are given the chance to create and design new ideas as a complement to the prepared learning environment set by the teacher. […] Guided play combines the benefits of self-directed play with the positive effects of restrained but purposeful instruction to promote cognitive, academic, and socio-emotional skills through play. Adults can support children by providing a "scaffold", but still letting the children implement their own ideas (Toub, Rajan, Golinkoff & Hirsh-Pasek, 2016)

Playful learning, as emphasized by Kathy Hirsh-Pasek and her colleagues, is a vital educational approach that integrates the joy of play with intentional learning objectives, fostering holistic development in children (Toub et al., 2016; Hirsh-Pasek & Hadani, 2020). The authors advocate for guided play—a method where educators subtly steer children's play towards specific learning goals without diminishing the child's sense of agency. This approach has been shown to enhance vocabulary acquisition and spatial reasoning more effectively than either free play or direct instruction alone. By engaging children in active, meaningful, and socially interactive experiences, playful learning cultivates essential 21st-century skills such as collaboration, communication, and critical thinking (Hirsh-Pasek & Hadani, 2020). Developing life skills can take place in all forms along the continuum of play. However, the PALS project tries to shift the attitudes of teachers and educators towards consciously integrating more child-directed and collaborative forms of play into their daily teaching. The following section provides a more detailed insight into the PALS project.

2. The PALS Project in Detail

The PALS – Play and Life Skills – project was co-organised by three institutions and ran from 2022 until 2025 with the financial support of the Community Fund of the Canton of Zurich. PALS was initiated by the Zurich University of Teacher Education and its Centre of Teaching and Transcultural Learning of the Department International Projects in Education following the demands of two other institutions, the Serbian Pre-school Teacher Training College in Novi Sad and the North-Macedonian Institute of Pedagogy of the

Faculty of Philosophy in Skopje. In short, PALS combines the two domains of play and life skills with the aim of developing competencies in both areas on different levels for different target groups. The most significant goals of PALS are threefold (Kuhn & Weidinger, 2023):

- to increase the awareness of the importance of free play for acquiring life skills among lecturers, students and teachers;
- to enhance the competencies of university faculties through the joint development of materials and training on play and learning and
- to strengthen the link between teacher training and school practice in play and learning for 4- to 8-year-old children.

The alignment of these goals stems from the demands formulated by all project partners in the light of the changed competencies of children entering kindergarten and primary school. Not only social changes in families, but also changes in children's play spaces, increasing fear in society in general, the influence of digital tools and a change in the perceived importance of play from caregivers lead to tensions and often also perceived deficits in the competencies of children when they enter the school system (Damovska, et al., 2023). All partners also pointed out that awareness-raising of the importance of play not only concerns parents, but must also be increased among teachers, student teachers and lecturers at pre- and in-service teacher training universities.

PALS works with an impact chain that focuses on the following target groups: lecturers, student teachers, kindergarten and schoolteachers and students (children), and foresees changes in competencies and attitudes in each target group:

1. Lecturers: joint development and implementation of manuals, videos, modules, train-the-trainer and research study–commitment, change of attitudes, capacity-building of young researchers.
2. Kindergarten and schoolteachers: trying out new approaches, taking part in training – change of attitudes, acquisition of competencies and commitment to innovative concepts.
3. Student teachers: experiencing innovative forms of teaching and learning methods, trying out development-oriented play situations and using new

materials – the acquisition of competencies, change of attitudes, courage and belief in own competencies and professional identity.

4. Students – children: experiencing play and learning opportunities in kindergarten/school and daycare (if integrated into school) – acquisition of competencies.

2.1 The Elements of PALS

The target groups within the impact chain of PALS are addressed with different elements within the project. PALS consists of:

- teaching materials for Higher Education (to be used by lecturers, kindergarten and schoolteachers, and student teachers);
- a series of videos of classroom situations (to be used in pre- and in-service training situations or for illustrative purposes at events for parents);
- training modules for Higher Education (to be used for pre-service training) and
- training sessions for in-service training for kindergarten and schoolteachers.

All materials have been jointly developed by the three participating institutions and their specialists with different areas of expertise (education, teaching and learning, developmental psychology, play, life skills, and inclusion). In a co-creative process, teams from the three institutions used an iterative process of observing, gathering information, building hypotheses, planning, deciding, intervening, adapting and continuously switching between reflection and action throughout the entire development and implementation period of PALS. Both the materials and the training elements were piloted in Skopje and Novi Sad. Teaching materials and the series of videos are available for free download from ipe-textbooks.phzh.ch and Filme für Eltern (spielen-plus.ch).

2.2 Research Study

The main concerns of the PALS project lie in the importance of free play in contrast to widespread educational games (which exclusively concentrate on the cognitive areas of thought-addressing activities), and which should lead

to a change in certain skills and abilities for learning. Free play as an expression of a child's desire to discover and explore the world is at the centre of these considerations.

The outcome study accompanying the PALS project fulfils two functions: on the one hand, it aims to gain insights into the attitudes of student teachers and teachers regarding the importance of opportunities for learning through play. On the other hand, the cross-country comparison not only delivers interesting results for enhancing the project's activities and future implementation, but also aims to help researchers contribute to capacity-building through this international exchange.

In the field of action research, the accompanying PALS study follows the paradigm of participatory action research (SAS 2 Dialogue, 2021). In the context of international educational collaborations, participatory action research provides a way to engage the various stakeholders together in the process of collaboration and reflection toward a desired change (Reason & Bradbury, 2008). In the study laid out by PALS, the participatory action research approach involves "communities of inquiry and action" that collectively gather and experiment with data and information and mirror their findings to their own experience. In doing this, the PALS companion study draws on the three aspects of the participants' own work: participation (living in society and democracy), action (involvement with experience and their own histories) and research (thoughtful grounding and knowledge building) (Chevalier & Buckles, 2013). In this interpretation of participatory action research, action combines the two fields of research as well as the collective processes of "self-exploration" (Rahman, 2008). In terms of the PALS project's concerns, this methodological approach also represents a pluralistic orientation to knowledge creation and social change (Chambers, 2008).

The study is supervised locally by a subject-matter expert from each of the partner organisations. It focuses on the following questions:

- How do teachers and teacher students estimate their competencies, knowledge and attitudes in connecting play with the development of life skills?
- Does the compiled PALS material and programme lead to a change in competencies, attitudes and knowledge?

It will be investigated if the project contributes to exploiting free play for the development of children's transversal competencies and provides evidence for integrating play into a component of elementary education in the future. The aim is to prove that age-appropriate pedagogy and didactics can not only promote knowledge and competence but also have an impact on attitudes towards play in the educational levels of kindergarten and primary school. The design followed a mixed-method approach, combining quantitative and qualitative elements, which aims to gain insights into the attitudinal and behavioural changes among lecturers and students participating in the PALS project using an action research approach (with phenomenological elements). The quantitative results were gained through questionnaires based on different dimensions of life skills and play development and completed by lecturers (who also act as multipliers), student teachers and teachers participating in the project training and who were part of the expert groups in a pre- and post-test design.

The qualitative elements of the design followed the ethnographic method of observation of training sessions, enriching these with focus group discussions with student teachers through semi-structured interview guidelines.

2.3 Results and Discussion

The results from the research study presented in this article consist of the pre- and post-test results from the pilot group student teachers (North Macedonia and Serbia) and preschool teachers (Serbia). The pre-test (T1) for student teachers in Serbia and North-Macedonia took place in November 2023, the post-test (T2) in June 2024. Pre- and post-tests for Serbian pre-school teachers took place in February 2024 and April 2025. Testing points were aligned shortly before the start of the training and after one year of training and implementation.

Pre-school teachers (n = 30)

The PALS survey was conducted among preschool teachers in Serbia at two time points, T1 and T2. In the initial phase, thirty participants were included, and the sample size expanded by 13% in T2, reaching a total of 34 respondents. The age distribution shifted slightly, with the younger cohort (21-

30 years) increasing from one-tenth to nearly one-fifth of the sample. Meanwhile, the proportion of male participants almost doubled, moving from just over 3% to almost 6%.

Between T1 and T2, the implementation of various play types increased. Open play was reported by over nine in ten teachers, up from nearly 87% in T1, reflecting a modest rise. Extended play saw a more noticeable increase, from 90% to 97%, while guided play rose from 70% to 79%. These trends indicate a broader adoption of structured play activities among teachers in T2.

The most practiced forms of play remained symbolic and constructive play at both points in time. Symbolic play decreased slightly, falling from 76% to 71%, while constructive play saw a similar decline of just over 6%. Conversely, didactic play experienced a small increase, moving from just over 53% to 56%. The use of digital games also rose slightly, from 13% to nearly 18%.

The preference for symbolic play remained steady, increasing slightly to just under 18% in T2. Role play also rose modestly from 27% to 29%, while didactic play remained largely unchanged. However, the preference for digital games declined from 60% to 50%, suggesting a shift back to more traditional forms of play.

Time dedicated to play activities increased significantly in T2, with over 44% of respondents allocating more than three hours daily, compared to one-third in T1. Meanwhile, the proportion of teachers allocating less than 30 minutes to play dropped to 0, indicating a growing recognition of the importance of extended play in early childhood education.

In T2, there was greater emphasis on critical thinking, interpersonal relationships, and self-awareness. The focus on critical thinking rose from 50% to 59%, while interpersonal skills saw a significant rise from just over 52% to 77% percent. However, the emphasis on empathy decreased slightly, from nearly 97% to 85%. Coping with emotions also saw a decline from 83% to 77%.

Teachers identified several challenges in implementing play activities. The proportion of those citing insufficient materials decreased from almost 47% to 35%. Conflicts among children also dropped, moving from 20% to just under 12%. However, challenges related to diverse family backgrounds remained consistent at approximately 47% in both phases.

Respondents expressed a need for more training in specific areas. Play

projects emerged as a key area of interest, increasing slightly, while the focus on digital competences decreased significantly, from nearly 37% to just over 20%. This shift suggests a reduced emphasis on digital tools in favor of more traditional play methods.

Active participation in play remained relatively stable in T2, with just over 73% of teachers actively engaging in play activities. Observing play decreased slightly, moving from 73% to 68%, while enriching play with materials also dropped slightly, from 93% to 91%.

Problem-solving continued to be the most effectively supported life skill through play, though it decreased slightly from 83% to 79%. Coping with stress, however, saw a more pronounced decline, falling from 43% to 32% percent. Empathy also decreased, moving from almost 97% percent in T1 to 85% in T2.

In conclusion, the findings suggest a positive shift toward more structured and varied play activities, with increased emphasis on critical thinking and interpersonal skills. However, the decrease in focus on emotional regulation and coping with stress indicates areas for further training and support, particularly in fostering emotional competence through play.

Student teachers (NMK: n=104, SRB: n= 27)

At T1, most second-year students in Serbia (86%) and North Macedonia (78%) had not received play-based life skills training at university, though many engaged in play activities during their practica. In T2, open play increased from 56% to 61% in Serbia and from 34% to 45% in North Macedonia. Extended play rose significantly in Serbia (40.7% to 73.1%), while guided play increased from 4% to 46%. In North Macedonia, extended play remained stable (60% to 58%), and guided play rose from 41% to 52%. Constructive play was practiced by 81% (SRB) and 53% (NMK), symbolic play by 77% (SRB) and 55% (NMK), and role play by 69% (SRB) and 54% (NMK). Interest in didactic play increased significantly, from 4% to 61% in Serbia and from 49% to 59% in North Macedonia.

By T2, 81% (SRB) and 57% (NMK) of students enriched play by providing materials, up from 35% (SRB) and 48% (NMK) in T1. Observing children's play rose from 8% to 27% in Serbia but decreased in North Macedonia from 48% to 43%. Participation in play increased in Serbia (46% to 73%) but re-

mained stable in North Macedonia. Serbian students increasingly focused on children's relationships during play (61% to 96%) and cooperation skills (23% to 69%).

Critical thinking was the least experienced life skill for Serbian teacher students in their training at T1, but 42% engaged in it by T2. Empathy and decision-making also saw significant increases in Serbia. In North Macedonia, problem-solving and coping with stress remained key skills but showed little change. Daily time allocation for life skills was minimal in both countries, with most students dedicating one to two hours per day.

Key challenges identified in T2 included being the only teacher (65%) and diverse family backgrounds (54%) in Serbia, and lack of classroom space (52%) and time (46%) in North Macedonia. Interest in training for play and inclusive education increased, especially in Serbia, where digital competence also saw a rise (8% to 35%).

Despite some progress, significant needs remain for training in coping with stress, coping with emotions, and decision-making, especially in North Macedonia, where 72% expressed a need for stress management training. The T2 findings suggest a growing focus on structured play and life skills, but targeted training is still necessary to address persistent challenges. From the researchers' point of view special attention should be given to the needs addressed concerning aspects of play-based learning such as developing innovative spaces, spending time outside, focusing on heterogenous groups of children and inclusive education. Concerning curricula at teacher training institutions, study programmes should incorporate the teacher students' needs for focusing on how to deal with stress and continue working on critical thinking skills. Strengthening the process of combining play and life skills in pre- and in-service teacher training should remain a central aim in the future.

2.4 Next Steps

After a series of training sessions and time for implementation, trialing and the post-test, schoolteachers in both countries will be invited to next phase. In both institutions, student teachers received information and training for play and life skills development with PALS materials. The results of both quanti-

tative and qualitative research activities will lead to a better understanding of the impact of the PALS materials and training elements. After this first round of trials and implementation, the PALS modules will be adapted and accompanied by recommendations and feedback from the lecturers solidly anchored in both pre- and in-service training programmes at both universities. Additionally, both institutions will disseminate the results and the adapted programme with other educational institutions, experts and teachers in the schools. Insights into how and what forms of play activities contribute most to not only the children's competencies but also to the change of skills and competencies of schoolteachers, future schoolteachers and lecturers, will be shared during the final year of the PALS project and in a final conference in September 2025.

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“I Trust You”. Fostering Social-Emotional Skills of Pre-Service Teachers Through Cooperative Games

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Abstract

Transformative education requires the participation of teachers with social-emotional skills. Examining the central role of Social Emotional Learning (SEL) and the educational value of cooperative games (following the holistic approach of the Findhorn Foundation), the present contribution explores the emotions experienced and described by 157 second-year students from the Primary Education Master’s programme at the Free University of Bozen (Italy). The students engaged in one or more sessions of cooperative games, involving body and non-verbal communication. The main categories relating to SEL which emerged from the Grounded Theory (GT) data analysis will be presented, namely: “experiencing relational well-being”, “discovering self-other”, “opening up to diversity”, and “growing professionally”. Finally, the educational relevance of cooperative games within a holistic approach to promoting social-emotional skills in initial teacher training will be discussed.

1. Introduction

The Italian education system is today being pulled − hard − in opposite directions. On the one hand, it is in the ever-tightening grip of *learnification*, a culture of performativity and a false sense of meritocracy (Tarozzi, 2023). On the other, it is more and more frequently called upon to see difference as offering all concerned opportunities for growth (Delors, 1996) and a way to confront a climate of increasing prejudice, hatred and aggression (Santerini, 2021, Malusà, 2020a).

Looking abroad, it is evident that serious attempts are being made to promote the values of peace and solidarity in education systems globally.

Almost ten years ago, the Organisation for Economic Co-operation and Development [OECD] revised its previous tripartite attitudes-skills-knowledge model, DeSeCo (2005). The new conceptual frame, *Learning Compass 2030* (OECD, 2015), includes a fourth area, values. This document contains indispensable insights into dealing with current changes, creating environments that foster wellbeing and, crucially, actively shape the future. It makes social-emotional skills a priority. These skills are considered vital if someone is to be open to new experiences in an aware way, concerned about others, able to collaborate, develop a good level of self-sufficiency, manage their emotional states in challenging circumstances and know how to cope in situations of vulnerability (Kankaraš & Suarez-Alvarez, 2019).

The butterfly model of *Competences for Democratic Culture* (Council of Europe, 2016) lists the values, attitudes, skills, knowledge and critical understanding needed to educate students to become citizens of a democracy. The aim is to foster competences for democratic culture and to educate people to live peacefully in diverse societies, through the interweaving of intercultural dialogue and a *culture of democracy*.

Moreover, the recent report of United Nations Educational, Scientific and Cultural Organization [UNESCO] (2021) *Reimagining our futures together: a new social contract for education* proposes a transformative (non-neutral) education, future-oriented towards an ethics of the possible − already defined by others as the pedagogy of hope (Freire, 2002) − grounded in the principles of cooperation, collaboration, and solidarity.

The domains of learning of this *transformative education* (UNESCO, 2019) include three dimensions: cognitive, socio-emotional and behavioural. Inspired by Korthagen (2004) and his model of concentric circles, the socio-emotional dimension, understood as

> the ability to act effectively and responsibly at local, national and global levels for a more peaceful and sustainable world (UNESCO, 2024, p. 6)

is not only the *trait-d'union* between the cognitive and behavioural dimensions, but pervades them (Tarozzi, 2024) and constitutes their very essence.

In other words, to promote *transformative education* – or rather, *global education* – would enable people

> to open their eyes, hearts and minds … to bring about a world of social and climate justice, peace, solidarity, equity and equality, planetary sustainability, and international understanding. (Global Education Network Europe, 2022, p. 3)

But what instruments can teachers use to urgently promote SEL, which is emancipatory and open to the future (Biesta, 2022)? And what professional skills do they need to do so?

In the first part of this paper, we focus on the central role of SEL and the pedagogical value of play, in particular cooperative play grounded in a holistic vision. The second part presents a case study from the Free University of Bozen-Bolzano, to share the students'(future kindergarten and primary teachers) accounts of the emotions that they experienced during one or more sessions of cooperative games and the possible effects of these sessions at the personal and professional level. Lastly, we demonstrate how necessary teacher training in social-emotional skills is to promote truly transformative education.

2. Cooperative Games as a Tool for Socio-Emotional Growth

2.1 Shall We Start With a Game?

> Ready, steady, go!

Play is one of the fundamental fields of experience in education (Bertolini, 1982). For some time, psycho-pedagogical research has been providing ample evidence of the efficacy of play from a didactic perspective and regarding learning processes. Play develops emotional intelligence and self-esteem, encourages cooperation and problem solving, fosters creativity and cognitive development. In particular, it offers experience beyond conformism, allowing children (and adults) to experiment with risk, error, and adventure

(Farné, 2016). Through these, play allows us to know ourselves and others better in an atmosphere of joyful discovery, often missing in an educational system which has involved a predominantly transmissive approach since the 17th century. To create inclusive learning spaces where children can "take a risk" and experience error as being something helpful is essential if we are to build schools which educate children to be independent and therefore free (Montessori, 1909/2015). Indeed, through play we can − without preconceptions − gain awareness of self and others, opening ourselves to the possible (Bertolini, 2021).

When educators adopt this perspective of "pedagogical trust in the value of play" (Staccioli, 2012, p. 21), the school of play becomes not just a school where you play (Rovatti & Zoletto, 2005), but a stable learning environment − or, even better, a playful space (Berti, 2022) − that gives every child the opportunity for personal and social growth.

Through a variety of (cooperative) games it is possible to foster attitudes of solidarity, tolerance, openness, respect, collaboration and the welcoming of diversity in all its forms.

2.2 The Inclusive Values of Cooperative Play

Cooperative games have been played by different peoples for millennia. Rediscovered in 1960s California by alternative groups inspired by ideals of non-violence, they were then called "new games". These groups contemplated noncompetitive games as part of their quest for harmony, cooperation and community. They were conceived as a way to counteract the dangers inherent in competition, whether between individuals or peoples. The various collections of games that were then created in the 1970s consisted of progressive sequences: from introduction and getting to know one another games to those fostering trust, empathy, non-verbal communication, relaxation. There were games for (big or small) groups, suitable for big or small spaces.

Orlick (1979), one of the first people to research the subject, identified four key characteristics of the cooperative game: *cooperation*, *acceptance*, *participation*, and *creativity* with creativity as being necessary for inventing group strategies. A fifth characteristic, *slowness*, can be added to the list (Staccioli, 2009): to play cooperatively, participants have to be given enough time for listening and mediation; to apparently "waste time", without having to worry about "coming first".

Cooperative games are thus particularly suitable for encouraging the building of inclusive, empathetic and supportive class groups (Berti, 2022; Demo, 2016; Loos, 1989). As evidenced by Staccioli (2009), there is a subtle but fundamental difference between collaborative and cooperative games:

> in the first, one makes allies in order to defeat someone else; in the second alliances are to support each other… without the need to destroy an enemy. (p. 71)

In a cultural climate of increasing hatred and fear of the other, to educate for cooperation thus means to choose to challenge neoliberal and individualistic education models (Malusà, 2019), supporting participation, not exclusion; dialogue, not silence; freedom of speech, not hate speech; equity, not discrimination; empathy, not indifference; enjoyment for all, not victory just for the few.

The close link between cooperative games and SEL has been studied extensively (Cusmai & Cresci, 2021; Guarini et al., 2018; Malusà, 2020b; Sáez de Ocáriz Granja et al., 2018). This research evidences the efficacy of cooperative play as a tool for nurturing social-emotional skills as part of an experiential learning model (Kolb, 1984) which includes spaces for working through experiences, alone and with others. Allowing space for (cooperative) play, it is possible, at all ages, to nurture the emotional intelligence (Goleman, 1996) necessary for building inclusive relationships in a climate of freedom, mutual trust, and democratic participation.

2.3 The Need for Social-Emotional Learning

UNESCO defines Social Emotional Learning [SEL] as a

> process of acquiring the competencies to recognise and manage emotions, develop care and concern for others, establish positive relationships, make responsible decisions, and handle challenging situations effectively. (UNESCO-MGIEP, 2022, p. 10)

To be in the world with others (Iori, 2002, p. 14), rather than simply *being there for them*, refers to the corporeal dimension, too, of educational care, in a relation of reciprocal listening. But taking care refers not so much to the things that are done as to the way in which they are done (Manini, 2007, p. 19): to the "how" rather than the "what". This new focus calls for a body accustomed to

being present, trained through reflective practices that do not separate doing from thinking, feeling from acting (Zagatti, 2009, p. 54). Thus the metaphorical aspect of play is included, allowing us to construct an intersubjectivity of meaning (Dallari, 2018).

Since at least the early 2000s, in fact, educational research has been demonstrating the importance of promoting SEL, from kindergarden on (Denham & Burton, 2003).

This process, however, poses certain challenges, one of which is the need to ensure that teachers receive proper training. It is essential to recognize that any adult involved in fostering children's social-emotional skills must also possess strong social-emotional competencies themselves (Bombieri, 2021; Bruzzone, 2022; Denham et al., 2012).

In fact, the subjective aspect of SEL requires a rethinking of teacher training, which should also consist of work on awareness of self and of one's own emotional tools (Bombieri, 2021, p. 160). Without this aspect SEL programmes are often ineffective (Jennings & Greenberg, 2009) and teachers are unable to manage behavioural issues in classes labelled "difficult", resulting in burnout.

Taking care of oneself, developing empathy, allowing time to get to know oneself and others, are only some of the skills needed to form authentic relationships that transcend individual differences and possible failures of communication. But how is this done? Can these training courses effectively support greater emotional awareness and professional growth for (trainee and serving) teachers?

More than just the transmission of techniques and prepackaged content, previous studies (Malusà, 2020b, 2023; Cusmai & Cresci, 2021) have focused on the educational value of the cooperative games suggested in the Findhorn Foundation's "Experiential Learning Model" (Platts, 1996/2022). So, what is this all about?

2.4 "Playful Self-Discovery": An Experiential Holistic Vision

> What is the sound of one hand clapping?

For more than twenty years at Findhorn, the home of a holistic learning foundation in Scotland, it has been possible to experience models of experiential or – as is intended – *Transformative learning*. David Earl Platts (1996/2022) creat-

ed a kind of operating manual, "Playful self-discovery", a series of proposals to develop self-awareness and gradually build trust and collaboration within a group, so that every difference can become a resource for all. Chiming with the principles of psychosynthesis (Assagioli, 1988), his ideas include cooperative games (win-win or "without losers") that encourage joyful participation and respect for others; facilitate the gradual development of self-awareness, relationships, and the capacity to work in a team; and take each person into account holistically. The objective is to facilitate an *educational* – and *not therapeutic* – process which encompasses diverse dimensions: cognitive, emotional, mental and spiritual. For optimal balance, the suggested games are divided into three parts (Platts, 1996/2022, p. 32): presenting instructions for the game; playing the game, processing the game. And it is in this third phase that the originality of his experiential approach lies: through the (shared) recasting of bodily experience it is possible to help people to learn to understand their experiences, avoiding the need for excessive analysis or rationalizations. It is better to allow space for the deep sharing of one's own feelings to facilitate their internalization and possible access to interior/spiritual dimensions of one's own personal growth, as previous studies have highlighted (Cusmai & Cresci, 2021; Malusà, 2020b).

But how can all this be realized? Not just anyone can facilitate cooperative games. Platts (1996/2022) advises that group moderators should be given specific experiential training, when they have completed their theoretical studies. In fact, their role in the group should be to help to *facilitate* processes, and *not* to *manipulate* them, transcending dynamics of power and control. The facilitator needs to be empathetic, authentic, flexible and creative, indispensable qualities for the creation of genuinely inclusive training environments. They need to be in tune with the energy of the group and to focus on the latter's needs, knowing how to choose the most suitable games for each particular situation.

The suggested progressions are usually gradual. First come the getting to know you games, then active, creative play and only afterwards trust-building games, involving close physical contact and "attunement". The guidelines include careful planning of the proposed play sessions and of the setting, with materials and sometimes music to support the emotional experience, in a (protected) climate of mutual respect and non-judgement, with clear group agreements being made at the beginning of each session. And finally, for the

proactive planning of the learning experience, ideally facilitators will already have had direct experience of the activities that they are offering.
It thus becomes possible for each trainer to create new games, adapt them as needed, use age appropriate metaphors, imagine new variations, in the spirit of an *embodied education* which prioritizes modalities for supporting a "felt" body experience, or in other words, the "how" rather than the "what".

3. A Study on the Initial Training of Teachers

3.1 Research Questions

On the basis of the above assumptions, the present study sets out to answer the following research questions:

- What awareness and social-emotional skills do trainee teachers develop during one or more sessions of cooperative games?
- What effects are felt in relation to personal and professional development?

3.2 Context of the Study

This case study monitors a training module focused on cooperative games within the indirect internship component of the Primary Education Master's program. The indirect internship consisted of in person meetings at the university and periods of self-learning in which to analyse, reflect, discuss and document the experience implemented in the school.

The cooperative games module has been offered annually (from 2021 to 2023) in the Italian and Ladin section of the Free University of Bozen (Italy). It has, so far, involved a total of 157 second-year students (F=95%; median age=23.49; SD=4.47), divided into 8 workshops (min 13; max 28 participants).

3.3 Training Experience

The training was led by a facilitator accredited by the Foundation. The university tutors provided organisational support. An appropriated space was provided: a large classroom with a circle of chairs and a central space in which to play the games.

According to the guidelines of the Experiential Learning Model and the holistic vision of the Findhorn Foundation (Platts, 1996/2022), each of the 8 workshops (min 4; max 11 hours) included games designed to promote awareness, exploration, and trust (Figure 1).

Figure 1 – Mirroring. Playing during one of the workshops. Foto by G. Malusà.

An illustration of the progressive sequence of two of the play sessions that were offered follows (Ayalon, 2005; Loos, 1989; Platts, 1996/2022; Zagatti, 2021). Some of the games were created by the facilitator.

1. Example of a short play session (4 hours): welcome and overview; group agreement; awakening circle; energy shower; shoulder massage; freezing; icebreaker; people-to-people; elephants' scratch; debriefing; break; line-up; mirroring; the tired butterfly; final debriefing; questionnaire.

2. Example of a long play session (11 hours):
   2.1. First session: welcome and overview; group agreement; names games; all those who…; smile walking; awakening circle; energy shower; shoulder massage; debriefing; freezing; icebreaker; icebreaker (emotions); people-to-people; elephants' scratch; the longest game in the world; hug tag; debriefing.
   2.2 Second session: today's weather; line-up; mirroring (5 phases); debriefing; the tired butterfly; blind sculptor; debriefing; group knot; rain game; feather dance; final debriefing; questionnaire.

The debriefing sessions were conducted through Circle Time, pair/small group debates, and an individual final questionnaire, with 3 open questions on the participants' experiences:
- "What did I appreciate about the workshop?"
- "How did I feel during this experience?"
- "What have I learned about myself and others that I didn't know before?"

Each module was documented with photos and videos, an opportunity for metacognitive reflection with the students.

3.4 Data Collection and Analysis

This qualitative case study draws on empirical data collected during the training experience:
a. the photographic materials were transcribed into text form;
b. the replies to the final questionnaire were collected using Google-Forms; consent was asked for their use in education research.

Subsequently, all of the data collected were systematically coded in accordance with Grounded Theory procedures (Charmaz, 2014). These involve an initial *open coding* phase (which entails defining preliminary descriptive labels), followed by *focused coding* (which consists of grouping the most frequent or most meaningful occurrences), and finally *theoretical coding*, which enabled the construction of interpretative categories and properties.

Data analysis used QSRNVivo14, a qualitative software that helps researchers to manage coding procedures.

The author is situated within the training environment, where she is a familiar presence in her dual role of trainer and (independent) researcher.

3.5 Emerging Categories[1] and Discussion

The photographic material shows that it only takes a few hours for the group atmosphere to transform: participants' faces become more relaxed; interpersonal distances decrease; body language indicates greater openness to each other; laughter, joy, intense gazes, hugs, sometimes a few tears illustrate the experience of each group.
The transcripts reveal the extent to which people increasingly participated in sharing experiences and that what they shared was increasingly linked to more intimate emotional content. Four categories emerge inductively from an analysis of the narratives:

- Experiencing relational well-being
- Discovering self-other
- Opening up to diversity
- Growing professionally

Figures 2, 3, 4, and 5 summarise these categories and their properties and provides some relevant extracts of text, in the words of the students (in vivo), for each category and property.

3.5.1 Experiencing relational well-being

> "At first, I felt embarrassed... then I started to feel like part of the group."

This statement, written by a student, serves as a key to interpreting this first category (Figure 2): a journey made up of small steps, moving from fear to trust, from distance to connection. It is through play that the group is transformed and the "we" emerges in an authentic and unforced way. In an educational context often marked by fragmentation and performance pressure, these words restore the possibility of an affective and relational education capable of fostering a sense of belonging.

1 For the preliminary results of this study, see Malusà 2023, upon which the present contribution is based.

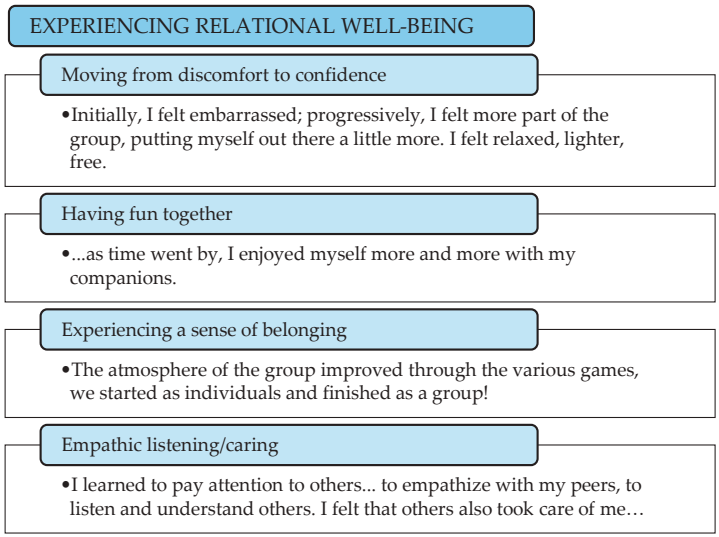

Figure 2 – Experiencing relational well-being. Properties and units in vivo.

Across the collected narratives, the strength of emotional connection becomes evident: participants listen to one another, laugh together, and build bonds that are gentle yet genuine. "We ended as a group," one student writes, as if the games had traced new relational geographies. Here, well-being is not static or superficial – it is dynamic, shared, and generative. This category echoes Staccioli's (2009) assertion that cooperative play, freed from competitive logic, opens spaces for encounter, welcome, and reciprocal listening.

The experience also emerges as a space of care: a threshold where one can meet the other without fear, allow oneself to be met, and rediscover, through play, a dimension of educational warmth. Feeling part of something, having fun together, being seen and welcomed – "I felt heard, understood, known" – are core elements of the "Prosocial Classroom Model" proposed by Jennings and Greenberg (2009), which foster deep educational processes. This is not merely about "feeling good together", but about feeling *in relation*, in a fluid balance between self and other, where everyone can find both a place and a voice. According to the Council of Europe (2016), such experiences lay the foundation for developing democratic competences: empathy, cooperation, and shared responsibility. It is, therefore, a relationship that educates, shapes, and transforms.

3.5.2 Discovering self-other through the body

> "I put myself out there, trying to feel my body, my emotions, and understand their meaning."

It is through the body – often marginalized in educational processes – that one of the workshop's most transformative experiences emerges (Figure 3).

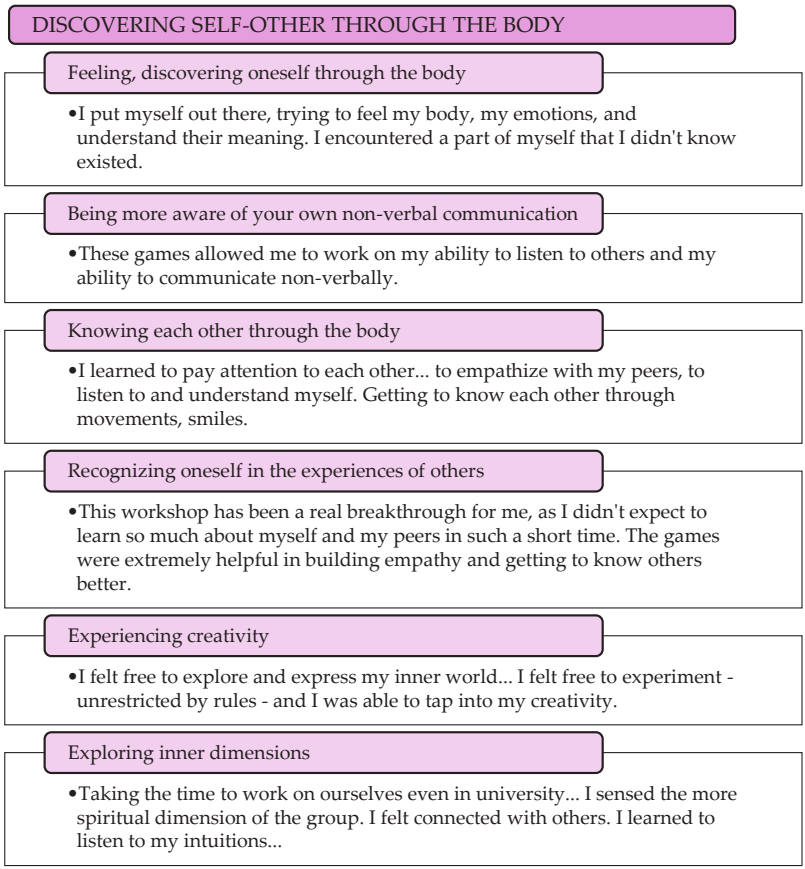

Figure 3 – Discovering self-other through the body. Properties and units in vivo.

The body is not merely a communicative vehicle; it becomes a space of contact and resonance. Nonverbal awareness, recognizing oneself in the experience of the other, and engaging one's own creativity and interiority – all of these

restore an embodied dimension of learning, aligned with the phenomenological pedagogy discussed by Francesconi and Tarozzi (2012). The experience of a body that communicates, listens, and creates thus becomes a crucial step toward a form of knowledge that engages the whole person.

Through physical play, previously unseen parts of the self are revealed. Participants explore creative and deeply personal dimensions: "I sensed the more spiritual dimension of the group," one student reflected. In this way, discovering the other becomes a rediscovery of oneself – a repositioning within the educational space as embodied, sensitive, and creative subjects. This embodied trust, built through gestures, gazes, and shared silences, resonates with the holistic approach of the Findhorn Foundation, where relationship is experienced as a process that is simultaneously physical, emotional, and spiritual (Platts, 1996/2022).

3.5.3 Opening up to diversity

"I felt relaxed and free to express myself without fear of being judged."

This is where the space for authentic encounter with the other opens up – an "other" who is never neutral, but always carries a story, a sensitivity, and a perspective different from one's own. Through cooperative games, the workshop fostered a climate of trust and suspended judgment, making it possible to engage meaningfully with alterity.

This is not merely about listening or accepting, but about actively inhabiting the experience of difference – entering into relationship with those who are different in a context of emotional safety. "*I learned to see others with new eyes… by putting myself in their shoes,*" writes one participant. These experiences reflect a shift in perspective, a role reversal that, as Tarozzi (2025) suggests, opens up access to the *unprecedented* – an educational space yet to be explored, where stereotypes are deconstructed, meanings renegotiated, and new bodily and relational alliances can be formed.

It is in these spaces that global citizenship education takes shape in its most authentic form: not as a collection of intercultural content, but as an inner disposition to be transformed by encounter. The workshop thus becomes a genuine training ground for coexistence – a space where one learns to live

together not merely through tolerance, but through curiosity, respect, trust, and openness (Figure 4).

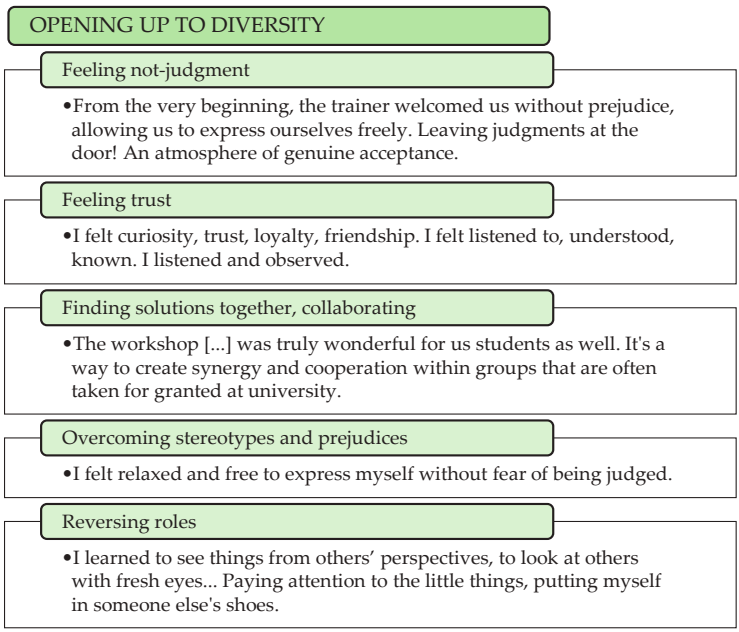

Figure 4 – Opening up to diversity. Properties and units in vivo.

3.5.4 Growing professionally

"This is real training!" exclaimed a student at the end of the experience.

Within these simple yet powerful words lies an implicit but compelling demand: for a kind of training that resonates, that leaves a lasting impression, that speaks to *who one is* – not only to *what one knows*. The workshop did not provide a technique to be replicated, but rather fostered a new educational stance, in which emotions, bodies, and relationships are deeply interwoven with one's emerging professional identity (Figure 5).

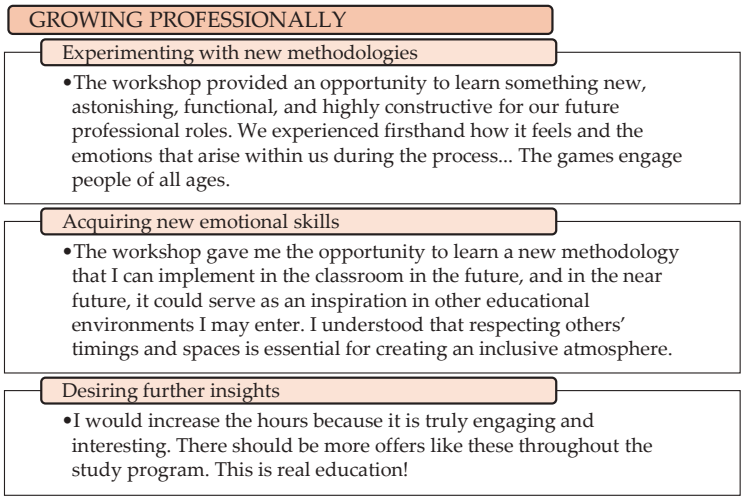

Figure 5 – Growing professionally. Properties and units in vivo.

Many students described the experience as providing not only practical tools for the future but also new insights into their role. "Respecting others' time and space," "building an inclusive climate," "getting to know myself better in order to better support others" – these are not empty slogans, but seeds of professional awareness that may continue to grow over time.

Here, growth is twofold: both personal and professional, emotional and pedagogical. It is a form of development born from lived experienc ,m me and nurtured through reflection and shared meaning-making. As emphasized in the OECD *Learning Compass 2030* (2018), a competent teacher is, above all, a self-aware individual – capable of emotional regulation, building authentic relationships, and creating safe and meaningful learning environments.

4. Towards Transformative Social Emotional Learning

The results of this study show that the students participating in the training perceived themselves to have experienced socio-emotional personal and professional growth; most of them requested more time for further training. The workshop allowed them to develop greater awareness of the numerous (explicit and implicit) messages involved in both verbal and non-verbal communication. It also enabled the nurturing of their emotional competence in a joyful learning atmosphere, including a wider vision of relational well-being, characterised by deep listening and looking after oneself.

Nevertheless, the processes of accepting oneself and others require carefully conceived and planned times and spaces in which to learn (Malusà, 2019). Ten hours of training is definitely not enough to acquire the social-emotional skills needed to manage complex dynamics in schools and to support truly transformative learning. Still, the results show that it did at least allow every participant to start to explore both the ways in which they themselves communicate verbally and non-verbally and those often forgotten spaces inhabited by our "inner child" (Assagioli, 1988) which unite each and every one of us.

The Findhorn games embrace the dimensions of body, relationship, metaphor (Gallagher & Lindgren, 2015) and also the meta-cognition that allows us to process the playful experience of the course, *discovering self-other through the body* to *open up to diversity*, and drawing upon ever deeper levels within our own internal worlds.

The "felt" integration of bodily experience, also definable as "embodied educational practice" (Francesconi & Tarozzi, 2012, p. 280) plays a crucial role in personal development thereby enabling greater awareness (Faggioli & Schenetti, 2023).

Understood thus, cooperative games allow us to get to know ourselves and others and to overcome our stereotypes and prejudices through a transformative journey on which the body is accorded a privileged position (Malusà, 2023; Tarozzi & Moser, 2025). According to UNESCO (2024) guidelines,

> Transformative Education is more than just the acquisition of knowledge; it is about fostering deep-rooted changes in an individual's beliefs, values and attitudes, and assimilating these concepts via learning by doing. This process…

> is often a deeply personal and emotional journey… [that] help[s] in building trust, allowing participants to open up, share their experiences, and feel empathy. (p. 12)

The themes presented here open up interesting directions for longitudinal research, not dealt with in the present contribution. It would be helpful to better understand, for example, to what extent emotional experiences remain a real socio-emotional resource as time passes. And at the level of didactic transferability, how much the students who take this workshop actually implement the tools of SEL in their classrooms, and with what results.
What clearly emerges in this paper, however, is that social-emotional skills are an essential part of every teacher's expertise and that cooperative games – thus understood – are a precious tool for SEL. They allow

> for self-discovery, group interaction, exploring different parts of oneself, developing interpersonal skills, deepening trust and creating community. (Inglis, 1996, p. 13)

It is therefore to be hoped that the teacher training paradigm can be revisited, providing suitable experiential spaces even within the university walls in which to start to *"open the eyes, hearts and minds"* of students. This would help to fine-tune the social-emotional skills that are crucial for supporting "an education of the heart" (Bruzzone, 2022) in the complex environments of today's schools.
In sum, as advocated several times by UNESCO, in order to ensure that learning in our schools includes social-emotional skills, teachers' professional training will ideally

> encourage teacher self-awareness, knowledge, and skills by providing training and resources that encourage educators to build their own SE competencies, examine and address implicit biases, and engage in culturally sustaining and equity-promoting practices. (UNESCO-MGIEP, 2022, p. 39)

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Playing and Daring in Childhood: Benefits, Limitations and Ethical Challenges in the Practice of Risky Play

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Abstract

Play is crucial for child development, serving as an essential activity that promotes exploration and learning. The pedagogy of risk emphasizes spontaneous play in natural environments, where the educator acts as a guide and companion, with children and the environment as the real protagonists of the experience.

Advocates of play highlight its autotelic value - an activity pursued for its own sake – free from moral and social constraints. Play is viewed as an innate biological need, vital for the development of children's psychophysical, social, and cognitive skills.

The concept of risky play links play with the aspect of physical risk, which is an indispensable element that offers children unique opportunities to develop motor, social, emotional and cognitive skills. However, diminishing opportunities for outdoor play and increasing safety concerns have limited these experiences. It is essential to differentiate between risk and danger, enabling children to engage in controlled challenges to foster their self-esteem and cultivate resilience over the long term.

The Norwegian educational context exemplifies a positive approach by acknowledging children's right to actively participate in decisions that affect them, thus giving them a voice and encouraging risky play in early childhood settings.

Ethical considerations surrounding risky play underscore the need to balance the promotion of enriching educational experiences with the prevention of harm. An inclusive approach is crucial to ensure that all children have equal access to play opportunities which are both stimulating and safe. Recognizing play as a fundamental right is the first step in providing a childhood which is rich in meaningful and formative experiences.

1. Introduction: The Value of Play

A century ago, Hall (1916) emphasized the significance of play in childhood, portraying it as a period of freedom and autonomous exploration. His early insights helped establish the foundation for viewing play as a vital element in human development and education. In humans, play is an integral component of development and education cannot be fully understood without it. As humans have developed increasingly complex social and cognitive capacities, the importance of play has grown accordingly. This suggests that during the evolution of primates, characterised by a protracted period of immaturity, the selection of the ability to play during these years has played a crucial role (Staccioli, 2008). This capacity not only persisted but also expanded during the evolution of the human species, establishing human infants as the most playful of animals.

Among the various theories regarding play, Huizinga offers a vital perspective by conceiving play as a free and voluntary act. His idea of ludus enriches both the social fabric – that is, the network of interpersonal relations – and the individual experience. It is a "serious game," yet free from ethical, ideological, or economic constraints, as play, according to Huizinga, lies outside the domain of moral norms (Huizinga, 1938/1949). Fink (1969/1991) similarly emphasises that play is fundamentally a process that goes beyond any objectives, in this way underscoring its autotelic value – an end in itself. According to Fink (1969/1991, pp. 66–67), play is an activity made up of gestures without a purpose, distancing itself from the non-serious and obvious aim of recreational games we play to pass the time. He also portrays play as an oasis of pleasure (Fink, 1957/2008). In contrast, Caillois (1958/1981) refers to it as an insecure island, highlighting that play exists within a defined space separate from everyday reality. Huizinga also mentions this separation, describing play as a *magical space* where the rules of everyday life are suspended. However, an island of uncertainty is not necessarily an island of happiness. Although the ludic dimension is associated with the pleasure of play, Caillois ascribes a different meaning to it than Huizinga does. The fair and noble competition that Huizinga envisions in the context of chivalry becomes, for Caillois, a disturbing experience marked by the ambiguity of a mask and the destabilizing effect of vertigo (ilinx) (Caillois, 1958/1981). The mask and verti-

go correspond to two categories of play identified by Caillois – mimicry and ilinx – both involving a temporary loss of identity or control. For Caillois, entering the game signifies not only stepping into an illusory and unstable realm but also exposing oneself to risk while experiencing the excitement characteristic of a gambler. He emphasizes the gratuitous nature of the game and asserts that its rules, if they exist, do not imitate or simulate the rules of real life and do not serve as a form of training for it. Consequently, the game is neither useful nor productive; rather, it is an activity that exists for its own sake (Rovatti, 1981), and this very nature can be seen as a devaluation. As Massa (1986) wrote in a provocative reflection on play:

> For what is less educational than playing? To play is to assimilate the world to oneself, to enclose oneself in one's egocentrism, to dominate one's own painful experiences with the compulsion to repeat facts and words within a framework of dramatization of one's desires. [...] But also, what is more pedagogical than play? Play is at the same time an action regulated by norms, a functional preparatory exercise, a device for technical and cognitive learning, a ritual of cultural initiation, an occasion for moral formation, a practice of identifying social roles. (Massa, 1986, pp. 230–231)

This dual nature of play becomes evident from the earliest moments of life: by the third or fourth week, in fact, infants begin to experience play, driven by a curiosity that leads them to movement and physical exploration. In the subsequent months, they take their first steps and later start climbing, running, jumping and engaging in other increasingly challenging physical activities. It is through the willingness to participate in games and activities, through experimentation and failure, that children learn about the world and about themselves. Through play, they discover that it is possible to lose without necessarily feeling like a loser, as playing also embodies the enjoyment of challenges, the thrill of uncertainty and the allure of disguise. Moreover, it serves as a means of interaction with others, allowing for the exploration of complex relationships through actions that convey deeper meanings beyond their literal interpretation. It is a way of experiencing in a rich and varied way the infinite possibilities of communication, coexistence, difficulties, respect and the pleasure of being together (Antonacci, 2022).

Play is first and foremost an innate biological need that precedes the cultural dimension. Children play spontaneously because play is not an activity learned from society. Bondioli (2019) thinks that, play cannot be domesticated by being guided in the directions wanted or desired by adults; it can only be supported and encouraged (p. 77). Although it is not a basic need, depriving a child of play goes against human nature. Farné notes that such deprivation would harm the development of a child's psychophysical, social and cognitive skills, which are essential for her/his growth (2015).

2. Risky Play Does Not Exclude the Encounter With Risks

Article 31 of the Convention on the Rights of the Child (United Nations General Assembly, 1989) recognises play as a fundamental right to be protected and promoted. The *Linee pedagogiche per il sistema integrato zerosei* (MIUR, 2021) also dedicate a specific paragraph to the value of play in early childhood contexts. That paragraph is inspired by the thoughts of the great play theorists who have already been written about.

Over the last thirty to forty years, a glaring contradiction has emerged: although play is seen as a central element of childhood, opportunities for free play have been significantly reduced. This form of play involves activities that carry a certain level of physical or emotional risk and are typically thrilling, adventurous, and challenging for children. Adults play a crucial role in either allowing or denying children the opportunity to play (Dweck & Molden, 2017). In recent years, adults have become increasingly concerned about the safety of early childhood environments in Western countries, including Italy (Farné, 2022; Bertolino, 2022). Even in Norway, considered one of the least risk-averse countries, there is growing concern about the safety of children's active play, as documented in recent research (Obee et al., 2020). This heightened focus on safety has contributed to a significant decline in opportunities for children to play in diverse outdoor spaces (Storli & Sandseter, 2019). Changes in the urban environment have further complicated children's ability to find suitable places to play and develop in their neighbourhoods (Francis & Lorenzo, 2006), with increased traffic and a reduction in parks and playgrounds.

Peter Gray, in his book *Free to Learn* (2013) links the decline in free play to the rise in anxiety, depression and feelings of helplessness among young people. According to this American psychologist, free play is nature's strategy for boys and girls to discover that they are not fragile subjects, contributing to the development of decision-making and the creation of a more equal relationship with peers. Outdoor play in particular immerses children in the heart of playful activity, in its expressive and free dimensions, stimulating reflection on all that children do when they are free from adult control (Schenetti & Li Pera, 2021).

In this respect, it is interesting to consider the studies (Sandseter, 2007, 2009) that have investigated risky play: an exciting and challenging form of play that does not exclude the encounter with physical risk and thus the possibility of injury. Sandseter (2007, 2009) identified six categories of high-risk play: (a) play with great heights; (b) play with high speed; (c) play with dangerous tools; (d) play near dangerous elements; (e) rough-and-tumble play; and finally (f) exploratory play, in which one can get lost or disappear, such as when playing in unfenced places like a forest or a large garden, outside of adult supervision.

In the pedagogy of risk, which characterises educational paths based on spontaneous play in a natural environment, the educator has the role of companion and sometimes of guide. The real protagonists of the experience are the children and the environment: relevant learning paths emerge from their interaction.

Despite the varying definitions, some common denominators can be identified: challenge, excitement, facing and overcoming fear, and the possibility of injury, although in most cases these are minor injuries. Several studies (Apter, 2007; Brussoni et al., 2012; Brussoni et al., 2015) identify numerous benefits associated with the practice of risky play that extend beyond mere fun (Masseretti, 2023). Risky play acts as a natural training ground for the development of essential skills (Gray, 2013). By engaging in physically and mentally challenging activities, children learn to recognise and manage real risks, improve their ability to assess danger and develop a sharper awareness of their own limits and abilities (Apter, 2007; Brussoni et al., 2012). In addition to challenging their physical abilities, active play offers children unique opportunities for motor, social, emotional and cognitive development (Farmer

et al., 2017; Lavrysen et al., 2017; Little et al., 2011; Sandseter et al., 2020). As early as in the late 1990s, Smith (1998) noted that natural risk-taking in motor play is a precursor to risk-taking in other contexts involving the emotional, social and affective domains. Facing and overcoming physical challenges and confronting personal fears also help to build up self-esteem and resilience, qualities that are fundamental to long-term mental wellbeing. Tovey (2007) also goes beyond the concept of risk in a purely physical sense, suggesting that social and emotional risk-taking is a natural progression from physical risk and is a vital component of the educational experience. Nevertheless, the implementation of risky play involves several challenges and constraints that must be critically considered.

3. Risky Play Between Benefits, Barriers and Challenges

In the context of studies and practices on risky play, Farné (2014, p. 19) argues that it is necessary to ask what the relationship is between risk and danger, two terms that, when referring to children's play activities, often tend to blur into each other in the adult's perception. Active play promotes children's development and helps them to become familiar with risk. Hazards, on the other hand, are those obstacles within play spaces that need to be reduced or removed, with the primary aim of preventing serious injuries. The role of adults is to identify and mitigate risks, offering supervision to the activity being carried out, to the child's abilities, personality and level of maturity (Schenetti, 2022). It is essential that educators/teachers are ready to intervene when play becomes dangerous but it is crucial that they do not uncritically exclude all play experiences involving risk, just for fear of exposing children to the possibility of being injured. This choice does not represent a forward-thinking educational intervention. It is impossible to eliminate risks in education, nor is it advisable to do so, since the dimension of risk is a constitutive part of being human (Bertolini, 2006). Accepting risks presupposes a profound knowledge of the child and a meaningful relationship with him/her: it is essential to enter his/her world, to observe it carefully, to use a language made up of tangible realities and to promote education in adventure. Furthermore, accepting risk implies being aware of one's own educational role with its specific responsibilities (Schenetti, 2023).

Recently, the position statement of the Canadian Paediatric Society expressed strong support for the practice of risky play (Beaulieu & Beno, 2024). The same document lists what cannot be considered risky play: neglecting safety measures such as helmet use; allowing children to play in potentially dangerous environments without adult supervision, such as busy streets; and finally, encouraging children to engage in adventurous activities against their will, forcing them out of their comfort zone (Beaulieu & Beno, 2024).

However, given the many benefits reported in the specific literature, it is questionable whether risky play is actually beneficial for all groups of children. While some papers urge parents to allow their children to play outdoors more freely and independently and to encourage risk-taking during play (Tremblay et al., 2015), others show how risk can easily lead to danger (Giles et al., 2018). This is the case for children from low-income families living in poverty and social exclusion: here, risky play crosses the line of risk and becomes dangerous due to the lack of safe play areas (Milteer et al., 2012). The presence of large machinery and the ease of encountering animals (Little et al., 2003; Ryan et al., 2014) makes risky play dangerous even in rural areas (Pickett et al., 2005).

Finally, the question of the inclusion of children with disabilities in risky play is not easily answered. Children with developmental disabilities are often excluded from this play experience due to overprotection and low adult expectations (Bundy et al., 2015; Grady-Dominguez et al., 2021).

It is therefore necessary to consider not only the benefits of active play, but also the structural inequalities that characterise society and limit the effective opportunities for some groups of children to play actively in safe, outdoor environments (Giles et al., 2018).

4. Ethical Challenge and Risky Play

In the text *Risky Play: An Ethical Challenge*, the construct of risky play is intertwined with ethical theory, Kvalnes and Sandseter (2023) provide a systematic account of active play as an ethical challenge for all those (teachers, educators, parents, legislators) who directly and indirectly influence children's play. According to the authors, each of them has an ethical responsibility

within their own role to ensure that children have sufficient space for active and adventurous play. At the same time, however, consideration must be given to the possible consequences of such adventurous activities. The ethical challenge lies in striking the right balance between allowing valuable experiences and preventing significant harm. The tension between these two dimensions is captured by Kvalnes and Sandseter (2023) through the use of the terms do-good ethics and avoid-harm-ethics: the former focuses on the responsibility to create stimulating and uplifting play experiences for children, the latter on the responsibility to protect children from significant harm. A good assessment of the framework for risky play is therefore based on a reasonable balance between these two poles.

The Norwegian pre-school curriculum emphasises children's right to be active, responsible and protagonists in their experiences. Children should have considerable freedom in their choice of activities and be able to express their opinions about the school's daily routine.

Little and Wyver's study found (2010), through interviews with children, that children use their risk assessment skills to make decisions during play. This aligns with the findings of a recent systematic review, which highlights how children often perceive school rules as overly restrictive, complaining that "all the fun stuff" is labelled as dangerous (Jerebine et al., 2022a). According to the results of this study, children with previous experience in risky situations gain a base of experience useful for assessing and managing risk in future situations. Interviews with four- and five-year-old children show that they are even able to explain their strategies for increasing or decreasing risks during play. For example, they try to reduce risk by choosing less risky strategies, such as reaching a lower point before jumping when climbing a tree (Sandseter, 2010).

Whether children's choices are respected often depends on the willingness of adults to actively and courageously support children's choices. The perception of children as "precious cargo" to be protected strongly influences school decisions, often leading to an overly cautious approach by adults (Jerebine et al., 2022b).

In Norway (Obee et al., 2020), institutions for early childhood education and care, commonly referred to as kindergartens, are known to actively empower children. Under the *Framework Plan for the Content and Tasks of Kinder-*

gartens (NMER, 2017), children have the right to express their opinions and actively participate in daily activities and learning environments that directly involve them. In this framework, NMER emphasises the importance of free and risky play in pre-school education, the need to recognise its value and to guide children in facing physical challenges in order to develop skills that are important for the future (Obee et al., 2020). In addition to Norway, Canada has adopted a proactive approach to risky play. The Canadian Paediatric Society highlights a broader international recognition of risky play as a key component of healthy child development, rooted in a pedagogical view of the child as an active subject with a voice to be acknowledged.

This pedagogical approach focuses on respecting children as individuals with their voices, conveyed through non-verbal modalities, such as bodily expressions related to emotions. Understanding and honouring this voice needs specific observation and listening: this form of empathic listening requires adequate specific training and implies a radical change in traditional childcare methods (Bondioli & Savio, 2017).

Facing challenges, taking risks with uncertain outcomes, overcoming failure and taking responsibility for choices allows children to feel fulfilled and learn more about themselves. Even negative experiences have formative potential (Kvalnes & Sandseter, 2023).

5. Final Reflections

Play is an essential part of every child's growth and development. Through play, children explore the world, develop social, cognitive, physical and emotional skills, learn to manage their emotions and discover more about themselves. According to Bertolino (2022, p. 13), preventing a child from taking risks means hindering his or her free play and ability to encounter the unknown, to respond creatively to it and, paradoxically, to prepare for the world from which adults want to protect the child, a world that is – by its very nature – increasingly unstable and unpredictable.

However, risky play also poses an ethical challenge: adults have a responsibility to strike a balance between allowing children to experience risk and ensuring their safety, transforming it from a constraint into an opportunity (Kvalnes & Sandseter, 2023; Masseretti & Schenetti, 2024).

Equal access to active play must also be ensured: children living in disadvantaged contexts or with disabilities are often excluded. Therefore, an inclusive approach that overcomes structural inequalities in society is needed.

The Norwegian educational context offers interesting insights: the right of children to participate actively in decisions that affect them is recognised and respected.

Recognising and valuing play as a fundamental right and a biological necessity is the first step towards guaranteeing all children a childhood full of meaningful and formative experiences. It is desirable that we can ensure that all children are given the opportunity to play and grow in a full, joyful and rewarding way.

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Section 3
Forms of Playful Learning

Learning Through Play

The Importance of Play in Childhood and its Implementation in the Learning Process

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Abstract

The article examines the development of play in early childhood and its central role in human development. Play is described as a fundamental activity that, from the earliest stages of life, promotes growth and social integration. In particular, free childlike play is invaluable, as it is based on natural, intrinsic motivations and allows children to explore their environment without external directives. In doing so, they gather a wide range of experiences that are deeply rooted emotionally and, therefore, long-lasting. Play develops in phases: while toddlers expand their imagination through imitation and symbolic play, preschool children increasingly structure their games with rules that provide orientation and foster social skills. In school-age children, play becomes more complex, focusing on competition, self-awareness, and experimental learning, which further develops their cognitive and motor abilities. The cultural context of play is also addressed, with play being viewed as an anthropological constant that exists in all cultures. It is argued that culture often has its roots in play and that free play is a spiritually necessary part of human life. Finally, the importance of didactic games in education is emphasized. These games combine playful elements with educational content to enhance learning and increase primary school students' motivation. An example of this is a lesson on the topic of the meadow habitat, where playful methods are central to knowledge transfer.

1. The Progression of Play Development in Early Childhood

The term "play" is used in various contexts, most commonly in relation to children's activities. However, play is also integral to adult life. Baer (2020, p. 467) describes play as a self-contained world with its own specific people, rules, and actions. According to Mogel (2008, pp. 6–43), children's play reflects cultural and social positions, forming a central intersection in the cultural development of humanity. Play and human existence are inseparable. When considering human development, play assumes a vital role in the holistic growth of a human being, with a particular emphasis on free childlike play. Free play is one of the most natural and important methods of preparing for future life (Sauerbrey, 2021, pp. 16–22). Through play, children gain countless experiences associated with emotions, which are more sustainably anchored in the brain. One of the first experiences children have through play is exploring their own bodies. Newborns initially become reflexively familiar with their bodily functions and, simultaneously, gain their first valuable self-efficacy experiences. These processes resemble play, as they are often repeated and experienced affectively. During toddlerhood, children imitate adults and assign new functions to objects from their environment during play. A block of wood might become a car, a teddy bear might become a child, or a roll of paper might become an airplane. In doing so, children develop and foster their imagination, which is based on experiences and observations from their surroundings. In genuine childlike play, children are absorbed and immersed, playing intuitively without any external prompting. In this developmental phase, children make significant progress in linguistic, cognitive, and motor areas. Childhood play development occurs in phases, but this does not mean that children abandon past play phases or experiences. The most crucial finding is that as children develop, they make more complex demands on play. For example, in early childhood, they are intrinsically motivated to take on and act out various roles, often imitating adults or transforming themselves into imaginative characters. In preschool, children increasingly develop an understanding of how to organize a game and how to adopt and adhere to rules. Rules provide children with orientation and order in play, which are essential for normative interaction within a community. According to Thiele

(2020, p. 145), rules determine who participates in the game, which moves are allowed, and which are forbidden. Those who do not abide by the rules cannot continue playing. The internalization of rules leads to social development and the assumption of new roles and functions. In elementary school, children show an increased interest in competition and experimentation. They are not primarily interested in winning but in self-knowledge and assessing their abilities in comparison with their peers. Questions such as "What am I good at?", "What talents do I have?", and "What superpowers do I possess?" become central. Through experimentation, children develop hypotheses and seek to explore them. Curiosity drives them to explore the world and natural phenomena. As they grow older, children develop the need to systematically build something concrete or according to a plan. One of their first attempts might be building a tower. Stacking blocks and trying to build the tower as high as possible fascinates all children. With more complex play activities, other ideas emerge, such as constructing a garage, a bridge, a spaceship, or a superhero. During construction, children learn how to plan and proceed systematically. Through trial and error, they learn to overcome difficulties and focus on their set goals. The physical and mathematical experiences gained in this process are indispensable for cognitive development at this stage. In addition to the above-mentioned areas, construction also promotes children's sensory-motor skills and creative problem-solving abilities.

2. Huizinga´s Views on Play: Exploring its Societal Contexts

Play is a cultural product that occurs within social contexts. When a person is born, they enter a society in which they develop and socialize as a personality. According to Abels (2019, p. 57), socialization occurs as an interaction between an individual and a group, wherein individuals interact by coordinating and adapting their actions. Play is a basic anthropological constant, existing in all cultures and on all continents. One of the most famous cultural theorists, Johann Huizinga, interpreted human culture through his work *Homo Ludens* (1938/1981), which explores the concept of „the playing man". Huizin-

ga argued that culture originates and evolves in the form of play, which he described as being older and more original than culture itself. He stated

> I do not claim that culture originates from play, but that it grows in play, and furthermore, that in some cases it retains its play character where one does not expect it or is aware of it; in short, play and seriousness are inseparable or merge into each other in culture. (Huizinga, 1938/1981, p. 22)

He called play a „primary life category" characteristic of living beings, placing human and animal play on the same level. Culture, which arises from play, emerges when play cannot be assigned a vital biological function. If play arises through free action and from an inner need, the cultural value created in the process spiritually enriches the human being. From Huizinga's perspective, a game is „a struggle or a representation of something" (p. 22). Free play is free of material interest, and the meaning of a game is not tied to externally determined norms and rules. The playing individual decides for themselves which rules apply. Free will determines what is played, with whom, and how the game proceeds. Huizinga affirmed that play has no practical purpose and proceeds according to its own rules, with the only reason to play being the pleasure of the game itself. From a philosophical-anthropological point of view, play is a spiritually necessary existence, indispensable for the development and elevation of human life in its spiritual and social dimensions.

3. Activation of Interest and Motivation Through Didactic Games

Before discussing didactic play, it is necessary to explicate free childlike play and free play in the school. Free childlike play arises from a child's intrinsic motivation to play and is not determined by spatial and temporal factors. The child's desire to play develops spontaneously and does not require external motivation. In free play, the child creates their own scenarios, immerses in fantasy, makes decisions, and pursues interests without external guidelines or goals. The value of such play is reflected in the child's emotional experi-

ence and must be viewed exclusively from the child's perspective. Free play is a natural way for children to explore themselves and the world, practice skills, and express creativity and emotions. Additionally, free play offers children a way to have fun, relieve stress, and express emotions. The current state of research clearly shows that free play plays a central role in children's development. The positive effects on cognitive, psychosocial and psychomotor development in this context have been proven by numerous studies (Hirsh-Pasek & Golinkoff, 2008; Elkind, 2008; White, 2012 and others). Free play in children is characterized by specific features, including spontaneity, a focus on the present ("here and now"), variability, freedom of purpose, voluntariness, imagination and deep immersion in the play process.

The term "free play" is not to be equated with the free play of children. This term and form of play are mainly used in educational institutions. We talk about free play when free childlike play takes place in an educational setting where the play environment is defined by a variety of play opportunities, content, and materials (Engel et al., 2022, p. 42). Like free childlike play, free play in educational settings is initiated by the child's own impulse, and the child determines the course of play. Learning progress occurs casually, as the playing child is intrinsically motivated to explore and experience new things. During free play, children perceive their environment in context, experiencing themselves, other children, and objects within the educational institution in a causal manner. The playing child processes, encodes, and orders sensory impressions, forming new cognitive structures and experiencing themselves as active participants in their environment. This contrasts with guided play, in which children only have limited control over the content, duration, partners and rules of the game. In school contexts, this is predominantly initiated by the teacher and is geared towards specific learning objectives. Guided play is a form of game-based learning and has some characteristics of free play. However, positive emotions and an action-oriented engagement with learning content can only be achieved if the game arouses the curiosity of the learners and offers an exciting process (Moser, 2024, p. 35).

Empirical studies (Bonawitz et al., 2011; Hopkins et al., 2019; Sahlberg & Doyle, 2019) illustrate the different effects of free and guided play from different perspectives. While free play leads to more intensive exploration and more diverse cognitive operations, guided play focuses on specific content,

which can limit spontaneous discoveries. At the primary level, free play is either planned as a morning activity to "get used to things" or as a learning phase in the classroom, often as a reward or to help pace the lessons. For primary school, a didactic integration of both forms of play and a varied repertoire of methods is recommended in order to meet the needs of the children. A didactic game always aims to acquire new knowledge, promote existing knowledge, or make it more flexible. It combines playful elements with educational content to make learning more enjoyable, motivational, and effective. At the primary level, didactic games are used in diverse learning contexts, characterized by a balanced combination of fun and learning. One aim of a didactic game is to activate students' interest and motivation for learning, inspiring them to learn through play. In the classroom, didactic games might take the form of language games to train vocabulary, grammar, pronunciation, or comprehension. In mathematics, games can support the learning of mathematical concepts. In science, games help to elicit and deepen knowledge of phenomena, and in music, games enhance skills and techniques. Logic and thinking games are played across subjects to train logical thinking, problem-solving skills, and critical thinking.

4. Deep Structures in Didactic Games: From Learning Goals to Game Content

Games, much like educational methods, possess deep structures that go beyond their surface elements. These deep structures are crucial for fostering cognitive activation, constructive support, and effective engagement, making them powerful tools for sustainable learning. Deep structures are interpreted differently within educational science discussions (Pauli & Schmid, 2019, p. 168), but they are most associated with cognitive activation, constructive support, and effective classroom management. Unlike surface structures, deep structures focus on the formation and understanding of concepts. In learning, various methods and strategies are applied to trigger deep-structural effects, such as actively processing information, making connections, asking questions, explaining concepts, transferring learning to new situations, and reflecting on what has been learned. This process fosters genuine under-

standing, a hallmark of sustainable learning. The deep structures of a didactic game depend on the learning goals and content. A learning game aims to elicit preconceptions, build new knowledge, make it flexible, and consolidate what has been learned. In these learning phases, observable in the classroom, students actively engage with new challenges in an interactive relationship. A didactic game promotes active learning if it excites learners and challenges them during play. The surface of a didactic game comprises all observable characteristics, such as the age group, game form, subject area, rules, design, number of players, duration, and game materials.

5. Outlined Double Lesson: "Habitat of the Meadow" - Play as a Central Method of Knowledge Transfer

When planning a lesson series or a teaching unit, teachers decide on the competencies to be built up in the classroom. Competency development is centrally oriented to both children's ideas of how they perceive and think about the world and phenomena, as well as to specialist knowledge. In this context, phenomena have to be explored from multiple perspectives and related to children's everyday life. The lesson is to be understood and conceived as a child-friendly learning environment. Effective teaching is reflected in a concrete confrontation with cognitively stimulating and child-friendly learning tasks, which challenge children, for example, to observe, determine, play, apply, prove, explain, research, and explore. All of these are potentials of an extracurricular learning location.

5.1 Exploring the Meadow

The topic "The Habitat Meadow" can be effectively formulated and explored in the classroom when the teacher links to the everyday experiences of the children and lets them explore and discover "the meadow" through exploratory and playful methods. The goal of the planned teaching unit is that the students get to know and experience the individual levels/floors? of the meadow and which animals live in each one. Through the playful design of the learning environment, the children will understand and recognize that the meadow and the animals of the meadow are interdependent. In the teach-

ing unit, the children's ideas and interest in the topic are stimulated by a fantasy journey. The fantasy journey contains fairy-tale and fantastic elements that tie in with the children's world of life. The fantasy journey promotes attention, concentration, abstract thinking, and creativity cognitively. When puzzling, students are challenged to solve problems and argue. Just like open questions, puzzles promote the children's analytical thinking. Puzzles playfully link the children's preconceptions with new information. In addition, puzzles also promote children's communicative skills. In the teaching unit, the new topic is worked through using a developed synthesis game with playing cards, promoting cognitive learning processes, social skills, and eye-hand coordination. Playing with learning cards playfully foregrounds the competence area of reading. The description of a meadow animal's habitat on the respective cards is designed to encourage children to think logically, analyze, and decide. The synthesis, i.e., the assignment of the cards, takes place in the last phase of understanding as a joint decision by the children. In the movement game, the competencies of social studies are linked with the competence area of speaking. Children implicitly learn the structure of a story, how to express themselves clearly, how to listen attentively to other children, and to observe the rules of conversation.

Preparation

The planned unit of instruction presumes that the students have already received an introduction to the topic and have noticed a meadow, perhaps around the school grounds, made targeted observations, acquainted themselves with individual plants and animals, and have exchanged their observations and knowledge.

Introduction

The introduction is made via a fantasy journey, where the teacher tells a meadow story to the children in a circle, placing each child in a meadow landscape.

An example of a fantasy journey

Imagine you're in a magical meadow with thousands of colourful flowers. They smell so beautiful that it seems like they are smiling at you. The grass

feels as soft under your feet as your fluffiest carpet at home. The sun shines in the sky and its light tickles your face. You decide to take a small break. You lie down in the grass, close your eyes and listen to the meadow. What do you hear? A cheerful chirping, a quiet sneaking, a fluttering wing beat, a gentle humming, a joyous jumping, a patient crawling, a diligent digging, and a mysterious rustling! All this makes you curious – who are all these inhabitants of the meadow? You open your eyes and prepare to go on an exciting exploration. The blades of grass joyfully wiggle in the wind and seem to be excited about your visit. But be careful, some animals in the meadow might be a little shy. The flowers that greet you on your journey release a wonderful summer scent that can only exist on this magical meadow. Are you ready for the adventure?

Puzzels

Who chirps above the meadow or inside the meadow?
Which creature can hum diligently, search for nectar, and visit the blossoms of the meadow?
Who flutters from blossom to blossom, is colourful and loves the warm rays of the sun?
Who hums and is heavier than a bee?
Who can quickly hop from one blade of grass to another?
Who sneaks and slithers mysteriously in the litter layer of the meadow?
Which creature digs and burrows in the ground of the meadow?

The floors of the meadow

The children's auditory perception becomes more focused when the teacher plays an audio file with meadow sounds during storytelling. At the end of the story, the children guess what kind of meadow animals could be hiding behind one of the described animal noises. The puzzle questions are designed so that the children are indirectly confronted with the floors of the meadow. ("I sneak through the grass and the leaves of the meadow..."). It is expected that they will name several animals for one sound, for example, not only the mole but also the mouse for "digging". After the round of puzzles, the teacher explains that the meadow can be compared to a house and opens a round of questions about the different floors of the meadow.

Game Phase I: Synthesis

For working through the topic, children are divided into groups of three or four and need space about 80 cm x 40 cm. Each group gets the meadow image and the Synthesis Game as detective per-work. The descriptions of habitats are formulated in such a way that children themselves find out which animal fits a habitat. Each child should read one of the descriptions aloud so that the others in the group can listen and think along.

Game Phase II: Movement

The children form a circle in the classroom. A picture of a spider is placed in the middle of the circle. The teacher begins a meadow story with an exciting introduction. The children now literally spin the story further: They throw a woolen ball at each other and hold the loose end of the wool with one hand before throwing it on. This creates a spider web. When throwing, the respective child says a sentence that fits the meadow story. The next child freely extends the story. It should be noted that in addition to the introduction and the main part, an ending should also be invented.

Exploration and discovery

The teacher explores a meadow near the school with the children. There, each child chooses a place and observes the animals and plants uncontested.

End of the lesson

Subsequently, the children's observations and perceptions are shared and exchanged in a circle. The observation cards serve as a memory aid. At the end of the lesson, children are allowed to try (meadow) honey, which the teacher brings as a surprise. A cool herbal tea also lets the children experience the meadow through the sense of taste (Moser, 2022, pp. 16–18).

6. Conclusion

"Play" in child development represents a central and natural activity form, agreed upon by medical professionals, psychologists, and educators. When we look at a child's competence and personality development, we find that

in the area of sensorimotor, emotional-affectionate, cognitive, linguistic, and social development, children make enormous competence progress through playing. In play, children concentrate their attention on shaping, experiencing sensory experiences, social and imaginative roles, dealing with the environment or the novelty factor of the joyful activity that is currently taking place. The urge to play and the joy of playing do not diminish in primary school children. However, the interest in play, the form of play, the complexity, and the child's behavior change. Applying play as a method of subject learning represents an almost insoluble situation for some teachers. However, the apparent tension between play and learning lies in understanding the didactic inclusion of both procedures. Lesson planning is done in practice as planning of lesson units in which teachers choose several lessons that encompass a thematic sense unit while aiming for competence development according to Curriculum21. Teachers make decisions about which subject-related competences are to be focused on and how these are to be achieved and operationalized. In order to achieve sustainable subject-related and cross-disciplinary success, it is necessary to foresee instructional formats such as cooperative learning, project work, discovery learning, experiential learning and problem-based learning as a framework for playful learning. The "game" offers a flexible method for the teaching practice in primary school, which can contribute to a high degree of motivation, increased attentiveness and a positive learning orientation of the students in dealing with the school and world knowledge, which can be integrated into the thematic instruction units or can represent individual instruction sequences. A playful teaching in the primary school creates not only a positive, relaxed atmosphere, but also gives the children the freedom to move, to speak, to listen, to look, to imagine, to think, to retain, to remember, to feel, to shape and to experiment. In a playful way, the students become aware of the topic in the lesson, testing their existing knowledge structures against the new or unfamiliar, constructing new knowledge fields, making independent decisions, arguing, doubting, justifying, defending, discovering solutions and applying them sustainably. Thus, the passage from the playful experience of the world of the child to the complex structured view of the world of the adult is not a contradiction in itself, but a prerequisite for successful playful learning as an exploratory, imaginative, reflective and communicative activity of the students. The core area of

playful learning is the area where the game and knowledge acquisition are the closest associated: the area of experiential learning. Playfully learned, the content of the mind becomes a lively memory. This process of "beaming" the knowledge into the mind is supported by positive emotions, which occur when winning a game or during a breathtaking adventure game, guessing a difficult riddle or an unexpected event in the story game. Playful learning always means experiential learning; it can take up impulses from the social, physical and emotional-affective sphere of children and incorporate them into an active teaching-learning process. For the successful use of games as a method in the primary school, the teacher must create a learning environment that is perceived by the children as inviting and stimulating and allows for playful access to learning, where the boundaries between compulsory and voluntary, between leisure and learning and between playing and working are fluent. Consequently, the teaching plan should include teaching concepts that are designed in such a way that there is enough space for changes and surprises in the progress of a game. The plan should work without time pressure, since the game develops its own dynamics, requires the skill of dealing with mistakes, mishaps, defeats and conflicts in the game and the social and emotional competence for teamwork. The teacher supporting the students in the game should be characterized by an accompanying, moderating and not a dominant-controlling behavior. The more freely the game process can be designed, the more creativity, imagination and inventiveness can be brought in by the children into the game. However, not every game is suitable for integrating thematically into teaching. A game-based instruction requires the teacher to be skilled in reviewing existing games for their appropriateness as a teaching method, perhaps also in modifying them, and then carefully integrating them into teaching on the basis of the curriculum and the teaching assignment. (Moser, 2023, pp. 30–38). The game must be interlinked with the objectives of the instruction in such a way that it enables a learning process and does not remain just a recreational activity. It is important that the initiators of game-supported teaching are aware of its limits. Not every topic, not every child, not every social composition of a learning group, not every classroom situation is suitable for a playful approach. Likewise, not every game is suitable for every child, because children have different preferences and talents. Therefore, it is necessary to employ a variety of different

types of games in teaching. Thus, in a board game, children can practice strategic thinking, in a guessing game they can train their memory, in a movement game they can discharge their urge to move and in a computer-assisted learning game they can acquire knowledge about different facts in a fun way.

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Play is Serious Work!
Play Didactics for the Development of Life Skills

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Abstract

The concept of the game is laden with ambiguity and multiple facets: For a planet with a hundred faces such as the game, it would be risky, to say the least, to attempt the cropping of an entire image, of a single frame. Such an interpretative approach would open the doors to superficial and undue generalizations (Frabboni et al., 1989, p. 9). According to historian Johan Huizinga, play in human history responds to two fundamental principles: freedom, whereby a game is first and foremost a free act. Commanded play is no longer play. At most, it can be the compulsory reproduction of a game (Huizinga, 1938/2002, p. 12) and the principle of pleasure attached to it. Based on these two principles, a third follows: play is autotelic, whereby the end of the play is within the play itself. But if for some, especially in the relatively distant past, games were not created to educate, but only to amuse, to engender sociality and participation, for scholars of child psychology - and not only - such as Piaget, Winnicott, Bruner, Mead, Vygotskij, Montessori, to name a few, it plays a fundamental process in that it is the means for the intellectual, affective and relational strengthening of the child. If one were to define play, one could say that it is a phenomenon rooted in the biological and psychic life of every human being, since it is both an amusement in itself andserious work. To use Maria Montessori's words, it could be defined as "serious fun", a fundamental activity for children (not an ordinary pastime that serves to learn, have fun, explore, relate, get rid of nervous tension, anxieties and emotions such as anger, fear, and so on . Play is not ordinary or real life. It is a departure from that, to enter a temporary sphere with a purpose all its own (Huizinga, 1938/2002, p. 11); it is not, therefore, difficult to imagine the enormous potential of play where the child experiences a realistic but protected dimension in which he or she can experience reality by pretending and thus train for real life. In the light of these premises, playful activity, whether free or structured,

solitary or in a group, leads the child above all to learn knowledge, skills, and behaviour in formal and informal environments: at home, in the street, in the gym, at school, anywhere. In the pedagogical and didactic sphere, it is emphasized that play can be a tool capable of developing increasingly intentional, targeted, and constructive transversal skills (Bondioli, 2002) thus activating an early educational-didactic approach to play, which offers teachers the possibility of opening up for all children a pathway to accompanying personal and social growth according to a renewed educational principle that goes beyond the affirmation of both the traditional values of tolerance and coexistence and the new values of recognizing identities and respecting differences (Chiappetta Cajola, 2013, p. 56);. At the same time, play enables children to learn more easily. It is, in fact, undeniable that pupils perceive many of the tasks related to formal learning as boring and tiring. Harnessing the power of play for educational purposes, irrespective of the type of game (for example serious game, motor game, board game, role-playing game, and so on.) and how it is experienced, certainly helps the child to learn while having fun, to greater involvement, increased attention and, why not, to better performance. This contribution aims to emphasize the importance of play didactics in the primary school segment, to analyze the functions of play for educational purposes, and to show, through the best practices experienced by students of Primary Education, how play didactics are fundamental in building life skills.

1. Play is a Multifaceted Phenomenon Rooted in Everyone's Biological and Psychic Life

Reflecting on such a multifaceted phenomenon as plat requires a vision that considers a plurality of approaches: pedagogical, didactic, psychological, anthropological, ethnographic, kinesiological, psychiatric and so on; a single definition can be criticised for reductionism. We can certainly assert that playful activity, whether free or structured, solitary or in a group, also has an important role on the psycho-affective level in that it allows one to experiment with symbolic and imaginative thought (Bobbio &, Bandioli, 2021), also performing a cathartic function of connection, comfort, and humanization of a relationship (Bateson, 1996), leads the child to acquire knowledge, skills and behaviour in formal, non-formal and informal environments: at home,

on the street, in the gym, at school, everywhere. Playful activity is a phenomenon rooted in the biological and psychic life of every human being; its origins, as testified by archaeological findings, as evidenced by archaeological findings, coincide with the appearance of man on Earth. The instinct to play, regardless of age, is common to all human beings, wherever they live on the globe and whatever degree of culture they possess. It constitutes the first way in which we interact with the world. From the very first weeks of life, the child touches, moves, throws, picks up, and manipulates in many different ways, everything around him/her, which is an amusement in itself and, at the same time, a serious job - to use Maria Montessori's words. This could be defined as "serious fun", a fundamental activity for children and not a common pastime that serves to learn, have fun, explore, relate, get rid of nervous tensions, anxieties and emotions such as anger andfear.

According to Johan Huizinga, play in human history responds to two fundamental principles: freedom, whereby a game is first and foremost a free act. Commanded play is no longer play. At most, it can be the forced reproduction of a game (Huizinga, 1938/2002, p. 12) and, at the same time, the principle of pleasure is attached to it. Based on Huizinga's two principles, a third follows: play is autotelic, whereby the end of the play is within the play itself. The game is not ordinary or real life. It is a moving away from that, to enter a temporary sphere with a purpose all its own (Huizinga, 1938/2002, p. 11); it is therefore not difficult to imagine the enormous potential of play where the child experiences a realistic but protected dimension in which s/he can experience reality by pretending to and thus train for real life.

But for some scholars, especially in the relatively distant past, play did not come into existence to educate but only to entertain, to create sociality and participation, for Piaget, Winnicott, Bruner, Mead, Vygotskij, Montessori, to name but a few, it is fundamental for cognitive development and in particular for the strengthening of essential cognitive skills, such as working memory, attention and problem-solving abilities (Diamond, 2013), but also for the child's emotional-affective, motor and social development; a means of learning while having fun.

Playful activity is indeed fundamental for the development of various competencies and skills, primarily social ones. In play contexts, children learn to collaborate, negotiate, and resolve conflicts, outlining the founda-

tions of their social interaction. Social interaction during play promotes the development of empathy and interpersonal relationship management, which are crucial skills for everyday life (Pellegrini, 2009). Numerous studies have also shown that team play increases a sense of belonging and fosters an understanding of the importance of teamwork (Rubin, Bukowski, & Parker, 2006).

Play also contributes to the development of emotional competence. It allows children to explore their emotions in a controlled environment, enabling them to develop skills in emotion management and empathy. Symbolic play, for example, engenders the exploration and understanding of complex emotions and feelings, providing a "safe ground" in which the child can experience and master emotional expression (Hirsh-Pasek & Golinkoff, 2008). Hurwitz (2003) also argues that play helps children develop a deeper understanding of their own emotions and those of others, thereby promoting more positive social relationships and greater emotional resilience.

Motor development is also boosted by involvement in play activities, as physical play encourages children to explore their physical limits and improve their motor skills. Playing outdoor or movement games helps develop coordination, balance, and physical strength, all of which are essential for healthy growth (Ginsburg, 2007). Playful activities also help prevent childhood obesity and promote an active and healthy lifestyle, which is crucial for psycho-physical development.

Playful activity, in various forms, is a powerful tool for facilitating the learning process. Several educational theories and a wide range of research support the use of play as an effective learning tool.

Regarding the correlation between playful activity and cognitive development, the scholars who first critically analyzed this relationship include Jean Piaget and Lev Semënovič Vygotskij: the former argued that play allows children to assimilate knowledge and acquire new cognitive skills as, during play activities, children are exposed to abstract and complex concepts, which they elaborate through practical interaction with their environment; Vygotskij, on the other hand, highlighted the importance of symbolic play as a means for the development of language and critical thinking, stating that

play is the ideal context for exercising and developing higher cognitive skills such as problem-solving and critical thinking (Bodrova & Leong, 2003).

Numerous studies show that executive functions such as working memory, inhibitory control, and cognitive flexibility are strongly influenced by playful activity, in particular by regulated play, which requires children to follow the rules and manage their behavior according to goals. Diamond and Ling (2016) point out that structured play – role-playing or games with rules – supports the development of these functions as it encourages children to plan their actions, monitor results, and modify their strategies. These executive skills prove to be essential for academic success and long-term learning.

In addition to improving executive functions, play has been shown to have a significant impact on the development of critical and creative thinking. Russ and Wallace (2013) point out that imaginative play allows children to explore hypothetical scenarios, develop problem-solving skills, and increase their mental flexibility. The opportunity to explore different solutions and try new strategies without fear of failure provides a safe learning environment that enhances creativity and the ability to think outside the box. Recent studies using neuroimaging techniques have also shown that playful activity affects brain plasticity, particularly in the prefrontal areas, which are responsible for executive functions and emotional regulation (Pascual-Leone et al., 2015). These studies show how playful activity, by stimulating the release of neurotransmitters such as dopamine, creates a favorable neurological environment for learning, improving mood (Panksepp, 2007) as well as the formation of new synaptic connections, which underpin memory and learning (Montgomery et al., 2020).

By stimulating the production of oxytocin – a neurotransmitter that promotes attachment and social relationships – play facilitates learning through a sense of belonging and mutual trust (Feldman, 2012). In this way, play contributes to a more inclusive school environment where children feel supported and encouraged to express their potential without fear of judgement.

2. Playful Activity as a Viaticum for Developing Life Skills in Primary School: Some Best Practices

In the pedagogical and didactic sphere, it is emphasized how playful activity, which has always captured and kept the child's interest alive, can be a tool capable of developing increasingly intentional, focused, and constructive transversal skills, and not only: as Bruner maintained, play is an indispensable training ground for creating new behavioural combinations, it is a combinatory activity that allows the child to see a situation and solve a "problem" in a creative and divergent manner, seeking alternative and never univocal solutions. Play can serve as a vehicle for teaching the nature of a society's conventions, and it can also inform about the nature of convention itself (Bruner, 1962/2005, p. 50).

The role of play in education – first in pre-school and then in primary school – has been recognized progressively as fundamental, since play not only makes learning more enjoyable and engaging but, as mentioned above, promotes the overall development of the child in a holistic and synergetic way, also fostering the development of essential cognitive, social and emotional skills. At this age, play constitutes a particularly important teaching tool since it respects children's learning rhythms and helps them explore complex concepts in an accessible and intuitive way, experiencing and learning skills that are crucial for their growth paths, such as self-regulation, problem-solving and collaboration with peers (Pellegrini, 2009).

Integrating play into education also allows for a less structured, flexible, and more inclusive learning environment, where children feel free to make mistakes and explore new solutions, thus fostering the building of cognitive autonomy (Zosh et al., 2017). Play itself becomes a problem-solving practice, where children learn to manage their cognitive resources and actively seek information to solve problems autonomously; it also lowers barriers, encourages active participation without fear of judgment (Hirsh-Pasek & Golinkoff, 2008), and facilitates the integration of students with special educational needs, providing opportunities for participation as they do not necessarily require advanced language or cognitive skills. Through play, even children with learning difficulties or from disadvantaged socio-economic backgrounds can experience success and improve their self-esteem. An in-

clusive play environment encourages collaboration and mutual respect and facilitates more participative and less competitive learning, where each child can express his or her potential.

Play-based teaching in primary schools is, therefore, particularly effective in fostering the acquisition of transversal competencies (life skills) and in improving student engagement and motivation. According to the World Health Organisation, life skills include skills such as problem-solving, emotion management, effective communication, and critical thinking. These skills, which are essential for personal success, are learned in a meaningful and lasting way through methodologies that foster active and engaging learning, just as in play-based learning. Italy, through Bill no. 2493/2022, and Europe, with the framework of key competencies for lifelong learning defined by the European Parliament and the Council of the European Union (Recommendation of 22 May 2018), place the importance of acquiring these skills at the center.

But how can the development of life skills be promoted?

One of the most effective practices for developing life skills in primary schools is the use of educational approaches that emphasize active learning, in which children are the protagonists of their learning process. Active learning stimulates critical thinking and problem-solving through activities such as group work, interdisciplinary projects, and educational games (Hattie, 2009). For example, role-plays and simulations offer children the opportunity to explore real situations in a protected context, developing skills such as decision-making and conflict resolution. Cooperative Learning is another key best practice for developing life skills. This approach promotes learning through collaboration and teamwork, creating an environment where children learn to communicate, solve problems, and negotiate effectively. Structured group activities, such as collective puzzle-solving or collaborative research projects – where each group member plays a specific role – allow children to develop soft skills such as empathy, active listening skills, and conflict management while also experiencing different forms of responsibility and developing a sense of belonging and collaboration.

According to Blum-Ross and Kumpulainen (2019), digital play activities and immersive technologies, such as virtual reality and augmented reality, also facilitate the acquisition of life skills as they allow pupils to explore new worlds, simulate real-life experiences, and experience complex situations in

controlled environments, allowing them to develop problem-solving, emotion management, and cooperation skills. Bergen (2009) also emphasizes how play creates opportunities for creative thinking and conflict resolution, two fundamental skills in everyday life.

Binkley et al. (2012) demonstrated how digital technologies and serious games – games designed for specific educational purposes – can be used to improve pupils' problem-solving skills by providing them with opportunities to tackle complex challenges in safe environments. Learning through play allows children to explore different solutions to problems while improving their critical and creative thinking skills. Banoğlu and Gümüş (2022) also point out that the integration of digital technologies and gamification in primary school can not only improve pupils' digital skills but also promote the development of soft skills, such as collaboration and problem-solving.

From all this evidence, it emerged that in order to acquire and develop life skills, especially in primary schools, it is necessary to experiment with play through active methodologies such as cooperative learning and gamification (Dreimane, 2021), which, through the integration of game elements in non-game contexts, stimulates pupils' active participation and interest in school activities (Malone & Lepper, 2021) but also serious games.

It was therefore decided, during the 2022/23 academic year, to experiment with innovative approaches based on play-based teaching with the 250 male and female students of the third year of the CdL in Primary Education in Bari, who got involved by creating digital games and more to develop certain life skills in primary school pupils that they would then meet in schools during their direct placement.

The students divided into small groups and divided up the tasks and the topics to avoid duplication. Some were responsible for creating digital educational chips, others for dramatization activities and role-playing games, and others for structured and regulated ludic-motor activities revisiting old street games. To be able to experience them during the direct placement, the students linked these activities to one or more disciplines: they, therefore, created obstacle courses with various difficulties and characteristics to be replicated in the gymnasium or the schoolyard, for geography, technology (coding unplugged), mathematics and physical education. The same routes were then built digitally through Scratch and especially ZaplyCode for plugged coding.

Some groups were responsible for creating real games with recycled materials and fun experiments for the science disciplines, while other groups of students were involved in role-playing, inventing fairy tales for Italian, history, English, and civics and then dramatizing them, as Farné emphasizes, children love theatre without knowing that they are doing theatre, without anyone teaching them how to play a part because it is a spontaneous and natural playful dimension (Farné, 2021, p. 70). The students set up dialogues between historical characters from different eras, and from these dialogues, through storytelling (also digital), they invented fantastic stories that they then dramatized.

All these activities, in the following months, were taken back to the host schools to experience them with the pupils. From the questionnaire, administered to the students at the end of the course, consisting of 20 questions, of which eight were open-ended, although not in an analytical manner, it is necessary to highlight that 78% of the students stated that unplugged coding significantly improved problem-solving in primary school pupils; 85% found that role-playing had a strong impact in developing social skills such as empathy and cooperation; 62% rated obstacle courses as very effective in developing resilience and the ability to cope with challenges; 73% of the students found that creating stories and fairy tales improved pupils' communication and creative skills. Although the data collected through the questionnaire reflects the perceived effectiveness of the university students involved in the experience, it is important to consider the limitations of this study, from the analysis of the open-ended responses, it is interesting to note that many students reported examples where children learned to solve problems in groups, strengthening the ability to cooperate and divide tasks to achieve a common goal; several students, on the other hand, noted that involvement in role-playing and storytelling encouraged children to express their emotions and listen to others' points of view, fostering the development of empathy.

In summary, the data collected show that playful teaching practices, both digital and physical, have played an essential role in the development of certain life skills. Undoubtedly, the best practices created offer valuable guidance for teachers interested in promoting a stimulating, inclusive learning environment centered on the overall development of pupils.

Activating, therefore, an educational-didactic approach to play offers teachers the possibility of initiating for all pupils a pathway to accompanying personal and social growth according to a renewed educational principle that goes beyond the affirmation of both the traditional values of tolerance and coexistence and the new values of recognition of identities and respect for differences (Chiappetta Cajola, 2013, p. 56).

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Playfully Learning About History Through Objects?

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Abstract

The text presents the results regarding the play- or game-based historical learning processes of primary school children in the binational Italian-German research project "Education and Objects. Historical learning processes of primary school children in museum collections." In the project, funded by the German Research Foundation (DFG), groups of Italian and German school children between the ages of eight to eleven years had performative and playful experiences with selected collection objects or their respective replicas in "contact zones" (Clifford, 1997; Wagner, 2010). These interactions with collection objects can be considered anthropologically as "play" – as an individual form of playing – or as a "game" – a social form of playing (see Schiller, 1795/1946; Mead, 1967; Huizinga, 1938/2006; Gebauer & Wulf, 1998).

On the basis of ethnographic participant observation (Breidenstein et al., 2013) and ethnographic videography (Friebertshäuser, 2012) children's approaches to and interactions with collection objects are reconstructed from a didactic as well as cultural studies perspective on performativity and material culture. The extensive video footage from Italy and Germany was coded and interpreted according to Corbin and Strauss' Grounded Theory Methodology (1996). The video data shows that children establish various connections from the present to the past, but also to the future through playful interactions. These can be seen as a preconditions for learning about history and indicate didactic potentials for child-centred, playful historical learning processes in primary schools.

1. Introduction

Based on the Italian-German DFG-funded project "Education and Objects", the present text discusses results on playfully learning about history by primary school children in school-related collections. In the project, Italian and German primary school children aged eight to eleven had playful experiences in performative engagement with selected collection objects. The text empirically shows that children can experience the concept of time in school-related collections. Children "jump" from the present to the past and future, using performative game and play situations in which collection objects in "contact zones" (Clifford, 1997; Wagner, 2010) are sometimes used as props. The findings are relevant for child-centred approaches in primary didactics and show the outlines of a didactics of material culture.

Contact zones were created in in two participating collections: the School Museum – Workshop for School History in Leipzig and the Fondo Pizzigoni in Rome. In both places, collection objects were set up for children to have individual and social experiences that were not subject to the "curricular order of learning" which is often imposed in school contexts and even outside school (Budde & Hummrich, 2016, p. 35). These experiences can be considered anthropologically as "play" as an individual form – or as a "game" – a social form of interacting with objects (see Schiller, 1795/1946; Mead, 1967; Huizinga, 1938/2006; Gebauer & Wulf, 1998).

On the basis of participant observation (Breidenstein et al., 2013) and ethnographic videography (Friebertshäuser, 2012), the project reconstructs children's approaches to collection objects and children's processes of learning about history, using Corbin and Strauss' grounded theory methodology (1996). This methodology is particularly useful in explorative studies for research fields without a solid data basis. Usually, such children's play or game activities spontaneously connect to the "affordances" (Norman, 1999) of objects, i. e. to material object properties that connect to physiological properties and which suggest a certain approach to the object or its use. Socially, games develop performatively from object interactions, which on the one hand lead to individual stagings with objects, and on the other, to joint explorations and mimetic appropriations and learning.

The first part of this text will introduce the project and its theoretical and methodological background and then will analyse the specific playful nature of object interactions using ethnographic scenes from the Italian and German empirical material. The text will conclude with considerations on how such performative play and game situations can be used didactically in multiperspectival teaching about history and the social sciences, and will address further questions.

2. Introducing the Project

The project "Education and Objects" is a cooperation between the Università degli Studi Roma Tre (Prof. Sandra Chistolini) and Leipzig University (Prof. Bernd Wagner), funded by the German Research Foundation (DFG). The project is theoretically grounded in a cultural studies perspective on performativity and material culture. It follows an approach of qualitative educational research on the object-centred learning processes of children (Scholz & Rauterberg, 2004; Wagner & König, 2023). Such learning processes are linked to children's own activities in collecting objects themselves as well as their use and interpretation of objects. Because of this, the use and interpretation of historical collection objects by children has to be brought into focus by the research project with the research design.

1.1 Research Design: Selection of Research Locations

Because primary school children usually make experiences with objects in direct, physical interactions and because they interpret the objects on the basis of their previous life-world experiences, the project focused on historical pedagogical and didactical traditions which used objects for children's learning processes. This is for two reasons: firstly, because primary school children have experiences with school and should therefore be able to recognize such didactic objects on the basis of their own school experiences. Secondly, because such pedagogical traditions would provide a selection of potentially interesting objects as the basis of the project's research. These considerations led to reform-pedagogical traditions at the beginning of the 20th centu-

ry, in particular in the work of the Leipzig Teachers' Association (1846–1933) (see also Taubert-Striese, 1996) and to that of Giuseppina Pizzigoni (see also Chistolini, 2015), a Milanese reform pedagogue who lived from 1870 to 1947. Objects from both traditions are kept in collections, for the Leipzig Teachers' Association, in the School Museum – Workshop for School History in Leipzig and in the Fondo Pizzigoni at the Università Roma Tre for Giuseppina Pizzigoni.

The time span of approx. 100 years between the aforementioned reform-pedagogical traditions and today should necessarily exceed everyday experiences and topical knowledge of today's children. If children thus have experiences with historical objects, i. e. experiences with objects which were not previously part of their life worlds, this can be considered a learning process in its most basic form – i. e. a change from a previous state to a different, new state (Bateson, 1964, p. 283). This leads to further questions of research design: how to capture such learning processes and which objects to choose from the holdings of the collections involved for these processes?

1.2 Research Design: Selection of Objects

As already indicated, both the reform-pedagogical traditions in Italy and Germany have a certain degree of similarity regarding the use of objects in educational settings. Both traditions produced and used of a wide range of objects by teachers and learners; many of which have been collected by the participating museum institutions. In addition, both traditions have an affinity to sports or physical education as well as outdoor education. Objects from these areas were therefore selected to focus on shared aspects despite the differences between the traditions. In cases where historical objects could not be used directly for conservation reasons (e. g. being very small or fragile, such as the original miniature building blocks in Figure 1), the designer Mady Piesold, who was involved in the project, created replicas of the originals. Sometimes, the number and size of the objects was changed in order to facilitate more interactions (see Figure 2). The selected originals or their replicas then became the centrepieces of "contact zones" (Clifford, 1997; Wagner, 2010).

Figure 1 – “Der kleine Schwede” (ca. 1910) historical miniature set of building blocks. Inv. Nr. U8-174-54556 (Photo Schulmuseum –Werkstatt für Schulgeschichte Leipzig). With kind permission of Schulmuseum – Werkstatt für Schulgeschichte Leipzig.

Figure 2 – Contact zone with objects at Schulmuseum – Werkstatt für Schulgeschichte Leipzig with enlarged replicas of the historical collection object “Der kleine Schwede”. Photo by Klaus-Christian Zehbe.

Two test groups of children were invited – one in Italy and one in Germany – to test the respectively chosen objects. This ensured that the selected objects aroused the children’s interest. After these successful tests, the planned contact zones in both participating collections were set up. The Leipzig School

Museum provided a room specifically for this purpose; the Fondo Pizzigoni, a university teaching and research collection, was opened to school children for the first time especially for the project intervention.

1.3 Research Design: Creation of Contact Zones

The term "contact zone" was originally coined by Marie Louise Pratt in 1991 in a decolonial discourse. James Clifford (1997) and Bernd Wagner (2010) adapted the term fruitfully for museums, so that "contact zones" describe a space where fundamentally asymmetrical positions come into contact with each other and relationships can be negotiated, for example between children and adults, but also between the past and present or between children and objects. New relationships and perspectives can emerge from such negotiations. For this reason, contact zones are particularly interesting for learning settings.

In the contact zones that were set up in Leipzig and Rome, children had the opportunity to explore specially designed objects or replicas of historical originals directly. For this to be possible at all, the contact zones had to provide sufficient space for children's activities, which meant that sufficient work and experimentation areas had to be created in sometimes very constrained collection spaces. Figure 3 shows some of the working areas with selected objects in the School Museum in Leipzig.

Figure 3 – Contact zone "Changing Cities", Schulmuseum – Werkstatt für Schulgeschichte Leipzig. Photo by Klaus-Christian Zehbe.

1.4 Data Collection and Analysis

Once the objects had been selected and the respective contact zones set up, data collection began. In the project this meant video ethnographic field research with participant observation. Already during planning and setting up the contact zones, two different camera positions were considered: one for close-up shots of individuals and one for wide-angle shots of groups.

Data collection typically meant taking groups of primary school children on a set course along different stations and objects. These visits of children were videographed while taking field notes on the children's activities and behaviour. This has generated a rich corpus of video material with more than 350 primary school children participating in Germany and Italy. Data was analysed following the Grounded Theory Methodology of Corbin and Strauss (1996), which is particularly suitable for exploratory studies. The following section presents some project results regarding performative play and game situations.

3. Spontaneous Plays and Games with Objects

It is assumed since ancient times that children, when not under supervision of adults or teachers, will spend most of their time "playing". At the beginning of the 20th century this was attributed to an anthropological or physiological "play drive" (especially Buytendijk, 1933). Despite the difficulty of grasping the multifaceted nature of "play" (especially Huizinga, 1938/2006, p. 10; Wittgenstein, 1953, §66), spontaneous actions by individual children or groups of children can be often found in the project's extensive videographed material which exhibit many of the characteristics which Huizinga identifies as features of play:

> Play is a voluntary action or activity, carried out within certain fixed limits of time and space according to voluntarily accepted but unconditionally binding rules, which has its goal in itself and is accompanied by a feeling of excitement and joy and an awareness of "being different" from "ordinary life". (Huizinga, 1938/2006, p. 37)

Figure 4 shows a scene from the project's videographed Italian material of such games which is inspired by historical games with hoops.

Figure 4 – Children playing with hoops based on historical games with hoops at Fondo Pizzigoni, Photo by Klaus-Christian Zehbe

In the scene, children explore ways of using a number of hoops in a span of time which is at their own free disposal. These time spans can be very short, f. e. between different tasks. It is interesting to note that children immediately begin different activities with the hoops in such time spans: some swing the hoops around their arms, others around their hips or neck. Some children explore how hoops return to them with back-spin. Some children appear to have already experience with such hoops, so that in some cases virtuoso actions are performed individually and in front of each other.

Interestingly, such activities in the material usually develop from spontaneous individual play situations with objects (see Wagner, 2017), something that George Herbert Mead describes as "play" or a "play for oneself": "A child plays at being a mother, at being a teacher, at being a policeman; that is, it is taking different rôles, as we say" (Mead, 1967, p. 150). These play situations sometimes develop into social situations, which Mead describes as "games" – as social or community activities – and which are distinct from "play" as described above:

> If a child is *playing* in the first sense he just goes on playing, there is no basic organisation gained. [...] But in a *game* where several individuals are involved, then the child taking one rôle must be ready to take the rôle of everyone else. (Mead, 1967, p. 151)

Mead presupposes certain rules for games, which Huizinga describes as a characteristic of the game, with the players taking on different roles amongst themselves. In the project's material, such rules often emerge spontaneously from interactions with objects. More precisely: the objects provide impulses according to which children performatively develop the framework conditions or rules of the play or game situation. These situations and their rules are partly but not completely determined by the objects or their properties, or their "affordances" (Norman, 1999). According to Norman, affordances are material object properties – such as shapes, colours, textures or degrees of freedom of movable objects that suggest a certain handling – and matching human physiological properties or skills. This can also lead to a reinterpretation of objects, as the following example from the German material shows:

Figure 5 – Child looks at the hole of a cardboard pinhole camera; Schulmuseum – Werkstatt für Schulgeschichte Leipzig. Video still by Keidel, Wagner and Zehbe, 2023.

Figure 6 – Child performs the launch auf a rocket from a portable rocket launcher with a cardboard pinhole camera; Schulmuseum – Werkstatt für Schulgeschichte Leipzig. Video still by Keidel, Wagner and Zehbe, 2023.

As part of a station with a historical pinhole camera, a child looks at the two openings of a replica pinhole camera made of cardboard. The child apparently establishes a connection between the two holes. The connecting axis through the body of the cardboard camera is obviously extended and brought into connection with the elongated shape of the object. By putting the box on the shoulder, the cardboard box takes on the symbolic meaning of a portable rocket launcher – a bazooka. This leads to a short, individual play situation: by pulling the box up from a horizontal position on the shoulder, the recoil of a rocket launch is performed and supported with the sound of an explosion. Later, this play situation is performed again in front of another child and thus "offered" as a game, but this does not lead to a social game between the two children.

Due to this spontaneous, individual, object- and context-dependent handling of the objects on the basis of previous experiences and the spontaneous emergence of play or game situations, such situations are considered here methodologically and operationally mainly under the aspect of performativity in connection with the respective object and its properties or affordances.

The theatre scholar Erika Fischer-Lichte defines performativity based on performative speech acts according to Austin (1962) and a praxeological defi-

nition of performativity according to Butler (1990), which is conducive for such object interactions:

> The term [performativity] designates specific symbolic actions, which do not express or represent something already given, but bring into being that reality to which they refer. It [the reality] is created in performing that action. A performative act must be thought of exclusively as an embodied act.
> (Fischer-Lichte 2013, p. 44)

It becomes clear from the data material that performative actions with objects do not necessarily have to be symbolic actions, as we have shown in the example of the hoops, but can be symbolic in certain contexts and situations, as the case of the rocket launcher shows. This also brings playful, direct object interactions into view, which can be further expanded in school settings from the perspective of performativity. The following example from the German material shows the interweaving of individual playing situations with social games based on object properties.

For the area of sports or physical exercises described above, movement figures were created for the Leipzig School Museum, which are modelled on gymnastics poses from historical photos. The movement figures were offered to children (see Figure 7). Children usually tried them out immediately and freely explored the movement possibilities of the figures. Large movements in particular – such as the splits – are tried out with the figures; it seems that the maximum and, so to speak, superhuman mobility of the figures is of interest. At the same time, possibilities are opened up by exploring the limits and potentials of one's own body as well as that of the figures. This often leads to individual gymnastics exercises: cartwheels, handstands or splits are frequently performed. The pupils are extremely co-operative and engaged, exchanging ideas with each other, proudly showing off their flexibility or imitating each other as well as the movement figures (see Figure 7).

Figure 7 – Group of children experimenting with movement possibilities, Schulmuseum – Werkstatt für Schulgeschichte Leipzig (Video still by Keidel, Wagner and Zehbe, 2023).

However, these performative, physical play and game situations can also be seen in a performative, object-related use of language, as the following transcript sequences from the German material also shows.

Figure 8 – Group of children with historical photos, Schulmuseum – Werkstatt für Schulgeschichte Leipzig (Video still by Keidel, Wagner and Zehbe, 2023).

We offered children copies of historical photos relating to reform-pedagogy (see Figure 8). The photos showed scenes of physical education and outdoor schooling. Through the photos and content-related impulses, children recognize similarities and differences to school today and refer to them, such as the school garden and gardening. A performative word play is created in reference to the photos between the German composite nouns of working in the garden (*Gartenarbeit*) and today's outlawing of child labour (*Kinderarbeit*), here in translation with reference to the composite of working in a recording from 16.06.2023 by K. Keidel, B. Wagner and K.-C. Zehbe (00:03:49–00:03:54):

Sf1: this ((photo)) is cool because they work with the shovels (here on it)
I: it's *working* in the *garden* [i. e. *Gartenarbeit*], isn't it
Sf1: exactly
Sf2: but *working* for *children* [i. e. *Kinderarbeit*] is illegal

Figure 9 – Open air classroom of the 34th elementary school Leipzig Eutritzsch (ca. 1920) / Inv. Nr. F5-027/19-6985 (Photo: unknown). With kind permission of Schulmuseum – Werkstatt für Schulgeschichte Leipzig.

Inspired by the photo of an outdoor school (see Figure 9), the children in the same group then develop a discussion on their own. They think about how the school desks in their own school could be taken outside. They come up with several ideas and become loud and enthusiastic, here in translation of a

recording from 16.06.2023 by K. Keidel, B. Wagner and K.-C. Zehbe (00:04:33–00:05:05).

I: And they have sometimes put such classrooms outside (.) would that be something for you, too?
Sf(several): Yeah:::::
Sf1: (unintellegible)
I: I also actually like this photo
Sf2: But then we would need to bring the tables outside
Sf3: Yeah simply throw them out of the window
Sf(several): Yeah:::
Sf: (unintellegible)
Sf4: Simply out of the window
Sf5: But no, there's this um (.) emergency exit upstairs (.)
Sf(several): Yeah:::
Sf: (unintellegible)
Sf5: No, we (flip the table) and then we all sit on it and then we slide with it down the stairs
Sf(several): Yeah::::::::::::::::::::::::::::::

The discussion between the children is at first about whether an outdoor classroom would still be possible today and what that might look like. Although the conversation is about a possible, near future, a group-related competition of ideas quickly ensues between the children. The discussion is about which ideas on the topic promise to be fun and are therefore interesting for the group. While this discussion quickly jumps from the past to the present, also differences between the past and present are noted.

On the basis of historical photos, differences between the present and the past are often spontaneously discussed. The colours of photos – black and white in the past versus color in the present – are often a first clue that is mentioned in both Germany and Italy. Children then also point to clothing or fashion where differences between the present and the past become visible. Such differences can be elaborated further for pedagogical and didactical purposes in primary didactics.

4. Outlook and Perspectives for Primary Didactics

The research results of the binational project "Education and Objects" indicate that the theoretical approaches of cultural studies regarding material culture and performativity can be developed further for pedagogy on the basis of empirical material. It can be shown through the interpretation of data, that children use performative approaches to collection objects, leading to body-related experiments and social contacts. Through these, a connection to life worlds in the past, present and future is established. These forms of engagement with objects are linked to properties of objects and do not develop freely from play and game situations, although such instances can also be reconstructed.

These findings hint at object interactions of children being not only linked to individual amazement at fascinating object properties. They rather show that there is a fundamentally anthropological dimension in object interactions which should be incorporated into didactic theories at elementary and primary level. A didactic theory of performative engagements with material culture views collection objects as possible occasions for communication and therefore extends the sociological theory of "boundary objects" by Star and Griesemer (1989) to include body-related engagements. The extent to which these can also be used to further develop play and game theories will have to be empirically tested. However, it is clear from the project's material that performativity includes not only language games and body-related forms of engagement, but also "assemblages" (Hahn, 2015) of material objects. The project's empirical material suggests that these forms of engagement can be both age-dependent and characterised by personal forms of playful expression. Further research is required to systematize these findings for didactical approaches.

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Pushing. Typing. Clicking.
Primary School Children Playing with Writing Tools

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Abstract

This article focuses on the writing processes of primary school children in the context of two different writing projects, in which typewriters, tablets and pens were used as writing tools. The children's written work was collected and the writing situations of 32 children were documented on video. In this article, we explore the research question of what potentials arise from playing with pens, typewriters and tablets for learning how to write texts. We draw on three theoretical concepts: the phenomenological understanding of writing as a corporeal activity (Herrmann, 2024a), the appeal of things (Stieve, 2010) and the qualitative dimension of play that lends passion and liveliness to activities (Huizinga, 1938/2017). In terms of research methodology, we are guided by key incident analysis (Kroon & Sturm, 2007) as well as procedures from phenomenological vignette research (Schratz et al., 2012), which we apply to the description of video data. Using key incidents, we show how learning takes place in the interplay between tools, people, and writing, and what potential arises from a play-tolerant or play-oriented didactic perspective for text writing in primary schools.

1. Quality in Writing Processes

In the current discourse on writing didactics, writing fluency and writing strategies are seen as prerequisites for being able to concentrate on content when writing texts and to complete tasks quickly and purposefully (Becker-Mrotzeck, 2021). The fact that writing tools also play a role in the quality of writing processes is being addressed against the backdrop of an increas-

ingly digitalized writing culture: Digital writing tools are examined in terms of their function as assistive technologies for achieving writing goals in the context of digital text production processes (Nolden, 2021). Another starting point is the idea that (digital and analog) writing tools, by slowing down, can open up spaces of experience which are important for the appreciation of writing processes, the promotion of independence, and for insights into the standardised use of writing (Ritter & Ritter, 2020). We build on this idea to explore a further qualitative dimension of writing processes: that of playing with writing tools. Our three research questions are: (1) What potential for learning to write text emerges from playing with pens, typewriters and tablets? (2) What significance does playing with writing tools have for the constitution of writing experiences? (3) How does learning manifest itself in the interplay of tools, people and writing? Based on our findings, we are interested in the potential of a play-tolerant or play-focused didactic perspective for writing (narrative) texts.

2. Theoretical Approaches

We consider the practice of playing with writing tools during the writing process from a phenomenological perspective. This chapter presents the theoretical approaches that guide this view. In relation to play, we focus particularly on its meaning-making dimension (Huizinga, 1938/2017). We connect the significance of writing tools with the *appeal of things* (Stieve, 2010), which we observe in writing processes. We understand writing as a corporeal activity, in which children engage in diverse writing gestures that establish a relationship with the world and with writing itself (Herrmann, 2024a).

2.1 Play

From an anthropological point of view, the unique feature of play compared to other everyday activities is its lack of purpose and function, although play proves to be useful both for the development of children and for living together in communities (Wulf, 2020, p. 4). In addition, there is a quality in play as an activity that is not functionally useful, but meaningful: In play, something "plays" that goes beyond the immediate urge to assert oneself and

gives meaning to the activity of living (Huizinga, 1938/2017, p. 9). Not playing is to be without inspiration. The freedom of play, of daring to do something whose outcome is uncertain, conveys liveliness. According to Huizinga, play is a prerequisite for culture; culture emerges from play, not vice versa. The fundamental nature of play therefore pervades all areas of social life. It is evident in the competitive aspects of legal disputes as well as in the performance of philosophers (Huizinga, 1938/2017, pp. 161–162). It is the passion, wit, pleasure, individuality and freedom in the play that give the activity its zest. It is this zest, the competition and wit that we look for in our data when we search for instances of playing with writing tools.

2.2 Things

From a phenomenological perspective, the things that surround us are not simply "there". We are always in relation to them (Stieve, 2010). Each thing can be used in various ways, they are surrounded by a range of possibilities. They challenge us, telling us "what to do" (Stieve, 2010, pp. 259–260) or what we can do with them beyond conventional use. We know from young children how much they enjoy emptying boxes of pens and watching the pens roll away. Primary school children balance pens in their hands, feel the barrel of the pen (Herrmann, 2024a, p. 148) or the paper as they rustle it (Herrmann, 2024b, p. 238). Stieve (2010, p. 273) sees in the *appeal of things* essential moments of learning - moments from which learning arises. Especially when something cannot be integrated into familiar structures of experience and resists previous order, excess and ambiguity can emerge, creating the conditions for learning that leaves a person changed.

2.3 Writing

We understand writing as a corporeal activity that can be described as an experience based on individual writing processes in specific writing situations (Herrmann, 2023b). Writing experiences emerge in the interplay between the subject, materials, space, script, others, imagination, and the developing text (Herrmann, 2023a; Healey & Merga, 2017). In order to adopt this perspective, the phenomenological concepts of *activity, corporeality, responsiveness, experience,* and *subject* are important in relation to their significance for writing.

The term *activity* expresses the fact that writing is an unintended event that follows its own structure, which determines the act of writing (Dehn et al., 2011, p. 223). This means that a text can indeed be planned conceptually by collecting and organizing ideas and aspects (Dehn & Schüler, 2015, p. 6). However, the formulation and actual writing of the text on paper develop its own dynamic, which cannot be fully captured by the term action.

The term *corporeality* refers to the body as we live through and with it (MerleauPonty, 1966). Those who read do not see themselves reading, do not see themselves and the text, often do not even see the text. Whoever reads follows a thought, understands or imagines something (Schüler & Herrmann, 2024, p. 42). The same applies to writing. In writing situations, the subject reveals itself as something that produces and brings forth. Following a thought and reading one's own text creates traces on paper or in the software (Millutat, 2017). These traces, like the writing tools as things, generate *responses* from the subject (Waldenfels, 2016), some of which manifest as further traces in the written work. Describing this process and the *experience* that arises within is the focus of phenomenological writing research.

3. Methodological Background

Phenomenological research follows a "style" (Merleau Ponty, 1966, p. 4) that is expressed through particular attitudes. One of these attitudes is opposed to the methodization of research: The more strictly the scientist follows his method, the more rigorously the world is viewed and screened under specific aspects. He inspects, examines, registers, observes. The artist, on the other hand, pays attention to the fruitful new and allows himself to be surprised (Bräuer, 1966, p. 33). In phenomenological description, one aim is to describe precisely how an experience reveals itself in its development, meaning the accurate and exhaustive reproduction of the processes that take place within the consciousness of the learning child itself, even in various details of the experience (Fischer, 1972, p. 86). On the other hand, the corporeality of the researcher prevents access to the child's real experience, which remains inaccessible. Therefore, one can only speak of an approximation to the experience of others, which depends on a *subjective engagement*. The term "Anschauung"

(attentive observation) has been coined. It refers to a specific form of scientific observation as an attentive perception and the awareness of that perception (Reh, 2012, p. 22). This attitude is adopted in the presented study during the analysis of video recordings of children engaged in writing.

4. Data Corpus and Methodological Approach

This article focuses on the writing processes of primary school children within two different writing projects in which writing tools such as pens, typewriters, and tablets were used. In three writing workshops conducted at the *Primary Education Research Lab* of the *Technische Universität Dresden* (Herrmann, 2023a) as well as in two teaching projects as part of Katharina Egerer's ongoing dissertation study *Click – Clack – Bing: Die Schreibmaschine im zeitgenössischen Bilderbuch* (Click – Clack – Bing: The Typewriter in Contemporary Picturebooks), a total of 88 children wrote in response to narrative cues (Schüler, 2019), using different writing tools. The children's works were collected, and the writing situations of 32 children were documented on video.

Based on our research questions, we selected specific video recordings from the collected material. We focused on situations in which the children interacted playfully with the writing tools in ways that appeared to open up their own distinctive spaces of meaning. For the chosen recordings of writing situations, we wrote videovignettes. By video vignettes, we mean textual forms created from the viewing of video recordings, following the approach of phenomenological vignette research (Herrmann, 2023b; Agostini et al., 2024). In this article, we use videovignettes as the core of *key incidents* (Kroon & Sturm, 2007). *Key incidents* are significant points in the data that indicate overarching patterns and are designed emblematically. Our presentation of examples follows this emblematic design in three parts: heading and context (1), videovignette (2), and interpretation (3).

5. Analyses

The following are three *key incidents* on playing with writing tools. Each focuses on the play of two children with the typewriter (Figure 1, A), with the pen (Figure 1, B) and with the tablet (Figure 1, C).

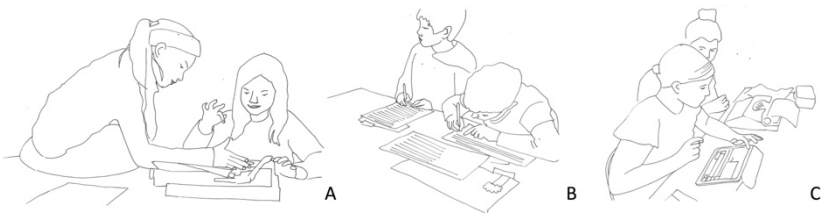

Figure 1 – Children playing with writing tools. Copyright 2024 by Katharina Egerer

5.1 Playing With the Typewriter – Alex and Enja – Pretended Play

5.1.1 Context

In Katharina Egerer's writing project at a primary school in Dresden, Alex and Enja (Figure 1, A) choose a writing task based on the book "Der unglaubliche Bücherfresser" [The Incredible Book Eating Boy] (2007) by Oliver Jeffers. The task is to write a text that the book-eater Henry simply cannot resist. The two girls write their text as a text in a book for the protagonist Henry, who loves to eat books. They write: "Dear Henry, we have a three-meter-long book in red for you." They use a typewriter as a writing tool. When writing with a typewriter, type levers, which carry the letter stamps, swing out from a type basket. The letter stamp strikes the inserted paper with an inked ribbon in between, leaving an imprint.

5.1.2 Description

Enja gently moves her fingers over the keys of the typewriter. She keeps two keys pressed. Slowly, she presses even further, even deeper. Two type levers fold out of the type basket, move slowly forward and stop in mid-air. Enja watches their slight movements (Figure 2, A).

Suddenly she releases both keys. With a metallic clatter, the letter stamps disappear back into the type basket. Alex sits bent over the typewriter next

to Enja on the table. She presses the Shift key. Enja looks at Alex's hand on the Shift key. Enja grabs Alex's hand and lifts it away from the Shift key (Figure 2, B).

Alex leans backwards away from the typewriter. She asks, "Well, what else would you write?" [22:03] While Alex crosses her legs, Enja wildly and quickly presses different letters with both hands so that the type levers rustle in the type basket (Figure 2, C).

Alex raises her hand and guides it toward the type basket as if to prevent the type lever from reaching the paper (Figure 2, D).

Enja pauses and smiles: "Well, 'Dear Henry', that sounds funny." [22:07] Then she says quietly, "Attention" [22:08]. She presses a letter key quickly and firmly with her right index finger. The letter stamp hits the palm of Alex's hand. Enja laughs. She presses another letter. Both girls laugh (Figure 2, E).

Alex turns her hand. She formulates an alternative writing idea: "Dear Henry, would you like to eat a book?" [22:19] Enja places the fingers of both hands back on the keyboard and types softly, causing the type levers to rustle softly. The letter stamps hit Alex's hand. Enja runs her hand over the whole keyboard (Figure 2, F).

She comments on Alex's writing idea, stretching it out: "No - n. 'Dear Henry', that sounds strange, do you know why? Because we're supposed to write a text that's in a book, and the person who invented the book doesn't know that it's for Henry" [22:26].

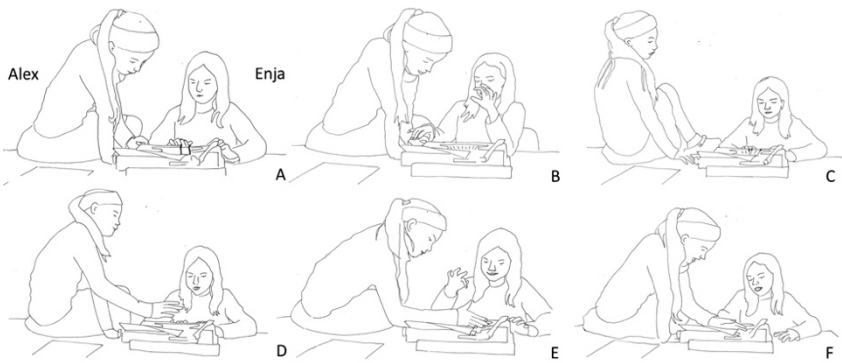

Figure 2 – Alex and Enja playing with the typewriter. Copyright 2024 by Katharina Egerer

5.1.3 Interpretation

In this scene, the play is a tactile exploration of the typewriter and its keys as a pretended play of writing. Enja first explores the range of motion of the letter keys and the protruding type levers by slowly pressing them. Alex explores the Shift key. This exploration goes hand in hand with negotiating a common writing idea. When Alex asks: "So, what else would you write?" [22:03], Enja "plays" with writing. She taps passionately on the keyboard, but not a single type lever comes out of the type basket and ends up on paper. This "as if" play expresses something: Enja wants to write, but not what Alex suggests. Alex takes the risk of putting her hand in the type basket. She sees and feels Enja typing as the type lever hits her hand with the letter stamp. With an "Attention" [22:08], Enja begins this new kind of play: tapping letters on Alex's hand. Both girls laugh and their conversation becomes more relaxed. Then they are completely absorbed in the joint planning process again. They continue to play, now with fixed roles: Enja types as if she were writing, and Alex offers her hand over to the gentle strokes of the letter stamps.

The scene is full of energy, moving dynamically between the girls, the typewriter, and the process of planning their text. The typewriter is directly involved in the girls' conversation about their unwritten text. They are in contact with it and express themselves by playing with it. This expression is created through gestures, not through written text. What initially appears to be an exploration of the keystroke turns into pretend writing and then seems to become a different kind of play – a game with fixed rules: Enja is allowed to type, but not to write. This opens up a lively and vibrant exchange of ideas about the shared text. Playing with the typewriter gives this exchange a momentum and a certain tension which constantly pushes towards real writing. This moment of typing, but not writing, creates opportunities for learning:

1. Space to formulate: Both girls can first think about and articulate what they want to write.
2. Space for reflection: Enja is given space to reflect on why "Dear Henry" seems strange to her as the beginning of a book. This also allows Alex to gain a new perspective on the target audience of books.
3. Becoming familiar with the typewriter: Both girls become familiar with the typewriter as a writing instrument through their tactile experience with it and their constant observing of it, and implicitly learn how it works.

4. Insight into writing processes: Being able to type, but not to write, gives both girls an important experience about writing processes. They learn that the planning discussion is part of collaborative writing. For Enja, it may feel like writing when she presses the keys, just like in real writing. And this reveals a special feature of using the typewriter: with another writing tool, the pen or the tablet, this experience of writing and yet not writing would not be so easily possible.

Playing with the typewriter does not stand alone. It is (seriously) connected to the writing process to be mastered and supports it through its dynamics and direct reference to the writing tool. In doing so, the play goes beyond the conventional use of the typewriter and does not follow any method for planning texts. In this unique quality, it reveals to us the potential of the typewriter for writing texts, which we might never have realized otherwise.

5.2 Playing with the Pen – Toni and Nicolai – Writing Without Looking

5.2.1. Context

In Franziska Herrmann's writing project at the Primary Education Research Lab at Technische Universität Dresden, Toni and Nicolai (Figure 1, B) each write their own story about a little wolf who has experienced something terrible and receives help (Herrmann, 2023a). Before writing, they collected ideas as a group and created a drawing of what might have happened to the little wolf. The drawings lie on the table in front of them. While Toni is writing his first draft text, Nicolai is already finalising his text by copying it through.

5.2.2 Description

With their heads bent low and close together, Toni and Nicolai write their texts (Figure 3, A).

Both are writing with their right hand, each keeps their left index finger close to the text. Their eyes follow what they are writing. Their pens move swiftly across the paper. Suddenly, Toni straightens up. His gaze drifts out into the room, but his pen continues to write as if on its own (Figure 3, B).

Toni turns to Nicolai and says: "I wrote 'a' (in German: 'ein') without looking" [00:21]. Nicolai looks at his own text and does not respond (Figure 3, C).

Toni looks for the spot in the text where he can continue writing. After finding it, he glances around the room as he writes.
He looks briefly at the paper.
Then away again.
At the sheet.
And away again.
Back to the sheet.

He turns to Nicolai and says: "I can write this without looking!" [17:43]. Nicolai has just finished writing the sentence: "They called the vet." and started a new sentence at the end of the line: "Then." He turns slightly left to continue writing the sentence he started on the new line. Then he looks at Toni's text and asks: "What?" [17:45] (Figure 3, D).

He looks at Toni's hand. Toni swings his pen in the air above the spot in the text : "Well, here's 'tree', and 'a'" [17:46]. Nicolai responds: "I can do that too" [17:50]. With a cheerful expression, he stretches his arms toward his draft sheet. A blank, white, rectangular area remains on it, where nothing has been written yet. He holds the edge of the page with his left index finger. His gaze directed straight ahead into the room, not at his page. With his right hand, he writes three letters with sweeping movements: "ein" (Figure 3, E).

Now he looks down at the page, smiling. Toni also looks curiously at what is being written (Figure 3, F).

Nicolai remarks: "Very big, hm" [17:51]. Sophie, the research student sitting with the boys at the table, whispers quietly to Toni and Nicolai: "You're doing great. But now keep writing your story!" [17:53]. Nicolai whispers back: "Yes, I'm almost done" [17:55]. He looks at his text and pauses for a moment. Suddenly he whispers "a" [18:04] and rushes to the page. He writes: "a few minutes later the vet arrived." Nicolai revises his draft while copying "(His friends came and called the vet. The vet bandaged Rolf's leg). "Now he writes: "His friends came. They called the vet. Then a few minutes later the vet arrived. [...] The vet bandaged Rolf's leg."

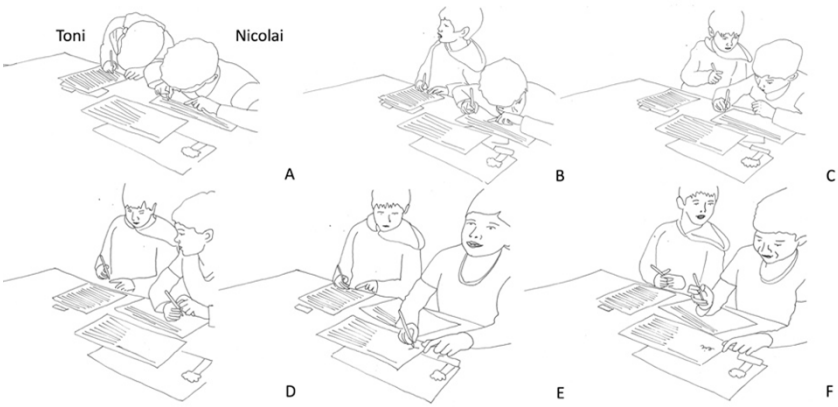

Figure 3 – Toni and Nicolai playing with the pen. Copyright 2024 by Katharina Egerer

5.2.3 Interpretation

In this scene, play manifests itself as demonstration and imitation. An impulse is captured and transformed into something new. Toni discovers by chance that he is writing something without looking at it directly. This arouses his interest. Toni finds it so exciting that he immediately wants to tell his neighbor Nicolai. But Nicolai is busy copying his text and doesn't react. Toni now begins to play with this new way of writing. He deliberately looks away from the text and writes without looking. Then a glance down to check. Then he looks away again. He tries something out, explores the limits of writing without visual control. However, this playful writing is not outsourced into a break. Nicolai's text continues to emerge as he explores the possibilities of looking away. Toni plays in the middle of the act of writing.

When Toni talks to Nicolai for the second time, Nicolai's curiosity is awakened. He breaks away from the text he has been so absorbed in. He asks: "What?" [17:45] and says: "I can do that too" [17:50]. Unlike Toni, he moves the play aside. He uses an empty space on the draft sheet to try out writing without looking. His neatly copied text is initially untouched by the play. He copies Toni's word on the draft sheet in large letters. Looking straight ahead and with a cheerful expression on his face, he boldly writes with sweeping movements: *"a"* (in german: "ein"). But what happens next? The two boys are interrupted while they are playing. The research student reminds them to focus on their writing. Then Nicolai has an idea. Even though the playful inter-

ruption of his copying only lasted a few seconds, he now changes his original text and writes: "a few minutes later the vet came."

Things are surrounded by a realm of possibilities (Stieve, 2010, p. 259 f.), including pens when writing. According to Stieve, it is the *appeal of things* that makes learning possible. We rarely realize that writing doesn't solely involve our hands. In the middle of writing a text, Toni shares this insight - unimportant in the context of the task of writing a story, but significant. Toni wants to know more about this and is now specifically trying to write without looking at his draft page. He gets a bit further without looking, but then he has to look at what he has written. At this moment, it's not about the story, it's already made up, nor is it about the wording or the spelling. It's about the writing itself, about the particularity and the condition of this activity that creates the text on paper.

When Nicolai finally joins in, the play becomes bigger and deserves its own space on paper. But even at this moment, text is being created, Nicolai's story is growing. The subplot on the extra sheet expands the text, enriches the story. When the play is over, Nicolai writes about time that has passed: "a few minutes later". This phrase does not appear in his first draft (Herrmann, 2023a, p. 190).

This serendipitous learning shows that there are things to be learned about writing that we might feel are not worth teaching; perhaps because we take them for granted or perhaps because we do not yet know them. It also shows that we don't have to stage everything, not even play for the sake of learning; sometimes, it finds its own way.

5.3 Playing With the Tablet – Ella and Kate – Discovering a Foreign Text

5.3.1 Context

As part of Katharina Egerer's writing project at a primary school in Dresden, Ella is sitting at a table with Kate. Kate is seated at a typewriter, while a tablet stands upright in its case on the table in front of Ella (Figure 1, C). The app Hanx Writer (Hitcents.com, Inc., 2017), a digital simulation of a typewriter, is open on the tablet. For the past ten minutes, Ella has been typing a text about the picture book "Agatha Christie" (Sánchez Vegara & Munsó, 2016/2019).

5.3.2 Description

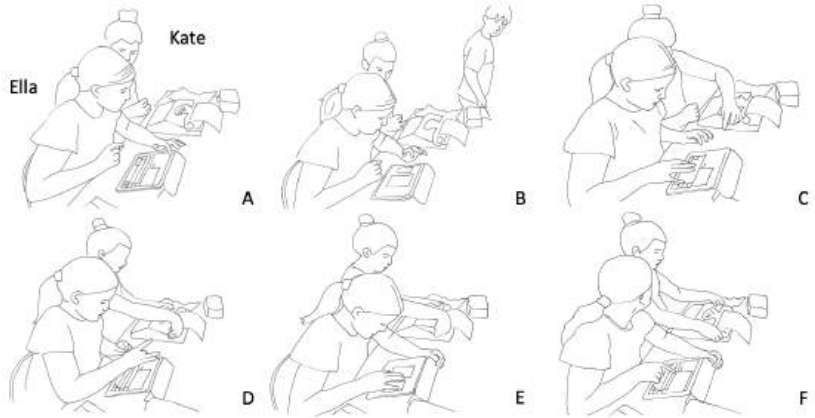

Figure 4 – Ella and Kate playing with the tablet. Copyright 2024 by Katharina Egerer

Ella claps her hands and says loudly: "There, I'm done!" [09:47]. She touches the smooth outer edges of the tablet on the right and left and examines what she has written. After a moment of looking, she nods, and quietly confirms: "Yes, I'm done!" [09:51]. She looks around the room and stretches her right arm upward. Turning to her neighbor Kate, she smiles and announces: "I don't know how to save this." [09:56] She places her left arm on the table and taps a button in the top left-hand corner of the tablet with her index finger (Figure 4, A).

The screen changes. Ella makes a high-pitched sound: "Uah!" [10:00]. While the typewriter keyboard with the clamped sheet of paper was visible a moment ago, two white pages with text in typewriter typeface now appear side by side. The right-hand page is larger than the left and shows Ella's text. The left-hand page is smaller and displays the text of another child who is passing by the girls' table at that moment (Figure 4, B).

Ella touches the larger, right-hand page with her right index finger and drags it further to the right across the screen. The left-hand side enlarges with this movement. It is now the same size as the right-hand page and then grows even larger. Ella slides the pages back to the left to restore the original view. Kate, sitting beside her, has observed Ella's backandforthsliding of the texts and points her index finger toward the text on the left (Figure 4, C).

She says, "Wait, I think that's..." [10:02]. Ella taps on the right-hand text page. The view changes again: her text appears as if set in a typewriter with a keyboard, while the other child's text disappears from view. Ella tilts her head slightly towards Kate and says: "No, Ben" [10:06]. She touches a button on the tablet and the text scrolls up. Below the text she has written so far, she types delicately: "*by Ella*". She then presses the button in the top left-hand corner of the tablet. In a determined tone, she says: "Like this!" [10:15] (Figure 4, D).

The view changes, and the two white sheets reappear on the screen. Ella swiftly moves the right-hand sheet with her own text to the right, enlarging the view of the left-hand sheet. She leans her face close to the device and scrutinizes the other person's text (Figure 4, E).

She taps on it with her index finger, and Ben's text now appears enlarged as if it's clamped into a typewriter. Ella points to the text with her index finger and says: "Look, Ben" [10:18]. Upon noticing that Kate doesn't respond, she looks directly at her and says again: "Here, Ben" [10:20] (Figure 4, F).

Ella taps the button again to change the view. She drags both texts far to the right and far to the left, as if searching for more texts in the app. She then grabs the device with both hands and stands up.

5.3.3 Interpretation

The scene begins with Ella finishing her typing on the tablet. A visible and audible clap marks the end of her typing activity. She picks up her tablet as if it were a sheet of paper and reviews her text. Then she confirms: "Yes, I'm done!" [09:51]. But how do you finalize a digital writing process? You might put a sheet of paper aside, hand it in, or file it. Ella already knows that she now needs to save her text. However, she doesn't know how to do this, so she waits for the teacher to help her. Then, something unexpected and unintended happens: Ella notices a button and taps on it. Her astonishment suggests that she didn't know where this tap would take her or what view she would be presented with. On the one hand, this tentative tapping demonstrates her confidence that the tablet offers many possibilities, that it can reveal something new. On the other hand, it also shows a risk that Ella is taking, because her typed text could have been deleted or unintentionally changed by this action. However, something else happens, something that Ella continues to explore in her writing. The view changes, and she can now see her text as a

whole, presented on a page. But not only that. Another text becomes visible, one that was previously written and saved on the tablet by another child. Both texts appear side by side and can be resized in relation to each other by sliding. Ella performs this sliding in a fluid motion and seems to have an important realization while comparing the texts. She returns to the editing view, where she can edit her text, and writes her name beneath it. Her neighbor Kate has become curious and makes a guess as to whom the other text could belong. Ella knows the answer: it's Ben. She knows this because she has read his name under his text; he wrote it there himself. Later, she shows it to Kate, "Here, Ben" [10:20].

There is something significant, a serious realization, in this play with different views, the gentle typing and shifting of text sizes: Ella's text reveals itself as one text among others. In this context, labeling her authorship becomes meaningful.

Playing with the tablet in an unplanned way enables this accidental discovery, which is only possible in this form with a digital medium. Texts can be saved invisibly, reopened, and made visible again. They can be arranged in different sizes, allowing them to be viewed and focused upon.

In this example, learning appears as a moment in which many things become visible at once. The view of both texts, which was not didactically intended in this situation, shows Ella her text as one among others. Through Ben's text, she realizes that her text is not yet complete: only when her name is added can others clearly know that she is the author. At this moment, Ella also learns something about how the app works: the written texts are visible to others, and her text could also be viewed and read by other children.

6. Potential for a Play-Tolerant and Game-Oriented Didactic Perspective

The example of Ella shows how allowing and tolerating trial and error enables children to make discoveries that go beyond the didactic intention of the task, such as engaging with a picture book through writing. They learn something about writing itself. In addition to familiarizing themselves with writing tools, the children gain important insights into writing text: by inter-

acting with the typewriter, Alex and Enja experience that planning and formulating are integral parts of writing, even if no text appears on paper at that moment. Toni observes the visual aspects of writing, and Nicolai develops a new writing idea through play, which enriches his text.

Playing with the writing tools was not the intention of the writing tasks, but these tasks provided the space for such exploration. What Ella and Kate discover through the functionality of the app is a fundamental principle of writing: texts emerge among texts and offer inspiration to others (Dehn et al., 2011). Ella experiences this directly when she sees Ben's text in the app, which she immediately uses as an example.

All three examples demonstrate the value of something that might not be planned and yet can spontaneously happen. These experiences are made possible by allowing children to try out and use the writing tools beyond their intended use. From a didactic point of view, this means that it is essential to tolerate playing with the writing tools to avoid hindering discoveries. This approach is closely linked to trust in the children's ability to apply their discoveries to text writing, a trust that is both necessary and possible.

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Play and Literacy in Literacy Centres: Language and Literacy Development in a Literacy-Rich Environment

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Abstract

For children, play is the preferred way of exploring and understanding the world. However, while educational games are often used to foster literacy skills and are well-established in the field of child literacy, the role of play in literacy education is often underestimated. In this regard, Literacy Centres offer children an opportunity to explore literacy in a playful manner.

1. Play and Literacy

The relationship between play and literacy has been a significant area of research for several decades, particularly within English-speaking academic traditions. One of the most influential figures in this field was James Christie (1991), whose pioneering work shaped the way we understand the role of play in early literacy development. His work helped to establish a foundational understanding of how play can facilitate literacy skills, and it has since become a core area of early childhood education research (cf. Davidson, 1996, Owocki, 1999, Roskos & Christie, 2001; Roskos & Christie, 2007; Han & Johnson, 2021).

James Christie emphasized that dramatic play is an effective way to enhance children's literacy development, as it provides opportunities for children to use language in new and creative ways, expanding their vocabulary and storytelling abilities. In dramatic play, children take on various roles and

enact different scenarios, often using props or actions to represent real-world objects and events. This type of play encourages children to use language in meaningful contexts, which in turn helps them practice new words and phrases. For example, when children play "store" or "doctor," they are exposed to specific vocabulary associated with those roles, such as "cash register," "prescription," or "patient." These activities not only enhance their understanding of words but also foster children's ability to create and understand narratives. Children actively engage in shaping the role. In dramatic play, they internalise the character they portray, living out the role within the safe confines of fiction, and can experiment with it. According to Vygotsky, this construction of a social context allows children to perform at a higher level in play than they could alone. In other words, in dramatic play, children act within their zone of proximal development.

The term emergent literacy refers to the early stages of literacy development, where children begin to engage with written language even before they can read or write conventionally. Emergent literacy is not limited to learning the alphabet or phonics but encompasses the broad range of skills, knowledge, and attitudes that children acquire as they begin to interact with their sociocultural environment, especially in the context of literacy-rich environments (Neaum, 2021).

The development of emergent literacy unfolds in stages, with children first experimenting with the basic concepts of print, such as the direction of reading and the distinction between letters and pictures. At this stage, pretend reading and writing are common. Pretend reading occurs when children mimic reading by "reading" aloud from a book, even though they may not yet be able to decode the words (Purcell-Gates 2001; Wittmer 2021; Strozyk, 2023). This act of pretending is a critical early literacy milestone, as it reflects an emerging awareness that reading has meaning and can be an enjoyable activity. Similarly, children engage in pretend writing, where they may scribble on paper, attributing meaning to their marks, such as saying "This is my letter to Grandma!" These early attempts are symbolic, as children use marks to represent writing before they have mastered the formal writing system. These practices are typically considered pre-literal or symbolic strategies, as children experiment with the idea of writing and reading without yet knowing the full structure of language.

Morrow (1990), like other researchers, argued that dramatic play could significantly contribute to the development of emerging literacy skills in young children. Specifically, she suggested that the creation of storylines and the use of a more sophisticated vocabulary during dramatic play could enhance textual development. In line with this, Morrow, along with Neuman and Roskos (1991; 1992; 1997), sought to introduce authentic materials and initiate realistic reading and writing activities within the context of dramatic play.

2. Thematic Role Play: The Literacy Centre

Literacy Centres are intentionally designed spaces within early childhood education that integrate play and literacy development. While these Centres are often seen as reading and writing areas, they more comprehensively encompass role-playing scenarios, such as running a store or acting as doctors, with authentic literacy materials like books, writing tools, and visual aids. This immersive environment fosters language and literacy development by situating learning in real-world contexts. Purcell-Gates' concept of Authentic Literacy aligns with this framework, suggesting that literacy learning is most effective in meaningful contexts (Purcell-Gates, 2001; Duke et al. 2006). Research indicates that, in Literacy Centres, children engage in functional literacy tasks, deepening their understanding of the role of language. Children frequently use the term "real" to describe their experiences, often saying that the play in the Literacy Centre felt "real" – meaning it had an authentic quality.

A literacy centre is guided by methodological principles and a flow chart. Kammermeyer (2007) and subsequently Großer & King (2008) distinguish three phases: preparation, realisation and finally, reflection. The phases before and after the actual play phase are particularly important and can be organised in different steps (see Table 1).

Table 1 – Process flow of a literacy centre (adapted from Großer, 2011; Großer & King, 2008; with slight modifications)

Preparation	1. Choice of theme or subject of the dramatic play activity. 2. Introduction and Exploration of the Topic: - Communicate with and involve parents in the process. - Observe practical applications and contexts related to the topic. - Gather relevant materials to support the role-play activity. - Set up the Literacy Centre, ensuring it is equipped with appropriate resources. 3. Development and Practice of Scripts: Create scripts for role-play.
Realisation	4. Conducting Dramatic Play: Children engage in play based on the chosen topic. - Adult involvement can promote learning, but it must be balanced.
Reflection	5. Reflection with Children: Discuss the experience with children to promote awareness of their learning. 6. Reflection with the Educator Team: Reflect collectively on the activity and its outcomes. 7. Material Review: Assess the materials used. 8. Linking to Broader Educational Goals: Connect literacy activities with other early childhood learning objectives.

2.1 Preparing a Literacy Centre

During the preparation phase (see Table 1), educators collaborate with the children to select a theme ("topic selection"). The theme should stem from the children's real-world experiences and be meaningful to them. It may emerge organically, for example, when children explore the professions of their parents (Großer, 2021). This approach can lead children to engage in unique Literacy Centres, such as an architecture office (Sörensen, 2009). Alternatively,

Themes can be initiated externally. Common Literacy Centre topics include bank, post office, veterinary clinic, hair salon, restaurant, bakery, ice cream parlor, etc. (see Table 2). The key in this phase is ensuring that the children actively participate in the theme selection process.

Once the theme is chosen, the next step is to connect it to each child's personal life. Through dialogues with the children and shared reading of books, prior knowledge, experiences, and concepts can be activated, sparking conversations among the children. Parents should also be informed about the upcoming Literacy Centre.

Following this is the exploration phase. Visits to real-world environments allow children to observe various professionals – such as veterinarians, receptionists, florists, and mechanics – in their daily work settings. These professionals explain their tasks, and children observe them engaging in a range of reading and writing activities. Children become aware of literacy practices that may have previously gone unnoticed in their everyday lives, which they later integrate into their play (Großer, 2011). They learn, for instance, that patient records are maintained, bills are issued, appointments are scheduled, order lists are followed, and incoming goods are verified against delivery slips. Through these experiences, children are introduced to a "world behind the world," expanding their knowledge of real-world processes.

After the excursions, a reflection session is held where children recall and discuss their experiences and observations. As Großer and King (2008) emphasize, it is essential that the children's suggestions are recorded on posters, symbolically documenting their contributions. The quality of the play benefits from careful planning and debriefing of these explorations.

As the play takes shape, it is useful to give the Literacy Centre a name. Children gather name suggestions on a poster and vote democratically. During this process, children engage in argument-based discussions, actively listening, responding to others' suggestions, and compromising to find a consensus. For instance, the chosen theme of "gardening" could result in the Literacy Centre being named "Flower Paradise."

Based on impressions from the explorations, the materials for the Literacy Centre are gathered and set up. These materials serve as "props" designed to encourage reading and writing activities. The materials should be authentic, appropriate, and useful (Neuman & Roskos, 1991). Many such materials can

be brought back from the excursions. Parents are also invited to actively support the Literacy Centre by providing everyday materials, thereby fostering thematic conversations between children and parents.

The children's involvement in selecting the materials for the Literacy Centre is key. Children take responsibility for their project from the very beginning (Großer & King, 2008). While extensive preparation lists are available in the United States, which include complete inventories for specific play themes (Cox & West, 2004; Walcavich & Bauer, 2007; Campo-Stallone, 2008), such lists should primarily serve as suggestions for educators. The critical factor is how children in a particular group relate to a theme and decide what to add based on their own ideas. The children should discuss, weigh their options, and make collective decisions – whether it is about which dishes belong on the menu, how much a meal should cost, or who will take on which role.

After collecting and creating the materials, the Literacy Centre is set up, a play area equipped with props and play inventory. A practical approach includes agreements with the children on the rules for the Literacy Centre and how it will be used. Morrow (2002) recommends a maximum of 5–6 children at a time, with organization facilitated by the daily schedule and activity cards.

Useful examples of Literacy Centres can be found in the reports by Großer (2021), Großer & King (2007), and Sörensen (2009). These contexts can represent various aspects of daily life, such as a bank, a store (e.g., supermarket, bakery, or sporting goods shop), restaurants, a cinema, a post office, a library, or even a construction site or workshop.

The following examples illustrate how these contexts can be linked to relevant materials and reading/writing activities.

Table 2 –Possible Materials and Activities for a Themed Role Play

Context (literacy practice)	Possible Materials (literacy props)	Possible Activities (literacy events)
Bank	Deposit slips, bank or credit cards, account statements, fee schedules, savings books, calculators.	Filling out deposit slips, checking account statements, calculating balances, requesting credit cards, planning savings goals, confirming payments, taking notes on banking transactions.
Ice cream parlor	Ice cream menu, counter with various ice cream scoops, price tags, labels for ice cream flavors, order forms, customer loyalty cards, paper napkins with branding, ice cream cone wrappers, promotional posters.	Writing customer orders (cone or cup choice), marking favorite flavors on a menu, filling out order forms, checking prices, writing down customer preferences, creating an ice cream shop menu, labelling new ice cream flavors, and taking inventory. Creating promotional signs for special offers.
Pizzeria	Menus, order slips, reservation book, kitchen tickets, ads, customer feedback cards, notepads, receipts	Taking orders, preparing bills, designing menus, creating shopping lists for ingredients, managing guestbooks or feedback forms, noting customer special requests, planning reservations.

Context (literacy practice)	Possible Materials (literacy props)	Possible Activities (literacy events)
Veterinary Clinic	Stuffed animals (representing pets), stethoscope, medical forms, appointment book, prescription pads, informational brochures on pet care, vaccination cards, X-ray images, examination tools, computer, and signage for clinic hours or treatment rooms.	Filling in the appointment book, noting pet names and conditions, documenting symptoms, treatments, and vaccination records, providing brochures about pet care, writing receipts, filling out insurance forms, and maintaining patient files.
Hairdresser	Hair styling magazines, price lists, appointment planner, scissors, rollers, client cards, etc.	Scheduling appointments (written confirmation), noting specific hairstyles or treatments, reading catalogs, creating invoices or receipts,
Bakery	Price list for bread and pastries, order forms, delivery calendar, recipe cards, shopping lists.	Writing down customer orders, planning orders (e.g., for seasonal events or holidays), creating shopping lists, preparing recipe notes, pricing items, labeling baked goods.
Construction Site	Construction plans, tools, material lists, safety guidelines, construction logs, blueprints	Reading construction plans, following safety guidelines, filling out construction logs, writing material lists, labeling tools and materials, creating inventory lists, noting the completion of construction phases, updating blueprints with modifications, and tracking progress through checklists.

These examples illustrate not only the use of everyday materials in a Literacy Centre but also the link between reading skills, writing skills, and practical applications in a contextualized setting.

In addition to the physical setup of a literacy Centre, it is essential to create a social environment that promotes language learning, where children are exposed to language patterns they may not encounter in their everyday communication. Literacy Centres provide opportunities for children to engage in structured dialogues – scripts that reflect real-world situations. For instance, at a restaurant, a typical interaction might be:

> Hi there! Would you like something to eat? Can I get you a menu? Sure, thanks. – What pizza would you recommend? – Our house special is really popular. Everyone loves it! – Sounds great! I'll go with that. Thanks!

Similarly, at a veterinary clinic, children might role-play this dialogue:

> Mrs. Müller, hi! What seems to be the problem with your rabbit? – It's stopped eating. – Oh no, how long has this been going on? – About a week now. – Alright. Please give it two drops of this medicine once a day. I'll write you a prescription. – Thanks so much, doctor!

These interactions introduce children to new vocabulary and offer them the chance to practice more formal or specialized speech registers. By interacting with these structured dialogues, children learn to use language in ways they may not typically encounter in their everyday conversations. This exposure not only builds their vocabulary but also helps them navigate different social situations by using appropriate language structures. By practicing these language patterns, children develop a deeper understanding of how language functions in diverse contexts, enriching both their expressive and receptive language skills.

2.2 Conducting a Literacy Centre (Play Phase)

During the implementation phase (see Table 1), the educator's role is essential. As emphasized by Morrow (1990; Morrow & Rand, 1991), the active involvement of educators significantly shapes children's engagement with literacy activities. Studies have shown that children's reading and writing behaviour is observed more frequently and in more diverse ways when educators actively participate in the play. Christie and Enz (1992) also explored the differing impacts of structured play settings on literacy engagement among preschool children. Their research indicated that simply providing literacy-related materials tied to specific themes was less effective than environments where adults were actively involved. In these settings, educators encouraged children's interaction with literacy materials by offering suggestions and modelling use within play scenarios. Furthermore, Christie and Enz found that such adult-supported engagement had a more enduring influence, with sustained literacy behaviours particularly evident in the group where children's play was scaffolded by adult participation.

Three primary roles can be identified for educators in this context (Davidson, 1996; Großer & King, 2008; Roskos & Neuman, 1993). As an observer, the educator watches from the sidelines, supporting the play with affirming gestures or brief comments to keep it moving. This role also allows for observing and documenting the children's learning and development. In the role of a co-player, the educator takes on a character but lets the children take the lead in the primary roles. This approach gives the educator the chance to introduce small variations, enriching the play and adding new layers. As a game leader, the educator takes a more active role in guiding the play, especially when the game loses momentum. In such cases, the educator can introduce new ideas, materials, or actions. For example, Großer and King (2007) describe a situation in a supermarket setting where a conflict is resolved by calling in the store manager. This type of intervention helps shift perspectives and encourages problem-solving.

During the play phase, it can also be beneficial to invite parents or other community members to participate. One effective way to involve them is by hosting an event at the start or end of the Literacy Centre. For example, in the "Flower Paradise", children could sell the flowers or plants they have made

or grown. Similarly, in the "Gelato Roma", children could sell ice cream they have made together in the kitchen on a summer day. This approach not only enhances the learning experience but also connects the children's play to real-world literacy practices and fosters a sense of community.

2.3 Reflecting on a Literacy Centre

To make the experiences associated with the Literacy Centre truly meaningful, it's crucial to reflect on them with the children and document the process, either through written records or photographs. These reflective moments can be woven throughout the entire Literacy Centre experience. At the conclusion, the documentation could take the form of a book or brochure, which would be made available to the children. This would encourage them to revisit and articulate their experiences. A video recording of the process can also be created, reproduced, and shared with the children to take home, fostering similar discussions with their families.

In addition to documenting the children's reflections, it's valuable to hold a group discussion at the end of the Literacy Centre: What did the children think of the experience? What did they enjoy the most, and what could have been better? What new things did they learn? What topics would they like to explore in future Literacy Centres? This helps children practice expressing both appreciation and critique, while also giving them a chance to collaborate on ideas and problem-solving. The involvement of adult educational professionals can promote learning, but it must be measured in order to avoid undermining children's self-regulation and enjoyment of play.

Finally, it's important to conduct a reflection session with the teaching team, which should include educators who may not have been directly involved in the Literacy Centre due to organizational reasons (Großer & King, 2008). The team should consider the overall impact of the project: How did it affect the daily routine of the kindergarten? Were the themes and activities successful in engaging the children in reading and writing? What aspects sparked the children's interest, and what did not? These reflections also provide a valuable opportunity to document observations of the children's development, perhaps through learning stories (Carr, 2001).

3. Literacy Centres in Diverse Educational Contexts

Symbolic play is widely recognized for its significant contribution to the development of narrative skills, which are essential for both listening and reading comprehension (Andresen, 2011). Literate behaviours tend to occur more frequently in supportive literacy environments, and there is strong evidence that literacy-enriched play settings increase children's narrative abilities and print awareness. While several studies report positive effects on print knowledge and functional writing, a meta-analysis by Roskos et al. (2010) highlights both consistent and variable outcomes. What remains unclear is which factors make such environments effective across diverse educational and social contexts (Roskos, 2019). Roskos et al. (2010) call for further research, particularly on play-based approaches that support motivational and emotional learning but are more difficult to assess than purely cognitive methods.

Children's enthusiasm for Literacy Centres can be explained through Self-Determination Theory (Deci & Ryan, 1985), which highlights the importance of autonomy, competence, and social connectedness in learning. Dramatic play allows children to construct their own scenarios and use emerging reading and writing skills meaningfully in real-life contexts. These activities foster interaction, communication, and collaboration, with educators playing a key supporting role (Morrow, 1990; Morrow & Rand, 1991; Christie & Enz, 1992; Rand & Morrow, 2021).

Despite growing focus on systematic instruction, play-based literacy strategies remain essential for comprehensive development. Justice and Pullen (2003) classify literacy-enriched play alongside Dialogic Reading and phonological awareness programmes as foundational for emergent literacy. Rand and Morrow (2021) stress the need for play as a counterbalance to the narrowing focus on phonics-based instruction. Phonics is grounded in essential competencies (Neaum, 2021), and Morrow (2020) argues that play is undervalued, especially in early grades. She advocates for its integration into teaching to promote problem-solving and language development, also recommending the use of digital media for added relevance. Geyer (2021) supports this with a promising model combining thematic Literacy Centres and a phoneme–grapheme chart, a widely used tool in German schools.

However, implementing guided play requires targeted teacher training, as many educators perceive it as too unstructured or difficult to manage (Pyle et al., 2018).

Literacy Centres have so far been implemented primarily in English-speaking countries (USA, Canada, Australia, New Zealand), while they remain largely unknown in Italy and German-speaking countries. In contrast, literacy-rich play is common in German-speaking Switzerland, though not explicitly labelled as Literacy Centres (Sörensen, 2009). This practice reflects the Swiss curriculum, which spans ages 4–8 in its first cycle, and lacks a strict divide between kindergarten and school – unlike Germany, Austria, and Italy, where such a separation reflects different educational philosophies and notions of childhood. This structural difference may explain why German research has largely focused on kindergartens, with schools rarely included (Kammermeyer, 2007; Großer & King, 2008). The current expansion of full-day schools in Germany could offer an opportunity to implement more holistic literacy approaches, incorporating play-based formats and introducing Literacy Centres into school settings.

A notable gap in current research concerns the role of play-oriented Literacy Centres in multilingual contexts. South Tyrol and Luxembourg provide ideal conditions for bilingual Centres that support both literacy development and multilingualism. In South Tyrol, German- and Italian-speaking institutions operate side by side, but bilingual education remains limited. Its expansion would require a substantial policy shift within the current educational framework.

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Video Games and New Generations. Analysis of Perceptions, Uses and Consumption Among Children and Young People

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Abstract

This study explores the perceptions, uses, and consumption of video games among children and young people, based on a questionnaire that collected 140 responses. Utilizing a conceptual framework that integrates theories of media learning and the influence of digital media on children's development and learning, the data analysis reveals significant trends in young children's gaming habits, motivations, and opinions. The findings indicate a wide range of behaviours and attitudes, with notable age and gender differences. Specifically, the study demonstrates how video games are used differently across age group and genders, with important implications for young people's cognitive, social, and emotional development. The analyses show that while some children use video games as tools for socialization and learning, others view them primarily as forms of entertainment or escapism. The implications of these findings are discussed in relation to the crucial role that video games can play in the development of children and young people. In this context, foundations are offered for developing educational strategies that utilize video games as effective tools for positive learning and development.

1. Introduction[1]

Video games represent a pervasive component of contemporary youth culture, no longer limited to mere entertainment but central to the socialization, emotional regulation, and learning experiences of children and adolescents. This evolution has stimulated a robust academic debate on their role in developmental processes, particularly regarding cognitive, emotional, and social dimensions (Gee, 2003; Granic et al., 2014; Rideout, 2017).

While much literature has emphasized the potential risks of excessive or uncritical use − such as aggression (Anderson et al., 2010), addiction (Király et al., 2018), or social withdrawal − recent contributions underline the capacity of games to support learning, digital literacy, and personal growth when integrated into educational and relational contexts (Barab et al., 2005; Shute & Ventura, 2020). Nonetheless, most studies have focused on preselected age groups, often adolescents, or have addressed single variables in isolation (e.g., motivation, aggression, or collaboration).

This study positions itself within this evolving research landscape by adopting a broad age range (8–16 years) and examining the multifaceted experiences of young players through a structured questionnaire. The research aims to investigate children's and adolescents' perceptions, habits, emotional engagement, and learning-related expectations toward video games. By doing so, it contributes to bridging the gap between theoretical reflections and empirical data on media practices in developmental stages. Specifically, we sought to:

- explore gaming habits (frequency, duration, preferred times).
- examine emotional and cognitive reactions associated with gameplay.
- identify perceived benefits and learning potential.
- compare responses by age and gender to detect meaningful differences.

This approach is designed to offer insights useful for educators, parents, and researchers, grounding interventions, and media education strategies in the real experiences of young users.

1 The authors collaborated on the conceptualization and overall structure of the paper. Federica Pelizzari was responsible for drafting all sections, while Michele Marangi conducted a final revision.

2. Games, Development, and Learning

Video games represent one of the most popular forms of entertainment among children and adolescents today. Over the years, the video game industry has become one of the most profitable sectors globally, featuring an increasingly diverse range of genres, game modes, and platforms (Subrahmanyam et al., 2001). This diversification has broadened accessibility and challenged long-standing stereotypes, particularly those associating video games with boys (Jansz & Martis, 2007; Shaw, 2012). The literature also highlights how video games influence the learning process and the development of key skills in both genders (Lucas & Sherry, 2004; Breuer et al., 2020).

Scholars increasingly analyse the video game experience not only as entertainment but as a complex cultural and developmental phenomenon (Granic et al., 2014; Barab et al., 2005; Cole & Griffiths, 2020). Games provide interactive environments in which players explore identities, develop problem-solving skills, and engage in experiential learning (Gee, 2003; Adachi & Willoughby, 2013; Shaffer, 2006; Squire, 2011). These "practice spaces" allow users to experiment with new ways of thinking and acting while reflecting critically on choices and consequences (Hanghøj, 2022).

The relationship between video games and youth development remains a subject of ongoing debate. Some studies have highlighted risks such as addiction, social isolation, and negative academic outcomes (Gentile et al., 2004; Király et al., 2018; Lemmens et al., 2020). Violent content has been discussed in relation to aggression (Johannes et al., 2021). However, recent contributions advocate for a more balanced view, noting that moderate and conscious use may enhance well-being, creativity, and cognitive abilities (Granic et al., 2014; Wang et al., 2021; Przybylski & Weinstein, 2022). The challenge lies in identifying strategies that maximize the benefits of gameplay while mitigating its negative effects (Kardefelt-Winther, 2018). This demands a critical reflection from educators, researchers, and families alike.

The increased participation of girls in video gaming contexts has drawn attention to the need for inclusive frameworks that consider gendered experiences. Research shows that boys and girls engage with games differently – not only in terms of genres but also in relation to motivations and social interactions (Jansz & Martis, 2007; Shaw, 2012; Lucas & Sherry, 2004). These

insights are crucial to interpreting data and designing pedagogical interventions that recognize diverse player identities and preferences.

Video games offer multiple opportunities for educational innovation due to their ability to foster engagement, provide immediate feedback, and promote adaptive learning experiences (Malone & Lepper, 1987; Shute & Ventura, 2020; Kafai & Burke, 2019). Their interactive and goal-oriented nature enables players to experience learning as a process of discovery and action (Gee, 2018; Laine & Lindberg, 2020; Kafai, 2020).

Studies in the field of game-based learning emphasize the importance of designing learning experiences that balance play and pedagogy (Egenfeldt-Nielsen, 2007, 2018; Clark et al., 2016). Teachers and researchers must be aware that not all games are equally suitable for all educational goals (Pelletier, 2008). The development of digital and critical literacy – essential in the 21st century – is one of the key potentials of integrating video games into curricula (Buckingham, 2007; Beavis et al., 2017; Grover & Pea, 2013).

3. Methods and Tools

This research represents the first action of an action-research initiative promoted by several schools in the province of Brescia (Italy), aimed at investigating digital media use and consumption among students. In this initial phase, a quantitative approach was employed to explore the perceptions, habits, and consumption patterns related to video games among children and adolescents. The primary data collection instrument was a structured, closed-ended questionnaire, specifically designed to gather detailed insights into participants' gaming behaviours, preferences, and attitudes. The study involved a sample of 140 respondents, aged between 8 and 16 years, selected through purposive sampling to ensure a diverse and balanced representation in terms of age and gender. The sample included 47.9% male and 52.1% female participants, thereby challenging traditional gender stereotypes around gaming. The largest age group was 12–13 years (28.6%), followed by 8–9 years (25.7%), 10–11 years (18.6%), and 14–15 years (17.1%). The smallest group comprised participants aged 16 or older (2.9%). All respondents were active video gamers.

Researchers designed the questionnaire collaboratively, media educators, and teachers involved in the broader educational project. While it does not replicate any existing validated instrument, the tool draws conceptually from several relevant studies: on gaming frequency and patterns (Przybylski et al., 2010), emotional and cognitive experiences during play (Granic et al., 2014), and the educational potential of digital games (Barab et al., 2005; Breuer et al., 2020). These references informed the selection of thematic dimensions and item formulation, ensuring both relevance and alignment with current research. Each item was written in accessible, age-appropriate language and pre-tested in a pilot phase with 12 students aged 8–14, to verify clarity and comprehension. The original questionnaire was administered in Italian, the native language of all participants. The English version presented in this article was prepared post hoc for publication. Every effort was made to maintain fidelity to the original meaning, though slight variations in semantic nuance are acknowledged as a limitation.

The questionnaire was structured into the following sections:

- Demographic information: Age, gender, and relevant contextual variables.
- Frequency and duration of play: Frequency of gaming sessions, their average duration, and preferred time slots for playing.
- Gaming context: Devices used (e.g., consoles, smartphones, tablets), and whether the participant plays alone or with others.
- Game preferences: Genres and types of games most frequently played (e.g., action-adventure, sports, puzzle, strategy).
- Emotional and behavioural responses: Emotions experienced before, during, and after gaming (e.g., joy, boredom, frustration), and players' self-regulated behaviours (e.g., ability to pause or stop playing).
- Perceived benefits and skills: Participants' opinions on the cognitive and social skills they believe they have developed through gaming (e.g., problem-solving, concentration, collaboration), as well as their views on the educational potential of video games.

The questionnaire included a combination of multiple-choice questions, Likert scales, and ranking items, allowing for structured and diversified data collection. The instrument was administered via an online survey platform,

which facilitated easy and anonymous access. The questionnaire remained open for a two-week period, during which participants could complete it independently. Prior to participation, all respondents were informed of the study's purpose and assured of the confidentiality of their data. Responses were analysed using descriptive statistics (frequencies, percentages) to identify trends and highlight salient patterns. Particular attention was given to disaggregating data by age and gender, in line with the study's objective to examine developmental differences and demographic influences on gaming experiences.

4. Results

More than a third of respondents (35%) play video games daily, indicating that video games are an important part of the daily routine for many young people (Figure 1). Another third plays a few times a week (34.3%), suggesting that for many, video games are a regular activity. The lower percentages of those who play monthly or annually imply that most teens engage with video games relatively frequently, confirming their significance as a recurring form of entertainment.

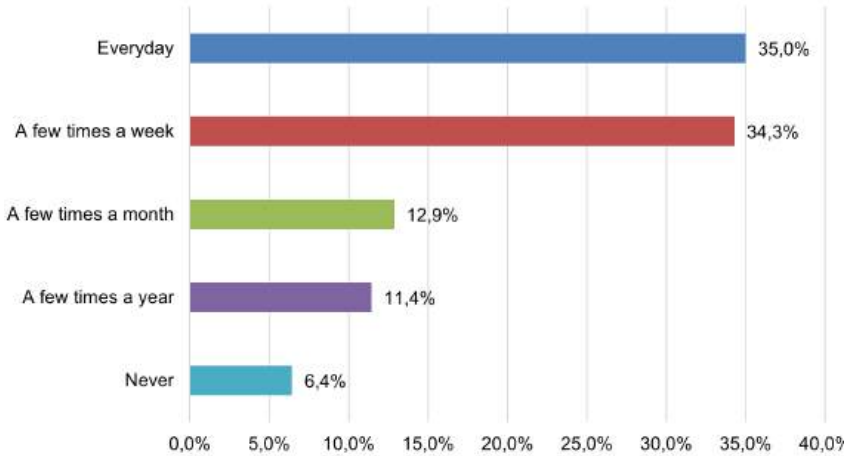

Figure 1 – How often do you play video games?

As shown in Figure 2, almost half of the respondents (48.6%) play once a day, while 35% play twice a day. Only 16.4% play more than three times a day. This data may indicate moderation in use, with most young people appearing to limit the number of daily gaming sessions. However, the presence of 16% who play more frequently could suggest cases of addiction or increased involvement.

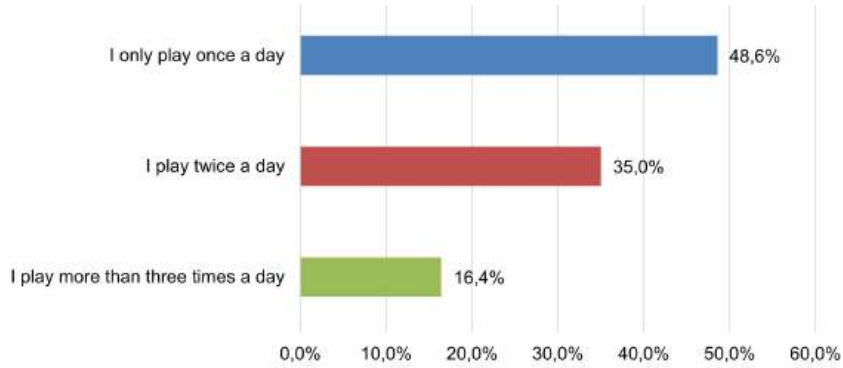

Figure 2 – How many gaming sessions do you have in a day?

The majority (52.9%) play for less than one hour, which may indicate moderate use of time spent playing video games (Figure 3). However, 37.9% of respondents play between one and three hours, while a minority of 9.3% spend more than three hours a day gaming. This finding is important for assessing the impact of time spent on video games in terms of well-being and the balance between play and school activities.

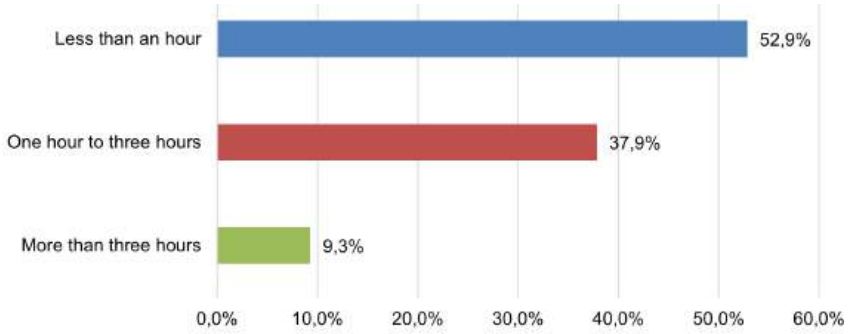

Figure 3 – How much do you play?

Many children play games whenever they get the chance (38.6%), indicating a tendency to take advantage of every free moment for gaming (Figure 4). This suggests that video games are a major recreational activity. About 25.7% play in the afternoon after studying, highlighting an attempt to balance gaming with school commitments. However, a significant percentage (15%) plays in the evening after dinner, while only 5% play in the afternoon instead of studying.

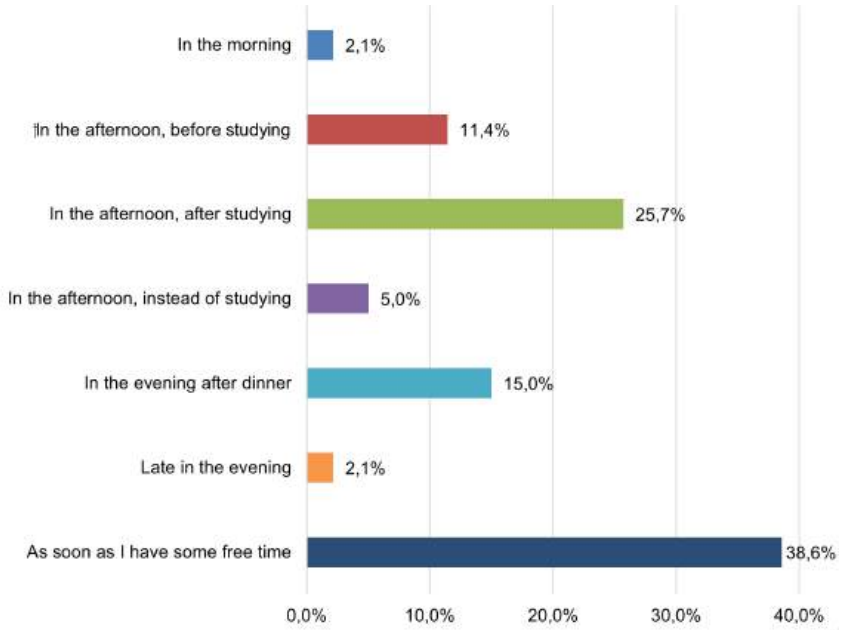

Figure 4 – During which period of the day do you play the most?

More than half of young people (53.6%) play in shared rooms (Figure 5), suggesting that video gaming is often a social activity done in environments where supervision is potentially supervision. The remaining 37.9% play in their own rooms, indicating a trend toward more private spaces as youth grow older or become more passionate about gaming.

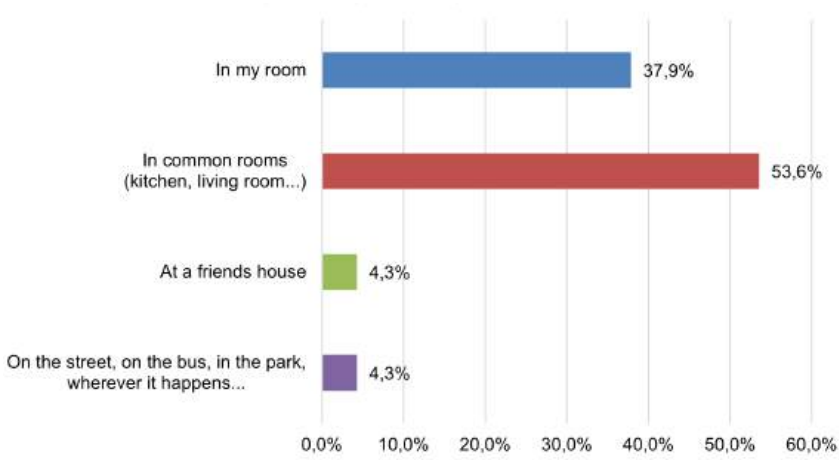

Figure 5 – Where do you play?

Interestingly, 66.4% of players have no problem interrupting their game if requested, while 27.9% do so with annoyance (Figure 6). Only a small portion (5.7%) attempts to postpone the interruption. These data indicate a level of flexibility on the part of young people in balancing time spent on video games with other activities.

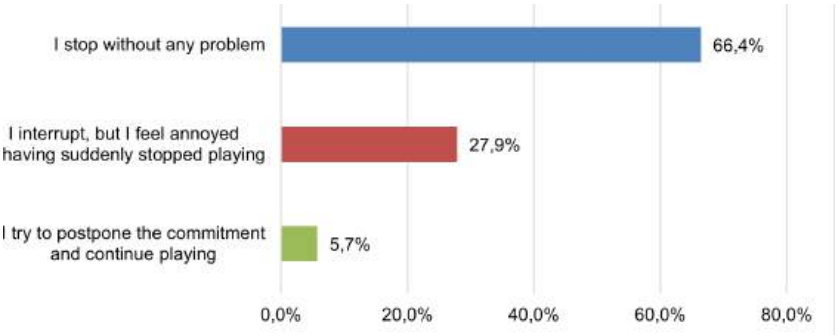

Figure 6 – How do you deal with interruptions during video games?

As shown in Figure 7, consoles such as PlayStation and Xbox are the most widely used devices (29.2%), followed by smartphones (22.3%) and tablets (18.8%). This suggests that while consoles remain dominant, mobile devices are gaining popularity due to their portability and accessibility.

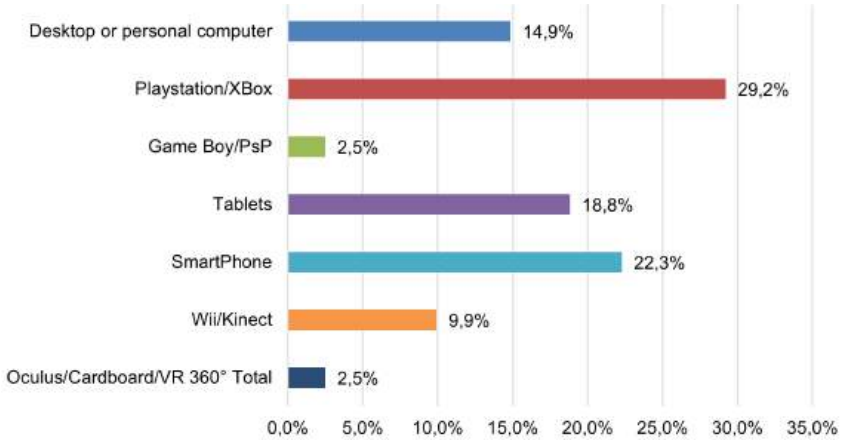

Figure 7 – Which device do you use?

The most popular type of video game is Action-adventure (29.6%), followed by Sports video games (14.8%) (Figure 8). Below 10%, we find other game types: Racing video games (9.7%); MMORPG (9.2%); Strategy (8.7%); Computer Role-Playing Games (6.1%); Shooter/First Person Shooter (5.1%); Education and Simulation (4.1%); Social (3.6%); Arcade and Jump&Run (both at 3.1%); Puzzle games (2.0%); and Management (1%). The lower percentage of participation in Education and Simulation games indicates a lower attractiveness for titles with an explicitly educational purpose.

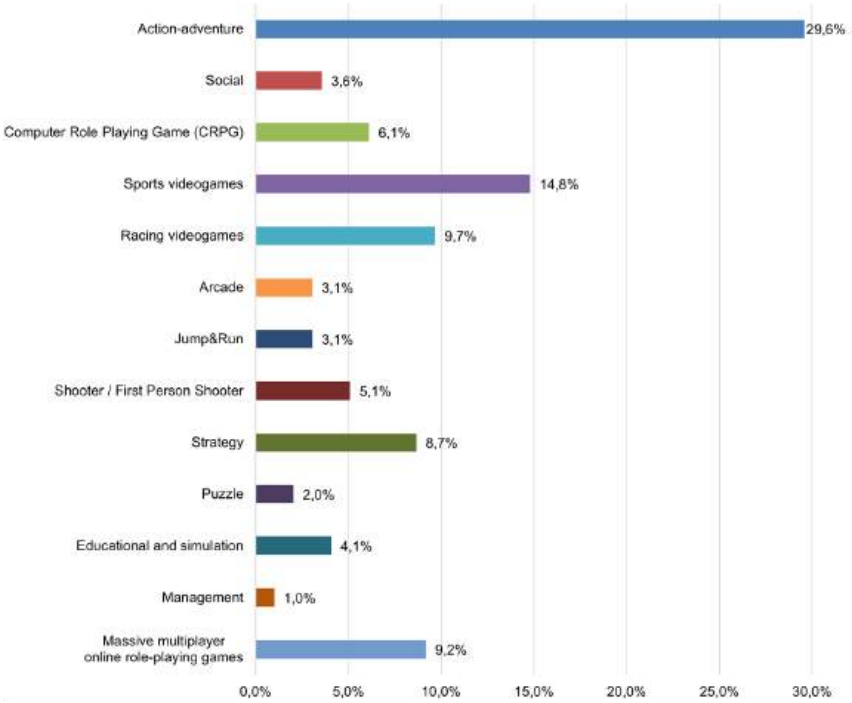

Figure 8 – Which type of video games do you prefer?

To the question regarding whether players developed a winning tactic, the difference between those who found one on their own (42.1%) and those who did not (33.6%) was only 8.5 percentage points (Figure 9). Of the remainder, 18.6% found a winning strategy with friends, and 5.7% watched videos or tutorials.

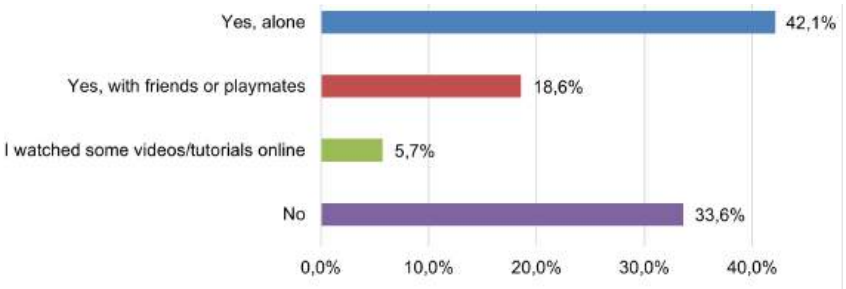

Figure 9 – Have you developed any tactics for winning?

Figure 10 shows the responses to the question of whether players think about stories, characters, or the moves the characters must make during the game. A 1–4 Likert scale was used, and most respondents (31.4%) rated this statement a 2 out of 4. With only a few percentages points difference, the second most common rating was 4 out of 4 (29.3%), followed by 3 (22.1%) and 1 (17.1%).

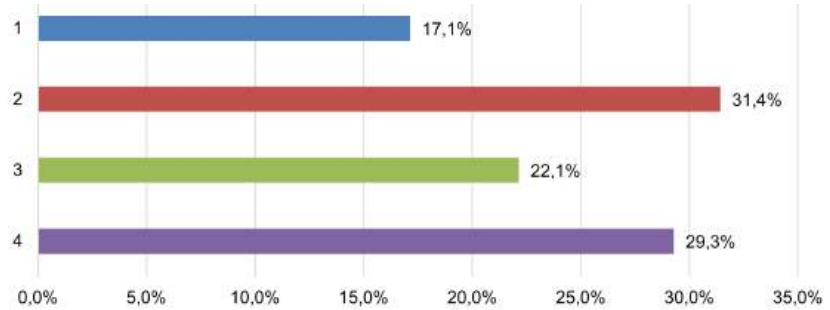

Figure 10 – Do you ever think about video games outside of gaming sessions?

It is interesting to note that the majority, about one-third of respondents (33.3%), play alone (Figure 11). Following closely is those who play "with friends in the same room" (16.4%) and those who "play alone or with others, depending on the situation". The frequency of responses decreases for those who "play with friends online" (12.7%), "with friends in front of the same screen" (9.1%), with anyone online (7.9%), and "with friends on different screens in the same room" (4.2%).

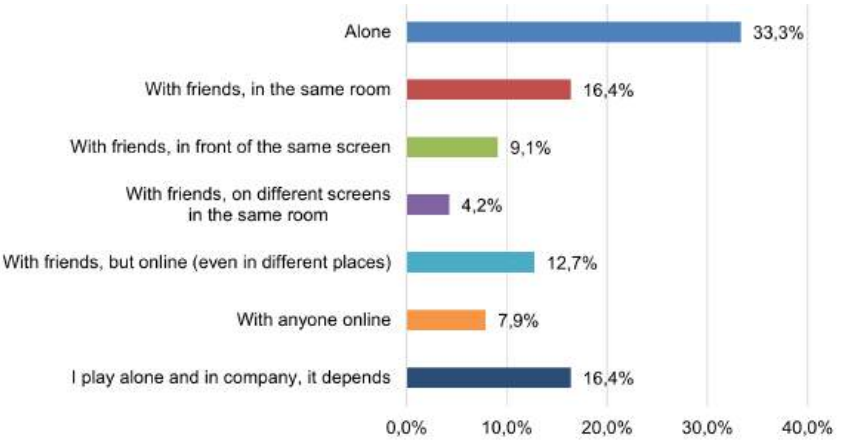

Figure 11 – With whom do you play video games?

To the question of whether adults play video games with boys and girls, the Likert scale value that received more than half of the responses (52.1%) was 4. A clear difference in score follows with option 3 (22.9%), then 1 (13.6%) and 2 (11.4%) (Figure 12). In almost one-third of cases, the adult playing with the video gamer is the father (29.2%) or an older sibling (27.0%). For 17.5% of subjects, the answer is "other relatives", while in 16.8% of cases, it is a younger sibling. Notably, the mother plays video games with boys or girls in only 9.5% of cases.

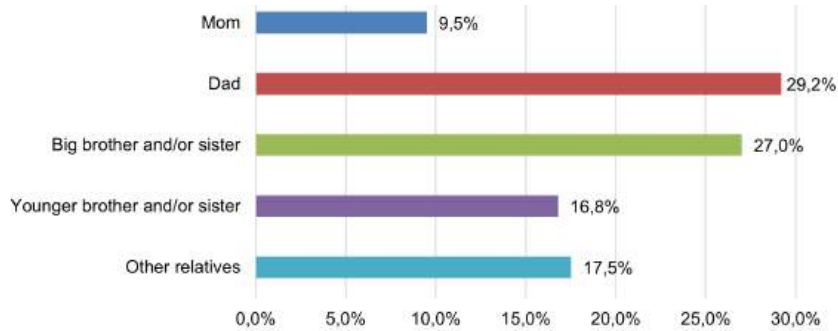

Figure 12 – Which adults play with you?

Contrary to expectations, the most frequent response to the question about playing online was "I have heard about it, but I have never played it" (37.9%) (Figure 13). The answer "Yes, I play it often" received 22.1% of the votes, with only two percentage points less (20.0%) for the other two options. It is evident that almost three in five (55.7%) players prefer not to play online with people they do not know, and one-third (32.1%) play with people online but do not meet them in person. Only 12.1% of players express interest in meeting people they had previously met online.

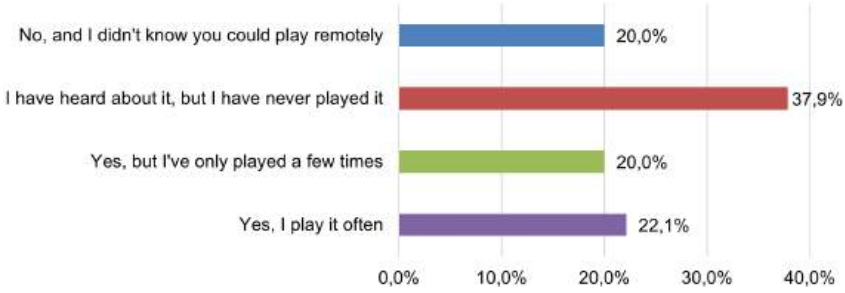

Figure 13 – Do you play online with other people?

An analysis of the collected data shows that emotions associated with video games vary significantly before, during, and after play (Table 1). Before starting to play, the dominant emotions are "Joy" (30.5%) and "Happiness" (26.5%), indicating that the anticipation of playing a video game is often linked to positive feelings and pleasant expectations. However, the emotion of "Boredom", which ranks third with 12.6%, suggests that some individuals may start playing games specifically to counteract a state of boredom. While playing, emotions remain positive, with "Happiness" (29.2%) and "Joy" (22.8%) still at the top spots. This shows how video gaming can be a source of pleasure and enjoyment. However, more complex emotions such as "Anxiety" (8.8%), "Hope" (7.6%), "Anger" (7.0%), and "Surprise" (7.0%) also emerge during gameplay. The presence of "Anxiety" may relate to challenging or competitive situations, while "Anger" could reflect frustration in response to difficulties or obstacles within the game. The emergence of "Hope" and "Surprise" indicates that players are emotionally engaged, hoping for a positive outcome or being taken aback by unexpected events that the game may present. After playing, "Happiness" (23.9%) and "Joy" (24.5%) remain the prevailing emotions, suggesting that the gaming experience leaves players feeling satisfied. However, it is interesting, however, to note that after the activity concludes, some negative emotions tend to surface. "Boredom" (10.7 %) makes its appearance again, indicating that the game serves as a temporary escape from boredom. Additionally, emotions such as "Sadness" (6.3%) and "Disappointment" (5.7%) become more prominent, suggesting that the end of the video game experience may leave a sense of emptiness or dissatisfaction. These latter emotions could be related to factors such as failure to achieve set goals or nostalgia for the time spent in gaming.

Table 1 – What emotions do you feel before/during/after...

	What emotions do you feel..		
	...before playing video games?	...while playing video games?	...after playing a video game?
Happiness	26,5%	29,2%	23,9%
Anxiety	4,6%	8,8%	2,5%
Disappointment	1,3%	3,5%	5,7%
Disgust	0,0%	0,0%	0,0%
Contempt	0,0%	2,3%	1,9%
Jealousy	0,0%	1,2%	0,0%
Joy	30,5%	22,8%	24,5%
Envy	0,0%	1,8%	0,0%
Boredom	12,6%	0,0%	10,7%
Nostalgia	2,0%	0,0%	4,4%
Offense	1,3%	1,2%	0,0%
Fear	1,3%	4,1%	1,9%
Forgiveness	1,3%	1,2%	0,0%
Anger	3,3%	7,0%	5,0%
Resignation	0,0%	0,0%	4,4%
Remorse	1,3%	0,0%	1,3%
Surprise	7,3%	7,0%	4,4%
Hope	5,3%	7,6%	1,9%
Sadness	0,0%	0,6%	6,3%
Shame	1,3%	1,8%	1,3%

The skills that participants believe are most developed through video games (Figure 14) include “Teamwork” in 19.4% of cases followed closely by “Fast reaction time” (18.8%). Not far behind are “Creativity” (14.7%) and Experimenting with Strategies (9.4%). “Reflection and concentration” (8.4%), “Problem solving” (7.9%), “Accurate planning “(6.8%), and “Mastering stress” (5.2%) also rank among the skills developed. The remaining skills, such as “Discipline and resistance”, “Well-Thought-Out Time Management”, and “Sense of orientation in physical spaces”, have an importance of 3.1%.

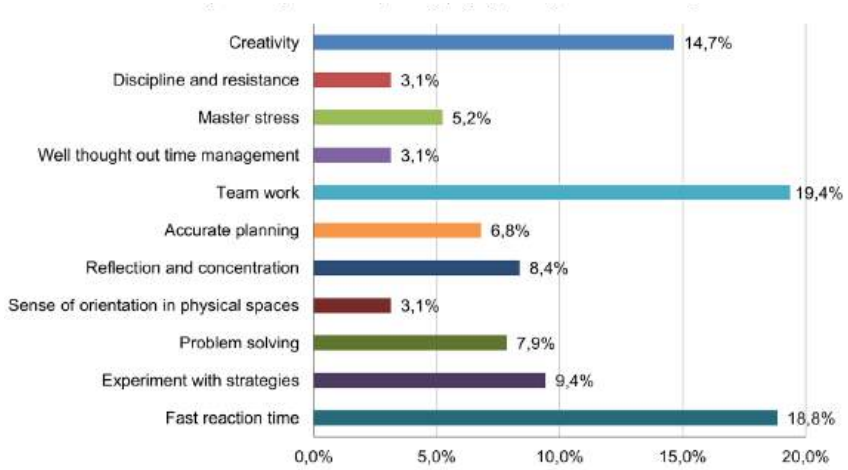

Figure 14 – What skills have you developed by playing video games?

According to users, the features of video games that could enhance learning in school subjects (Figure 15) include "Fun" (17.5%), "Collaboration with others" (14.2%), "Skill levels and competencies" (13.1%), "Specific challenges" (10.9%), and "Achievable and challenging goals" (10.4%). Two tied characteristics, "Clear rules" and "Visibility of progress", were chosen by 7.7% of subjects. Below 6%, other characteristics of the video game world include "Ranking" (5.5%), "Points and awards" (4.4%), "Compelling narrative" (3.8%), "Instant feedback" (3.3%), and "Community appreciation" (1.6%).

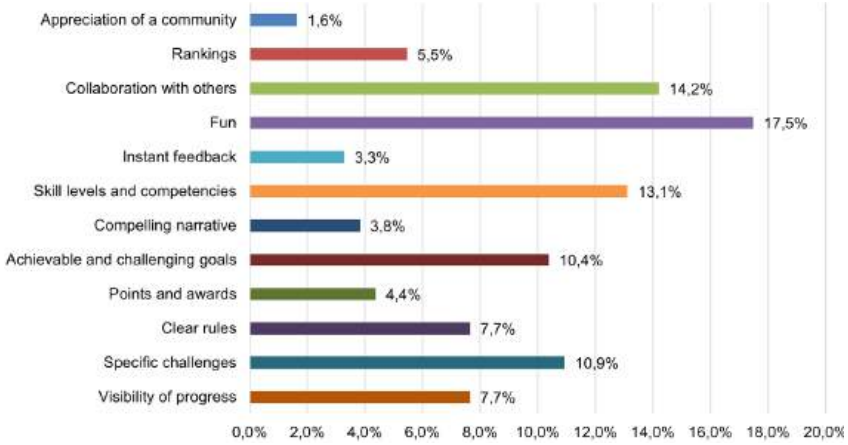

Figure 15 – Which features of video games can improve your learning experience in school?

In addition to overall trends, the data were analysed by age and gender to uncover potential differences in gaming practices, preferences, and emotional responses. Disaggregating the data by age and gender revealed several meaningful patterns in how children and adolescents experience video games. While the gender balance and age distribution were established through purposive sampling, some internal differences emerged in the responses. Game preferences varied by gender: action-adventure and sports games were more frequently chosen by boys, especially in the 12–13 age group, while girls – particularly those aged 10–11 – reported a higher interest in simulation and puzzle games. Boys reported playing more frequently and for longer periods, while girls were more likely to associate gaming with creativity and emotional expression. When analysing emotional responses, younger participants (ages 8–9) reported higher levels of joy and surprise, while older adolescents (14–15) mentioned feelings of boredom and frustration more frequently. Boys were more likely to report competitive excitement and challenge-related emotions, whereas girls described feelings of calm, reflection, and narrative immersion.

Regarding self-regulation, a larger proportion of younger children claimed to stop playing when asked by an adult, while older respondents showed more autonomy in managing their playtime – though with greater difficulty in interrupting longer sessions. These findings suggest that gender and age are crucial factors that shape the subjective experience of gaming, not only in terms of preferred genres or frequency of play but also in emotional engagement and perceived benefits. Tailoring educational interventions to these differences may help foster more inclusive and developmentally appropriate uses of video games.

5. Discussion

The findings of this study provide valuable insights into how children and adolescents interact with video games, revealing distinct patterns based on age, gender, and individual perceptions. Rather than reinforcing stereotypical views, the data highlight the diversity of experiences and meanings that young players attribute to gaming.

The frequency and duration of play varied widely across participants, with boys tending to engage in longer and more frequent sessions than girls. However, these differences should not be interpreted as indicators of excessive use, as the questionnaire did not collect precise data on session duration or contextual factors. Future studies may benefit from integrating more granular time-tracking tools to evaluate actual exposure and its implications (Gentile et al., 2004; Radesky et al., 2016).

Participants across all age groups identified multiple benefits associated with gameplay. Younger children reported elevated levels of joy and curiosity, while older adolescents expressed more ambivalent emotional responses, including frustration and boredom. These findings align with previous studies suggesting that emotional experiences linked to gaming evolve with age and cognitive development (Granic et al., 2014; Ryan et al., 2006; Ferguson, 2011).

Perceived skill development – particularly in areas such as problem-solving, concentration, and strategic thinking – was reported by a substantial portion of the sample, especially among frequent players (Boot et al., 2018). Girls more often linked gameplay to creative thinking and emotional reflection, reinforcing the idea that different forms of engagement may foster diverse types of learning (Barab et al., 2005; Breuer et al., 2020; Adachi & Willoughby, 2013).

The belief that video games can serve educational purposes was shared across age groups. While it may seem intuitive that "fun" supports learning, the responses suggest a deeper awareness among students of how interactivity, challenge, and feedback contribute to their understanding and retention of content. This perspective is consistent with recent research in game-based learning and digital literacy (Gee, 2018; Shute & Ventura, 2020; Malone & Lepper, 1987; Kafai, 2006).

Importantly, the analysis of age- and gender-based differences revealed how socio-demographic variables influence gaming preferences, emotional engagement, and perceived benefits. While the near-equal participation rates of boys and girls were the result of purposive sampling, the internal variation in their responses offers meaningful insights into gendered experiences. Boys and girls differ not only in game preferences but also in how they describe emotional engagement and the perceived educational value of gam-

ing. These distinctions reinforce the idea that gender plays a significant role in shaping how young people interpret and benefit from gameplay (Pelletier, 2008; Cheng et al., 2021).

Similarly, the concentration of responses from 12–13-year-olds – also attributable to the sampling strategy – coincides with a critical developmental phase characterized by identity formation and peer comparison. Within this group, gaming is closely tied to social bonding and strategic exploration. In contrast, younger children (8–9) relate more to gaming as a space of imaginative and affective engagement (Shaffer, 2006; Squire, 2011).

These interpretations are not intended to be generalized, but rather to illustrate how a nuanced reading of age- and gender-based differences can support the development of inclusive, developmentally informed educational interventions.

Overall, this exploratory study provides a foundation for more detailed investigations into how young people perceive, use, and learn from video games. Future research should aim to refine measurement instruments, include qualitative components, and examine contextual mediators such as family norms, school environments, and peer influence (Przybylski et al., 2010; Vorderer et al., 2003; Griffiths et al., 2014).

6. Conclusions

This study explored how children and adolescents perceive and experience video games, offering insights into the diversity of gaming practices, emotional responses, and perceived benefits across age and gender groups. The results underscore the complex and multifaceted role that video games play in the lives of young people – serving not only as entertainment but also as environments for emotional expression, skill development, and potential learning.

The diversity in responses highlights the importance of avoiding generalizations when analysing youth gaming behaviours. Age and gender influence not only game preferences but also the emotions linked to gameplay and the educational value attributed to gaming. These findings support the need for

pedagogical approaches that consider learners' individual experiences, interests, and developmental stages.

Although this was an exploratory study, it lays the groundwork for future research. The development of more robust tools – including validated questionnaires and mixed-method designs – would allow for a deeper understanding of how young people engage with video games. Additionally, future research should aim to further disaggregate findings by gender and age group, exploring the interplay between demographic variables and gaming outcomes. Developing validated instruments that account for both behavioural data and subjective experiences could enhance the accuracy of such studies.

In educational contexts, the findings encourage a differentiated use of video games, tailoring strategies to learners' profiles and game preferences. A critical and reflective integration of video games into pedagogical practices holds promise for promoting motivation, creativity, and collaborative skills.

By grounding media education in empirical evidence and real-life practices, we move closer to realizing the potential of digital games as allies in learning and development.

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Section 4
Narrative Play and Storytelling

Playing with Language and Possible Worlds on a *Field Trip to the Moon* – Talking about Wordless Picturebooks in German- and Italian-Speaking Primary Schools

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Abstract

Play as an anthropological constant of human beings is closely linked to children's acquisition of language and literature, in which playing with language and with possible worlds is of central importance (Andresen, 2013; Bruner 1986). Wordless picturebooks can be used in all languages and encourage language play and imaginative play in particular. In the context of primary education, shared reception situations in classroom interactions offer opportunities for the playful appropriation of stories. This article focuses on picturebook discussions from the study *IMAGO. Picturebooks – Multilingual, Rhyming and Wordless – In Kindergartens and Primary Schools in South Tyrol* (Hoffmann, 2024a; 2024b) about the wordless picturebook *Field Trip to the Moon* (Hare, 2019b). It shows how wordless picturebooks are playfully appropriated in dialogic reception situations in Italian- and German-speaking primary schools in the multilingual province of South Tyrol. By analysing transcribed key incidents, this contribution investigates how wordless picturebooks invite children to engage in language play and imaginative play, and which forms of play can be reconstructed in the picturebook discussions. It is shown that even with different didactic approaches, common patterns of play can be found across languages, which highlight the diverse opportunities and ways of playing with language and possible worlds.

1. Introduction

Stories in pictures open up narrative spaces for the imagination and invite us to play with possibilities within the framework of fiction (Hoffmann, 2018; 2020) from early childhood and family literary socialisation to primary school, where they can be received together in dialogue with each other (Dammann-Thedens, 2020; Wieler, 2024). This creates a shared imaginative space in which the participants move within play, where language(s) and literature, self and world are acquired (Mayer, 2018; Dehn, 2019). How this play with the *as if*, with *possible worlds* (Bruner, 1986), with the "draft-character of self and world" (Ulich & Ulich, 1994, p. 827, translation JH), is realised in different linguistic-cultural educational contexts will be shown by analysing transcribed *key incidents* (Kroon & Sturm, 2007) from dialogic picturebook discussions about the wordless picturebook *Field Trip to the Moon* (Hare, 2019b) which was read both in a German-speaking (*Ausflug zum Mond*, Hare, 2019a) and in an Italian-speaking (*Gita sulla luna*, Hare, 2019c) primary school.

The data in this research paper is part of the ethnographically-orientated study *IMAGO. Picturebooks – Multilingual, Rhyming and Wordless – In Kindergartens and Primary Schools in South Tyrol* (Hoffmann, 2024a; 2024b), which aims to reconstruct the conditions for language and literature learning in multilingual contexts.

The picturebook tells the story of a school trip to the moon, where a child is accidentally left alone, encounters aliens, and finally returns to earth. It is about loneliness and community, loss and responsibility, strangeness and friendship, curiosity and courage. This experientiality (Dehn et al., 2014; Fludernik, 1996) characterises the story and makes it meaningful for children. The narration in monoscenic images and sequences of images is expressive and colour-symbolic in terms of both the *landscape of action* and the *landscape of consciousness* (Bruner, 1986). The ambiguity of the images enables playing with possibilities.

As different as the literary approaches of the respective reception situations may be – more literary or more grammar-oriented – they nevertheless have in common a communication-oriented dialogue, plus a focus on language and the playfulness of the imagination (Wulf, 2020). The article uses key incidents from both picturebook discussions to differentiate playful

ways of dealing with literature and multilingualism, in which the close interweaving of play and literature (Stenger, 2014) is documented.

Firstly, from an anthropological perspective (Chapter 2), play is didactically and empirically located in the context of language and literature learning (Chapter 3). This is followed by an insight into the ongoing empirical-qualitative study *IMAGO* (Chapter 4) and the wordless picturebook *Field Trip to the Moon* (Chapter 5). In the central section of the paper, key incidents on imaginative play and language play in German- and Italian-speaking primary schools are analysed (Chapter 6). Finally, these forms of play are differentiated and their potential for language and literature learning is reconstructed (Chapter 7).

2. Anthropology of Play

Play, language and literature are closely interwoven, as the literary scholar Gundel Mattenklott aptly puts it:

> If we consider poetry as play, we are not only emphasising an activity familiar to the child, but also one of its essential performative aspects. The word *play* denotes two things: something predetermined, finished – an ensemble of rules [...] – and something possible, a process that is always to be carried out anew, which follows the predetermined rules, but in the course of which they can also be changed, expanded or even destroyed. [...] Related to this is language with its grammatical system of rules that we revitalise, change or destroy with every sentence. Poetry is no different: as a work, it is historically self-contained and at the same time it actualises itself anew and differently in the process of each reading. It is created by following rules or destroying them, and it produces new rules – impulses for other works. With language play, the child not only plays his/her way into language, but also into literature. (Mattenklott, 1996a, p. 344)

In the following, I will take a closer look at children's *playing into language* and *playing into literature*. From an anthropological perspective, play as an anthropological constant (Stenger, 2012) is part of being human. It is integrated into

performative actions (Wulf, 2020), and can be considered a central educational medium. In play, children can explore *possible worlds* (Bruner, 1986), work on their *action-guiding themes* (Bachmair, 1994) and move within the *zone of proximal development* (Vygotsky, 1966/2016).

Different forms of play can be distinguished: on a diachronic level in child development, there exists *functional play*, *constructive play*, *symbolic play* and *games with rules play* (Piaget, 2013). On a synchronous level, there exists play in the form of *competition*, *chance*, *simulation* or *vertigo* (Caillois, 1958/2001; Huizinga, 1938/2016). With regard to play relating to language and literature, this contribution focuses on symbolic play and games with rules plays, which are particularly important at kindergarten and primary school age, as well as simulation, the play of transformation.

The different types of play are based on common structural elements, which have been differentiated by the educational anthropologist Christoph Wulf (2020). Without going into the individual elements in too much detail, their central importance in dealing with language and literature must be emphasised. Various aspects of literary learning, as formulated out of the perspective of literature didactics by Kaspar H. Spinner (2019), first published in 2006 in his frequently quoted *Praxis-Deutsch* article, can be found here (Table 1).

Table 1 – Connections between playing and literary learning

Structural elements of play (Wulf, 2020)	Aspects of literary learning (Spinner, 2019)
Space and time	Imagination when reading and listening
Rules	Subjective involvement and accurate perception
Imagination	Linguistic composition
The as-if	Perspectives of characters
“Flow” and sensory experience	Narrative and dramaturgical logic of action
Mimesis	Consciousness of fictionality
Performativity	Metaphorical and symbolic language
Practical knowledge	Inconclusiveness of meaning construction
Community	Literary discussion
Functionlessness	Genres as prototypes
Play utensils	Awareness of literary history
Uncertainty of the outcome of the playing	

The connections between playing and literary learning can be found, for example, in the importance of imagination and in dealing with fictionality (the as-if) in the playing as well as in the reading and listening process, in the acquisition of rules (or, rather, narrative structures and genres), the awareness of space and time or of literary history, the significance of the social community for playing or literary discussions, and in the openness of the play or interpretation process: the uncertainty of the outcome of the play or the inconclusiveness of meaning construction.

In addition to structural similarities in the processes of playing and literary learning, stories and their shared reception also serve as a collection of materials, a *fund of stories* (Dehn et al., 2014) that provides inspiration for children's play.

> […] looking at picturebooks, stories, images, theatrical productions, songs and dances provide rich material and open up horizons of meaning, which can then be processed and transformed into their own interpretation of the world through free play. (Stenger, 2014, p. 273)

At the same time, imaginative and traditional play can serve as an inspiration for stories and storytelling (Berti, 2023; Hoffmann, 2018). How this playful approach can in turn be made didactically fruitful for language and literature learning processes is explored below.

3. Playing with Language and Literature

Looking back at the language and literature didactic discussion of the last 20 years, not only in the German but also in the English-speaking context, we can find a lively debate on playfulness concerning the titles of monographs: *Interaktion, Sprache und Spiel* (Andresen, 2002), *Schreibspielräume* (Kohl, 2005), *Playing with Picturebooks* (Allan, 2012), *Mit Sprache(n) spielen* (Belke, 2020), *Poesie und Grammatik* (Belke, 2021), *Spielräume der Ordnungen* (Morrin, 2023); of edited volumes: *Literatur als Spiel* (Anz & Kaulen, 2009), *Postmodern Picturebooks. Play, Parody, and Self-Referentiality* (Sipe & Pantaleo, 2012), *SpracheSpielen* (Andresen & Januschek, 2013), *Poetische Spielräume für Kinder* (Ritter et al., 2013), *Children's Play in Literature* (Kelley, 2018), *Varieté der Vielfalt: Äs-*

thetisches Lernen in Sprache, Spiel, Bewegung, Kunst (Mayer et al., 2018), *Children's Literature and Intergenerational Relationships: Encounters of the Playful Kind* (Deszcz-Tryhubczak & Kalla, 2021); and of special issues of scientific journals: *Spielen mit Sprache* (Die Grundschulzeitschrift – Kohl, 1998), *Spielen in der Kinder- und Jugendliteratur* (kjl&m – Roeder, 2008), *Child and Play. Imagination – Expression – Education* (Filoteknos – Waksmund et al., 2019), *Kinderliteratur und Kinderspielkultur* (kjl&m – Schmideler, 2021), *Literalität und Spiel* (Leseforum – Tresch & Monnier, 2022), *Lust auf Sprache – Neue Spielräume eröffnen für und mit Literatur* (JuLit – Arbeitskreis Jugendliteratur, 2023), *Playing in and Through Children's Books* (Bookbird – Malilang, 2023). Selected key findings of this discussion are summarised as follows.

Language play exists in all cultures. The literariness of literary texts or other narrative forms, which is expressed in tonal, rhythmic, syntactic, lexical and semantic patterns, differs fundamentally from functional everyday language, which is embedded in communicative contexts of action. This aesthetic dimension of language is of fundamental anthropological importance and invites children to become aware of linguistic structures, develop language awareness and reflect on language (Mattenklott, 1996a; 1996b; 2009). In addition, repetition in the form of stanzas and verses in songs and poems and in the form of repeated reception of language play in radio plays and read-aloud situations with picturebooks all support children in the acquisition of language and literature, also in the area of second language and written language acquisition (Belke, 2006, 2011).

Based on this central importance of language play for the acquisition of language and literature, Gerlind Belke has developed a linguistic didactic approach of playing with language(s) as part of integrative German lessons in primary schools, which combine language and literature learning and open up scope for participation for children also in multilingual contexts.

> Language play as a form of elementary literature makes it possible to combine the acquisition of literature and language: systematic linguistic learning should always include aesthetic and playful elements – literature lessons should always be language lessons as well. The proximity of poetry and grammar, known since antiquity and almost forgotten today, can be utilised for German lessons that are integrative in many ways and also help to make grammar lessons in the *mother tongue* more inviting and attractive. (Belke, 2006, p. 302)

Kasper H. Spinner (2016) argues in favour of using poetic language play to build on early childhood literary language play experiences in the early years of school and summarises the basic procedures of poetic language use as follows: *repetition structures, onomatopoeia, rhymes, rhythmising, breaking norms and rules, decontextualisation, interaction, imitation* and *variation* (Spinner, 2016, pp. 48–50).

If we look at the empirical research on the importance of play in language and literacy acquisition, our attention is drawn in particular to the work of Helga Andresen (2005, 2013). She traces the elementary importance of *role play* at kindergarten age for decontextualised language use, the linguistic marking of fictionality and the adoption of different perspectives (Andresen, 2005). If we look at discussions about literature, similar phenomena can be observed. These can be described as *imaginative play* in which imaginations and interpretations of literary stories are tentatively formulated and negotiated, thereby marking fictionality. At primary school age, *language play* also takes on a special significance: from *renaming play, word formation play,* and *reverse world play,* to *language jokes* and *riddles* as well as *secret languages*. These language play forms are based on rules that open up room for playing by either (excessively) adhering to them, breaking them or reinventing them (Andresen, 2013). Imaginative play, word formation play and secret languages will play a central role in the discussions on the wordless picturebook.

In discussions about picturebooks, *image play* (Grünewald, 2012) and *image language play* (Grünewald, 2005) can stimulate imaginative and language play. When transforming the material image (picture) into a mental image (image), discrepancies can lead to increase in knowledge, as Mechthild Dehn (2019) has shown in German didactic research. Didactically, this requires focusing on the first glance, such as the transformation of images into language, writing, scenic play or other aesthetic forms of expression. The language with which visual narratives are interpreted is characterised by *fictionality signals* (Dehn, 2019) that can be *descriptive-relativising, cognitive-perspectivising* or *imaginative-generating*, as differentiated by the empirical reception research of graphic picturebooks (Hoffmann, 2019).

4. The *IMAGO* Study

In order to analyse the key incidents concerning language play and imaginative play in wordless picturebook discussions, the context of the research project is outlined. The study *IMAGO. Picturebooks – Multilingual, Rhyming and Wordless – In Kindergartens and Primary Schools in South Tyrol* (Hoffmann, 2024a; 2024b) aims to shed light on the importance of picturebooks in an autonomous province characterised by language and cultural diversity in connection with children's acquisition of language and literature in different educational contexts.

Theoretical points of reference include narrativity (Fludernik, 1996), multimodality (Naujok, 2023; Serafini, 2022), multilingualism (Franceschini, 2011; Gogolin, 2021), materiality (Kalthoff, 2021) and resonance (Rosa, 2019). Empirical reference points include, in particular, research on the interplay between visual literacy and language learning (Dehn, 2019; Evans, 2015; Ommundsen et al., 2022).

Methodologically, within the framework of interpretative classroom research (Krummheuer & Naujok, 1999), picturebook reception situations are videotaped, transcribed (Selting et al., 2011) and anonymised, and selected *key incidents* (Kroon & Sturm, 2007) are interpreted using ethnographic conversation analysis (Deppermann, 2000). The sample consists of German-, Italian- and Ladin-speaking kindergartens and primary schools in South Tyrol, in which a selection of multilingual, rhyming and wordless picturebooks are read.

Research questions about play that arise from ethnographic observations of the study and in relation to the thematic focus of this edited volume are: How do wordless picturebooks invite primary school children to play with language and possible worlds? Which literary forms of play can be reconstructed in picturebook discussions in the German-Italian language context?

The analyses draw on language lessons at a German- and an Italian-speaking primary school in South Tyrol. Both third grade learning groups are characterised by heterogeneity in various dimensions (age, gender, family languages, disabilities and special educational needs) (Krüger-Potratz, 2016).

From a picturebook selection (Hoffmann, 2024b), the educators and teachers could each choose one picturebook per narrative form and create a re-

ception situation with it. The picturebooks are characterised by their experientiality (Dehn et al., 2014; Fludernik, 1996), which makes them meaningful for children in kindergarten and primary school. As a wordless picturebook, which have increasingly formed the picturebook landscape and are recognised by children's literature studies and didactics (Krichel, 2000) as well as empirical reception research (Hoffmann, 2019, Conrad & Michalak 2020; Dammann-Thedens, 2020), the monoscenic and sequentially narrated *Field Trip to the Moon* (Hare, 2019b) was selected by teachers of all the Italian-, the German- and the Ladin-speaking primary school, with the article focusing on the first two. The picturebook's experientiality includes loneliness and community, loss and responsibility, strangeness and friendship, curiosity and courage.

5. Wordless Picturebook

Playful elements are already visible on the cover of the wordless picturebook *Field Trip to the Moon* by John Hare (2019b), both at textual level (the title) and at visual level (Figure 1). The title *Field Trip to the Moon* points to something incompatible (at least for the time being). A "field trip to the theatre" (to the zoo, to the museum, to the forest, etc.) would be conceivable. In the school context, it would evoke familiar ideas of a class community in a place of leisure, culture or nature, as well as the journey getting there by public transport or school bus, for example. A "space flight to the moon" would also be possible and would tend to be associated with an expert cast of space travellers and a rocket. "Field trip to the moon", however, brings together irreconcilable opposites: the everyday (school) excursion with the extraordinary and (for children) inaccessible location of the moon. This contradiction is also visually portrayed: the large-format spaceship depicted on the cover against the backdrop of outer space has the colour and shape of an American school bus. This verbal and visual play with conventions and rules (following the rules, breaking the rules and reinventing the rules) on the cover is an invitation to play-based appropriation of the story told in pictures.

Figure 1 and 2 – Cover and double page spread from *Field Trip to the Moon* (Hare, 2019b). Copyrith by Margaret Ferguson Books.

The plot of the story unfolds on one of the first double page spreads after the moon landing (Figure 2): a school class goes on a trip to the moon and follows a teacher who uses sweeping gestures to draw attention to the special nature of the lunar landscape, which resembles mountain ranges in its hilly form. However, one child remains behind right from the beginning, so that the tension in the relationships between the figures becomes visible. Later in the story, this child will be the one who is left alone on the moon by the group. How this picturebook is received in the German-Italian language context of primary school is shown below using selected key incidents.

6. Imaginative Play and Language Play

Numerous forms of playing with possibilities can be recognised in the picturebook discussions of the German- and Italian-speaking primary schools, in particular *language play* and *imaginative play*. In the language play, the children are playing with language, with writing, with images and with multilingualism. In the imaginative play (the play with possible worlds), the children deal with their own experiences as well as with the characters' landscapes of action and consciousness. In the following, key incidents on language play and imaginative play are shown, first in the Italian- and then in the German-speaking primary school.

6.1 Italian-Speaking Primary School

The focus of the lesson at the Italian-speaking primary school was on reading aloud or rather talking about the pictures in the form of a literary discussion (Figure 3).

Figure 3 – Picturebook discussion in the Italian-speaking primary school (grade 3)

The starting point was looking at the book cover together with the teacher asking the students to look very closely: "la *gita sulla luna* cosa vi immaginate guardate un po' guardate anche l'illustrazione cosa vedete qui ((...)) cosa vedete di particolare", ("the *field trip to the moon* what do you imagine look at the picture what do you see here ((...)) what do you see in particular?") Based on this invitation to observe, a discussion about the place and the plot of the story unfolds. On the one hand, the play on language in the title is taken up and deconstructed: space travel to the moon can be described as a trip, a journey or a flight to the moon, but not as a "field trip" in the sense of a school trip. On the other hand, the imagery of the spacecraft in the shape and colour of an American school bus is taken up and transformed into a *language play* as can be seen in the following key incident in the discussion about the front and back covers (in the transcripts the teacher is abbreviated to T, the names of the pupils are replaced by pseudonyms):

"un autobus spaziale." – "a space bus."

		Original	*Translation*
50	T:	((...)) aha adesso ve lo apro così vedete meglio? ((opens the book, showing the front and back cover))	((...)) aha i open it for you now so you can see it better? ((opens the book, showing the front and back cover))
51	Child:	u: u: u: bello-	ooh: ooh: ooh: beautiful-
52	Child:	(-) u: [bello.]	(-) ooh: [beautiful.]
53	Child:	[bellissimo.]	[wonderful.]
54	T:	(3.0) vediamo ancora cosa notate. (-) anna?	(3.0) let's see what else you notice. (-) anna?
55	Anna:	e:m:- (7.0)	uhm:- (7.0)
56	T:	mattia?	mattia?
57	Mattia:	una porta.	a door.
58	T:	una porta sì? (-) abbiamo già detto che escono da questa porta escono e? (.) passano-	a door yes? (-) we've already said that they exit through this door they exit and? (.) they pass-
59	Leonardo:	dentro.	inside.
60	T:	dentro? (.) nel [tubo?]	inside? (.)in the [tube?]
61	Child:	[tubo.]	[tube.]
62	Anna:	[un]	[a]
		tunnel-	tunnel-
63	T:	e arrivano?	and they arrive?
64	Federico:	(-) all'autobus.	(-) at the bus.
65	T:	hm:. (.) un po' strano no?	hm:. (.) a bit strange right?
66	Children:	sì-	yes-
67	T:	non è proprio un autobus normale o è [normale?]	it's not exactly a normal bus or is it [normal?]
68	Child:	[no-]	[no-]
69	Child:	[no-]	[no-]
70	Luca:	[un autobus]	[a]
		SPAziale.	SPACE bus.
71	Child:	no.	no.
72	T:	eh: un autobus spaziale eh:? ((...))	yes a space bus isn't it? ((...))

The spaceship is perceived by the children as an "autobus nello spazio" ("a bus in space") and thus becomes an "autobus spaziale" ("space bus"). This neologism follows the word formation rules for compound words in Italian, but represents a break on a semantic level. The correct term for the vehicle would be "navicella spaziale" ("spaceship"). Through the word formation play with the usually incompatible components, the strange, extraordinary and playful aspects of the fictional space is brought into consciousness. The participants now move within this playful space.

After the children have entered the fictional space of the story through dialogue, the teacher opens up a space for *imaginative play* by asking questions, like in the following key incident about the first double page spread where the "space bus" takes off:

"come vi sentireste?" – "how would you feel?"

		Original	*Translation*
120	T:	((...)) allora secondo voi. (3.0) dove stanno andando? (3.0) secondo voi susi siediti em vieni un po' più in qua sennò copri:-	((...)) so according to you. (3.0) where are they going? (3.0) according to you susi sit down uhm come a little bit over here otherwise you cover:-
121	Silena:	nella luna.	in the moon.
122	T:	SULla luna eh: SULla luna. (.) hm-	TO the moon right: TO the moon. (.) hm-
123	Salvia:	stanno [partendo.]	they're [leaving.]
124	T:	[e secondo] voi che viaggio sarà? (1.0) pensate pensate a voi che (.) magari entrate su questo autobus-	[and in your] opinion what kind of trip it will be? (1.0) think think of yourself (.) maybe getting on this bus-
125	Leonardo:	wow che bello.	wow how beautiful.
126	T:	e andate sulla luna.	and you go to the moon.
127	Cristina:	sarebbe molto bello-	it would be really beautiful-
128	T:	aha? (.) come vi sentireste?	aha? (.) how would you feel?
129	Luca:	a:-	uh:-
130	Leonardo:	emozionato-	excited-
131	T:	emozionati vero?	excited right?
132	Luca:	sarebbe fantastico-	it would be fantastic-
133	T:	aha-: (.) che meraviglia e cosa pensate di trovare- (.) che avventura pensate che- (2.0) di avere forse uguale a questa di queste persone- (.) anna?	aha-: (.) how wonderful and what do you think you would find- (.) what kind of adventure do you think you would have- (2.0) maybe the same as these people- (.) anna?
134	Anna:	e:- e:m. (3.0) vediamo pianeti.	uh:- uh:m. (3.0) we see planets.
135	T:	m_hm?	m_hm?
136	Rimaz:	da trovare una cometa-	to find a comet-
137	T:	trovare una cometa.	find a comet.
138	Stefano:	gli aglie- (-) gli:::	the alie- (-) the:::
139	T:	gli [alieni?]	the [aliens?]
140	Stefano:	[(alieni)] sì.	[(aliens)] yes.
141	T:	chi sono gli alieni?	who are the aliens?
142	Luca:	i mostri.	the monsters.
143	T:	i mostri [chissà-]	the monsters [who knows-]
144	Children:	[( )]	[( )]
145	T:	chissà che se li trovano (.) anche loro eh:? ((...))	who knows if they also find (.) them there right? ((...))

On the one hand, she asks questions about the progress of the story "dove stanno andando" ("where are they going") in the landscape of action, using the progressive tense, which refers to actions that are currently taking place. On the other hand, she formulates questions about the experience of the sit-

uation in the landscape of consciousness, “che viaggio sarà” (“what kind of journey it will be?”), in the future simple tense, which represents a (still unknown) future. The teacher also makes a connection to the children’s own experiences, “come vi sentireste” (“how would you feel”), expressed in the Italian conditional tense. This tense is used to express conditions in connection with uncertainty: longings, wishes, doubts, assumptions, requests or polite expressions. This makes it a predestined tense for literary discussions that move in the realm of possibility of fiction. The indeterminacy of the image and the uncertainty of the spectator (Dehn, 2019) can be expressed linguistically. So, the children get involved in the conversation in this tense and play with possible feelings: “sarebbe molto bello”, “sarebbe fantastico” (“it would be very nice”, “it would be fantastic”). The question “cosa pensate di trovare” (“what do you think you will find”) triggers imaginations that also play with the fantastic: “vediamo i pianeti“, “trovare una cometa”, “alieni”, “mostri“ (“we see the planets“, “find a comet”, “aliens”, “monsters”). The sequence is finally closed by the teacher with a “chissà” (“who knows”) and then reconnected to the fictional story “chissà che se li trovano anche loro” (“who knows if they also find them there”). Room is left for imagination.

6.2 German-Speaking Primary School

In the German-speaking primary school, the focus of the discussion while regarding the picturebook is not on its literariness, but on the acquisition of punctuation, in this case punctuation for literal speech (Figure 4).

Figure 4 – Picturebook discussion in the German-speaking primary school (grade 3)

Even though this focus is more on language structure, space is given also to the literary story. The pictures are looked at together, a possible story is imagined in conversation and, as in the Italian-speaking primary school, references are made to the children's experiences in the *imaginative play*, demonstrated in the following key incident about the book cover:

"maiausflug zum mond" – "may trip to the moon"

		Original	*Translation*
22	T:	((...)) wer von euch würde denn gerne zum- (.) einen einen maiausflug zum mond machen-	((...)) who of you would like to- (.) go on a on a may trip to the moon-
23	Children:	((raising their hands))	((raising their hands))
24	Emma:	[<<directed at Emil> möchtest du zum mond fahren?> ((takes his arm and raises his hand))]	[<<directed at Emil> would you like to go to the moon?> ((takes his arm and raises his hand))]
25	T:	[lea schon emma schon- (-) simon auch] <<erstaunt> ALle.>	[lea yes emma yes- (-) simon too] <<surprised> EVERYone.>
26	Simon:	ober i bin mir a net so sicher-	but i'm not so sure either-
27	Emma:	[i a net.]	[me neither.]
28	T:	[warum bist du] dir nicht so sicher simon.	[why are you] not so sure simon.
29	Simon:	jo wenn wenn wenn irgendwo äh epes schiaf geaht. (-) [sem konn-]	yeah if if if somewhere uh something goes wrong. (-) [then-]
30	Emma:	[jo wenn wos] passiert.	[yes if something] happens.
31	Simon:	jo. (-) eben.	yes. (-) exactly.
32	T:	so ein bisschen ein [mulmiges-]	so a bit of an [uneasy-]
33	Simon:	[(wenn epes)] passiert jo.	[(if something)] happens yes.
34	T:	es könnte was passieren ja natürlich gel? (.) weiß man nicht was da los ist. (.) wir werden jetzt schauen was was dieser schulklasse da passiert was DIE erleben- (...)	something could happen yes of course right? (.) you don't know what's going on there. (.) we're going to see now what what happens to this school class what THEY experience- ((...))

The connection between the fictional world and real experience is created with the language play "maiausflug zum mond" ("may trip to the moon"). This language play picks up on the title of the picturebook *Ausflug zum Mond* (*Field Trip to the Moon*), linking it to the class excursion in schools in spring, known in South Tyrol as *Maiausflug* (May trip). In the imaginative play that follows, in the space of possibilities of their own feelings, some children

(even if interested in a "may trip") formulate less of a fantastic thirst for adventure and more of a worried view of a journey that is not without danger. The teacher closes this sequence with the use of the subjunctive "es könnte was passieren ja natürlich" ("something could happen yes of course") and her own lack of knowledge "weiß man nicht was da los ist" ("you don't know what's going on there") and re-establishes a link to the fictional story: "wir werden jetzt schauen was was dieser schulklasse da passiert was DIE erleben" ("we're going to see now what what happens to this school class what THEY experience").

With the teaching focus on punctuation for literal speech, the picturebook is playfully transformed into a comic by equipping the characters with thought and speech bubbles. In this way, the characters' landscapes of action and landscapes of consciousness are developed in a literary way. This results in the *language play* in the following key incident about the double page spread, where the school class is walking along the hilly landscape of the moon led by the teacher:

"mond everest junior." – "moon everest junior."

		Original	*Translation*
80	T:	((...)) und der lehrer. (-) oder die lehrerin? ((makes a movement to the right with the right hand, palm facing up, then points to a spot in the book))	((...)) and the teacher. (-) or the female teacher? ((makes a movement to the right with the right hand, palm facing up, then points to a spot in the book))
81	Leander:	hier geht_s lang-	this way
82	T:	m_hm? (.) hier geht_s lang zum beispiel könnte er sagen- <<taking an empty speech bubble and a pen from a box> hier geht_s lang oder was könnte er noch sagen?>	m_hm? (.) this way for example he could say- <<taking an empty speech bubble and a pen from a box> this way or what else could he say?>
83	Rena:	ähm: [da ist ( )]	uhm: [there is ( )]
84	Emma:	[ähm das ist der] hügel- ((gestures with her hands)) keine ahnung wie-	[uhm there is the] hill- ((gestures with her hands)) no idea how-
85	T:	((writing)) ah ja:: ein-	((writing)) ah yes:: a-
86	Leander:	oder geht mir nach?	or follow me?

87	T:	((writing)) geht mir nach kommt bitte nach genau lauter so lehrerinnen- (.) und lehrersätze oder wie könnte denn der hügel heißen? ((points to a spot in the book)) dass er den berg da benennt.	((writing)) follow me please come exactly just like those- (.) teacher phrases or what could the hill be named? ((points to a spot in the book)) so he names this mountain.
88	Rena:	ähm: (1.0) vielleicht noch der schuale?	uhm: (1.0) maybe after the school?
89	Emma:	<<directed at Emil> wie heißt der berg?>	<<directed at Emil> what is the name of the mountain?>
90	Emil:	mond everest-	moon everest-
91	T:	der mount der der MOND everest <<laughing> okay->	the mount the the MOON everest <<laughing> okay->
92	Rena:	((laughs quietly))	((laughs quietly))
93	T:	<<writing> der MOND everest.>	<<writing> the MOON everest.>
94	Emma:	<< directed at Emil> [super emil.]>	<<directed at Emil> [great emil.]>
95	Leander:	[der mount-] (.) mond everest junior.	[the mount-] (.) moon everest junior.
96	T:	((shows the speech bubble to he children)) und zwar so geschrieben wirklich wie der <<directed at Leander> der MOND everest JUNior> weil er ein bisschen kleiner ist okay- (2.0) <<writing> junior> (--) also die sprechblase für den lehrer- ((places the speech bubble on the picture in the book)) *hier geht_s lang das ist der mond everest junior.* ((...))	((shows the speech bubble to the children)) and really written like this just like the <<directed at Leander> the MOON everest JUNior> because it is a bit smaller okay- (2.0) <<writing>> junior> (--) so the speech bubble for the teacher- ((places the speech bubble on the picture in the book)) *this way this is the moon everest junior.* ((...))

Emil and the teacher are working together to develop the language play "mond everest" ("moon everest") as a possible name for the mountain. While on a phonetic level the similarity to the real mountain Mount Everest is maintained, thus taking up the similarity to the visual representation of the hilly landscape in the picturebook and also complying with the word formation rule, the rule is broken again on a semantic level: the moon is a celestial body whereas Everest is the name of the highest mountain on earth – the two do not actually collocate and that is precisely the point of the language play. The extension to "mond everest junior" ("moon everest junior") by Leander again utilises linguistic-cultural knowledge and brings the highest real mountain and the small fictional hilly landscape closer together.

7. Conclusion

In the conclusion, the research questions will be answered after providing overviews of further examples of *language play* and *imaginative play* in classroom discussions in the German- and the Italian-speaking schools.

Table 2 – Language Play

Playing with …	German-language	Italian-language
language	"mond everest junior" ("moon everest junior")	"autobus spaziale" ("space bus")
writing	"wenn es ein Comic wäre" ("if it were a comic")	"se ci fossero state le scritte" ("if there had been writing")
image	"jetzt können wir uns bunt anmalen" ("now we can paint ourselves colourful")	"poi un alieno colora un: desiderio" ("then an alien paints a wish")
multilingualism	"nanutschu wersn des" ("wellnow who's that")	"gli alieni non riescono a capirlo" ("the aliens can't understand")

Alongside the play with spoken language (see 6.1 and 6.2), the children play with writing by exploring what difference it could make, if there were writing in the visual narrative "wenn es ein comic wäre" ("if it were a comic") – "se ci fossero state le scritte" ("if there had been writing").

They play with images, for example by imagining the significance of colours for extraterrestrial life "jetzt können wir uns bunt anmalen" ("now we can paint ourselves colourful") – "poi un alieno colora un desiderio" ("then an alien paints a wish").

They play with multilingualism by staging secret languages "nanutschu wersn des" ("wellnow whos that") or by putting themselves in the shoes of beings who speak other languages "gli alieni non riescono a capirlo" ("the aliens can't understand").

Table 3 – Imaginative Play

Playing with …	German-language	Italian-language
own experiences	"maiausflug zum mond" ("may trip to the moon")	"come vi sentireste" ("how would you feel")
landscapes of consciousness	"hilfe was soll ich jetzt tun" ("help what should i do now") "yeah ich bin frei" ("yeah i'm free")	"molto triste" ("very sad") "impaurito" ("scared") "tanta paura" ("a lot of fear")
landscapes of action	"was denkt ihr was tut es dreht es sich um oder nicht" ("what do you think it does does it turn round or not")	"lo riportano in dietro" ("they bring it back") "stanno insieme e fanno amicizia" ("they stay together and make friends")

Alongside the play with own experiences (see 6.1 and 6.2), other imaginative play forms in the discussions include playing with the landscapes of consciousness by exploring potentially different ways of experiencing "hilfe was soll ich jetzt tun" ("help what should i do now") or "yeah ich bin frei" ("yeah i'm free") or looking for different formulations for an experience "molto triste", "impaurito", "tanta paura" ("very sad", "scared", "a lot of fear"). The landscapes of action are also played with tentatively: "was denkt ihr was tut es dreht es sich um oder nicht" ("what do you think it does does it turn round or not?") or "lo riportano in dietro" ("they bring it back") and "stanno insieme e fanno amicizia" ("they stay together and make friends"). The teachers frame these imaginative play as "die andere möglichkeit" ("the other possibility") or "altre idee" ("different ideas"). With this in mind, we return to the initial research questions.

How do wordless picturebooks invite primary school children to play with language and possible worlds? Wordless picturebooks, which are characterised by ambiguity and experientiality, open up spaces of possibility for children in which they can experiment linguistically and imaginatively. Language play and image play in wordless picturebooks (in the title and in the pictures) offer numerous opportunities for storytelling and dialogue and invite children to play their own language play and imaginative play. This requires time, space and a community.

Which literary forms of play can be reconstructed in picturebook discussions in the German-Italian context? Even if the approaches are diverse, more linguistic or more literary, focusing more on the appropriation of (written) language or the practice of literary discussions, they both open up a variety of literary forms of play. Both the *imaginative play* with personal experience and with landscapes of action and landscapes of consciousness, as well as the *language play* with language, writing, image or multilingualism, demonstrate the importance of aesthetic language and literary experiences, the power of imagination and the pleasure of playing together.

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Transcription Conventions

The transcription conventions are based on GAT 2 (Selting et al., 2011).

[ ]	Overlaps and simultaneous speech
[ ]	
(.) / (-) / (--) / (---)	shorter pauses up to one second
(1.0)	pauses in seconds
: / :: / :::	elongations
JUNior	focus accent
? / - / .	pitch rising, staying the same, falling
((laughs quietly))	(extra-linguistic) actions
<<writing> junior>	speech-accompanying actions, interpretive comments
(if something)	presumed wording
( )	incomprehensible
((...))	omissions

Picturebooks as Inclusive and Participatory Play Objects in School

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Abstract

How can children's literature serve as an inclusive and participatory play object in a school setting? Picturebooks in particular enable participation for children regardless of their starting conditions, thanks to their synergistic image-text relationship. Because they transcend the boundaries of the codex medium by creatively utilising its physical materiality for storytelling, they can be understood as playable objects. Especially toy books offer multimodal forms of reception and participation, which makes them predestined for inclusion. This article aims to design a classification that sorts toy books based on their underlying level of encouragement. The resulting observations are then used to weigh up the benefits and challenges of toy books in educational use. The question is how the potential for playful participation can be fully utilized as a pedagogical resource rather than just being a gimmick. Based on this, two dialogue picturebooks nominated for the German Youth Literature Award (Deutscher Jugendliteraturpreis) 2023 – *Spinne spielt Klavier* and *How to Count to One* – are examined. The analysis shows that readers can also become constituent co-creators of literary worlds without mechanical or sensory modifications. It is primarily the communicative interaction, which is characterized by narrative affordances and appealing impulses, that encourages not only to learn with literature, but also to play with it. With this type of playable picturebooks, school can be easily expanded with playful, literary spaces.

1. Introduction

> If we foreground the triangulation of children's literature, material culture, and play, our field stands to gain three substantial benefits. (…) The first benefit we stand to gain is a clearer vision of how children's literature actually functions in the everyday lives of children. (…) [Second] if we understand children's literature as persistently integrating with material culture and play, a very different picture emerges. We see adults producing children's literature and children's material culture, and we see children playing with and through both. (…) Third and finally, this approach renews the relevance and urgency of the study of children's literature across the university. (...) In other words, we can position children's literature and childhood studies as exciting and hotly relevant sources of insight and evidence for any department that already cares about play or material culture. (Bernstein, 2013, pp. 458–461)

This quote clearly outlines the orientation of this paper. When children's literature is considered in conjunction with play, a compelling argument can be made for its use in educational contexts. Children's literature that invites children to play – whether through physical interaction or appealing impulses – stimulates various sensory channels and learning approaches. When books can not only be read but also played with, they provide low-threshold, inclusive access to literature.

This article therefore explores what makes picturebooks "playable" and how they can be used to expand educational settings like the school with playful, literary spaces.

For this aim, an attempt of classification is made to differentiate the variety of toy books available on the market according to their affordances to play. Toy books are defined as offering physical or mechanical modifications. These additions transform them into interactive objects that go beyond mere reading and invite readers to playfully participate within the literary world. Due to their multimodal nature, toy books facilitate various approaches to literary learning through the use of different codes. This makes them ideal tools for inclusive learning. However, as a comparison of their benefits and challenges reveals, most of these books are difficult to use in educational settings, not least due to their fragility and often high acquisition costs.

Given these limitations, it is all the more important to consider alternative forms of playful literary engagement that are practically feasible in educational contexts. Especially primary schools have a responsibility to provide a wide range of literary experiences. Attention should be paid not only to the children's experiences and developmental needs, but also to the power of art emanating from good children's books. All children, regardless of their backgrounds, must be given the opportunity to become motivated readers. The responsibility of schools, as institutions for inclusive literature education and reading motivation, is huge. In light of this responsibility, it is essential to explore literary formats that actively engage readers.

This article therefore focuses on the use of "simple" picturebooks like dialogue books to demonstrate how active participation can also be demanded beyond mechanical modifications. To illustrate this, two picturebooks nominated for the German Youth Literature Award (Deutscher Jugendliteraturpreis) 2023 were selected as examples: The textless picturebook, originally in German, *Spinne spielt Klavier* [Spider Plays the Piano] (Gottwald, 2022) and the English nonsense "counting book" *How to Count to One* (Salmon & Hunt, 2022). What happens when picturebooks become more than just something to read – when they invite playful interaction between readers and the books themselves? The selected examples offer holistic literary experiences and demonstrate the potential of such books to transform reading into a participatory and playful experience.

Recognizing the inextricable link between literature and play can serve as a source for exploring how the playful, literary spaces opened up by books can also be used as expansions in the school context.

2. Play – Picturebook – Playable Picturebooks

In the context of this article, the term "play" refers to the act of playing itself and is to be distinguished from plays in the sense of a board game or plays in the sense of theater.

Playing is the profession of every child: It is a social process, a self-determined activity free of compulsion (Huizinga, 1938). This means that players must regulate themselves without the intervention of an authority; it is

necessary to voluntarily follow the rules of the play (even those that have been invented in the process) – regardless of whether it takes place in interaction with others or alone. Through play, children acquire social practices and thereby grasp them (Huizinga, 1938; Morgenstern, 2009). They autonomously (re)construct the reality of their lives, process their experiences and make sense of their world, so the power of imagination released through play is essential, as it allows worlds to be created and playfully tested (Hoffmann, 2020). By this kind of imitation, human nature is stimulated to create knowledge, culture and other systems (Morgenstern, 2009); new perspectives can be developed, as well as previously non-existent courses of action. The potential for creativity and creation inherent in play fosters the development of cognitive abilities and affective learning processes (Russ & Wallace, 2013).

Picturebooks are also central elements in the world of children, besides plays. They can be understood as aesthetic objects, positioned at the intersection of literature, image, book, art and play object (Thiele, 2003, p. 180). This definition already makes clear what a special role the picturebook has, despite or actually because it cannot be clearly pinned down. The most significant characteristics are the medium (book) and the content (pictures and sometimes texts). As the term implies, picturebooks are easily conceivable without texts, but not without images. "We can say that the picturebook presents words and pictures in a 'synergistic relationship'" (op de Beeck, 2018, p. 20). Unlike purely narrative children's literature, picturebooks operate on two levels of communication: the textual and the visual. These levels do not only coexist and just accumulate, but they transform each other by their mutual influence, thereby creating a new dimension of storytelling. Picturebooks must be understood as multimodal texts (Kümmerling-Meibauer, 2018, p. 5). The term multimodality in the context of picturebooks refers to their particularly interactive reception: This includes not only the interpretation of image and text but also materiality. "In a sense, all parchment or paper materials intended for reading and viewing are interactive, for the reader-viewer must engage directly with the material object in order to find the words and images requiring interpretation" (Reid-Walsh, 2018, p. xvii). The picturebook fundamentally utilizes its physical materiality for storytelling (Staiger, 2022). This is mainly due to the artistic creativity of picturebook creators, which is not exhausted by the intermedial interaction of text and image on flat book pages (Bader, 1976) – the book's architecture also

significantly shapes the narrative flow and perception of the story. It provides the structure of the narrative and the very act of turning the page is decisive for the dramaturgy (Serafini & Moses, 2023). Picturebooks transcend the boundaries of the codex medium through the creative use of paper as a material, as well as through intertextual and intermedial references and their conception as play objects (Serafini & Moses, 2023; Staiger, 2022).

According to this understanding, picturebooks are therefore always automatically *playable*. Thanks to their structure and content, books are clearly connected to the realm of play (Schmitz-Emans, 2019) and insofar literary experiences can always be understood as a form of play. One possible starting point for play is the materiality of objects that prompt or encourage certain actions. The well-known picturebook artist Maurice Sendak (1988) remembers in an interview how he was given a book by his sister as a present: He smelled it, flipped the pages, even bit into it and developed "a love for books and bookmaking. There's so much more to a book than just the reading. I've seen children play with books, fondle books, smell books, and that's every reason why books should be lovingly produced." (p. 173f.)

3. Toy Books

According to the considerations made, picturebooks can therefore always be playable because of their multimodal nature: constituted by the characteristics of play, they not only trascend the boundaries of the codex medium through the creative use of their synergistic relationship between image and text, but also utilise their physical materiality for storytelling.

In differentiation from this, and as their own distinctive subcategory, are picturebooks that are intentionally designed not only for telling stories but also for offering opportunities for interaction through their playful and performative features. Such books are known as *toy books* – this is the term used by publication houses and in reviews to describe books that are typically defined as physical artefacts, due to their materiality and special designs (Al Chammas, 2012; Dichtl, 2022; Drucker, 2004; Luptowicz & Dinkel, 2019; Reid-Walsh, 2018; Schmitz-Emans, 2019). Their added value lies mostly in physical alterations like movable or sensory elements that can be manipulated by readers.

3.1 Attempt of Classification

Traditional books follow a fixed norm and predictable nature. Regularly they are static with a spine, a front and a back cover, and pages to turn (Ramos & Ramos, 2014). Toy books furthermore offer physical or mechanical modifications such as movable elements, 3D pop-up features or special characteristics like hidden or transformable elements or acoustic, haptic, even olfactory effects, which makes these books clearly playable. The variety of interaction possibilities challenges the reader's expectations of what constitutes a book and expands their experience by breaking through the normative boundaries of a book (Ramos & Ramos, 2014). The additional elements transform them into interactive objects that go beyond mere reading and invite readers to playfully participate. Due to their design, these "affordances" demand certain acts (Reid-Walsh, 2018, p. 17). The result is an overwhelming variety of existing designs and forms (Al Chammas, 2012; Luptowicz & Dinkel, 2022), making it difficult to manage the flood of books labelled as playable. The inconsistent terminology used by publishers further contributes to unclear or blurred definitions of the various types of toy books (except for pop-up books, which are clearly defined, and feel books, which are relatively well outlined).

While existing classifications focus on specific types of toy books (Al Chammas, 2012; Rothwell Montanaro, 1993), the underlying idea here is to classify toy books according to their affordances to play – as Kurwinkel (2020) has already implied (Figure 1).

Figure 1 – Classification of toy books (wide grid). Copyright 2024 Elisabeth von Leon

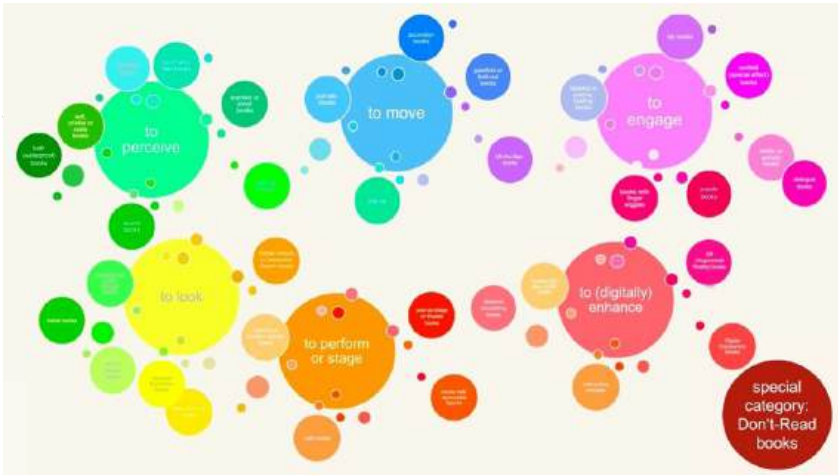

Figure 2 – Demands for action from toy books (fine grid). Copyright 2024 Elisabeth von Leon

According to this variety of actions, the common designations and categorizations of toy books made by publishing houses or reviewers can be assigned to the following classification grid:

- There are toy books whose affordance lies in urging the reader *to move* something due to mechanical modifications, such as accordion books, pop-up books or lift-the-flap books.
- Also due to physical modifications, some toy books encourage sensory perception, inviting readers to touch, taste, smell, listen, – in short: *to perceive*.
- The sense of sight in particular is served by toy books *to look* at, whose appeal lies in looking closely or, for example, exploring seek-and-find or Hidden Picturebooks.
- All toy books with an inherent dramaturgical character suggest the reader *to perform or stage* them, such as craft books or theatre books, some of them even contain figures (to be cut out).
- Some multimedia books utilise technological achievements *to digitally enhance* the physical world of books with immersive experiences. Some e-books offer this; alternatively, additional resources to the conventional print medium, e.g. QR code books, can also have a supplementary effect.
- Similarly, toy books with finger wiggles or books designed for tapping,

poking or tickling aim to prompt interaction. The affordance of all these types, including books to zip or special effect books with confetti to shake, is *to engage*.

Of course there are fluid transitions between the individual categories, as some toy books cannot be neatly classified into a single category. For example, lift-the-flap books invite both the physical act of moving the flaps and active engagement. Other toy books are combined formats, that contain a variety of modifications: with one page inviting you to unfold them, while the next one encourages crafting and so on.

Another observation that could be made during the classification process is that, with few exceptions, nearly all types of toy books involve physical alterations – except for Hidden Picture or Interactive Search Books and dialogue books. These are the only types of playable books that rely solely on the image-text relationship and narrative tricks to provoke interaction (on the significance of narration in toy books, see also Dichtl, 2020). This way they prove that interactive experiences do not necessarily depend on mechanical modifications. "Even when an individual children's book has no material tie-ins, the material commodity still exists as potential" (Bernstein, 2013, p. 460). An unusual, participatory reading experience can achieve similar effects by demanding heightened attention and active co-creation; the aim is to make readers an integral part of the literary world (Iser, 1984) and thereby enhancing their involvement in the literary experience by engaging them through entertainment and a playful approach (Luptowicz & Dinkel, 2022). Like mechanically modified toy books, Hidden Picture or Interactive Search Books and dialogue books rely on specific manipulation methods inherent in their concept to enable characteristic interactions (Reid-Walsh, 2018) – although without using tactile elements. Instead, dramatic requirements of the plot serve as affordances in order to promote specific (re-)actions (Reid-Walsh, 2018).

3.2 Participative (Interactive) and Inclusive Character

As already stated, the unifying moment of all toy books is the invitation to participate. This succeeds due to the aforementioned affordances that encourage interaction. At the same time, all affordances are characterized by

liveliness and dynamism: Thanks to their playful character, it is significantly easier to participate in the story. Under these circumstances toy books can be perceived as living objects that seek interaction with their counterparts, positioning the readers as play partners (Drucker, 2004). Through this interaction, the book is brought to life, providing both entertainment and enjoyment (Schmitz-Emans, 2019). Such lively animated texts can be quickly identified as suitable objects for inclusive education.

Inclusive literature education means high-quality instruction that is accessible to *all* learners – regardless of their individual dispositions; the aim is to enable literary learning for all (Leiß, 2020). Due to their multimodality, toy books are particularly significant in this context. They offer various access points through the use of different codes, such as movable or sensory elements, media variations or narrative affordances. The wide-ranging potential of sensory impressions makes it possible to explore its facets on different levels and in different ways. This enables to consider individual differences in modes of reception even beyond the distinction of disabled / non-disabled (Hoffmann & Naujok, 2014, p. 221). Literary-aesthetically challenging books with an inherent experimental character provide irritations, which slow down the entire reception process and so far enable inclusive approaches to literature (Hoffmann & Naujok, 2014, p. 201; Serafini & Moses, 2023). It is exactly the complexity and the irritation that result from the specific, semiotically based comprehension requirements of toy books that are seen here as a starting point for inclusive literature education, from which readers with a wide variety of learning backgrounds can benefit (Leiß, 2020).

3.3 Educational Practice: Benefits and Challenges

According to Luptowicz and Dinkel (2019, p. 93) learners should primarily engage with literature through active, hands-on approaches. Toy books offer a wide range of possibilities for such engagement. For example, they use elements of suspense and entertainment that can enhance reading motivation and enjoyment. The spectrum of interactive, tactile, visual and textual modalities plays an important role as a pedagogical resource for engaging the reader's attention and interest (Serafini & Moses, 2023). Toy books teach in clever ways because they are unlike traditional illustrated books, as they make the reading experience more interactive, effective and memorable (Montanaro

Staples, 2018). Especially for early readers and weaker readers, toy books represent a motivating alternative. "The reluctant reader may be captivated by the stimulating action of the moving paper and be challenged to follow the story in the text." (Montanaro Staples, 2018, p. 188) In addition to the opportunity to acquire knowledge in self-directed and innovative ways, a subjective and universal interaction with texts is made possible, which favours personal literary experiences (Spinner, 2007). Another advantage of using toy books with mechanical modifications lies in the engagement of multiple senses, particularly through tactile experiences. This also plays a role with enhancing fine-motor skills. Such an interaction with the medium of the book enables a holistic aesthetic experience (Thiele, 2010). So, there are many good reasons for using toy books in the classroom and thereby expand the school with playful literary spaces.

But there are also significant challenges associated with using toy books in school environments. One major issue is their fragility. Because of their delicate nature these editions are rarely, if ever, to be found at elementary classroom libraries. The fragile nature of the paper elements requires careful handling to preserve the mechanical features for a long time, which makes them less suitable for use in classrooms with younger children and often necessitates adult supervision (Serafini & Moses, 2023). Toy books with physical alterations are also often bulky. This can require additional space in the classroom and make storage more difficult. Another problem is the high acquisition costs of toy books. According to Serafini & Moser (2023) the complexity of their paper and material requirements, the engineering involved, and the labour costs for assembling movable picturebooks contribute to their elevated prices. Moreover, with the rise of digitalization, books that incorporate virtual or augmented reality are becoming increasingly important. These technologies offer new possibilities for interactive learning and engagement, enhancing the educational experience by integrating digital elements with traditional book formats. But since not all educational institutions have the necessary digital infrastructure and digitally enhanced toy books still face the issue of high acquisition costs and the fragility of handling technical accessories, they do not appear to be a satisfactory alternative to traditional movable books.

Quite apart from the difficulties mentioned above, the currently enormous number of toy books on the book market is primarily aimed at tod-

dlers – children of school age are less in the focus. For these target groups, mainly non-fiction books are published that use various of the above mentioned techniques to illustrate certain physical, biological or other phenomena (Grünewald, 1993). One problem with these books is that the playful affordances can quickly become exhausted.

> As with any picturebook, the narrative and the visual, the content and the design should form a high-quality unit. Playful effects must not just be a gimmick, but rather an integrated, indeed compelling offer that increases the pleasure – and not a short-term illusion. (Grünewald, 1993, p. 100)

If physical alterations are merely used as embellishments, there is a danger that the content of the book will be completely overshadowed: The impressive techniques distract from a deeper examination (Luptowicz & Dinkel, 2019).

4. Two Examples of Playable Picturebooks as Inclusive and Participatory Play Objects

At this point the discussion shifts to the use of playable picturebooks that are independent of mechanical modifications. This includes the Hidden Picture or Interactive Search Books and dialogue books previously recognized in the classification attempt. (Re-)Actions in these books are not provoked by physical alterations but rather through the image-text relationship and purely narrative tricks: These include dramatic demands and a participatory reading experience. It is primarily dialogue books that achieve active engagement through these methods. Their kind of interaction is of a communicative nature, expecting a dialogue. By addressing readers in an appellative manner (usually using the pronominal form "you") and through indirect prompts, the reception becomes an active exchange. Without readers, these books would be unfinished; they require a counterpart. The reader becomes the central figure of the play's plot (Dichtl, 2020, p. 194). The interactive design of dialogue books can only be activated through reading. The advantage of these picturebooks is that they are neither fragile nor particularly expensive. This enables them to avoid the major challenges faced by toy books, as described above. Nevertheless, they encourage playful participation and can

be used to add playful literary spaces to the classroom. "They can not only be used for reading, reading aloud, looking at a picture, but also for playing" (Al Chammas 2012, p. 59). In other words, the potential for play is not merely a gimmick but is realized through engagement with the narrative part, the literary component of the book. The combination of play and literature not only increases motivation but also simplifies reading. In addition to text comprehension and the subsequent communicative exchange (Luptowicz & Dinkel, 2019), advanced reading promotion also focuses on sensory-aesthetic perception, concentrated accountability, understanding of structure and critical reflection (Blei-Hoch, 2022, p. 149). Innovative picturebook productions facilitate these learning experiences through their modern, stylistically diverse forms of literary and visual aesthetic expression (Blei-Hoch, 2022, p. 149). Readers do not only interpret the story through the visual and textual elements; the specific techniques used even encourage them to co-create the content based on their own interpretation (Grünewald, 1993). This approach supports heterogeneous learning types – thanks to covering different preferences and needs, more readers get the chance to find an individual approach to literature (Leiß, 2020).

To show how active participation can also be demanded beyond mechanical modifications and how simple picturebooks like dialogue books can be used to expand the school with playful spaces, two books are selected as examples. There would have been countless other books suitable to illustrate the main point. The choice was made for *Spinne spielt Klavier* [Spider Plays the Piano] (Gottwald, 2022) and *How to Count to One* (Salmon & Hunt, 2022), due to the following reasons: On the one hand both examples have already been analyzed in terms of their narrative-verbal and visual dimensions in other works (von Leon, 2024; Schäfer, 2023), which testifies its scientific relevance. On the other hand the selection was motivated by their recent nomination for the 2023 German Youth Literature Award (Deutscher Jugendliteraturpreis) in the picturebook category. This prestigious award for international children's and young adult literature can be seen as a trend marker, it consistently honors books of outstanding quality. In the nomination justifications (Arbeitskreis Jugendliteratur [AKJ], 2023), the emphasis is placed on the high level of engagement, liveliness, playfulness and eccentricity (the latter of which can be understood as innovation) – criteria that classify both books as toy books.

Both examples demonstrate that unusual elements do not necessarily need to be tactile in order to achieve the aforementioned added value.

4.1 *Spinne spielt Klavier*

Already the indirectly appellative subtitle *Geräusche zum Mitmachen* (Sounds to play along with) (Gottwald, 2022) of this wordless picturebook published by Carlsen in 2022 serves as affordance and determines the role of the readers. By the time one reaches the dialogically designed preface, the pronominal appeal becomes clear: "Listen to this book! Can you hear what you see? (...) Just mimic the sounds. You should read this book out loud." (Gottwald, 2022, n. p.) But there is hardly anything to read: The stroke of genius lies in the full-page illustrations that represent various sounds completely without text (Figure 3).

Figure 3 – From *Spinne spielt Klavier* by Benjamin Gottwald, Carlsen. Copyright 2022 by Carlsen. Reprinted with permission.

The visual stimuli intuitively enter through the eyes and exit loudly through the mouth without words, creating a head theatre for multiple senses. In a delightful way, the illustrations awaken the desire to co-create by vocaliz-

ing them with pleasure (von Leon, 2024). The result is a reading performance (Morgenstern, 2009) that only works if someone can be found to respond the intuitive prompts – otherwise its potential remains unrealized. This playable picturebook is not designed for passive readers, it craves interaction. In a school context, both music lessons and language lessons can utilize this potential. Due to its wordlessness, the silent picturebook is ideal not only for compositions but also for narrative text. It enables access to fictional worlds and thereby offers an expansion to school with its playful, literary spaces. It can be used entirely on its own, as it is also completely self-explanatory, or it can be shared in a social setting as a starting point for playing (music or sounds) together.

4.2 *How to Count to One*

Once again, the subtitle of this "fun new counting book" (Salmon & Hunt, 2022) published by Nosy Crow in 2022 indicates that this is something special: "And don't even THINK about bigger numbers!" Expressed as a warning, the affordance is actually an order. By a mischievous gesture of underchallenge, on each successive double-page the narrator asks to count just to one (Arbeitskreis Jugendliteratur [AKJ], 2023). The gaze on the colorful illustrations always spontaneously captures countable items in increasingly large quantities. But at the text level, the pronominal appeal remains to count only unique things (Figure 4).

Figure 4 – From *How to Count to One* by Caspar Salmon and Matt Hunt, Nosy Crow. Copyright 2022 Nosy Crow. Reprinted with permission.

This picturebook is primarily a seek-and-find book. However, it is not a conventional one. The interactive dialogical situation assumes that readers will solve the search puzzles correctly; the challenge lies in the paradoxical (restrictive) tasks (von Leon, 2024). It is up to the readers' judgement to decide whether they faithfully follow the implicit instructions of the book or whether they listen to their intuitive impulses or act against the instructions (von Leon, 2024). This opens up various reading paths and playful reading experiences. This autonomy is considered an essential characteristic of play. Precisely because schools is bound to rules, it is good to open up (literary) spaces in which playful freedom is possible. One opportunity for this can be found between the covers of this book.

5. Concluding and Suggestive Reflections

In sum – as the attempt of classification has also shown – especially toy books with physical alterations demand different acts due to their variety of affordances. As a result they offer significant opportunities in terms of reading motivation and innovative, self-directed knowledge acquisition. However, the high costs and fragile mechanical modifications present challenges, especially for the acquisition of movable toy books for use at school. Playable picturebooks, which work by way of dialogue and focus on the image-text relationship and narrative tricks, prove to be effective alternatives. They could be a category of its own within the classification grid: toy books *to chat with*.

The selected samples have shown that readers can also become constituent co-creators of literary worlds without mechanical or sensory modifications. These playable picturebooks rely on the dialogue between the reader and the book itself to develop its playful potential. As complex picturebook productions, they manage to foster the interest of readers in the image-text relationship and to train their skills to engage with literature; as well as to develop their appreciation for picturebooks as playable objects of art (Blei-Hoch, 2022).

If we look at this from the perspective of school education, literary experiences of this kind hold enormous learning potential: If literary learning is organized as a participatory experience, on the one hand aesthetically suc-

cessful illustrations, but even more playful engagement stimulates imagination; on the other hand, a playful, enjoyable approach promotes a stylistic sense for literary expression, the fictional character of literature and narrative patterns (Spinner, 2007). Furthermore, the variety of individual modes of reception and approaches enables equally varied personal literary experiences and consequently unique encounters with or within fictional worlds (Spinner, 2007; Hoffmann & Naujok, 2014). Experimenting with the different approaches is part of the play and stimulates other, unusual ways of handling (Reid-Walsh, 2018). The resulting ambiguity is particularly suitable for heterogeneous learning groups in their complexity (Hoffmann & Naujok, 2014). This satisfies inclusive literature education: thanks to the playful character, it is significantly easier to participate in the story. School is thereby expanded to include playful literary spaces in which children not only learn together but also play together. And by playing they learn.

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Imagining Spaces, Tools, and Activities for Playful Training: The Art of Kamishibai[1]

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Abstract

Building on years of experimentation across diverse educational settings, this initiative showcases a professional development experience for educators focused on the use of Kamishibai – a Japanese storytelling art meaning "paper theater". Held in Bressanone in October 2023 in collaboration with the MultiLab, a physical space and an opportunity for project co-planning of the Free University of Bozen- Bolzano, the programme delved into the cultural and philosophical roots of this ancient art form, highlighting its rich pedagogical and didactic potential. The training emphasized how Kamishibai fosters a holistic educationalprocess that nurtures personal and interpersonal awareness while enhancing relational, communicative, and creative abilities.

Kamishibai provides a unique framework for exploring emotional literacy by engaging the body and senses. It opens an aesthetic space for self-expression through the synergy of multiple languages. Beyond serving as a teaching tool, Kamishibai becomes a dynamic space for imagination, expression, sharing, and action – a realm for playing with space and time dimensions through diverse perspectives, unlocking meaning through exploration and creativity.

The training experience is presented through both theoretical insights and practical reflections, supported by documentation and testimonials from participants. Central themes that emerged during the process will be examined, emphasizing the transformative role of storytelling with Kamishibai.

1 The contribution is the joint work of three authors. However, paragraphs 1 and 2 are attributed to Rita Casadei, paragraphs 3.0, 3.3, and 3.4 to Sara Baroni and paragraphs 3.1 and 3.2 to Alessandro Gelmi, the conclusion to Alessandro Gelmi and Sara Baroni.

1. The Art of Kamishibai

紙芝居 – Kamishibai – is how these ideograms sound in Japanese. Internationally translated as paper play, paper drama, and paper theatre, where 紙 kami stands for paper and 芝居 shibai stands for play, opera, story, scene, theatre. Kamishibai can be described in an artistic-expressive form in which the narrative and the sound are united with the visual. Before going into a presentation of this specific form of narration-communication-expression, some notes will be given to help those who are not at all familiar with this reality figure out what we are physically referring to a wooden theatre (舞台 butai) that serves as frame, space, time and place of the narration, two wooden clappers (拍子木 hyoushigi) that resonate and announce the beginning of the event, tables depicting the story, the storyteller, the audience, a welcoming space.

Traditionally, as this was an itinerant form of entertainment, the small butai was set up on a bicycle, thus enabling the storyteller to reach different areas of any given city. To begin with, it is necessary to point out the socio-historical reality in which Kamishibai takes origin. It started off in Japanat the end of the 1920s where its great popularity in the streets lasted until the 1970s; from that time on, the presence and gradual spread of television and other communication media determined its necessary adaptation to more circumscribed contexts but it continued to gain interest even on an international scale. First of all, Kamishibai is the fantasy space on the street corners of cities, where at the call of the two clappers, children flock to meet the storyteller ready to entertain, amuse and enthuse them. This is the image that has most penetrated the memory and heart of those who experienced childhood between the 20s and 70s. It may be useful to start from the concrete fact that it is a sensory and aesthetic experience in which imaginative thinking, gesture, sounds, and voice mutually solicit each other to promote a narrative filled with imaginative and creative possibilities, on the levels of thinking andlanguage, and relational and emotional expressive skills. The show all begins with an attention-grabbing sound, announcing the start of the performance, which attracts a wide audience, not only the very young. This sound acts as an invitation to participate, which is already a statement of its intent to include, welcome and integrate. It is an important element in

the ceremonial aspect of other ritualised forms, where religious, artistic and folkloric elements are often intertwined. The sound produced by the wooden clappers is a call to take part in the performance , not just be passive, but active within a chorally-experienced event. In this case, one becomes part of a narrative intertwined with the image, its movement and the context – cultural, social and natural – within which it all takes place. The popularity of Kamishibai, and the interest that seems to have become renewed in it, may be said to derive from its being a dynamic, bodily tactile experience where the physical, sensorial and emotional touch and contact is a continuum marked by different aspects.

Historically, Kamishibai may have several precursors that date back to ancient times. It is possible to trace Kamishibai back to the 12th century with the traditional genre of e-toki 絵解き (literally: explanation through images). . This genre includes the artistic form of the e-makimono 絵巻物 – depictions on sheets of paper or cloth to be rolled up and unrolled – used to visually narrate stories of prominent historical and literary figures. E-makimono is connected to the practice of e-toki with which buddhist monks instructed the population – not always literate – using llustrated episodes from the Buddha's life. This served to communicate precepts and conduct useful for community life, fostering shared values and social cohesion through a blend of moral teaching and aesthetic experience. Another related form of storytelling involves no illustrations, but rather evokes imagery through chant and musical narration. Singing and music are carried by a storytelling monk: biwa houshi. This term denoted the blind wandering monk who told stories while accompanying himself with a traditional stringed instrument, called biwa. The coexistence of a multiplicity of expressive languages makes these artistic-communicative genres a formula for conveying taste, sensitivity, entertainment, information, education. Kamishibai is more than a form of visual storytelling – it is a cross- disciplinary phenomenon shaped by cultural, social, political, and architectural dynamics. Along with to the informal style, "educational kamishibai" also came into being: 教育 - Kyouiku Kamishibai. This distinction can be explained from the rising interest in Japan for reconsidering the concept of childhood with its specific evolutionary stages and its needs concerned to instruction and learning. Contents and ludic-didactic programmes were designed by adults and always oriented towards an eminently educational purpose.

Kamishibai is still alive today. Its revival reflects a desire for a simpler, more mindful, and less hurried way of life. Currently, Kamishibai is used in preschool services and kindergartens, but above all it lives in cultural centres and local libraries that seem to replace what used to be the street. Community places such as cultural centres and libraries are experienced by children as free, open spaces in which the presence of parents and teachers does not prevail. This factor seems to somehow reawaken a spirit of openness and freedom (Bingushi, 2005). These are the spaces where Kamishibai is preserved and continues to evolve in contemporary Japan. The aims are playful, but include the transmission of content and knowledge useful for a spirit of active citizenship.

2. A Teacher Education Experience Through the Art of Kamishibai

This paper presents a teacher training experience based on the art of Kamishibai, held at the MultiLab on the Brixen University Campus in autumn 2023. Adopting a holistic educational approach, the training aimed to engage participants across multiple dimensions – physical, cognitive, emotional, and affective – by creating space for exploration, recognition, and meaningful experience . Above all, the activity aimed to make adult-leaders experience the meaning of play, revitalizing all its characteristics that make it a fundamental experience, at all ages (Rodari, 1973). To support this objective, the training took the form of a hands-on workshop – an experimental space for methodology, imagination, creativity, and social-relational skill development (Frabboni, 2004). Before being seen as a teaching tool, Kamishibai should be understood as a space that nurtures imagination, expression, sharing, and action .. It is the space in which to "play" the space-time dimension according to different parameters and sensibilities, probing its meaning in terms of exploration, creativity, sharing and collaboration (Munari, 1977). The Kamishibai offers opportunities to explore emotional literacy through the involvement of the body and senses and opens to an aesthetic perspective that facilitates self-expression through the combination of multiple artistic-expressive languages. Extensive studies and in-progress research make it possible to high-

light the pedagogical-didactic potential for training and education that can develop personal and interpersonal awareness, considering the wholeness of the person and the social, cultural and natural environment in which they live. Training through the Kamishibai has been considered for emotional literacy, which includes literacy to imaginative thinking and expressive potentials, which can find their fulfillment (Casadei, 2022). Writing, reading, illustrating and animating become ways of giving voice to oneself and others, within a methodology that values listening as deeply as speaking, and gestures as powerfully as words. Central to this approach is the need to listen and be heard, to unlock imagination and creativity – not as indulgence, but as a writing, generative force that gives shape even to uncharted thoughts. From this perspective the Kamishibai engages the exercise of logical and creative thinking, the ability to figure and build sequences, the ability to represent through the sign of writing and through drawing, in all its descriptive and evocative potential. Then comes the narrative voice that gives body to the story and helps the imagination to emerge within a tangible shape. The spoken word carries tones that allow different emotional tones to be experienced and expressed. Last, but not least, is the gesture that also speaks; in this case reading is giving voice to the gesture to enter into con-tact with the story.

Building on these theoretical foundations, the training experience – attended by 17 primary and preschool teachers, along with librarians – invited participants to actively engage by experimenting firsthand. They explored the use of their voice, body, linguistic and graphic skills, as well as their emotional and interpersonal abilities. The program began with a theoretical introduction, followed by dynamic activities designed to integrate body, mind, and breath. Participants then engaged in listening to stories read aloud and collaborated in group tasks such as rewriting and creatively representing the stories. Ample space was also dedicated to reflection, facilitated through personal journaling and the collection of feedback from participants.

3. Giving Voice to the Participants

During the training experience the participants were invited to write down their thoughts both in their diaries and on sheets of paper to be placed in-

side an envelope. This approach draws inspiration from Mortari's "box of thoughts" method, often used in research with children (2009). Participants' openness to documenting their experiences was especially valuable for two main reasons. First, it provided a key moment in the training, allowing participants to leave a personal trace and engage in reflective practice. Secondly, it allowed the trainers to obtain rich feedback that was functional both for the subsequent training meetings and for possible future research pathways. At the end of each meeting, care was taken to read the written thoughts to make them the subject of a shared reflection on what the participants' perceptions of the learning experience might have been. Finally, they were asked to complete an anonymous satisfaction questionnaire through which they were asked, among other things, to write down their level of enjoyment of the course, what they most appreciated, what they did not, whether there was anything they would like to change, what they feel they would like "to take away" from the course on a professional and/or personal level. In addition to this, they were guided in the creation of a strictly personal logbook, which some chose to share voluntarily. After the training, all submitted reflections were transcribed by the authors. Using qualitative analysis software (Maxqda), the most frequently mentioned themes were inductively categorized. It is important to note that this was not a formal analysis, but rather a way of documenting the experience – a tool to inspire further reflection, without aiming to be representative. In doing so, four recurring themes were identified, which will be briefly described in the following paragraphs: imagination/creativity, sense of community, (re)valuing time, and expressive languages.

3.1 Imagination and Creativity

A central theme emerging from participants' reflections was the exploration of imagination and creativity, which proved to be fundamental elements of the training experience. These two aspects were not only implicit objectives of the course but also key lenses through which participants interpreted their own experiences and those of the students they work with.

One significant aspect of this theme concerns participants' reflections on the potential of kamishibai as an educational tool for stimulating and engaging children's imagination. Adapting a story for Kamishibai was seen as both

intellectually demanding and deeply rewarding, requiring considerable cognitive and emotional engagement As one participant observed: "The transformation of the story for Kamishibai is a challenging mental exercise that heavily involves imagination but ultimately brings great satisfaction."

This reflection illustrates both the effort required and the satisfaction gained through creative engagement. The participants' reflections align with theoretical insights on the pedagogical value of imaginative and creative activities. These activities go beyond merely capturing children's attention; they contribute to the co-construction of meaningful learning experiences. Imagination enables children to see from new perspectives, collaborate effectively, and connect learning content to their lived experiences (Vygotsky, 2004; Resnick, 2017; Akkerman, 2018; Starko, 2021).

However, the theme of imagination and creativity was not limited to children's engagement; it also encompassed participants' own involvement in the training process. Participants also reflected on their own creative roles during the course, emphasizing how the experience revived their sense of discovery and expressive freedom. This personal engagement was supported by several key factors that participants directly linked to their imaginative and creative involvement in experiencing and creating stories with Kamishibai. Among these factors, participants highlighted the importance of a relaxed sense of time, which allowed full immersion in the activities. They also emphasized the collaborative environment – marked by sharing, solidarity, and dialogue – that fostered mutual support and inspiration. In addition, they appreciated access to a range of diverse expressive tools and languages, often lacking in their daily roles as educators: "I had the chance to draw after a long time without doing it... all to the benefit of creativity and imagination". These elements will be explored in greater detail in subsequent sections. Altogether, they highlight the importance of providing educators with opportunities to experiment and rediscover their own creative and imaginative potential. This not only enriches their repertoire of professional skills, but also renews awareness of the transformative role imagination and creativity play in education (Egan, 1997, 2005; Egan & Judson, 2016; Glaveanu et al., 2020).

3.2 Sense of Community

A prominent theme in participants' reflections was the emergence of a strong sense of community. This concept, recurring across many testimonies, represented a central element of the course experience. Participants described the sense of community as a natural and organic feeling that developed spontaneously, thanks to the welcoming environment and the quality of the interactions. One participant encapsulated this sentiment succinctly: "We enjoyed being in a group, spontaneously creating a sense of community." This perspective reveals both the joy of group cohesion and the ease with which meaningful bonds formed in an inclusive, participatory setting (Winstone et al., 2020).

When analysed more closely, the sense of community described by participants unfolded into two primary dimensions, each offering insight into the importance of this aspect of the training experience.

The first dimension relates to a sense of belonging, understood as the feeling of being part of a group that fosters emotional support, acceptance, and an authentic spirit of sharing (Gravett & Ajjawi, 2022). This sense of belonging is vividly conveyed in the words of a participant who reflected on the experience as follows: "This course has been a true journey of discovery: filled with emotion, engagement, and a welcoming spirit. A place that truly felt like home." This testimony evokes the concept of "home" – not as a physical place, but as a symbolic space where individuals feel safe, accepted, and free to express themselves. Many participants repeatedly mentioned this sense of kinship (Glaveanu, 2020; Tanggaard, 2020), highlighting how shared creative efforts and collective expression helped build deep and meaningful bonds. In collaboratively creating and retelling stories through Kamishibai, the imaginative process took on a deeply interpersonal dimension. This aligns with what contemporary research on creative pedagogies define as co-creativity (Franklin, 2022), where collaboration transcends mere dialogic exchange to cultivate a deep sense of reciprocity and affinity, within a communal sense of unity and connectedness (Kimmel & Hristova, 2021; Beaty et al., 2021).

The second dimension pertains to the freedom and serenity required to negotiate meanings and engage in generative exchanges. Participants frequently emphasized how the course created an atmosphere that offered not

only a sense of safety but also opportunities to explore and express ideas freely, without fear of judgment. This is captured in statements highlighting the concept of freedom: "A community was formed where freedom became the key to expressing concepts and ideas", or the role of experimentation and error: "Sharing together, creating, imagining: there's no RIGHT or WRONG." In this context, freedom is not merely an absence of constraints but a vital condition for fostering creativity and authenticity. This aligns with theoretical discussions on the risks inherent in educational environments designed to support shared creativity (Glaveanu, 2020). These environments underscore the need for psychological safety as a foundation for creative dialogue – especially when such processes involve uncertainty, emotional risk, and productive tensions. (Bakhtin, 1981).

3.3 (Re)valuing Time

The value of time is one of the themes most frequently found within the participants' thoughts. It emerged repeatedly in both written reflections and questionnaire responses . It also seems to be as much linked to the practice of telling stories with the Kamishibai with "a slow and cadenced rhythm" and with "slow gestures" as an opening towards a broader reflection on one's professional and personal life.

Taking up the many reflections on our society characterised by consumerism, the constant quest for efficiency, the impossibility of dwelling on things, collecting adults' reflections on the "rediscovered pleasure of slowness" can be considered meaningful. If during the pandemic seemed to have opened possibilities for slowing down, today's speed seems to have returned as the dominant logic (De Faveri, 2023). Thinking about the implications this logic may have on educational practice, one could cite research conducted in Flanders (Peleman, 2020) that showed how three-year-old children spend 20 to 30 per cent of their time in kindergarten waiting. This happens because educators, to avoid "wasting time" in the name of efficiency, wait until all the children are ready before moving on to the next activity. In this regard, Clark (2022) stresses the urgency of counteracting this harmful acceleration, which begins as early as childhood.

The discourse on the importance of allowing time for children to engage in enjoyable activities can be found in numerous philosophers and pedagogues, whose contribution still seems to be relevant today. Comenius argued that it is necessary to find strategies that allow teachers to teach less and learners to learn more and, in this regard, called for less talk and useless work, but more free time for the pleasure of learning (Gola, 2021). In *Emile* Rousseau (1762/2016) argued that, to educate, it is necessary to "learn to waste time in order to gain time", i.e. to allow children to enjoy the happiness of play, nature and movement. Montessori (1948/1999), emphasised how a good teacher is one who's able to respect the unfolding of the child's intelligence, not substituting himself for him, but in a context of freedom letting him choose which activity to devote himself to, and in this sense taking care to preserve his concentration without interruptions. Froebel then emphasised the relevance of bodily experience and play, which, as we know, can only take place in extended time (1867). Similarly, Dewey (1938/2014) claimed that it is precisely by giving children the autonomy and the freedom to make experience of the world that deep learning can occur. Contrary to the logic of curricular acceleration often witnessed at school, learning needs time and it is precisely in "slowing down" that the meaning of what is being done can be identified (Gola, 2021). In addition to the important insights that the use of the Kamishibai has opened about the use of time in educational settings, the importance of "giving time" to the educational relationship should be also considered. In this regard, it is interesting to reflect on how the temporal dimension of educational accompaniment requires two conditions to be met, which are availability and narrative competence. First, one of the most meaningful ways to care for someone is by offering them time – since authentic communication cannot thrive in haste or superficiality. Secondly, the role of the educator is to give the other the opportunity to tell her/himself, giving her/him the time to find the words, to have a voice, and while waiting patiently, allow her/him to identify their own life purpose (Bruzzone, 2016). The powerful idea is that by slowing down and truly experiencing time, meaningful things are allowed to unfold. This is a vital insight for shaping meaningful learning environments – for both children and adults alike.

3.4 Expressive Languages

Another notable theme that emerged in participants' reflections was the idea of *multiple expressive languages*. By its very nature, the Kamishibai is an instrument that combines the visual, the sonorous, the kinesthetics and can offer very personal possibilities of expression (Casadei, 2022). For example, in the conducted training one of the participants, an experienced musician, involved the members of his group in a search for more appropriate ways to add music to the narrative made of gestures, words, and illustrations. Questions such as: "Would it be possible to add a soundtrack to represent musically the chosen story? Which type of music? Continuous music or not to help the words and images?". Thanks to the possibility offered by the workshop with the Kamishibai, these stimuli found an expressive channel, managing to enrich the reading experience.

On a didactical level, this opens a reflection on the possibility that artistic activities have in accommodating different talents, inclinations, and abilities. The goal is to offer a broad spectrum of expressive modes, encouraging individuals to discover the languages that resonate most with their way of expressing and communicating (Tonucci, 1980; see Baroni, 2022). This allows those who participate to rediscover their sense of self-efficacy, thus increasing intrinsic motivation and more generally the pleasure "of putting oneself out there", which is relevant to the professionalisation of teachers (Bandura, 2000).

Thoughts such as: "I really appreciated the opportunity to create something that allows different arts and various artistic, linguistic, and literary fields to interact. I will carry this experience with me in my journey"; "From a personal point of view, it has given my artistic side the chance to grow and get involved" highlight the significant potential of creating spaces and activities like these. In fact, it is in an atmosphere of acceptance, of experimentation such as that of the workshop, where each participant can engage directly and gain deeper self-awareness (Casadei, 2017).

This offers the opportunity to reflect on the inclusive possibilities of the Kamishibai, which adopts a "multidisciplinary, multifaceted and inclusive language" capable of "dilating time, allowing it to repeat itself, to linger, modelling itself, differentiating itself and personalising itself on the specific

needs" of the learner, grounded in the appreciation of individual differences rather than their exclusion (Sgambelluri & Domenico, 2022).

4. Conclusion

This contribution represents a preliminary documentation of an adult educational experience with Kamishibai, and as such, it has certain limitations. The findings and reflections presented should be considered an initial exploration rather than a comprehensive analysis. Nonetheless, the experience has sparked several promising ideas and directions for future development.

One possible direction for expansion involves scaling the initiative through collaborations with schools and local organizations.. In this regard, a cycle of storytelling sessions was conducted in schools, and the training program was shared, with the involvement of participants, during dedicated events held by the Civic Library of Bressanone (Baroni et al., 2024). These events welcomed both children and adults, fostering intergenerational connections. Such initiatives highlight the value of embedding creative educational practices like Kamishibai into community and institutional contexts to enhance their pedagogical impact. Another meaningful path involves designing research-based training initiatives (Asquini, 2018) informed by the themes and insights gathered during this initial documentation. These efforts aim to deepen our understanding of the effects of training programs centered on Kamishibai's pedagogical potential. Further analysis could reveal how imaginative and creative processes affect both educators and learners, offering deeper insight into their role in fostering inclusive educational environments. In summary, while this work represents only a starting point, it lays the groundwork for both practical extensions and more robust research endeavours. The reflections and outcomes documented here not only affirm the potential of Kamishibai as a pedagogical tool but also point to its broader implications for educational innovation and community engagement.

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Narrative Experiences between Play and Education: A Study on Narrative Learning Through Eudaimonic Design

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Abstract

This study challenges the conventional separation of play, education, and narration, positing that play and learning are inherently interconnected. While critics of a reductive interpretation of gamification argue that superficial applications of game mechanics (e.g., points, levels, leaderboards) reduce education to manipulation, this research asks whether play and learning can be promoted through eudaimonic design, an approach that fosters the experience of autonomy, competence, and connection. Drawing from narrative thinking as a foundational cognitive ability as well as constructivist frameworks, this paper explores under what circumstances digital storytelling among primary school children facilitates meaningful engagement. Using two case studies, which both involve the development and classroom application of a digital storytelling tool, the research illustrates how guided narrative play can promote creativity, personal identification, and collaboration among primary school children. The findings highlight key design strategies that support motivating, playful learning experiences and suggest potential starting points for didactic approaches that engage students more deeply.

1. Introduction

In recent decades, play has been acknowledged as an essential element in educational processes. While describing play as a fundamental aspect of human culture, Huizinga (1949, p. 46) suggested that there is actually an etymological link between "care" and "play". Even before that, Vygotsky (1934/1978, p. 102) famously stated that "in play a child always behaves beyond his average

age, [...] as though he were a head taller than himself". This concept of play as a zone of proximal development describes how social play activities allow children to explore possibilities beyond their current capabilities. And this opens up the possibility of various scaffolding strategies to promote beneficial play, such as multi-age groups, symbolic toys and props, and preparing extended play scenarios through field trips and background knowledge (Bodrova, 2008). Regarding games in education, researchers like Gee (2005) have emphasized the potential of games, i.e. certain features of video games, to captivate students' attention and foster deeper learning. At the same time, there is the notion that narrative thinking plays a fundamental role in social cognition (Bruner, 1991; Herman, 2003), highlighting the importance of storytelling for playful experiences as well.

In recent discourse, gamification has gained significant traction as an approach to make use of this potential of games, offering a streamlined method for integrating game-like mechanics to motivate users by integrating common game elements like points, levels, leaderboards and badges. According to Zichermann and Cunningham (2011), gamification can be defined as "the process of game-thinking and game mechanics to engage users and solve problems". Perrotta et al. (2019) note how gamification has become increasingly important in European education policy and research funding. However, by focusing primarily on external incentives, gamification risks reducing education to a series of mechanical tasks, potentially sidelining more meaningful, symbolic aspects of learning. Thus, gamification may inadvertently reinforce a dichotomy, suggesting that education – unless "made fun" – is inherently unengaging. At the same time, scholars such as De Castell (2011, p. 21) suggest that a ludic epistemology in education means "thoroughly challenging traditional dichotomies between learning and leisure, between education and entertainment, between work and play".

In response to these limitations, this paper explores how a broader concept of game-based design, also known as "eudaimonic design" (Detering, 2014) can be applied in educational settings. Acknowledging that the educational value of storytelling and imagination is not always captured in experiences that merely apply game-like mechanics, the goal is to create learning experiences that are not only engaging but also meaningful and aligned with students' deeper curiosities. This paper explores this issue by analysing data

from two studies that are part of a larger design-based research project on narrative-based tools for learning (Schlauch, 2023). The analysis addresses the research question: What design strategies can enhance guided storytelling activities to create playful learning experiences for primary school children? The first part of the paper examines the limitations of gamification and explores the broader concept of eudaimonic design in educational settings. Data is then presented, showcasing the development of a narrative tool that serves as an example of this approach.

2. Approaches to Game-based Learning

Upon close examination, schools are already deeply embedded with mechanisms that resemble gamified structures, such as grades and rankings. This raises the question: if some of these are already in place, why would further gamified elements be able to make education more engaging and playful? In the debate about gamification in education, several arguments cast doubt on the viability of such a mechanistic understanding of gamification.

According to Deci et al. (1999), extrinsic rewards are able to undermine free-choice intrinsic motivation. In other words, children's natural interest and inclination to explore determinate activities could diminish if they are gamified. If pupils are already interested, there is a risk that extrinsic incentives, rather than increasing motivation, will replace the intrinsic motivation already present, with negative long-term effects. For example, children could lose interest in an activity that had been initially perceived as interesting once they become accustomed to the expectation of external reward (Greene & Lepper, 1974). In practice, extrinsic rewards can be beneficial if they are used individually, in moderation and not offered "for mere participation in a task without regard for completion and quality" (Akin-Little et al., 2004, p. 357). However, according to self-determination theory (Ryan & Deci, 2000), before considering extrinsic rewards it is essential to firstcreate long-term engagement by making activities meaningful and engaging at a deeper level, therefore cultivating the student's inner drive for autonomy, competence and connection to others.

Over the years, there has been much criticism of educational games that can be described as "chocolate-covered broccoli" (Laurel, 2001). Here, game-like features are added to mask an otherwise unengaging experience, yet they do little to enhance the actual learning process. In terms of interactive experiences in general, Koenitz (2023) refers to the practice of treating interactivity as an afterthought as *interactivization*. Interactive design is not an add-on feature, but should be considered from the start of the project where digital artifacts intertwine interactivity and narrative aspects.

Furthermore, Bogost (2013) criticises the very idea of replacing real incentives with fictional ones as a form of "exploitationware". He argues that rather than fostering genuine engagement, many gamified systems prioritize immediate behavioral outcomes and exploit addictive mechanisms. The gamification concept gains its lure through its easy, cheap and replicable formula. However, promoting self-regulated, lifelong learning is unlikely to be achieved through one-size-fits-all solutions. According to Bogost (2013, p. 142), rather than points, badges, levels, challenges and leaderboards, key game mechanics consist of "the operational parts of games that produce an experience of interest, enlightenment, terror, fascination, hope or any number of other sensations".

2.1 Eudaimonic Design in Education

Detering (2014) suggests expanding the concept of gamification beyond simple rule-based systems to a more comprehensive approach that broadens its focus from games to socio-technical systems that afford motivational experiences in general. He defines eudaimonic design as a "a critical, transformative, socio-technical systems design practice for motivational affordances in the service of human flourishing." (Detering, 2014, p. 307).

Dimensions that are often overlooked, such as autonomy, situational and social norms and the ways in which educational experiences are framed by signals and actors, come to the forefront. By focusing on the experience itself, eudaimonic design is closely related to the MDA (Mechanics, Dynamics, Aesthetics) model (Hunicke et al., 2004), which is a framework used in game design to understand how different components of a game interact to create player experiences. Here, the mechanics and rules of a game are only the first

component that determines possible player's actions. Those give rise to interactional dynamics, which in turn result in experiential aesthetics.

Table 1 shows how gamification and eudaimonic design relate to each other. In terms of scope, gamification is primarily concerned with creating game-like and playful experiences. This approach uses game design elements to enhance engagement in non-game contexts. In contrast, eudaimonic design encompasses a broader range of motivating experiences aimed at promoting well-being and personal growth. In other words, in order to make an experience more motivating and engaging, it doesn't have to fit into a current game genre or necessarily be identified as a game.

Table 1 – Main characteristics of gamification and eudaimonic design

	Gamification	Eudaimonic Design
Scope	gameful and playful experiences	a wide range of motivating experiences
Means	application of technical design elements like mechanics, elements, patterns	wider systems: social situations, frames, meanings, norms, and practices
Strategy	structure, goals and rules, feedback	situationally appraised meanings, design lenses
Desired Effects	behaviour, competence, recognition	curiosity, exploration, transgression, creativity, innovation
Paradigm	additive-deterministic paradigm	interaction-based, situated, dynamic

Regarding means, eudaimonic design considers a wider range of factors including social situations, cultural norms, and practices that shape user experiences. This approach recognizes that motivation is not solely derived from game mechanics but is highly contextual. Gamification typically aims to guide user behaviour through structured goals, rules, and feedback mechanisms. As a strategic approach, eudaimonic design advocates for understanding the situational meanings behind actions, focusing on fostering intrinsic motivation through contextually relevant *design lenses* (Schell, 2008). As a more open alternative to prescriptive game patterns, design lenses formalise desired motivational experiences as short descriptions, i.e. lenses, to analyse

target activities and then tweak socio-technical systems until they deliver the targeted motivational experience. In short, patterns are prescriptive and domain-bound, whereas design lenses are context-sensitive.

The desired effects of gamification are often behaviour change, competence development, and recognition through external rewards. While these outcomes can lead to short-term engagement, they may not sustain long-term intrinsic motivation. With eudaimonic design, the desired outcome shifts from behaviour change to creating meaningful experiences that inspire curiosity, exploration and creativity, ultimately contributing to personal growth. Finally, the underlying paradigms differ significantly between the two approaches. Gamification is characterised by an additive-deterministic paradigm that views experiences as a sum of added game elements. In contrast, eudaimonic design operates within an interaction-based, situated paradigm that acknowledges the complexity of user experiences shaped by social interactions and contextual factors. On the other hand, creating meaningful experiences that resonate on a deeper psychological level requires much more contextual knowledge and experimentation than the application of given recipes.

3. Methods

This paper focuses on evaluating and synthesising data from two interconnected studies with the aim to develop a web-based storytelling tool that facilitates storytelling about specific subjects defined by the teacher. Thus, the digital storytelling tool called "Fantastinomio" was developed during a broader design-based research project (McKenney & Reeves, 2018; Schlauch, 2023) that involved a variety of substudies in various locations. Fantastinomio (Schlauch, 2022) is designed to help children construct narratives on determinate subjects by selecting and arranging story elements that are customisable. Upon launching the tool, children are introduced to an interface featuring a magic hat, which enables them to select from different categories of story elements, such as characters, settings, or items, by presenting up to three options at each step. As children select elements, the chosen images appear sequentially, building a visual narrative that culminates in a story

sequence, which can be exported and printed. Fantastinomio supports multiple languages (Italian, German, English, Portuguese) and includes a text-to-speech option, which can be activated or disabled to support reading or collaborative engagement. In the backend, teachers can customise the story element library, adding specific themes or educational content relevant to subjects like science or social studies, by adjusting entries in an online spreadsheet. This customisation provides teachers with the flexibility to tailor the storytelling experience to different educational needs and age groups.

The first study considered here employed an exploratory design-based research approach to create and refine the tool, with methods grounded in cooperative inquiry (Druin, 1999; Guha et al., 2013). This involved direct engagement with 14 children aged 6-13 years in a Montessori setting to design story elements and gather insights through contextual inquiry, involving groups of 3-4 children in specific workshop settings over a 6-week period. Data collection included observational notes, audio recordings, screen recordings, and children's digital and hand-drawn story artifacts, which were analysed to assess usability and developmental outcomes.

The second study, set in a Portuguese primary school, focused on the use of the Fantastinomio tool within a structured curriculum on social-emotional learning. This phase used qualitative case study methods, including semi-structured interviews, field notes, and the analysis of narrative artifacts. These were produced during whole-class lessons in a fourth grade classroom with 19 children, ages 9-10, over the course of a month. The goal was to understand how digital storytelling influenced children's reflection on emotions and social interactions. Children were guided through storytelling tasks that required selecting, organising, and contextualising their own emotions and experiences.

For the purpose of this paper, a secondary analysis was conducted across datasets with an inductive, qualitative approach, examining common patterns in children's engagement and contextual challenges in relation to the research question of possible design recommendations for supporting narrative play experiences. The analysed data consists of observational notes collected during both the design workshops (first study) and the classroom intervention (second study), supported by audio and video recordings. In both cases, a think-aloud approach was adopted to track children's thought pro-

cesses; they were encouraged to verbalize their ideas and reflections in dialogue with peers (Markopoulos et al., 2008, p. 189). The data collection followed the contextual inquiry technique, which aims to "observe and analyze the users' environment for patterns of activity, communication, artifacts, and cultural relationships" (Druin, 1999, p. 593). The collected data was compiled into a contextual inquiry diagram, organizing insights under categories such as time, quotes, activities, activity patterns, roles, and design ideas. However, for clarity and alignment with the analytical focus of this paper, selected observations are presented in summarised form.

4. Findings: Design Lenses for Narrative Play

This section reexamines the design study results from the perspective of eudaimonic design, utilizing the MDA (Mechanics-Dynamics-Aesthetics) framework (Hunicke et al., 2004). The outcomes indicate specific design lenses that facilitate the aesthetic experiences of (a) creativity, (b) identification, and (c) collaboration. These aesthetic experiences, in turn, contribute to meeting fundamental psychological needs – namely, (a) competence, (b) autonomy, and (c) connection – as described by Ryan and Deci (2000). Therefore, the following didactic recommendations can be given in order to create playful learning experiences and enhance guided storytelling activities.

4.1 Provide Space for Creative Fillings

Observations have shown that children would add their own ideas and details to story characters, places and events whenever they were required to reinterpret a graphical picture of a story element in their own words, or to transform an orally presented story into written form. For example, in one storytelling session, the children's initial narrative idea – shared during the selection of story elements – closely mirrored the visual prompts provided:

> Once upon a time there was a dragon who read in a book that there is a catastrophe. And afterwards he followed a data trail that led to his grandmother. She had a magic pen and with it she saved the earth . Then the grandmother twirled the pen around and the dragon became a tree horse.

Through several rounds of storytelling, discussion, and iterative writing, the children elaborated on their initial idea, introducing new characters and refining the plot. Notably, after the initial selection of story elements, the default titles associated with those elements disappeared from view, prompting the children to create their own descriptions and narrative phrasing. The final version (translated from Italian) read:

> The Dragon Eragon: Once upon a time, there was a dragon named Eragon who read in a book that a catastrophe was imminent. He followed a data trail that led to his grandmother Frida. For she possessed a magic pen. The dragon asked Frida if she could reverse the catastrophe? Frida said she had to turn Eragon into a tree horse, because only such a creature had the power to save the world. Eragon agreed and Frida performed the spell. They lived happily ever after until end of their lives.

This suggests that by engaging students in activities where they translate meanings across modes, educators can foster a creative environment.

In discussing the implications of different modes, such as verbal, visual, auditory, spatial and gestural forms of representation, in educational settings, Kress (2003, p. 100) refers to the process of transforming meanings from one modality to another as transduction. Transduction is not merely a translation of content but a complex process that takes into account the unique characteristics and affordances of different modalities.

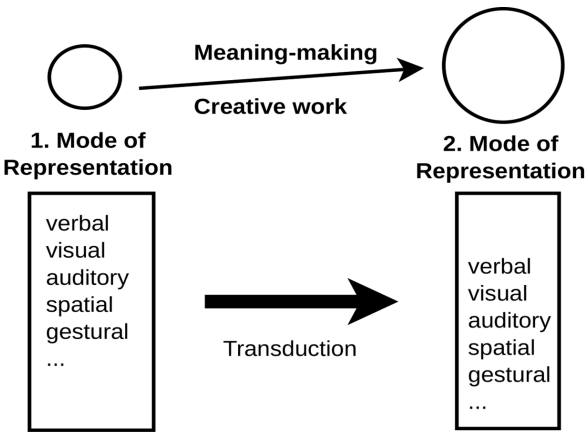

Figure 1 – As children move meanings between representational modalities, they engage in transduction.

Figure 1 shows how meaning moves between different modes of representation during storytelling activities. By actively engaging in the translation of an idea or concept from one mode to another, children reinterpret the content and shape it into their own different representational form. Based on this notion, the Fantastinomio storytelling tool has been designed so that children first witness how a word they click on, i.e. the title of a story element, is represented as a drawing on a storyboard-like display. Based on that nonverbal drawing, children would often make slight modifications and additions to the wording of the original title during their oral retelling, ultimately taking ownership of the full meaning of their story at the end of the process. Figure 2 shows how this need to «fill in the blanks» across modes within the storytelling activity leads to processes of transduction that ultimately allow children to nurture their creative competence. This dynamic gives rise to the experience of creative expression.

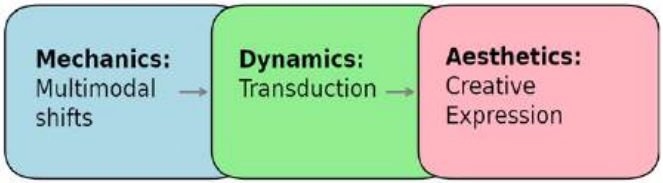

Figure 2 – MDA-model and creative expression

4.2 Provide Means of Identification

The analysis of the collected cases has shown that story elements, which are offered to students as a creative input to work from, are more effective when they provide the opportunity for students to identify with them. Moments of identification were observable through group-wide immediate agreement on a specific element, expressions of excitement or laughter, and spontaneous comments such as "Wow, an electronic pig!" Such instances tended to result in more enriched stories with more connections to personal experiences and more detailed characters descriptions. Based on the identification of some common characteristics of story elements that children prioritized (Schlauch, 2023, p. 113), we are now able discuss these story elements as shaping narrative choices that are perceived as meaningful to the children, leading eventu-

ally to a greater identification with their work that can be shaped in a unique way, promoting autonomous decision-making. The connection between story elements, dynamics of meaningful choice and identification can again be displayed in Figure 3.

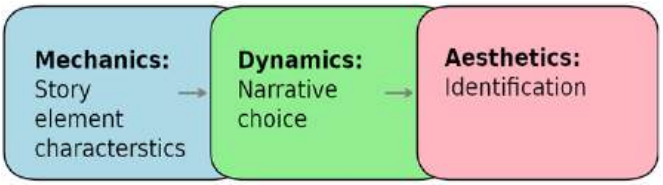

Figure 3 – MDA-model and identification

Whenever a storytelling activity involves the selection of story elements which students would later use to construct stories, the following criteria can be applied during the design of these story elements.

- Narrative fit: story elements should fit within the current context and feel like plausible additions that make sense within the storyline and the lived experiences of the student. Each element should enrich or advance the story without disrupting its flow. For example, this can be achieved by providing a mix of different categories of elements (e.g. places, characters, events) that are compatible to each other.
- Novelty: unexpected elements introduce unexpected twists and spark curiosity. Interestingly, the additions provided by children themselves often offer the greatest novelty, linking a familiar background with new ideas. For example, seeing a custom story element entitled "electronic pig" lets children speculate about the drawings of their classmates.
- Amusement: elements that add amusement make sessions more engaging and lighthearted, encouraging children to entertain themselves and each other.
- Convenience: refers to choices based on simplicity or ease of use, often relating to language or reading skills. Elements that are easier to understand, pronounce, or incorporate are more likely to be selected. Therefore, it is essential to take children's prior knowledge into account when preparing story elements.

- Personal connection: children select story elements that hold specific meaning, relevance, or emotional resonance for them. Elements with a personal connection often reflect their interests, concerns, or cultural backgrounds, allowing them to embed personal identity into the narrative. For example, a picture of a girl might represent "my best friend Dina," or a t-shirt could symbolize a favorite football player, allowing children to personalize the narrative.

By supporting these diverse preferences, the tool fosters a more inclusive and engaging storytelling environment, where children can contribute in ways that resonate personally and socially.

4.3 Provide Roles for Collaboration

Affording separate roles for collaboration in a storytelling activity can significantly enhance the group experience. This division of responsibilities encourages a structured approach to collaboration, allowing children to focus on specific aspects of the storytelling process, whether it's generating narrative content, analyzing story elements, or navigating the storytelling tool. In group-based storytelling sessions, children often spontaneously took on roles and fluidly shifted between them according to situational needs. However, the following key roles could be observed that children tended to assume when working in groups:

- Operator: manages the technical aspects of the storytelling tool (e.g. selecting the correct image) and ensures that the group's choices are reflected in the narrative
- Language mediator: translates or reads aloud if comprehension difficulties arise
- Participant: shows agreement and disagreement, ensures a turn-taking routine
- Interpreter: decodes and explains story elements, also through nonverbal cues, to facilitate decision making
- Analyst: verifies the storyline, asks follow-up questions when something is unclear, makes sure everyone is updated
- Storyteller: articulates narrative ideas as a suggestion, integrates story details, relabels story elements and removes them as needed

If children are unable to assign or adopt these roles among themselves, the resulting story tends to be less coherent and offers fewer opportunities for identification. A storytelling activity that supports differentiated roles allows each participant to meaningfully engage according to their strengths and preferences. This role differentiation promotes collaboration by clarifying individual contributions, reducing conflict, and fostering a collective sense of ownership of the final narrative (see Figure 4).

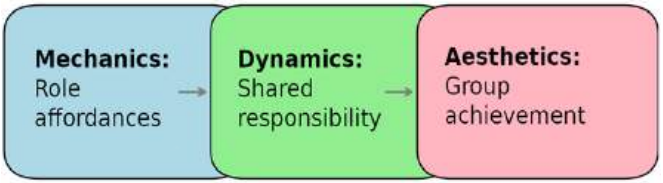

Figure 4 – MDA-model and collaboration

5. Limitations

Several limitations affect the interpretation and generalizability of the aforementioned findings. First, the range of contexts and participants was limited, with participants drawn from two different primary schools already open to game-based approaches. Further testing of the findings should include a greater variety of educational settings, pedagogical philosophies, and student backgrounds. Second, because of their focus on design, the studies reviewed here don't address long-term effects on student outcomes and rely on observations, whereas further research could assess learning outcomes such as content knowledge, literacy and language skills, and motivation with appropriate instruments. Another limitation is the reliance on teacher competence and support. It hasn't been addressed that these may vary significantly based on individual familiarity with digital storytelling tools and game-based pedagogy. Further studies should address the need for consistent training and support to ensure effective integration of the recommendations.

6. Conclusion

The shift from gamification to eudaimonic design underscores the importance of treating play as an integral part of learning rather than as a superficial motivator. The study examples discussed here demonstrate that integrating storytelling into playful educational experiences can meaningfully enhance learning by fostering creativity, identification, and collaboration. The concept of eudaimonic design, as applied here, allows the storytelling process to transcend conventional gamified approaches by focusing on deeper psychological engagement rather than extrinsic rewards. By implementing eudaimonic principles in the Fantastinomio, this research illustrates how educational tools can foster a deeper, more authentic engagement by prioritizing autonomy, competence and connection through collaboration rather than purely outcome-based incentives. This suggests that eudaimonic design can bridge the gap between enjoyment and learning, framing them as complementary rather than opposites.

For practitioners, this study highlights the need for practical resources that translate eudaimonic principles into actionable classroom strategies. Teachers would benefit from professional development programs offering adaptable materials that support creative expression, techniques for facilitating collaboration, and formative assessment approaches aligned with intrinsic motivation.

More broadly, play-based learning resources should be designed to leverage the transition between multiple modalities to provide space for students' creative contributions. Involving students early in the design process helps cultivate personal identification with characters and themes, deepening emotional and cognitive engagement. To foster meaningful collaboration, teachers need strategic lesson planning skills and a strong grasp of the digital or analog technologies they employ, enabling them to assign roles that support shared responsibility and interdependence.

Further design-based studies could explore the effectiveness of this approach across different educational contexts, subject domains, and age groups, amplifying the original focus on storytelling toward broader curricular activities.

In light of the paper's primary focus, the design lenses presented offer a structured approach to crafting storytelling activities in a way that encourages collaboration, creative expression and identification, thereby enhancing the storytelling experience for each participant.

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Section 5
Best Practices

Walking Among Trees: Scientific, Naturalistic and Narrative Itineraries. A Playful-Expressive Approach for Citizen Science and the Heritage Curriculum[1]

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Abstract

During the entire school year 2021–2022, two classes of the Manzoni Institute in Reggio Emilia, Italy, were taught in the town's Civic Museums as part of an experiment with new teaching and learning strategies. After returning to the school environment, the teachers involved reflected on how to support the playful methodologies that they had explored. From this perspective, the potential richness of the Palazzo Franchetti's school garden, home of Baron Raimondo Franchetti, who donated his collection of African fauna to the city's museums, emerged as a starting point for a project on outdoor education and citizen science. After the exploration of this ancient courtyard, the project extended to the city's public gardens and even into the woods in the nearby Appennine Mountains using storytelling and play to observe, collect data and samples, and catalogue findings. The project was structured around four themes linked by playful approaches and creativity: in-depth examination of citizen science aspects related to local flora, particularly tardigrades (in collaboration with the PNRR, the National Recovery and Resilience Plan of Unimore, National Biodi-

1 The contribution is the joint work of the six authors. However, paragraphs 1 and 2 as well as the conclusions are attributed to Alessandra Landini, paragraphs 3, 3.1 and 3.3 to Giulia Domenichini, Elisabetta Bedogni, Claudia Reggiani and Alfonso Trillicoso, paragraph 3.2 to Tiziana Altiero.

versity Future Center); focus on the cultural heritage of the school (the courtyard of Palazzo Franchetti) and the public city gardens; development of real or fictional stories about the historic trees in the school courtyard and public park; and the creation of musical pieces and narratives, using rhythms created with natural materials, inspired by external explorations. The common thread of the project was a dimension of creativity, which found its highest espressions in discovery-based learning and playful-expressive approaches.

1. The Context: The Manzoni Schools in Reggio Emilia

The pandemic crisis, coupled with the pervasive identity crisis affecting educators, has illuminated the challenges faced by the school system while also highlighting positive outcomes in terms of resilience and creativity. A significant adaptation to the new context has been observed, transitioning from the experience of isolation to a greater openness towards the surrounding community. The Community Educational Pacts (Cannella et al., 2021) have facilitated a broader alliance and interaction between educational institutions and their local contexts, promoting synergy among schools, local authorities, and associations. In this framework, it becomes possible to contextualize the experiences of the Manzoni Institute in Reggio Emilia, a comprehensive school institution that has undertaken a broader reflection following the "School in the Museum" experience (Landini et al., 2021). In fact, after stepping out of its school environments and decentralizing to the town's Civic Museums, the institute chose to concretize the experience and systematize it. This "provisional citizenship", caused by the health emergency, facilitated by the municipal administration of Reggio Emilia, through the "Scuola diffusa" project coordinated by Officina Educativa, gave the Manzoni school the opportunity to rotate all its classes for one week each year in the halls of the Palazzo dei Musei. In its first year 2020–2021, the Community Educational Pact therefore focused on the relocation of classes to environments outside the school and to cultural venues. The institute's choice to transform the opportunity for some classes into an opportunity for all its students and teachers, since 2020–2021, (Figure 1), has strengthened and given substance to the organizational flexibility within the autonomy of educational institutions, already promoted in

DPR 275/99. In the following school year, 2021–22, two classes from the Ada Negri primary school had the privilege to fully immerse into this museum experience during the entire school year. While this was happening in the museum, new forms of collaboration were created between the museum and the school, allowing all other classes to reflect on the entire educational offer and to experiment hybridization with experts in museum education, as well as an educational approach linked to heritage pedagogy (Landini et al., 2024).

1.1 The Curriculum of Citizenship and Heritage

The Curriculum of Heritage and Citizenship is characterized, specifically, by collaborations with formal, informal, and non-formal educational systems. The territory is viewed as the primary context for deepening the idea of an immersive and emergent curriculum and explores "the role of meaning and beauty in education" (Dallari, 2021). The necessity for students to perceive in the educational offering a horizon of meaning that, as Merleau-Ponty (1945/1962, pp. 82) notes, emerges from the undifferentiated whole, situates the collective experience of the museum and the exploration of the city, nature, and places of life within a lived experience of encounter. At the same time, children demand the opportunity to enrich their emotional and aesthetic sphere with meaningful relationships and beauty, responding to a natural need for pleasure. Immersion in the historical, artistic, scientific, and natural heritage of one's territory becomes a gift that must be intentionally prepared for the students. Finally, this curriculum is placed within the framework of «territorial intelligence» and the significant relationship established between the curriculum of heritage and the collective identity of the students (Landini et al., 2024).

> What emerges from this experience is the important ability of heritage to connect with emotional and territorial intelligence, facilitating reflections on one's own identity. Regarding identities, they indeed pose a challenge to education: they allow students to evaluate themselves on the same level as the identities of others, fostering a reflection on identity from an inclusive perspective, in contrast to egocentrism and sociocentrism.
> (Landini et al., 2024, p. 81)

Figure 1 – The school in the museum, school year 2020–2021

1.2 The Ada Negri Primary School, Collaborations With the University of Modena and Reggio Emilia

The Manzoni school institution also promotes collaborative relationships with the University of Modena and Reggio Emilia, believing that engagement with the research world is an integral part of its mandate. Among the various collaborations is one with Professor Tiziana Altiero, a biologist and zoologist and member of the National Biodiversity Future Center (NBFC), which promotes the sustainable management of Italian biodiversity to improve the planet's health and return beneficial effects essential for everyone, according to the EU Biodiversity 2050 vision of „Living in harmony with nature." Part of the „Walking Among Trees" project is connected to this goal through a Citizen Science initiative focused on the flora present in the context of the Ada Negri primary school. The classes involved in the project, the fourth and the fifth grades, are an inclusive context for children with disabilities and the majority of the pupils come from migrant family backgrounds. The school is a standard time-institution organized for five mornings a week, offering a total of 27 hours of teaching. Each class is equipped with a Smartboard, which all teachers use in daily teaching, and within the school, there is a computer

room and a cart for Chromebooks, two ateliers, and a library. An additional resource is the outdoor area, which features a multipurpose track, a garden space for play, and a school garden.

The Ada Negri primary school and the Alessandro Manzoni lower secondary school are both housed, as previously mentioned, in an impressive historic residence in Emilia Romagna, Palazzo Franchetti, named after the Jewish Baron Raimondo Franchetti, who purchased it to build the largest private residence in the town. The palace itself contains 59 rooms on four floors, but its grounds extend well beyond the current walls: The Franchetti family also owned a vast park including a greenhouse, a lookout point, stables, and a riding school, which currently houses the gym of the comprehensive institute. The family's properties were transferred to the municipality of Reggio Emilia in 1929.

2. The Theoretical Framework

To better outline the main theoretical references that drive the project, it is necessary to highlight that the vertical curriculum of the institute is based on four reference methodologies: narration, socialization of learning, the school as a permanent research lab, and formative assessment for learning.

Narration is a powerful tool for interpreting the world; it helps us organize concepts and events in a coherent and meaningful way and emotionally guides us toward knowledge. Therefore, it is one of the main tools of human understanding (Bruner, 1996/1997; Egan, 1997/2012). The interaction with others is also crucial for developing thought and concepts, as well as for social and cultural mediation (Vygotsky, 1934/2000). Regarding the child as a researcher, which sees the laboratory as an essential moment for children's inquiry, references range from Dewey's active school (Dewey, 1916/2018; 1917/1963) to Malaguzzi (1993), with his vision of the competent child, endowed with potential, activated by interaction with objects, the environment, adults, and other children. This perspective is further confirmed by experientialism, thanks to the vision of Lakoff and Johnson (1980), with the theory of embodied cognition, which sees human thought as strongly structured by interaction with other people and the world, starting from sensory-motor ex-

periences. Formative assessment for learning (Black & Wiliam, 1998) and as learning (Earl, 2003) ultimately allow students to be engaged as critical thinkers, making sense of information, relating it to prior knowledge, and using it to construct new learning. Starting from this methodological foundation, which teachers have come to better understand after their immersion experiences in cultural settings, is the significant value of a playful and expressive approach that is based on the need to give space to children's creativity. In *Thought and Language*, Vygotsky emphasizes the importance of language and symbolic thought in the development of imagination and creativity. As language is a symbolic system through which individuals represent abstract ideas and concepts, it allows for the combination and manipulation of symbols in ever-new ways, thus proving essential for the development of imagination and creativity (Vygotsky, 1934/2000). In addition, Guilford (1950) defines divergent thinking as typical of when one moves away from known and expected products and explores unusual paths. Following the criteria developed by Guilford, another American scholar, Frederic Bartlett (1958, as cited in Dentici, 2001), shows that individuals considered creative exhibit an active exploration of situations, an analysis of structures and relationships that often lead to sudden restructurings of thought and the breaking of closed systems. According to the author, innovative experimentation seeks points of overlap or analogy between phenomena normally observed in different fields: it applies techniques typical of one field to another, such as statistical methods, mathematical, biological and genetic models. For this reason, it is essential to create a playful, flexible, and motivating environment to foster dialogue among the various competences and expressive languages that children possess. Bondioli (2002, p. 349) argues that the playful quality of the activities is influenced not by game structures or rule basis, but rather by a playful attitude of the learners. Another important support for this playfulness is the presence of ateliers in schools: a rich and stimulating space where visual language interacts and intertwines with other languages (Vecchi, 1995, as cited in Cardarello & Gariboldi, 2012). The atelier encourages creative thinking, not because it is the place where children create artistic objects in the strict sense, but because it is the place where hands reconnect with the mind to explore and construct knowledge (Malaguzzi as cited in Cardarello & Gariboldi, 2012). This suggests that, along with knowledge, experience, and storytelling, you can

create a complete involvement in the activity, through playfulness, freedom of expression and an overall emotional tone that helps sustain concentration and interest.

3. Walking Among the Trees

The park of the Franchetti family extends from the palace, which is now the site of the school, to what are now the Public Gardens, namely Parco del Popolo in the town of Reggio Emilia. In this area once stood the Gonzaga citadel, the birthplace of Ludovico Ariosto. It was demolished in 1850 to allow the establishment of the Gardens in 1871, with the aim, as stated in a municipal resolution of the time, of offering citizens a pleasant and convenient walk within and near the city, the most genial meeting place for the community.

Here, the Franchetti family owned the racetrack for horse races, and today that ring constitutes the main pedestrian walkway within the garden. It is among these trees that the Ada Negri classes began their walks. The location is intrinsically linked to the environments they frequent daily and offers a unique variety of specimens, at the botanical level, in the city.

The trees present in the gardens are largely from the original planting, making them certainly over a hundred years old. The ring of the horse racing track was lined with rows of plane trees that are still present today; the original Japanese sophoras are also located between the Municipal Theater and Ariosto, and some photos from the early 1900s already testify to their presence. The majestic oak near the Mercure Hotel and the American ash at the beginning of Viale Allegri were also certainly present by the end of the 19th century.

However, the botanical emblem of the gardens is the large, centuries-old cedar of Lebanon, located almost at the center of the star-shaped layout. An inventory from 1889 describes all the species among the 1,302 trees present; among the trees, deciduous specimens (662) predominated over evergreens (248). Now, the situation has changed, and evergreens make up the majority of the thirty species present: Caucasian fir, red fir, mountain maple, holly, Judas tree, hackberry, Atlantic cedar, Deodar cedar, Cedar of Lebanon, flowering cherry, beech, oak, ash, ginkgo, white wisteria, horse chestnut, cher-

ry laurel, liquidambar, magnolia, black walnut, paulownia, Himalayan pine, black pine, eastern white pine, white poplar, cypress poplar, plane tree, Japanese sophora, red-leaf plum, yew, and lime (Pellini, 2006).

Additionally, the park houses several artistic pieces that are part of the local history, which have allowed, in other school projects, the development of historical research and narrative reinterpretation. Among these, the students particularly studied some of them, such as the Fountain with the little elephant, the Capitoline Wolf, and the Bust of Chierici. The research conducted was, ultimately, shared with the community.

3.1 Project Areas Emerging in the Contexts of Experience

The project aimed to create a motivating and playful combination between the historical-artistic experience related to the Franchetti site and the experience of Citizen Science, which, with the collaboration of the university, would enable the children to become true researchers in the service of the research community (Bonney et al., 2009; 2014). There are four areas that have emerged from the experiences and informal exploration of the classes, within which it is possible to briefly synthesize the experiences that have arisen from co-design with the children:

Naturalistic area:

1. Exploration of the schoolyard
2. Exploration of the city's public gardens
3. Exploration of woods next to the city
4. Collection and observation of tardigrades in various environments (citizen science)

Historical-cultural area:

1. Research on the monuments of the city's public gardens
2. Creation of narratives about the history of the monuments in the public gardens

Narrative area:

1. Invention of fantasy narratives about the trees in the city's public gardens
2. Role-playing and dramatization of the narratives
3. Digital experiences: the blog
4. Digital experiences: the news program

Musical area:

1. Creation of melodies with environmental themes
2. Use of natural elements as musical instruments

Children, directly immersed in the observation environment, develop authentic scientific learning: experiencing the natural contexts trains students to pay attention to the phenomena they witness and educates them to be respectful of the environment. Moreover, it encourages them to discover what is important to know about objects and facts, fostering an authentic interest in the natural world. In this way, students begin to tackle the small problems they encounter using hypothetical-deductive reasoning and refine their ability to make predictions about the consequences of the observed phenomena.

The project began with the idea of exploration, aiming to utilize open spaces, both inside and outside the school, as generative sites for questions. The initial phase focused on plural operational methods, consistent with the methodologies of the three-year educational offer plan, which identifies the socialization of learning as a cornerstone of its practice. The first exploration took place in the ancient park of the school, a natural yet anthropized and historicized space, one that has been "colonized" by a garden school space for vegetables.

Subsequent steps led the children to open the large ancient gate of Palazzo Franchetti and proceed with active and participatory observation in the public gardens, perhaps seeing with new eyes the large green trees that had gone unnoticed at a hurried glance. The image in figure 2 shows the map of the park, which, after the initial informal exploration, would allow for orientation along a targeted path to find specific plants.

Figure 2 – Map of Parco del Popolo: Seeking ancient trees

This in-environment learning, where groups of students learn to use tools from their own culture and documentation, within dialogues and the social construction of knowledge, takes on an intentionality that adds value to the experience.

The children not only sought the plants but also negotiated and shared their hypotheses during the structured exploration phase. Divided into four groups, they had to compile a booklet by observing five different trees in the Parco del Popolo: a cedar of Lebanon, an oak, a plane tree, a hackberry called "bagolaro schiacciasassi", and a Japanese sophora.

Initially, they were to stay near each tree and pay attention to its characteristics in order to produce a live graphic interpretation, such as a direct observation drawing or frottage of the leaves. Then, they were to describe in writing the observable characteristics and, as a final divergent and creative act, imagine that the tree could speak and transcribe what the tree would say to introduce itself based on its name and what they could observe.

The naturalistic part, which would later culminate in the citizen science project and the research of samples led by professor Altiero, was preceded

by a narrative phase in which the collective exercise of constructing a story and developing a script would introduce the creation of a class short film as an authentic task. The children worked on the sets, costumes, staging, and technical aspects of recording and editing the video, with the five observed trees from the park and their profiles, as the main characters, mediated by the first encounter with the children. In Figure 3, some phases of this creative part are shown.

Figure 3 – Some phases of the short film production

All the children's productions such as plays, narratives, graphics, and conversations, were reviewed with qualitative analysis. Seeking out themes highlighted by Guilford (1950), teachers redefined them as criteria for pursuing greater creative "intensity." The author, in his article "Creativity," identifies four key components:

- Fluency, understood as the ability to generate a large number of ideas or solutions in a short period;
- Flexibility, defined as the ability to adapt and shift between different categories of thought or perspectives;
- Originality, which refers to the ability to produce original ideas or solutions uncommon or different from norms;
- Elaboration, as ability to extend and enrich the generated ideas or solutions in new contexts (Guilford, 1950).

The Historical-cultural area of the project was developed during the whole project, but was emphasized through the research on the monuments of the city's public gardens. After studying the meaning of the statues and their authors, the students continued the storytelling on the public park sculptures, writing narratives about the history of the monuments and giving them a space in their imagination, as Rodari argues "If we want to teach people to

think, we must first teach them to invent" (Rodari, 1973). For him, creativity is synonymous with divergent thinking, meaning the ability to continuously break the patterns of experience:

> A creative mind is one that is always at work, always asking questions, discovering problems where others find satisfactory answers, capable of autonomous and independent judgments, rejecting the conventional, and re-manipulating objects and concepts without being inhibited by conformism. (Rodari, 1973)

It is interesting to remember that the word *play* means both *to play a game* and *to play a role*. In both cases, children feel pleasure and affection toward learning. As Rodari suggested, inventing stories is a game in itself. From this the idea of a playfull approach that has its roots in the *tempting* and fantastic pairing of narration and role playing.

3.2 We, Scientists and Researchers of Beauty

The scientific-natural phase has accompanied and intersected with the narrative phase, where exploration has evolved from spontaneous scientific observation. Subsequently, the discovery of the richness of the flora in public green spaces sparked reflections and questions about the fauna inhabiting those trees. The spontaneous investigation was then enriched by the contributions of Professor Altiero, who guided the students in discovering new microscopic animals: tardigrades. In this case as well, during the science teaching activities, narration generates an intentional and natural use of language that facilitates understanding and in-depth knowledge of reality. Narration thus emerges as the most suitable tool to stimulate learning in general and science learning in particular. Scientific education cannot be fragmented, as often happens in schools, as this would lead to a loss of understanding of reality and limit students' inferential and representational skills (Landini & Corni, 2023).

In this didactic phase, Ada Negri pupils studied tardigrades (Figure 4). These animals are aquatic interstitial micro-invertebrates, also known as water bears, their length is less than 1 mm.

They are cosmopolitan and capable of tolerating extreme conditions: desiccation, freezing, high temperatures, various types of radiation, vacuum, and outer space environments.

Although tardigrades are mostly unseen by the public, they have become very popular among child-researchers.

They really are an excellent model for science education, due to their cryptobiotic abilities, unique appearance, and global distribution. In addition, they maintain a quality of mystery and originality that significantly and naturally fuels curiosity and the desire to explore.

Figure 4 – A tardigrade

During this project, school pupils collected mosses in the school garden to look for tardigrades. They extracted tardigrades from the moss substrates with everyday materials, following a video tutorial and they observed them under microscopes. Then, the children drew the tardigrades they had collected, after observing them under the microscope, as well as the laboratory procedures phases. After these experiences, children seeking and looking for tardigrades, collected other mosses during a school trip to a woodland in the natural park in Northern Apennines called Marola Wood (Figure 5). They compiled a datasheet provided by researchers, and sent the moss with the samples to tardigradologists, for biodiversity assessment, at the Laboratory of Evolutionary Zoology, Department of Life Sciences, University of Modena and Reggio Emilia.

Figure 5 – Children collected moss samples in the park and in the wood to look for and extract tardigrades.

The researchers analysed these samples of tardigrades through an integrative taxonomy approach involving morphological (light microscopy) and molecular (cox1 mitochondrial gene for DNA barcoding) studies. Feedback was sent to the Ada Negri pupils: the researchers communicated to them the biodiversity highlighted in the mosses through written reports and meetings.

Finally, the students realized that they had discovered a new species and, thanks to the coordinates sent to the researchers, they understood that they had contributed in mapping the area, from a biological and zoological perspective.

This scientific work put the children *in the shoes of scientists*, enriching their knowledge and fostering their idea of science and biodiversity. Above all, children had the opportunity to see the beauty in science, to understand the unseen, making knowledge of biodiversity and to recognize the importance of its conservation as a commitment of all citizens.

3.3 Between Digital Storytelling and Musical Compositions: Reimagining While Having Fun

The didactic path has integrated all the areas mentioned above. In the final part of the project, the narrative area was explored thanks to digital experiences: the Blog and the News program.

The use of blogs and news broadcasts in education is a simplified digital version of the "Giornalino" by Mario Lodi and that of Don Lorenzo Milani. Making the necessary distinctions, even today, for students, it serves as a way to tell stories, rework experiences, and participate by communicating within the social contexts they are part of. The students of Ada Negri experienced it as an easy and fun tool, playful, in fact, to engage strongly, through new technologies, in the realm of storytelling directed towards communication. From an educational standpoint, this has allowed them to:

- research and experiment with new forms of learning in virtual environments;
- create learning and practice communities.

The children organized into groups, built a social and cultural context through the Blog and the News, allowing them to reinterpret their experiences while reflecting on conceptual connections and the necessity of producing short yet engaging texts with visual elements. In the digital realm, this meant sharing materials, reworking digital content, creating links to online articles, searching for short musical compositions, providing information supported by captions, and commenting on real or fictional events. The discussions or related readings, as well as the selection of objects such as images, videos, and music, provided opportunities to exercise problem-solving and divergent thinking.

The musical area, instead, facilitated the creation of melodies with environmental themes, using of natural elements as musical instruments. This highlighted the significant value of invention, imagination, and musical experimentation for the development of creative skills starting from experience. In the creation of their compositions, it was indeed of fundamental importance that children engaged in motor and sound exploration activities. Sound-musical improvisation is a practice that does not require particular technical or theoretical skills, and for this reason, it becomes an important and motivating creative tool in basic musical learning. During the project, children listened extensively: they listened to the trees, their sounds, and the noises of the forest. They collected natural materials from the courtyard, the park, and the woods, then categorized these natural elements as a "sound collection." Playing with natural elements, building harmonies and rhythms from materials related to nature, facilitates and educates active listening skills and sound creativity. In the forms of musical improvisation and elementary composition experienced in the project, artistic creation occurred spontaneously and holistically through the integration of movement with voice and natural instruments. This action guided children towards a series of exploratory attitudes that contribute to the development of imagination and fantasy while simultaneously fostering the process of invention. Then, it was necessary to relate a possible score to ensemble music, in order to use music as a language and to expand its descriptive potential.

4. Conclusions

The project "Walking Among Trees" underlines the importance of creativity and playfulness, as interrelated dimensions that found their highest espressions in discovery-based learning and playful-expressive approaches. The latter are firmly rooted in the theoretical frameworks of experientialism, in addition to narrative, simulative and collaborative didactic architectures. Consequently, the children have integrated linguistic-expressive and logical-inferential skills throughout the various phases of the activities, while focusing on themes related to scientific education and active research experiences. The documentation has briefly shown how narrating and representing situations, invented characters, emotional plots in a multimodal way, can stimulate the pleasure of learning in children.

In conclusion, the school, thanks to creative and playful activities and fostering divergent thinking, can and must move away from a strictly traditional approach and open itself to integrated and innovative experiences. The stimulus is to open one's eyes to the territory, to cross boundaries and to embrace it. This vision evokes, in addition to a less ordinary and more creative and constructive teaching approach, a kind of existential planning (Bertin, 1983). As Berti and Contini suggested:

> Children and students can thus build action objectives in their daily lives. They will have the power to project themselves into their future as citizens, that is, aimed at configuring themselves not simply in terms of adapting to the present reality, but also (and indeed predominantly) in terms of a "possible" that can be imagined, achievable through intelligence, and realizable in a continuous process of constructing. (Landini, 2023, p. 260)

A *possible* world, the one designed by the children in the school park and their territory, which has woven together emotions, knowledge, narrative and scientific thought, supported by the pleasure of that playfulness that Bondioli evokes as possibility, offered or earned (2002, p. 352) to share affectively meaningful encounters and playful vivid memories.

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Let's Play Together: Deconstructing Stereotypes in School Games: The Potential of Play for Participation and Inclusion[1]

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Abstract

The ways in which children engage in play, the skills they acquire, the dynamics they navigate, and the relationships they form offer valuable insights into their future development as adults. It is precisely because of this powerful, yet often underestimated, role of play in shaping their growth that children's playful activities must be carefully observed, studied, and guided by the adults responsible for their care. By actively accompanying them on their developmental journey, educators and caregivers can better support the formative processes that influence children's social, emotional, and cognitive growth.

We aim to offer methodological and practical guidelines directed at countering the emergence of stereotypes during the elementary school years. By engaging in collective play and deconstructing these limiting mechanisms, children can explore and identify alternative pathways that enhance their imagination and creativity. Through play, a space is created where diverse perspectives are embraced, allowing for the broadening of children's understanding and the development of more inclusive attitudes. The heuristic value of mistakes made collectively by children and teachers enables learning through play without the fear of failure or feelings of inadequacy. This process not only leads to unexpected and challenging outcomes but also encourages individuals to push their boundaries while sharing their discoveries with others.

1 This contribution is to be considered the result of a constant and synergistic shared work between the authors. For reasons of scientific responsibility, it is specified that paragraphs 1, 2, 3 are to be attributed to Elena Pacetti, and paragraphs 4, 5 to Claudia Baiata. Conclusions were elaborated together.

1. Play in Primary School

Play is part of the basic needs of human beings. The desire to play, indeed the need to play, does not abandon us at the end of the developmental age, but remains rooted throughout our existence: the individual, in fact, changes the way he or she plays according to the different ages, but play always remains the driving force behind all psychic and social activity (Gray, 2013).

Play stimulates creativity, encouraging exploration, and imagination, bringing about a climate of security which is free of anxiety and fear, enabling the child to master external reality. Through play, the child experiences people and objects, enriches their memory, studies causes and effects, reflects on problems, builds up a vocabulary, learns to control his or her emotional reactions and adapts his or her behaviour to the cultural patterns of his or her social group. Play is therefore necessary for the complete development of the child's body, intellect, emotions and personality (Farné & Bortolotti, 2019).

The Romans defined *ludus* as both school and leisure, and similarly in ancient Greek the same term, *skholé*, was used to refer to fun, leisure and school (Staccioli, 2008). Where do we stand, then, with regard to the presence of play in schools? Play did not easily become part of the Italian school curriculum. Education promoted since the end of the 19th century was committed to combating illiteracy and to educating children in reading, writing and counting. Play was recognised in the Gentile Reform of 1923[2] in its free and spontaneous form and in the primary school programmes of 1955[3], the intention to make playful and ludic activity *useful* for learning was also consolidated, as well as valorising it for its moral and social roles. Three functions of play emerged at the time within the school: for physical development, to support teaching, and for moral and social education.

In the 1955 programmes, a special and positive focus was manifested on daily outdoor play, thus promoting both its spontaneous expression and the bodily aspects that had characterised the previous decades.

2 R.D. 1º ottobre 1923, n. 2185. Provvedimenti per la scuola elementare.

3 D.P.R. 14 giugno 1955, n. 503, Programmi didattici per le scuole elementari pubbliche e private.

The 1969 *Orientamenti*[4] highlighted the importance of play in the state nursery school, moving it from a recreational tool to an essential educational element. The 1991 *Orientamenti*[5] further emphasized the significance of play in developing children's various skills. In the 2000s, the 2007 *Indicazioni Nazionali*[6] indicated a shift in focus from play in preschool to more disciplinary aspects in primary school. Despite recognizing the value of play in learning, its role is mostly limited to motor and sports activities, rather than being seen as a holistic pathway linked to learning, well-being, and relationships.

Although the right to play has been recognised since 1989 by the UN Convention on the Rights of the Child and Adolescent, in 2013 the UN Committee expressed concern about the lack of awareness of the importance of play and recreation, an importance that, when recognised, is reserved for play as a motor activity and competitive games with the idea that a useful time is an expert-driven time, and underlined that "greater recognition of the forms and locations of play and recreation preferred by older children is particularly necessary" (United Nations, 2013, p. 11). Equally, access to play by children with disabilities remains particularly critical (Bianquin, 2017), a very worrying indicator of a lack, among adults (parents, teachers, administrators, politicians), of a culture of play, too often aimed at educational, didactic or rehabilitative therapeutic purposes (Antonacci et al., 2017).

2. Factors of Exclusion and Inclusion in Play

Even when permitted, free play at school is relegated to filling the confined time of recess, and it is noticeable that teachers generally tend, during this free time, to apply the same rules that are imposed in the classroom during teaching activities, such as avoiding shouting, not running, moving in an orderly manner. This attitude, however, diminishes and does not adequately value the formative role of playful activity, which is underappreciated and not

4 D.P.R. 10 settembre 1969, n. 647, Orientamenti dell'attività educativa nelle Scuole Materne Statali.

5 D.M. 3 giugno 1991, Orientamenti dell'attività educativa nelle scuole materne statali.

6 D.M. 31 luglio 2007, Indicazioni per la scuola d'infanzia e del primo ciclo di istruzione. Indicazioni per il curricolo.

adequately planned for in the educational and didactic programming phases (Gruppo di lavoro per la convenzione sui Diritti dell'Infanzia e dell'Adolescenza, 2023). Very often, moreover, the desire of adults to guide and protect children and young people has deprived them of the freedom they need for their own mental health, contributing to record levels of anxiety and depression: this happens because opportunities for children and young people to play, roam and participate in activities independent of direct adult control are diminished (Gray et al., 2023).

Pupils experience difficulties when they encounter barriers to learning and participation in environments, materials, relationships (at school and outside school). Inclusion must guarantee active participation and equal educational opportunities (including play) for all (Booth & Ainscow, 2011).

What factors represent barriers to learning and participation in play? Gender, disability, ethnicity, culture, religious divisions, poverty, war, racism, migration ... (Slee, 2013). Teachers' awareness of biases and stereotypes in the process of teaching and learning is crucial to guarantee an inclusive environment that takes into account all learning needs and diverse students' backgrounds.

It becomes a priority to guarantee the right to play to all and everyone so that playful activities can also be experienced in the school context, taking inclusion as a transversal perspective. This means inclusive (and playful) education that values the uniqueness and singularity of each pupil and promotes the strengthening of the class group as an active and welcoming community. In this sense, the school must promote social, emotional and affective competences, peer relationships, the active participation of all and cooperative learning (Ianes & Canevaro, 2016).

Cooperative games (and play) represent an extraordinary opportunity to transform the school environment into a fun, inclusive and stimulating place of learning. It is, to all intents and purposes, an experience in which children have the chance to develop a range of social skills, such as effective communication, mutual trust and the ability to work as part of a team, thus fostering empathy, respect and tolerance for others. Regularly integrating cooperative play into curricular activities can increase the dose of playfulness that con-

tributes to improved psychophysical well-being and consequently to more effective learning.

The fundamental principle of cooperative games is shared participation, in which people do not compete against each other, but play to overcome their own limits rather than to defeat their opponents. These games are structured to offer a feeling of freedom and fun, because the key element is the collaboration of all players, no one excluded. In addition, these types of games foster mutual acceptance and a sense of belonging to a group in the context of a shared and meaningful experience (Lyons, 2022).

In cooperative games, a particularly important role is played by the leader (or facilitator). At school, this role belongs to the teacher, who is responsible for careful planning and appropriately choosing the time and place to propose cooperative games, which can be presented for different purposes:

- to get to know each other better;
- to share different aspects of oneself;
- to enhance one's own and others' abilities;
- to create greater harmony.

The main task of the teacher in this type of game is to ensure certain conditions during the game: to avoid exclusions, to promote a non-judgmental climate during dialogues and discussions, and to enforce the tasks. No less important is the observation of the groups during the game and the subsequent sharing of the observed dynamics with the children (Loos & Vittori, 2011).

3. Analysis of Best-Selling and Most Publicized Games

If we refer to the commercial world, it becomes even more evident how little inclusive and difference-respecting toys are widespread. A traditional subdivision of toys almost sets male and female toys in opposition, highlighting at an early stage how gender-specific roles and expectations exist. Concerning boys, advertisements often depict fearless superheroes and brave professionals, ready for any adventure or to save the world. These games usually have educational aspects to enhance physical and mental skills. In contrast, toys for girls tend to focus on beauty, fashion, grooming, and caring for babies or

animals. They are more about promoting traditional roles like being a housewife or caring mother, rather than developing educational skills, creativity, or competition (Smith, 2015).

Commercials play a vital role in influencing societal expectations regarding social, economic, and gender behaviours. Advertisers focus on selling products and appealing to customers, often perpetuating harmful stereotypes without considering the impact on children. Their main objective is to persuade and seize a portion of the market, aligning with prevailing societal norms (Lull, 2003).

In Italy, toys & games market is projected to reach €1,724.0m in 2024. Forecasts indicate that the best-selling categories will be "Plastic & Other Toys" (e.g. action figures, remote control toys, and model cars and planes) followed by "Toys for Toddlers & Kids" (e.g. building blocks, shape sorters, and activity tables) and "Dolls & Stuffed Toys" (e.g. dolls, teddy bears, and plush toys) (Statista, 2025).

But the way these toys are advertised among children (and their parents) can strongly condition their choices, inducing them to buy not so much what they like or might like, but what the market itself proposes as the best purchase for boys and girls. In this sense, especially in the Italian context, we can see that toy advertisements tend to maintain the differences already present in various spheres of society, in a sort of "natural" imagery in which children are genetically predisposed to such differences (Baiata & Pacetti, 2023)[7].

Social norms, attributes, skills and competences... but how well are the differences represented in toy advertisements? How much disability is represented? Or minority cultures? And what is the impact of these representations on children's development? Can teachers make the difference?

7 A detailed analysis of the influence of the toy market on the choices of families and children and the cultural and pedagogical implications can be found in the article by Baiata & Pacetti, 2023.

4. Games and Stereotypes/Games and Representation of Gender, Cultures, Differences

Children of all cultures rely deeply on play in their everyday lives to develop fundamental social skills, imagination, and resilience, as well as create connections and comprehend limits while expressing their feelings and thoughts. During play, linguistic and cultural barriers are overcome, as communication acquires a universal language of childhood that transcends cognitive frameworks (Fleer, 2010). Play, whether spontaneous or structured, promotes physical and emotional development, improves problem-solving skills, and gives a secure environment in which to experiment, imagine, and develop their identities. It is unquestionably a great organizer during childhood: children's games during social interactions often establish and shape their connections with peers and adults. Understanding each child's personal situation as well as the subtle cultural and symbolic elements that are inextricably linked to education, knowledge, and culture requires an awareness of education, family, and society (Duek, 2016). Children demonstrate their physical, cognitive, social, and artistic talents through play, which is also one of the most significant ways they learn from and develop their ability to learn about the world by experimenting with various objects and situations (Cardona et al., 2021).

In our society, there is a growing awareness about the dangers of stereotypical messages conveyed by the family, community, and school environment in shaping children's self-perception and self-efficacy from early age (Sultan et al., 2019). These influences affect students' interests and motivation to pursue certain subjects over time, often to the detriment of others (Virtanen et al., 2014). Very early in their lives, children quickly assimilate and apply fundamental gender categories to a variety of situations and activities. By age three, kids begin to recognize gender-related elements of objects and actions. Between the ages of three and six, their comprehension of activities involving children and adults grows. Around the age of five, they begin to build preconceptions about personal and social qualities connected with gender, and by primary school, they have a solid understanding of which items, activities, and traits are associated with being male or female (Trautner et al., 2005).

To help children understand and embrace personal and cultural differences, educators should be aware of how early in life stereotypes are absorbed and should endeavour to create a more inclusive and equitable play environment that prevents these differences from becoming disparities, empowering all students in their individualities and reinforcing their self-esteem. Tailoring playful activities to the needs and interests of all children not only fosters greater inclusivity but also challenges prevailing stereotypes, thereby creating opportunities for all to express themselves more fully. A playful, inclusive approach encourages diversity in participation and supports the development of individual identities within a supportive and equitable learning environment.

5. Deconstructing Stereotypes

From a young age, including in kindergarten, children are often expected to engage with certain colours, games, and activities traditionally associated with their gender (Ricchiardi & Venera, 2005; Tomasetto, 2013). A key instrument for eradicating gender preconceptions that supports gender segregation as well as gender inequality in many spheres of social life is education, and stereotypes awareness among early childhood educators (Angeli, 2020).

Several factors can act as obstacles to learning and participation. These include gender, disability, ethnicity, cultural differences, religious divisions, poverty, war, racism, and migration, among others. These issues can significantly limit students' access to quality education and social integration. Children may encounter challenges when they face barriers to learning and participation within various environments, including educational contexts and interpersonal relationships both within and beyond school contexts. True inclusion must facilitate active engagement and equal opportunities for all individuals, ensuring that everyone can fully participate in all aspects of education, including – and especially – play (Danniels & Pyle, 2023). The emphasis must remain firmly on upholding the rights of every individual, prioritizing inclusivity as a fundamental principle. Inclusion should be viewed as a cross-cutting perspective, integrated into every facet of the educational experience to ensure equitable participation and opportunity for all learners.

A board game created collaboratively with the entire class, incorporating avatars and narratives that represent all individuals, provides a wide variety of settings and scenography for all children to play with, experiment, and feel safe to express their creativity, explore diverse perspectives, and engage in imaginative scenarios. Not only does this inclusive approach foster a sense of belonging, but it also enables children to develop empathy, critical thinking, and social skills as they interact with the game and their classmates in a collaborative, supportive setting. The rules of the game can be rewritten to ensure accessibility, with careful consideration given to the diverse cultural and linguistical backgrounds, and needs of both male and female students to be represented without biases. Different levels of difficulty may be included, as well as various communicative strategies to ensure the game can be played and understood effectively by everyone. All kind of adjustments should be made to guarantee full, equitable, and inclusive participation from all students (Housh et al., 2021).

Education that embraces the plurality of perspectives and encourages the understanding of the world through the experiences of others fosters inclusivity and empathy. By promoting critical thinking, reflection, and the capacity and courage to articulate individual opinions, such an approach nurtures open-mindedness and intellectual growth. Additionally, cooperative games that ensure the active participation of all students play a vital role in cultivating collaboration and mutual respect (Collins & Griess, 2012). Games and toys possess significant potential to provide unique opportunities for teaching about diversity, challenging preconceived notions, and dismantling stereotypes, thereby contributing to a more equitable and inclusive learning environment. For example, traditional gendered toys and play situations might unintentionally steer youngsters toward limited views about careers, talents, and abilities, such as associating caring responsibilities with females and building and exploration with boys. When selecting toys for their classes, educators should consider the impact that pinkwashing can have on males' choices and desire to engage with such toys. Boys may disregard pink or purple toys out of fear of social rejection, concerned that their peers will judge and mock them for not conforming to traditional gender expectations. This avoidance may restrict boys' abilities to pursue hobbies and behaviours normally associated with toys, such as caregiving, creativity, and social collaboration (Mackin, 2016).

These playful activities encourage the development of divergent thinking, problem-solving skills, and an appreciation for the positive role of mistakes, while fostering inclusion, active participation, and metacognitive strategies for learning. Additionally, through the educational benefits of cooperative play, these activities reinforce prosocial behaviours, support the internalization of democratic values, and promote collaboration toward achieving shared objectives. This approach enhances individual growth, and it concurrently strengthens social cohesion within the learning environment.

Teachers have long incorporated games into the classroom, including card games, board games, and role-playing activities, though these have primarily served educational purposes rather than simply providing entertainment (Botturi & Loh, 2009). Predominantly, a combination of embedded and direct assistance is needed to help children engage in inclusive play. Teaching methods and curricular changes pertaining to various forms of supports, such as adult assistance, peer support, and embedded learning opportunities, are all integral components of inclusive early childhood education (Sobel et al., 2015). Playing may efficiently promote learning about the world, but it also a medium to perpetuate biases and create assumptions that are rooted from childhood. When play becomes a vehicle for these prejudices, it has the potential to affect children's conceptions of gender roles, racial prejudices, cultural expectations, and social hierarchies, frequently in ways that restrict their understanding of themselves and others. These early-formed notions, if left unquestioned, can shape children's goals, sense of identity, and perceived prospects, resulting in discrepancies in future opportunities. Kindergartens and play centers often provide a diverse assortment of toys, including donated items such as dolls or action figures, brought by children's families as gifts to the school. These toys can serve as valuable learning tools, offering interesting opportunities to experiment and engage in exploratory play rather than adhering to the gendered expectations typically promoted by the toy market. Educators and teachers can use such closed-ended toys traditionally designed for specific, limited play scenarios and transform them into open-ended learning tools by having children to take them apart and explore their inner mechanisms. This activity offers hands-on experience with basic mechanical components, such as screws, wires, and motors, allowing the comprehension about how toys function, sparking curiosity about how

things work. By recycling pieces to create new toys, blending components, or even rebuilding them with extra functions, children may shift their perspective of play from passive usage to active experimentation and invention, which fosters creativity. In addition to developing problem-solving abilities, this method encourages a more profound and creative interaction with everyday objects[8].

A familiar challenge for teachers is when young students are required to share a play area with their classmates and adhere to designated play times and locations within a school setting, they may exhibit aggressive or exclusionary behaviours as a form of social conflict toward peers they perceive as outsiders or not conforming to social norms (Varea & Ndhlovu, 2017). In the paper What Makes You Powerful, the educators of a Reggio inspired American preschool witnessed an ongoing conflict between girls and boys during recess in their group of children. Despite teachers' requests to include everyone in their play, the children persisted in excluding one another, maintaining their selectiveness during free play. Instead of keep trying to stop the conflicts between the two groups of children, the teachers decided to take a collaborative approach, engaging the children in discussions to explore and understand their perceptions and feelings surrounding the power dynamics they were expressing. Rather than dismissing their fights as mere disruptions, the teachers saw an opportunity to delve deeper into the children's ideas about strength, control, and influence. Together with the school's *atelierista*, they documented observations and revisited them during co-teacher planning sessions. They also encouraged children to explore power creatively via various expressive languages as part of a co-research journey. This endeavour provided valuable opportunity to learn about superheroes and their valuable impact on humanity in a constructive and collaborative way among boys and girls (Venier et al., 2022).

8 For more information, see https://www.exploratorium.edu/tinkering

6. Conclusions

Resnick argues that play provides an environment in which children can actively explore, experiment and learn. Through play, children can acquire important skills such as critical thinking, problem solving, collaboration, and creativity. Play also provides a safe space to experiment and make mistakes, encouraging children to persevere and find alternative solutions. Creativity is a crucial skill to meet the challenges of today's fast-changing world. The MIT computer scientist believes that everyone is a potential creator, and that creativity should be cultivated in all areas of life, not only in the arts or artistic disciplines. Creativity involves the ability to think in original ways, to find connections between different ideas and to turn one's ideas into reality (Resnick, 2017).

The right to play and game, to playful situations free of stereotypes and prejudices, is a right that schools must promote to ensure democratic and inclusive educational opportunities for all their pupils. In fact, it is in the school environment that the adult, as educator, can have that fundamental role in accompanying children's play. The role of the adult in children's play is to provide a safe and stimulating environment, to be present and involved, and to act as a positive role model as well as having an important responsibility in encouraging and supporting this activity. The approval and support of the adult is necessary because only in this way will the child feel empowered to explore his or her inner world and express, without fear of being judged, the wide range of feelings and emotions that run through it (Bondioli, 2002).

Ultimately, the intentional deconstruction of biases and promotion of varied, cooperative, and unstructured play experiences are the keys to establishing a more equal and inclusive learning environment. It is necessary to design research-actions that promote inclusive practices and education for differences, while providing solid initial and continuous training for teachers and awareness-raising activities with families. Teachers can foster the development and well-being of all students by allowing them the freedom to play out creative and widespread scenarios. This will equip them to become self-assured, kind, and cooperative adults who can successfully negotiate the challenges of our multicultural society.

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Let's Play! Interweaving All-Day Education and Playfulness in the Italian Context

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Abstract

This paper explores the pedagogical value of play in all-day education contexts. Playfulness makes it possible to go beyond transmissive methods, encouraging student agency, creativity, experiential and collaborative learning, and the strengthening of relationships. In all-day education contexts, where school time is also an educational variable, play offers opportunities for interdisciplinarity and rethinking traditional lesson structures. After having structured a theoretical framework that interweaves play, playfulness and all-day education, a qualitative study conducted in northern Italy during the 2022/2023 school year is presented. Semi-structured interviews were carried out with seven primary school teachers working in all-day education classrooms. The thematic analysis of the collected data revealed three topics: (1) ideas on all-day education; (2) play as a marginal and "disorganised" experience; (3) play as a primarily pedagogical moment. There is a general loss of pedagogical meaning in all-day education, with play often seen as a filler between unstructured moments; only in a few cases is it recognised as pedagogically valuable.

1. Introduction

The role of play and playfulness in educational processes has received considerable international attention (Lytle, 2003; Proyer et al., 2019; Walsh et al., 2011): creating non-frontal learning environments centered on students' protagonism implies pedagogical work in a democratic sense and allows valuing each pupil's uniqueness in terms of languages, access to knowledge and relational skills (Beatty, 2017). Student protagonism, as understood in this study,

refers to students' active and reflective participation in their own learning process; it goes beyond mere engagement, encompassing agency, voice, and responsibility in shaping their educational experience (Shier, 2019). These are fundamental aspects for the promotion of experiential learning that supports student motivation and the co-construction of knowledge.

The educational value of play is evident in all-day education contexts (Martlew et al., 2011; Newman et al., 1996): the time spent in school should not be a sequence of different subjects, but a cohesive set of interdisciplinary experiences that foster creativity, critical thinking, and learners' emotional and relational skills. Therefore, time is considered an educational variable that must be shaped according to a precise conception of schooling and education (Silva-Maceda et al., 2016).

In this chapter, we examine the close connection between play, playfulness, and all-day education in primary school in order to offer an original and critical perspective on these issues. Having elaborated the theoretical framework, we present and analyse the results of an exploratory study conducted in the Italian context: it is focused on the importance that teachers attribute to all-day education and on the space assigned to play as a pedagogical tool. The results of the study, while reflecting the specificities of the Italian context, also provide an opportunity for reflection for school systems that share similar characteristics and problems.

2. Theoretical Framework

The theoretical framework presented in this study is formulated around the concepts of play and playfulness and the theme of all-day education. This second topic is then placed in the Italian context in order to better understand its history and development.

2.1 Play and Playfulness as Pedagogical Tools

Before delving into the pedagogical value of play, it is essential to clarify what is meant by play and playfulness, as the two are often intertwined but theoretically distinct. Play refers to a set of activities that are voluntary, intrinsically motivated, and governed by rules or imagination, often associat-

ed with interaction, exploration, and enjoyment (Huizinga, 1938/2008; Caillois, 1992; Bateson, 2020). On the other hand, playfulness denotes a personal disposition, an attitude of curiosity, creativity, and openness, that can be expressed across various contexts, including non-playful tasks (Lieberman, 2014; Proyer, 2017).

The reflection on play as a pedagogical tool (Colliver & Veraksa, 2019) primarily aims to emphasise the need to overcome frontal and transmissive forms of teaching (Fine, 2014; Youell, 2018). In fact, play succeeds in making learners active participants of their learning: they do not passively absorb information, but co-construct knowledge and interiorise concepts after experiencing them first-hand and developing a sense of mastery and self-efficacy that the frontal approach rarely offers (Tang et al., 2020).

Through play, learners can explore and develop their individual and social selves (Chang et al., 2013): during playful activities, they interact, learn to respect rules, cooperate and resolve conflicts. By playing together, learners develop soft skills such as empathy, active listening and cooperation (Altomari & Valenti, 2023). Play therefore not only promotes autonomy and self-confidence, but the acceptance of diversity and the building of positive relationships with peers too (Proyer & Tandler, 2020; Scheuer & Cremin, 2024). In addition, any play activity provides a safe space for the expression of emotions and for coping with feelings, which is crucial for personal development (Tidmand, 2021).

Through play, motivation to learn can be fostered due to the enjoyment of the activity and its inherent immediate gratification (Kangas et al., 2017). Students who are having fun and feel involved are more likely to focus, participate and face challenges without becoming discouraged (Cook & Artino, 2016). This active participation is crucial for maintaining high motivation, an essential element of any effective learning process. Furthermore, a playful approach allows content and teaching methods to be adapted to students' preferences and interests, making the learning path more stimulating and less stressful (Walsh et al., 2011).

Play enables experiential learning, i.e., learning based on direct experience and experimentation (An, 2018; Rice, 2009). By playing, students are confronted with concrete situations and problems that require a practical solution and thus they develop skills that are applicable to the real world. This

type of learning allows students to move from theory to practice and gives them the opportunity to experiment and test their ideas, hypotheses and intuitions (Whitton, 2018). Direct experiences facilitate the understanding and memorization of concepts and promote the ability to deal with new and unexpected situations independently (Jørgensen et al., 2023).

Play fosters creativity by allowing students to imagine, invent, and experiment without fear of mistakes, which are viewed as learning opportunities (Bateson & Nettle, 2014). This promotes flexible, original thinking, which is essential in a complex world (Edwards, 2022). Many games also support storytelling, artistic expression, and the creation of imaginary worlds, helping students explore and represent their own perspectives (Haynes & Murris, 2013).

Play promotes the co-construction of knowledge (Kangas, 2010): students learn to pool their ideas, discuss and integrate different perspectives, creating shared knowledge that goes beyond individual knowledge (Gray, 2013). This approach reflects a horizontal dynamic in which the role of the teacher is that of a guide and facilitator rather than the sole holder of knowledge (Li & Kangas, 2024; Pinchover, 2017). Sharing knowledge through play helps students understand the importance of collaboration and develop skills that are useful for adult and professional life.

2.2 All-Day Education and Playfulness

All-day education is a pedagogical model where students attend school both in the morning and afternoon (Pfeifer et al., 2008). This extended time is not meant for more subject instruction but for rethinking teaching in participatory, dialogical, and experiential ways (Bae, 2019; Stecher, 2019). The ultimate goal is to enhance schooling outcomes with a focus on equity, efficiency and effectiveness (Dyson, 2010; Fischer et al., 2014).

By supplementing traditional lessons with artistic, sporting and social activities, the holistic development of students is sustained (Mendes et al., 2021; Orchard, 2007): the aim is to promote learning that takes into account cognitive, emotional and relational skills and promotes psychophysical well-being and comprehensive development. The integration of school and community is a fundamental aspect (Cummings et al., 2007; Heath & McLaughlin, 1994):

local authorities and organisations collaborate with schools, enabling students to root their learning in social reality and develop a sense of belonging.

In addition, all-day education promotes the personalization of the school experience and the co-construction of knowledge (Murray et al., 2024). Each student can explore their passions, develop individual talents, and actively learn by participating in collaborative projects that foster skills such as empathy, communication and conflict management. Therefore, this model not only enriches academic knowledge, but also prepares students to live and work responsibly and collaboratively, focusing on their personal and social development.

Thus, the intertwining of playfulness and all-day education becomes clear. Indeed, by interpreting time as an educational variable to be organised and shaped (Millot & Lane, 2002), it is possible to use play to act in an interdisciplinary perspective and foster the development of creativity and critical thinking in students (Tang et al., 2020). Furthermore, play provides an opportunity to disrupt the traditional rhythm of class time through active forms of student engagement (Parker et al., 2022).

In recent years, the concept of playful learning has gained traction in educational research. It describes an approach that combines structured learning objectives with elements of playfulness, such as curiosity, experimentation, and joyful engagement, across all subjects (Whitton, 2018; Jørgensen et al., 2023). This perspective is particularly relevant in all-day education contexts, where extended time allows for a more integrated and exploratory curriculum design.

2.3 All-Day Education in Italy[1]

As far as the Italian context is concerned, all-day education started according to bottom-up logic at the end of the 1960s. A group of teachers at an elementary school in Turin (northern Italy) decided to organise afternoon activities to meet the specific needs of the school population, which consisted mainly of southern Italian students who came from families with low schooling. By extending school time, teachers wanted to help students acquire basic skills

1 The focus on the Italian context proposed in this paragraph is based on the author's work published in Italian (Ferrero, 2023).

through experimental pedagogical approaches that moved away from frontal methods.

This experience was institutionalised in the 1970s with a law that introduced this pedagogical model nationwide (Law 820/1971). Originally, the all-day education was also planned for middle schools, but actually it has only spread to primary schools. However, critical problems immediately arose in its application, such as territorial disparities, the lack of teacher training to implement an idea of school that was not just about extending school hours, and ineffective pedagogical measures. In the 1980s and 1990s, new laws were passed to curb these critical issues that still persist today.

At the beginning of the 2000s, school autonomy was introduced. It would have allowed individual institutions to organise all-day education with greater freedom in terms of curricula and timetabling. Nevertheless, numerous critical points remain, particularly with regard to territorial disparities and the quality of the experience offered to students.

3. The Exploratory Research

Our research aims to understand the space allocated to play in Italian elementary school in all-day educational contexts and teachers' ideas regarding this pedagogical model. Considering the small number of participants, the study has an exploratory character. A qualitative approach was used.

3.1 Research Questions

We want to answer the following research questions:

1. how do teachers interpret all-day education?
2. what types of playful activities are intentionally designed and implemented in all-day primary schools?
3. what role does play occupy in terms of curricular time, physical space and pedagogical planning?

3.2 Participants

Seven primary school teachers took part in the study. All teachers have at least five years' experience; two have a fixed-term contract, while the other five are permanently employed. All teachers work in all-day education contexts.

3.3 Tools and Data Collection

We conducted semi-structured interviews via video conferencing software between December 2022 and March 2023. A guide was created: it included questions about the teachers' professional experience, their involvement in the all-day education context, their ideas about this pedagogical model, their teaching methods, their beliefs about the pedagogical value of play and the use of play in the classroom (Appendix A). The interviews were recorded and transcribed with the consent of the participants.

3.4 Data Analysis

The interviews were analysed using reflexive thematic analysis (Braun & Clarke, 2021), within a constructivist epistemology. Coding was inductive and semantic, based on iterative reading of transcripts to identify patterns of meaning. Manual, line-by-line coding was performed. The analysis prioritised the interpretative relevance of each code over frequency. Themes were developed through recursive engagement with the data, supported by reflexive memo-writing and theoretical notes (Appendix B).

4. Results

The results are presented from the thematic strands identified during the data analysis, i.e., ideas on all-day education; play as a marginal and "disorganised" experience; play as a primarily pedagogical moment.

4.1 Ideas of All-Day Education

Most of the teachers interviewed perceive all-day education simply as an extension of the school timetable, without recognising time as a meaningful educational resource. Their focus tends to be on the additional hours that are available to cover subject content, with little attention given to the possibility of designing a cohesive educational approach that integrates diverse methodologies and transcends rigid subject boundaries.

> I don't see much difference between all-day education and "normal" school. We simply have more time for the school subjects... We don't have to rush through all the planned content. (Teacher 1)

> I have worked both in an all-day education context and in schools with reduced hours... Honestly, there is no difference. (Teacher 3)

> In all-day education contexts, as teachers we can work better, do more... We have more relaxed times and we can organise our work better. (Teacher 7)

The emphasis is usually on the amount of knowledge that students can acquire, from a transmissive perspective. Conversely, other teachers emphasise the gradual loss of the ideals that led to the bottom-up development of all-day education in Italy in the 1960s.

> The spirit of 1960s all-day education no longer exists! There was a strong pedagogical project, with politically and ethically engaged teachers. Today that is no longer possible: we are overwhelmed with bureaucratic requirements and have no time to sit down together to think up a school idea. (Teacher 2)

> Everything has changed. In the 1970s, there were two teachers per class in all-day education contexts. Now there are even five or six. Everything is fragmented and it is not possible to imagine time as a mosaic of experiences... It is still divided into individual subjects. (Teacher 6)

Only one teacher works in an all-day education context in which time is treated as a pedagogical variable.

> I work in a lucky context. At the beginning of each school year, we engage in serious scheduling. We intervene in the curriculum, the subjects and the organisation of the classes. It's a multifaceted task where we try to create a personalised school experience without losing the community nature of learning. (Teacher 4)

As far as the interviewed teachers are concerned, some do not recognise the special features of all-day education. Others recognise its importance, but find it difficult to put it into pedagogical practice and lament the loss of the original ideals. Only one teacher reported pedagogical efforts to organise school time according to a precise idea of education.

4.2 Play as a Marginal and "Disorganised" Experience

Most teachers interviewed do not interpret play as a pedagogical opportunity. Play is seen as a frivolous interlude between serious moments and occupies a marginal place in everyday school life.

> It is important for children to play at school, because this is how they develop their social skills. During the breaks I let them play as they wish. (Teacher 3)

> I'm used to organising short games at the end of the school day, before going out. We end the lesson ten minutes early and play some games at the blackboard. (Teacher 6)

> Children can play, of course! Each pupil works at a different pace... Whoever finishes an activity first can play silently, without disturbing their classmates. (Teacher 7)

Play is not perceived as having significant educational value, but is seen as an interlude between activities that are considered more typical school activities. Furthermore, it is often only allowed during unstructured moments and is only given marginal attention. It also happens that it is not seen as a

moment of free expression for students, but as a means of control to prevent those who have finished their activities more quickly from disturbing their classmates.

> We don't have time to play in class with all there is to do! Sometimes we still have time at the end of the morning or afternoon... During the physical education lesson, I organise movement games. But the students are aware that the place to play is not at school. (Teacher 1)

> We cannot play at school... We need to make it clear that this is a serious place dedicated to learning. (Teacher 5)

The teachers interviewed do not regard play as a pedagogical tool, but classify it as a filler activity or even avoid it because it would jeopardise the seriousness of the school experience. The result is an impoverishment of the educational pathways of students, who could instead see play as an opportunity to learn and grow.

4.3 Play as a Primarily Pedagogical Moment

Two teachers recognise playfulness as a pedagogical element that should be encouraged in the teaching and learning process. It is clear from their words that they are aware of the educational potential of play, even if it is used in different ways. The first teacher even emphasises its extrinsic value by explaining that it is a means to address disciplinary content, while the second highlights its intrinsic value.

> I teach Maths. I'm a great advocate of alternative teaching methods. That's why I often use games to promote logical-mathematical skills. In class, we play cards and do other activities that use typical game mechanics to stimulate problem solving skills. (Teacher 2)

> Thanks to the all-day education model, we have longer periods that allow us to overcome the rigid division between subjects. Together with my colleague, we have planned interdisciplinary moments. One of them is dedicated to play: every day there is a time when the students play certain games

> (motor games one day, board games the next day, strategy games the next day...). This helps them to socialise and develop skills such as creativity that are difficult to use in traditional subjects. (Teacher 4)

In the first case, play is used in an instrumental way to achieve specific disciplinary goals. In the second one, play is used as an interdisciplinary and experiential platform due to its heuristic and social value. It is no coincidence that this happens in the school where more attention is paid to the pedagogical importance of all-day education: in fact, the awareness of the need to build an organic educational project aimed at the holistic development of students means that play is valued for its potential, without it being considered merely as a tool for acquiring subject-specific skills or as a break for insignificant and unstructured moments.

5. Discussion

The exploratory study highlights the need to recognise the educational potential of time within all-day education contexts (Andersen et al., 2016). Indeed, the extended school day is often perceived merely as an opportunity to cover various subjects without the pressure of time constraints, overlooking its potential to foster methodological pluralism and to develop a school model that embraces personalisation, active learning and genuine student agency.

This loss of the eminently educational value of the school experience (Biesta, 2012) not surprisingly also affects the value attributed to play. Our research shows that there is an urgent need to reaffirm the importance of play as a pedagogical tool with its own validity, so that it does not become a parenthesis between moments of the school day that are mistakenly considered more serious. In fact, play enables the integration of different disciplinary approaches and promotes a critical and creative co-construction of knowledge (Bateson & Martin, 2013; Lester, 2019).

In our exploratory study, play is used for purely pedagogical purposes in only two cases. In the first situation, the objectives are disciplinary, whereas in the second, play is used for its intrinsic value and potential in terms of holistic personal development, active participation and increased motivation,

experiential learning, the promotion of creativity, critical thinking and the co-construction of knowledge.

Overall, our research highlights that incorporating playfulness into the design of learning pathways is closely linked to a critical reflection on the role of all-day education. Specifically, the use of play is associated with a growing awareness of time as an educational variable with intrinsic value. This underscores the importance of developing both initial and in-service teacher education programs (Boysen et al., 2022) that encourage reflection on the significance of all-day education and the potential of play to foster cooperative, participatory, and dialogical learning processes. In summary, our findings respond to the three research questions as follows:

1. teachers interpret all-day education primarily as an extension of school time, with limited reflection on its pedagogical reconfiguration – except in rare, context-sensitive cases.
2. playful activities are rarely "activated" as part of structured pedagogical projects. When they are, it tends to be within game-based learning or scheduled "play slots.
3. play occupies marginal spaces in the school day, often relegated to end-of-day transitions or recess. Only a few schools integrate it into the planned curriculum, valuing its holistic potential.

6. Conclusion

On a theoretical level, all-day education and playfulness share the goal of fostering experience-based learning and student protagonism. All-day education supports methodological pluralism, encouraging practical, creative, and collaborative activities that develop social and emotional skills. This aligns with playfulness, which brings spontaneity and enjoyment to learning, making content more accessible. By extending learning time, all-day education creates more opportunities to integrate play and exploration, supporting holistic development beyond the cognitive domain.

Our exploratory study shows that in primary schools that adopt the all-day education pedagogical model, play is not always seen as a central element of pedagogical planning. In particular, play is often confined to un-

structured moments. The teachers who instead choose to use it in their own planning emphasise its extrinsic value in terms of supporting subject teaching as a trigger for engagement with the different curricular domains and its intrinsic value as a platform that runs between subjects at different times of the school day for the holistic development of the person.

Given the exploratory nature of the study, the findings are not generalisable but offer valuable insights into the role of play and playfulness in primary schools adopting the all-day model. While grounded in the Italian context, our reflections may be relevant to other systems facing similar challenges. Overall, investing in teacher education is essential to raise awareness of the educational value of time in all-day settings and the pedagogical potential of play to foster collaborative, active, and dialogic learning.

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Appendix A – Interview Guide

This appendix includes the full interview guide used in data collection. The questions were designed to elicit teachers' experiences and representations regarding both all-day education and the use of play in that context. The guide was built around two main thematic foci, i.e., perceptions of the all-day school model and pedagogical uses and meanings of play/playfulness. Questions were open-ended and exploratory in nature, to allow participants to articulate their views freely and generate rich, contextualized data.

1. Can you briefly describe your professional background and teaching experience?
2. How long have you been working in an all-day school context?
3. What are your thoughts about the all-day education model?
4. In your experience, what are its main strengths and weaknesses?
5. How is school time usually organised in your class?
6. How would you define the role of play in your teaching practice?
7. Can you describe situations in which play is used intentionally?
8. What kinds of games or playful activities do you use, and why?
9. How do you balance structured learning and free play?
10. Do you collaborate with colleagues when planning playful activities?
11. Have you received any specific training on using play as a pedagogical tool?
12. What would help you better integrate play into your teaching?

Appendix B – Reflexive Thematic Analysis Process

This study employed reflexive thematic analysis as outlined by Braun and Clarke (2021). This approach is grounded in a constructivist epistemology, recognising that themes do not emerge passively from the data but are actively constructed by the researcher through an iterative, reflexive engagement with the material.

Analytical Positioning

The analysis adopted this perspective:

- semantic focus, meaning we coded explicit meanings within participants' language, without looking for latent structures;
- inductive orientation, avoiding pre-defined theoretical codes and allowing themes to be shaped by the empirical material itself;
- reflexive logic, acknowledging the role of the researcher in interpreting, organising, and giving significance to the patterns identified.

Process

1. Familiarisation With the Data

The seven interviews (ranging from 40 to 70 minutes) were fully transcribed and read multiple times. During this stage, marginal notes were added using Word comments to highlight initial ideas (e.g. "play as reward", "rigid schedule", "loss of original vision").

2. Coding

Each transcript was manually coded using units of meaning, typically clauses or short paragraphs. Coding was carried out line-by-line, generating a total of 164 initial codes.

3. Theme Construction

Codes were grouped into tentative categories, which were iteratively refined. Themes were defined not by frequency, but by patterned meaning across the dataset that addressed the research questions.

4. Reviewing and Refining Themes

Themes were reviewed internally for coherence and externally for distinctiveness. For example, the theme "instrumental uses of play" was split into extrinsic vs. intrinsic patterns under theme 3.

5. Defining and Naming Themes

Themes were written up with definitions supported by thick description and quotes.

6. Producing the Report

Themes informed the structure of the Results and Discussion sections.

Reflexivity Note

The researcher engaged in ongoing reflexivity through memo writing and theoretical annotations, especially in cases where personal experiences in the Italian school system resonated with teachers' frustrations. This awareness of positionality contributed to a richer, more situated interpretation.

Coding Summary

- Approach: Reflexive thematic analysis
- Epistemology: Constructivist
- Coding logic: Inductive
- Level: Semantic
- Software: Microsoft Word (manual coding)
- Theme construction: Meaning-based, not frequency-based
- Reflexivity: Active, through memos and annotations

Coding Process

The coding of the data for the extracts used in the paper is shown here.

Theme 1 – Perceptions of All-Day Education

Sub-theme 1.1 – Continuity with Traditional Schooling

Interpretation: Teachers do not perceive significant pedagogical innovation in the all-day model.

> I don't see much difference between all-day education and "normal" school. We simply have more time for the school subjects... We don't have to rush through all the planned content. (Teacher 1)

> I have worked both in an all-day education context and in schools with reduced hours... Honestly, there is no difference. (Teacher 3)

> In all-day education contexts, as teachers we can work better, do more... We have more relaxed times and we can organise our work better. (Teacher 7)

Sub-theme 1.2 – Loss of Educational Mission

Interpretation: Teachers report the erosion of the original pedagogical vision of all-day schooling.

> The spirit of 1960s all-day education no longer exists! There was a strong pedagogical project, with politically and ethically committed teachers. Today that is no longer possible: we are overwhelmed with bureaucratic requirements and have no time to sit down together to think up a school idea. (Teacher 2)

> Everything has changed. In the 1970s, there were two teachers per class in all-day education contexts. Now there are even five or six. Everything is fragmented and it is not possible to imagine time as a mosaic of experiences... It is still divided into individual subjects. (Teacher 6)

Sub-theme 1.3 – Intentional and Participatory Planning

Interpretation: Some teachers describe shared planning processes as attempts to recover pedagogical meaning.

> We intervene in the curriculum, the subjects and the organisation of the classes. It's a multifaceted task where we try to create a personalised school experience without losing the community nature of learning. (Teacher 4)

Theme 2 – Play as Marginal or Regulated

Sub-theme 2.1 – Play Restricted to Specific Contexts

Interpretation: Play is allowed in regulated or transitional moments, rarely integrated into formal learning.

> During the breaks I let them play as they wish. (Teacher 3)

> We end the lesson ten minutes early and play some games at the blackboard. (Teacher 6)

> Whoever finishes an activity first can play silently, without disturbing their classmates. (Teacher 7)

Sub-theme 2.2 – Institutional Resistance to Play

Interpretation: Teachers describe time and institutional culture as barriers to play-based pedagogy.

> We don't have time to play in class with all there is to do! Sometimes we still have time at the end of the morning or afternoon... During the physical education lesson, I organise movement games. But the students are aware that the place to play is not at school. (Teacher 1)

> We cannot play at school... We need to make it clear that this is a serious place dedicated to learning. (Teacher 5)

Theme 3 – Play as a Pedagogical Resource

Sub-theme 3.1 – Play Supporting Disciplinary Learning

Interpretation: Play is used as a methodological tool for specific curricular goals.

> I often use games to promote logical-mathematical skills. In class, we play cards and do other activities that use typical game mechanics to stimulate problem solving activities. (Teacher 2)

Sub-theme 3.2 – Structured Time for Play

Interpretation: In rare but significant cases, play is intentionally integrated into the curriculum through planned time slots.

> Every day there is a time when the students play certain games (motor games one day, board games the next day, strategy games the next day...). This helps them to socialise and develop skills such as creativity that are difficult to use in traditional subjects. (Teacher 4)

“Pierino Wrote ‘Go Juve’ in the Class Padlet!” Playful Creativity in Managing Digital Tools With Off-Topic or Dysfunctional Contributions From Students

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Abstract

This study examines the pedagogical dynamics of managing divergence and error in technology-enhanced classrooms, focusing on a simulation conducted with 360 Primary Education students over four years. The case of Pierino and his off-topic digital contribution (“Forza Juve!”) serves as a springboard for exploring teacher responses to disruptions. The thematic analysis of student reflections reveals six clusters of action, highlighting the potential of humour, playfulness, and gamification in reframing error as a shared pedagogical resource. By balancing relational engagement and creative responsiveness, pursuing a strong drive for inclusion, fostering students’ comfort and well-being, and challenging them toward growth, self-awareness, self-efficacy and confidence, teachers can transform disruptions into opportunities for collaboration and meaning-making. This study emphasizes the constructed and contextual nature of error and its management, situating it within adaptive, human-centered practices that transcend prescriptive uses of digital tools. Reflecting on networked classroom interactions, it advocates for participatory approaches that foster emotional safety, curiosity, and imaginative exploration, aligning with broader goals of teacher education and reflective praxis.[1]

1 This text has been elaborated in the context of the author’s commitment as RTDA Researcher, in the framework of a research project co-funded by the MUR with ESF REACT EU funds - PON R&I 2014-2020 and funds from the National Research Programme as per Ministerial Decree 737/2021, Axis IV - Education and Research for Recovery - REACT-EU, Action IV.4 - PhDs and research contracts on innovation topics, Action IV.6 - Research contracts on Green ESF REACT-EU topics.

1. Post-Pandemic Digital Education: Need for Pedagogical Mediation

Since the pandemics, the use of digital tools witnessed a sudden acceleration in primary education. What until 2020 had been a slow and resisted deployment of Information and Communication Technology (ICT) suddenly became unavoidable (Bozkurt et al., 2022). In an emergency remote education climate, teachers had to adopt ICT abruptly, regardless of a lack of preparation or support, and younger generations of learners experienced a time of experimental trial, fatigue, and renewed divide (Bonavolontà et al., 2023). Pedagogical mediation was and remains essential to thoughtfully integrate ICT in meaningful, inclusive and interactive learning experiences, recognizing the value of technologies as opportunities for teachers to create dynamic and authentic educational interactions. Nowadays, it is no longer a matter of survival through digital means but of leveraging them to foster participatory, accessible, high-quality learning environments – a process that presents a long and complex path ahead.

2. From "Go Juve" to a Catalogue

2.1 Methodology

This essay reflects on an experimental activity carried out in the Educational Technology Labs (Labs) in the Primary Education Course at Milan-Bicocca University, involving 360 students between 2018 and 2021. As a Labs teacher I focused on digital tools as cognitive and metacognitive mediators – instruments that amplify, scaffold, and compensate cognitive processes; and vehicles for the development of teachers' methodological competencies, beyond mere ICT literacy – particularly addressing specific educational needs (Canarini & Bertozzo, 2008). Labs students participated in a didactic simulation designed to reflect on a real-life scenario which had recently occurred: a fifth-grade teacher, employing a digital class noticeboard (a Padlet), assigns students to post individual contributions on a specific topic related to the ongoing lesson. A student called Pierino posts "Forza Juve!" ("Go Juve!"), evi-

dently out of task. The class disunites, erupting in laughter. Pierino's message appears as disrupting the activity, breaking its thematic focus, challenging the teacher to manage both the immediate pedagogical objectives and the broader social and relational dynamics emerging in the class. Labs participants were asked: "How can the teacher handle this situation and the dynamics arising from it?".

The choice to propose this specific scenario to the participants stems from a long-standing personal and professional commitment to divergent thinking, lateral leadership, and pluralistic educational approaches.[2] I therefore considered drawing on one among the many classroom episodes I had encountered in my career. This was revisited through a reflective process involving peer dialogue and critical self-observation, in line with perspectives that legitimize the situated, elaborated use of professional experience as a valuable pedagogical resource – once appropriately de-personalised and analytically reframed (Schön, 1983; Connelly & Clandinin, 1990). I discussed the idea with departmental colleagues: three out of four expressed strong support for the educational value and methodological soundness of the proposed simulation, for it to foster a deeper understanding of educational relationships, managing group dynamics, and the multifaceted role of the teacher as both facilitator of content and living model in navigating complex, situated interactions.[3]

The simulation-based exercise consisted of a 15-minute pitch task to foster immediacy, focused engagement and concise yet insightful responses. In small groups, students immersed in the scenario, drawing upon their own experiences as learners or educators. No limitations of length, structure or style were imposed, encouraging diversity of elaboration, expression and deliberation. I collected Labs participants' contributions and took ethnographic notes of plenary discussions held after the groups' short-pitches. I then

2 Over the past three decades, I have worked as an educator in early childhood settings, kindergartens, primary schools, lower and upper secondary schools – gradually transitioning to university-level instructional design. In coherence with this background, it was natural for me to planning to bring into the hybrid-learning lab setting a stimulus aligned with these thematic concerns, both as a pedagogical prompt and as a research-informed provocation.

3 It would indeed be valuable to explore how the original episode was handled within that specific school community, considering its unique situated dynamics. However, this lies beyond the scope of the present contribution.

thematically analyzed these materials to identify and categorize recurring patterns, central topics and underlying conceptual frameworks. Overall, 90 groups of four students each produced 440 responses to the question, averaging 4.89 responses per group. 363 answers (82.5%) were about 20 words-long or shorter and were composed of one to two relatively brief sentences. The remaining 17.5% – 77 prompts – exhibited greater structural complexity, consisting of multiple sentences of over 20 words, displaying wider elaboration.

2.2 Strategy Clusters

The exercise promoted an interplay between individual critical thinking and collective discussion, aiming at fostering participants':

- reflexivity and metacognition, to encourage future teachers to problematize off-topic contributions not as mere disruptions but as windows on deeper social, motivational, and communicative dynamics in the classroom;
- constructive management of divergence, recognizing and reframing it as opportunity for inclusive and dialogic pedagogical practices;
- agency and creativity, increasing knowledge of flexible and context-sensitive strategies, to address unexpected student behaviours in technology-enhanced environments.

A catalogue of action possibilities from the 440 contributions was collected, serving as a repository of responses and a mirror of the pedagogical tensions inherent in a teacher's role – between control and flexibility, immediate reactions and long-term reflection. Clusters are presented below, enriched by some illustrative responses:

1. Promoting dialogue. Here, the teacher reinterprets disruption as an opportunity to foster collective engagement and inclusive dialogue in the classroom, socializing Pierino's off-track:

   "I involve the class group, creating a discussion on this off-topic contribution."

   "I encourage the class to reflect on what off-topic means: has it always to be considered disruptive?"

2. Leveraging play and creativity. This cluster highlights strategies that transform the disruption in a playful, creative opportunity for learning, engagement and inclusion:

   "I propose a discussion-game: other teams? Other sports?"

   "We turn it in a creative writing exercise: 'What if Pierino's team had to solve today's lesson problem?'"

   "W Napoli!"

3. Ignoring or minimizing. Teachers chose to avoid or de-escalate the situation by minimizing its visibility or significance.

   "I avoid blatant reactions, showing that the provocation doesn't affect me. I ignore it."

   "I calmly continue with the lesson, addressing the incident indirectly in a later moment."

4. Teacher self-reflection and management. The teacher's reflexivity and relational awareness are at the core:

   "I take a moment to reflect on my own reactions: am I addressing the issue constructively or reacting emotionally?"

   "I use the incident as a chance to model reflective behavior for the class, showing how adults can respond calmly to unexpected situations!"

5. Understanding the student's motivations. Teachers attempt to explore underlying causes of the student's action, focusing on empathy and contextualization:

   "I talk to Pierino privately to understand his motives."

   "I observe his behavior in other moments to identify patterns, recurring triggers. I discuss with colleagues to understand his needs and motivations."

6. Authoritarian reactions and sanctions. Teachers react to maintain control, sometimes through punitive or reactive measures:

> "I tell the students 'The more inappropriate messages appear, or digital participation rules are not respected, the more homework they'll have.'"

> "I get angry, I lose it, I raise my voice, and that's it, Pierino!"

Table 1 summarizes the quantitative distribution of the clusters.

Table 1 – Response clusters

Cluster	No. of entries	%	Observations and dynamics
1. Promoting Dialogue	115	26.14	Dialogic-inclusive approach, transforming provocation in an opportunity for confrontation
2. Leveraging Play-Creativity	98	22.27	Use of creativity-play to reframe the situation
3. Ignoring, Minimizing	85	19.32	De-escalation-avoidance strategy, minimizing the impact of provocation
4. Teacher Self-Reflection & Management	58	13.18	Teacher's self-control and reflective management of own role
5. Understanding Student's Motivations	53	12.04	Exploring underlying reasons for the student's behavior
6. Authoritarian Reactions & Sanctions	31	7.04	Instinctive-punitive responses; human vulnerability; personal, temperamental, contingent idiosyncrasies

The exercise showed students that managing divergence in technology-enhanced environments requires not just digital literacy, but reflective, pedagogically informed praxis embracing unpredictability as a formative element of teaching. Cluster no.1 dominates (115 contributions, 26.14%), showing

how participants see communication, exchange and collective discussion as the most effective way to deal with divergent situations. No.2 (98 contributions, 22.27%), highlights participants inclination to value creativity and play as constructive pedagogical tools. Cluster no.3 appears interesting (19.32%), showing how neutralizing provocation is perceived as a practical and functional solution. As discussed with students in plenary, avoidance as an educational strategy – while at times an effective form of negative pedagogy – requires nuanced reflection. While potentially useful to de-dramatize the event, prevent unnecessary escalation, and subtly model restraint or composure – maybe intending to address the matter privately, or just to wait – ignoring a behavior can become an evasive response, a disengaged forfeiting a chance for constructive intervention, and an inadverted signal to students that certain behaviors or issues are not to be tackled, potentially shaping their understanding of conflict resolution and social accountability. Clusters Teacher self-reflection and management and Understanding the student's motivations appear quantitatively aligned – 58 and 53 contributions respectively, 13.18% and 12.04% – and thematically intertwined, representing reflective and problematizing structures of thought activated by Pierino's case. They diverge on the object of this reflection: a self-referential inquiry in the teacher's own responses and reactions, vs. an outward-oriented curiosity to understand the student's reasons and behavior's roots. I noticed the relative paucity of spontaneous curiosity toward Pierino himself – the possible web of experiences, forces, and meanings that may have led him to act – ranking only fifth out of six. In a program of study such as Primary Education, often driven by vocations of relational engagement, I'd rather had anticipated stronger instinctive inclinations to interrogate and empathize with the child's perspective. Though, when prompted in plenary discussion, participants quickly seized upon this line of inquiry, awakening their need to explore the interpretative possibilities of Pierino's post (see here, 3.3). Authoritarian reactions and sanctions represent the tail end (7.04%) – yet with a relevant qualitative significance. In this cluster, underlying elements of ideological stances, professional ethical values, and a somewhat dominant teacher's Superego were discussed, which can't be deepened here. In guided discussions, participants recognized this category as a human and real component of the teaching profession, often linked to contingent or temperamental fac-

tors. It enriched students understanding of the pedagogical role, stimulating reflection on the need for training in emotion awareness and management.

3. Conceptualizing Mistake and Divergence in Educational Dynamics

By almost all the Labs students and Pierino's real classmates, his act was classified as an error – albeit with varying hues and consistently regarded as a minor or light mistake.

3.1 Pedagogical Perspectives on Error

In broader social discourse, error has long been framed as a defect to correct, a deviation to eliminate, a shortcoming to avoid. Pedagogically, it can be discussed from multiple perspectives (Binanti, 2022) – e.g., as a critical reflection and knowledge acquisition gateway, an opportunity for inclusive and creative pedagogical practices (Benes & Cellie, 2018), a cognitive and affective phenomenon demanding nuanced management in digital education (Gegenfurtner & Hagenhofer, 2020), or a methodological tool for developing professional and metacognitive skills through gamification, serious games and active learning strategies (Giampaolo, 2021). Notoriously, "error" roots in Latin errare ("to wander", "to stray"): embarking on a movement of precarious exploration and recalibration. Experience itself denotes a journey outward (ex) and through (per), emphasizing going (ire) – in absence of a predetermined destination – . Mistake thus bases on divergence, as an ontological condition of human experience and an opportunity to explore alternative cognitive pathways and foster resilience. Its management stands as a dynamic, context-centered, cultural and pedagogical process, stimulating creativity and learning; and relationally, as a dialogic moment inviting participation and shared meaning-making. This conceptualization echoes Popper's critical rationalism, positioning error as an essential component in the iterative refinement of knowledge, as well as Taleb's (2012) notion of antifragility, where diversity and disruption become sources of strength and adaptability in educational ecosystems. Two threads deserve further mention from Labs discussions. The first one highlights the importance for teachers to acknowledge the

emotional undercurrents of their role and engage in self-reflection on its complexities, balancing rational management with relational awareness and empathy (Larocca, 2008). Secondly, any error, phenomenologically, has always already occurred. It's a chronologically irreversible, completed event: once it occurs – Pierino's "Go Juve!" – its management cannot undo what has already transpired. Teachers don't manage the act in se, but its consequences – the ripple effects it generates in the classroom environment. Furthermore, the adult's response is an intrinsic element of the error's aftermath. It is not neutral, but an active agent in shaping the social and pedagogical outcome of the situation – be it its resolution, amplification, or transformation. As a teacher acts in front of students, she's not merely performing that action; she is simultaneously modeling how an adult can approach and manage things. Rich with formative potential, the teacher's response – whether reflective, dialogic, creative, or normative – shapes the classroom culture, modeling approaches to conflict, divergence, and growth. Integrating emotional awareness and a relational focus on their practice, teachers transform dysfunctionality in opportunity, fostering a classroom environment where students are shown that mistakes are to be valued as essential components of learning.

Elaborating on Sterponi and Santagata's comparative perspective on pedagogical responses to errors (2000), mistake management reveals a transcultural distinction between its socialization and its individualization, corresponding to broader ethical and moral frameworks rooted in different normative traditions – e.g. the Catholic and the Protestant-Calvinist ones. In Catholic-influenced, Neo-Latin-speaking societies – e.g., the Italian classroom model – error tends to be treated as a collective opportunity for communal experience of reasoning and learning – sharing its burden, diluting its stigma. This reflects an underlying social logic: as there exist far more individuals than types of error, socializing mistakes optimizes their collective prevention and the construction of a communal understanding of their consequences. By contrast, the individualization of error, more characteristic of contexts influenced by Protestant-Calvinist ethos, aligns with a cultural orientation toward introspection and "personal virtue". Mistakes are treated as private failings, managed through intimate correction. Avoidance of public acknowledgment aims to mitigate social embarrassment, yet the solitary burden placed on the individual can amplify the emotional and symbolic weight.

One cannot help but recall familiar scenes from Anglo-Saxon films in which a teacher, as the bell rings to mark the end of a lesson or school day, asks a specific student to stay behind. In those moments, an almost palpable collective understanding goes, that no one in the class would wish to trade places with that particular Pierino.

3.2 From Habitus to Antiprograms

The concept of habitus theorized by Bourdieu (1980/1990) provides a compelling framework for understanding the interplay between the teacher, the student, and the classroom dynamics when faced with divergent behaviors. The habitus – a set of internalized dispositions shaped by social and cultural experiences – mediates between structure and agency, influencing how individuals perceive, act, and respond in specific situations. In a hybrid physical-digital classroom, any cluster of teacher's response to an off-topic contribution reflects not only their professional training and pedagogical values but also their habitus, embodying underneath frames tied to broader cultural and institutional norms. Pierino's provocative action can itself be viewed as a manifestation of habitus – as a "symbolic rupture" (Bourdieu, 1992/1993) of the expected order, requiring the teacher to reframe it through interactive performance.

In Latour's work, programs of action – planned, prescribed uses of tools – are constantly met with counterforces, competing trajectories, or antiprograms that disrupt, resist, or reorient the intended flow of action. The case of Pierino's off-topic is an antiprogram, a counter-use destabilizing the teacher's pedagogical design, inviting her to dialectic or dialogic exploration. As such, it reveals the constructed and negotiated nature of "functionality. The Padlet rises as a pedagogical device, exemplifying Latour's idea that non-human mediators are never neutral but are implicated in complex webs of agency. The teacher becomes a facilitator tasked with renegotiating relationships between program (the intended educational activity) and antiprogram (Pierino's divergent use). The latter introduces a pedagogical tension: how does an educator respond to divergence without defaulting to authoritarian control or disengagement? Latour's actor-network framework and concept of "irreduction" (Latour, 1988) suggest that human and non-human agents co-con-

stitute meaning in networks that remain contingent, fluid, and open to reinterpretation, against both traditional views of human interaction – e.g. Goffman's micro-social focus – and linear theories of power. Order is not inherent but must be constantly performed, maintained, and reconfigured in the face of resistance or divergence (Latour, 1986). Through these lenses, Pierino's apparent disruption is a part of a network interaction between the technological mediator, whose affordances enable and facilitate unanticipated, divergent uses; the teacher's pedagogical agency, called upon to dynamically reinterpret such an antiprogram as a potential formative opportunity rather than a mere deviation; and the habitus subtly informing both Pierino's act and the teacher's reaction via a broader system of cultural norms, relational dynamics, and educational expectations.

3.3 Through Fun and Humor: Consciousness Matters

From this paragraph onward we'll focus on Leveraging Play and Creativity cluster. In Labs discussions, discernment and awareness were stressed as deontological values for teachers and as learning goals for Pierino. Teachers should or would be able to integrate in their practice lighthearted, humorous, divergent and playful types of action, to foster trust, connection, and a sense of safety for the children – a teacher's quality of the utmost importance for students. Yet, Pierino's capacity to bring divergence, humor and light-heartedness in the group through a witty remark, a playful joke, or a moment of comic relief needs to be recognized as a gift as well. Far from trivial, his ability to create joy, provoke laughter, and lighten the collective atmosphere, when nurtured, holds immense social and relational value. Moreover, it may serve as a barometer of Pierino's level of attention and workload experience, but also that of his classmates, potentially signaling a collective need for a break. Here lies an essential responsibility for the teacher: to support Pierino in cultivating discernment – teaching him to recognize this capacity but also to exercise it with intentionality and care, through a process of personal growth and skill development anchored in self-awareness, self-esteem and self-efficacy, for the group's well-being, self-respect and confidence, and for his own too. Can Pierino be led to realize his worth independent of performance – that his "gift" does not define his value, and he is appreciated and

accepted regardless of the laughter or attention he may bring? At the heart of Pierino's off-track behavior may lie one of humanity's most profound and universal needs – to be loved and to belong – and a deep pedagogic principle: as the mediator undergoes epistemological and structural shifts – e.g., is digitalized – the foundational pedagogical actions – such as including, supporting, and fostering growth – remain intrinsic and irreplaceable. Here, teaching is called to embody a deeply transformative, essentially unwavering message, no matter how context, language, relational dynamics and variables at play may shape its specifics: Pierino, I want to see you – and so I do see you. I want to recognize you – and so I do recognize you. You are loved as you are – unconditionally, with no need for any performance, including humor or provocation. This pedagogical affirmation carries immense weight – not only for Pierino, but for all learners who seek connection and meaning through their actions. Guiding Labs students through this reflective itinerary allowed me to witness their growingly aware emotional resonance and sobering sense of purpose about this teacher's function in every Pierino's path.

4. From Humor to Playfulness and Gamification

4.1 Practices of Humor and Playfulness

Amongst the approaches oriented towards socialization of mistakes, the role of humorous playfulness and games warrants closer examination. Humor, in its performative and dialogic applications, may help defusing the emotional charge of error while fostering relational trust and cognitive re-engagement. Relational agency emerges as a critical competency here. Made of a set of intertwined qualities – empathy, situational awareness, dialogic sensitivity, adaptive creativity, and capacity to hold space for others' individual and collective expression – it enables teachers to encompass divergence as a network act, with which to relate by facilitating inclusive habitus in the classroom community, especially at the intersection of digital technologies and pedagogy – which demand specifically nuanced strategies for fostering a constructive and inclusive learning environment. In general, digitalization of class interactions turns in a lasting document – posted on the Padlet's social arena – what in a non-digital classroom could have been Pierino's ephemeral

and aleatory spoken contribution. Digital technologies afford new pathways for emotional and cognitive self-regulation, encouraging reflective engagement with errors through the platform. Empirical studies underscore the significance of socially regulated emotional dynamics for effective learning in digital contexts (Panadero & Järvelä, 2015): virtual environments can transform errors in collective opportunities for collaborative reflection and problem-solving, by leveraging group discussions, shared forums, or peer interaction. Nonetheless, asynchronous feedback mechanisms, while offering flexibility, may unintentionally exacerbate students' feelings of isolation or frustration, as the delayed response deprives learners of the immediacy useful to address errors with emotional and cognitive support. In physical settings or synchronous ones – webinars and live virtual classrooms – teachers are better positioned to provide immediate, dialogic, and constructive feedback, mitigating risks of emotional discomfort. Thereby, teachers' relational agency paves the way for relational playfulness as an attitude, which – drawing on Berti's vision of school as a ludic space (2023) – emerges as a performative and relational posture that enables teachers to respond with curiosity, flexibility and emotional lightness to disruptions like Pierino's off-track. Rooting in the work of Huizinga (1938/2008) and Bateson (1955) among others, teachers are invited to integrate humor, divergence and creativity – favoring a climate that celebrates collaborative connection, putting in second place direct control. Relational playfulness emphasizes the teacher's attitude rather than formal game structures. As an interpersonal stance, it values spontaneity, dialogue, and inclusivity. It balances pedagogical goals with emotional well-being, affirming the centrality of pleasure, curiosity, and mutual recognition in learning processes. Labs' discussions emphasized the educated nature of playful approaches (Ligabue, 2020): play is not a talent reserved for the "naturally creative", but a professional area of competence that can be trained.

4.2 Gamification and Design in the Light of Digital Pedagogy

Conversely, gamification represents more a formalized, structured, design-driven pedagogical strategy, applying game mechanics in non-ludic educational settings. Labs' discussions highlighted the importance of balancing digital or physical gamification's dual dimensions. I suggest referring to the first one as "enjoyment and divergence": the playful elements of gami-

fication are fun, pleasure, playful exploration and creative divergence – all promoting engagement and emotional investment in the learning process (Moyles, 2014). We may call "competition and agonism" the second pillar – triggering achievement and performance. It became central to digital gamification since individualistic values and capitalistic ideas of agency and personhood gained power in our society (Reeves & Sinnicks, 2024), and since leaderboards, points, and badges got more and more digitalized and present in learning platforms – a historical turn far from being politically neutral, as it speaks of rationalization and processualization of play as a whole (Ekbia & Nardi, 2017). All learning platforms embed competitive tools and goal-oriented functions, that cannot often be deactivated by the teacher. A healthy competition can foster resilience and drive, encouraging goal-setting and perseverance (Burke, 2016) – world records are broken through competition. However, its pedagogical value in school settings requires careful calibration: it should remain a secondary element, applied in age-sensitive measures and inclusive ways. Overemphasizing competition in gamification risks alienating students who may not be prepared, willing, or inclined to engage on competitive terms (Hung, 2017). A classroom – unlike the Olympics – is not a stage for records but a space for inclusive, sustainable learning.

Labs participants were accompanied throughout a reflective discussion about how – from the cognitive perspective of communication pragmatics and cybernetics – a teacher has multiple dialectical possibilities to harnessing logical divergence and convergence to interact with Pierino's post, managing it in the relational and situational flow of the class dynamics and the learning moment at hand, to inclusively ludicize situations using a range of communicative and cognitive techniques – e.g., collaborative storytelling, exploratory tasks, creative or imaginative re-framings – whether to further extend the divergence, redirect it in the figurative walls of the classroom, or reintegrate it in the shared We of the group, which is continuously being formed, reformed, and maintained through each network interaction. All these options can be conceived of as forms of playfulness or gamification. For instance, one direction a teacher could take would be that of expanding the semantic context of Pierino's Forza Juve!, to include the group: "Ok, class, but here do we only cheer for Juve? Who supports Napoli? Inter?". Such a kind of question normalizes Pierino's comment; diffuses its impact; invites the class to a

broader, shared processing. Another type of playful or gamified management of Pierino's diversion could aim at diversifying and extending the play: "Who cheers for volleyball? Figure skating? Running?". The teacher here recognizes Pierino's comment preventing it from stigma; reframes the moment exploring diverse interests; relativizes "Go Juve" to more radically other preferences in the class. Even further, the teacher might opt for a stronger re-centering of the class learning community – yet including Pierino's contribution: "That's a good one, but let's cheer for Class Five! Forza Quinta!". Here, the teacher acknowledges Pierino's initiative; playfully reaffirms a shared purpose; redirects attention back to the collective identity of the group and the classroom walls. Examples (same soccer team, other sport, the class identity) are a powerful resource for teachers to drive students' imagination away or close to the classroom. Many other examples might illustrate how playfull approaches or gamification techniques – centered on inclusion, balancing emotion and cognition – allow teachers to transform disruptions in opportunities for play, creativity and dialogue, to empower their relational agency to include divergence, and restore the nature of play as a catalyst for connection, emotional safety, and co-constructed meaning.

Pedagogically managing designed resources and built environments – their use and interactive appropriation – regains centrality. In contemporary digital education discourse, in fact, the design of resources and tools has garnered priority. Platform pedagogies (Menegola, 2024) tend to highlight the object-centeredness of the digital product as a reified mediator, often eclipsing how teachers and students, as network actors, dynamically use – sometime counter-use – digital tools in real-world contexts, leveraging on relation-focused interplay processes, and on adult facilitation, scaffolding and recognition of learner agency. There exists life beyond design – in the form of lived processes of educational mediation (Maccario & Garibaldi, 2023), usage and interaction, transcending the boundaries of pre-conceived instructional frameworks; of explorations and creativity emerging from the participant's agency (Whitton, 2009); of learner-driven appropriations of mediators. This perspective situates error and divergence at the heart of educational innovation, emphasizing that learning environments must balance design intent with adaptive, human-centered practices. Let us re-in-habit ICT, since attention and engagement are shaped not merely by tools per se, but by their in-

teraction with spatial dynamics, emotional well-being, and educator facilitation. Pedagogical management involves fostering flexibility, relational engagement and exploration by learners, moving beyond static frameworks to a dynamic, context-sensitive horizon of practice. Enjoyment and divergence – integrated with carefully dosed drive for competition and achievement – require educators to consciously navigate playfulness and gamification, for them to serve inclusion and collaboration, to encourage students to express their creative abilities and knowledge and foster a culture of mutual respect.

5. Conclusion

This essay draws in a nested way on Pierino's case and the Labs discussions around it, suggesting that teachers be studied and trained as active intermediators, balancing design intentions with the divergence and fluidity of class interactions and pedagogically facilitating learner agency. It discussed inclusively cultivating learning environments where students can experience cognitive and intellectual stimulation while simultaneously feeling embraced and at ease, fostering a sense of belonging and emotional security. By gamification or playfulness educators can enhance attention and engagement, favoring wellbeing- over competition-driven frameworks.

Finally recognizing the contextual and constructed nature of "error", Labs participants reframed the unpredictedness of Pierino's ludic provocation and its aftermath dynamics, as openings for shared exploration, navigating imaginative opportunities and encouraging students to include non-prescriptive uses of digital tools, through adaptive reflection and participated flexibility. The classroom, its network interactions and its mediators thus become dynamic spaces for learning games to be played – and meanings to be constructed – together.

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Tinkering in Primary School: From Episode to Science Practice

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Abstract

This study discusses the opportunity to integrate tinkering, a constructionist practice, into formal education, highlighting its potential and challenges. We propose a model through which teachers can blend the open exploratory nature of tinkering with structured learning in primary school classrooms, focusing on Physics Education. Despite pandemic-induced limitations, feedback from 20 teachers and analysis of fishbowl protocols revealed the positive impact of tinkering on classroom dynamics, teacher engagement, and student access to knowledge. Our findings indicated that tinkering can surface relevant scientific questions. Nevertheless, teachers feel unprepared to tackle them in the classroom. This evidence will guide our future co-designs to enhance learning experiences and address the complexities of incorporating tinkering into formal education.

1. Tinkering: A Constructionist Practice for Full Scientific Citizenship

Tinkering is a constructivist practice traditionally rooted in informal settings, providing a holistic way to engage people in Science, Technology, Engineering and Mathematics (STEM) by blending it with art and combining it with high-tech and low-tech materials (Petrich et al., 2013; Resnick & Rosen-

baum, 2013). It emphasises active knowledge construction, aligning with Papert's (1980) constructionism, which asserts that learning becomes meaningful when learners create personally significant artefacts. This method fosters creativity, exploration, and deeper understanding, particularly in self-directed projects.

Our team, composed of educators, teachers, and scientists, is committed to enhancing education through creativity, playfulness, and self-expression. Scientists in our group strive to demystify science, presenting it not as a collection of facts but as a dynamic, collaborative process filled with experimentation and discovery. Science's social nature – teamwork, idea-sharing, and collective refinement – is central to our approach. Some of our previous experiences are documented in Ricciardi, Rini, Villa, Ferrante et al. (2021) and Ricciardi, Rini, Villa (2021).

Tinkering practices can reveal the Nature of Science (NOS) (Lederman 1992, Erduran & Dagher 2014), promoting informed attitudes and critical engagement. Rooted in constructionist principles, tinkering mirrors scientific inquiry by blending creativity, collaboration, and active knowledge construction. Integrating these practices in public education is vital to cultivating democratic societies equipped to address complex challenges. We believe, in fact, that a practice like tinkering can, for all these reasons, serve as a concrete step toward a more inclusive and participatory democracy. This is because tinkering embodies a deep connection with science understood as a human, creative, and collaborative endeavour. Through tinkering, we can make the construction of scientific knowledge come alive from the bottom up, starting with tinkering experiences that can later evolve also through other tools and approaches. What matters is the consistent, personal and prolonged embodied connection with physical phenomena in a playful environment, which fosters authentic involvement. Allowing children's and students' research questions to emerge from their own explorations is, in our view, a crucial choice for nurturing critical thinking, scientific creativity, and citizenship. We view these aspects of our practice as critical for fostering scientific citizenship: empowering learners to participate actively in the knowledge society (Greco et al., 2008; Bandelli, 2016).

2. Constructionist Practice at Work: Coding and Tinkering

Italy's education system has embraced transitions inspired by the Lisbon Strategy (2000), emphasising STEAM approaches to promote interdisciplinary, creative learning. Coding initiatives, with Scratch as one of the most commonly used platforms, became very popular in 2015 to enhance digital literacy and computational thinking. However, as Resnick et al. (2020) highlight, coding's potential is undermined when approached rigidly, reducing it to rote tasks rather than tools for creative exploration. While coding gained traction, although frequently used in a limited way, tinkering remained marginalised, often limited to extracurricular settings. Its transformative potential lies in bridging disciplines and encouraging playful, exploratory learning. Yet, its lack of explicit curricular goals (Petrich et al., 2013; Bevan, Petrich et al., 2014) challenges its integration into formal education. The incredible power of tinkering lies not in disciplinary content but in how it enables us to understand the world around us. Through tinkering, one can learn and understand how we can construct knowledge as individuals and as a research community.

These ideas are most fully articulated in Papert's work, not only through his seminal publications (Papert, 1980, 1993), but also through the way he conducted his research, embedding his educational philosophy directly within school environments. Papert's constructionism radically reimagines learning/teaching as a process of active, creative engagement, in which knowledge is not transmitted but rather emerges through the construction of meaningful artefacts within socially and culturally rich contexts.

Emerging in the same historical period, these principles are closely aligned with the framework of critical pedagogy (Freire, 2018). Freire conceives of knowledge construction as a collective and dialogical process in which both teachers and students participate as co-investigators. This conception stands in stark opposition to the "banking model" of education, which Freire critiques as an oppressive approach wherein teachers "deposit" information into passive learners, denying them agency and critical thought. This shared legacy continues to shape contemporary educational practices that center learner agency, critical thinking, and creative exploration (Res-

nick, 2017; Petrich et al., 2013; Bevan, Petrich et al., 2014; Martinez & Stager, 2019).

To tinker, observe, and reflect upon tinkering practices, we draw on educational approaches that place children's thinking and expression at the center. We are inspired by the Reggio Emilia tradition, which values children's multiple languages and emphasises documentation as a tool for interpretation and pedagogical reflection (Edwards et al., 2012; Giudici et al., 2011). Our perspective is also informed by the concept of playful learning, which highlights engagement, meaning, and joy as essential elements of deep learning (Zosh et al., 2018; Project Zero, 2016).

It is within this framework that we situate our research, exploring how tinkering, as both a pedagogical stance and a design practice, can support the development of epistemic curiosity and foster authentic engagement with scientific phenomena in primary education, contributing to more inclusive and democratically grounded science learning environments.

3. Officina della Luce (Light Workshop): Tinkering in the Classroom

Since 2012, we have worked with teachers to introduce tinkering in schools through workshops with students and co-design processes with educators. Our experiments were successful, and teachers appreciated and used constructivist practices, but they were often relegated to recreational time or time for "other activities", not learning itself. Over the years, we have conducted and recorded interviews with teachers to better understand and re-orient our work, which we are still analysing. The first layer of the analysis suggests that tinkering was perceived as something interesting and exciting, sometimes transformative, but not directly interacting with school life. The crucial issue is that teachers often struggle to fully unpack all the physics embedded in a tinkering workshop. Since tinkering is a creative interaction with a physical phenomenon, the teacher-facilitator should have a deep and nuanced understanding of that phenomenon in order to recognise and support the cognitive challenges students are facing at any moment. They should also be able to connect emerging questions with other experiences that can deep-

en and extend the investigation. We've observed that teachers tend to use tinkering in ways that feel more familiar to them – for example, using light play as a storytelling exercise rather than as an opportunity for deep inquiry into the phenomenon of light. This is not because students lack curiosity, but because the teacher feels more confident staying in a known territory rather than venturing into the unknown.

We realised that achieving a deeper and more significant impact required meeting teachers' expectations and unpacking those workshops. Through co-design discussions, it became evident that teachers considered having a clear and structured link with learning objectives crucial. This need is legitimate for teachers, but it puts us in a dilemma because forcibly attaching a disciplinary goal to tinkering would completely distort this practice, reducing its essence significantly. We did not want these practices to lose their potential, as was sometimes happening with coding being reduced to its engineering and technical side. We did not solve this problem quickly; some ideas began to form by delving into pedagogical activism, especially in the works of Malaguzzi, Lodi, and Ciari, and also by studying Rodari and Munari. Eventually, Ciari's text, "The New Educational Techniques", clarified our thoughts and led us to the model we attempted to implement in our "Officina della Luce".

This also ties into our particular interest in the Sciences. We believe that the core of scientific learning lies in the understanding of the Nature of Science (NoS). Recognising this dimension as foundational not only enables a deeper grasp of the discipline's meaning – particularly in the case of physics – but also represents an essential step toward the development of a conscious and democratic citizenship. When this perspective is adopted, many subsequent educational choices become clearer and more coherent: teachers may be more inclined to reconsider the centrality of disciplinary content in favour of deeper cognitive and emotional engagement, aimed at fostering a meaningful and authentic relationship with physics and the sciences more broadly.

In our view, promoting a genuine understanding of the nature of physics requires an experiential approach: physics must be lived, reconstructed through educational pathways that reflect its epistemological foundations – that is, the authentic processes through which scientific knowledge is constructed and evolves. A curriculum designed in this way, grounded in ex-

ploration, foundation of a research question, argumentation, hypothesis formulation, and testing, proves essential in making learning truly meaningful.

Nevertheless, many active learning practices fall short of their potential precisely because they overlook what we consider to be the first and most crucial step in the process of scientific inquiry: the formulation of one's own research question. Without this generative element, school experiences the risk of becoming a sequence of activities devoid of real epistemic value for the learner. In this regard, we argue that tinkering— an open-ended, creative practice—offers a privileged context for the emergence of authentic student questions. Once made explicit, these questions can be nurtured and developed through a variety of learning experiences, contributing to the construction of scientific knowledge that is both personal and shared.

Tinkering could be a fundamental practice and technique for the science class: a tinkering workshop can be seen as a playroom where children can find their relevant research questions while personally engaging with different phenomena. Learners allow themselves to fail, collaborate, exchange knowledge, explore materials, make hypotheses, and test their theories, working the same way a scientific community works. When tinkering happens in a classroom, common knowledge emerges even if different groups tackle different problems with different ideas. This core of personal and significant but necessarily incomplete knowledge can be a stimulus for other tinkering sessions, but also can lead to different experiments and explorations that the classroom can plan together. Of course, these further explorations will have specific learning objectives and could be integrated into the curricula. Tinkering could be a precious open moment where students get to experiment creatively with the world around them by observing and understanding, building artefacts, and constructing their microworlds. During this open exploration, questions may arise, and the class, as a learning community, can collectively try to answer these, building a contraption or setting up an experiment to do so. The class members can also search for information in the school library or online, or in external resources. They can engage with different people from the larger community outside the school with a specific professional or academic background that resonates with the new open questions. A self-posed question is invaluable for children's agency and learning.

It will nurture their curiosity and passion and help build their confidence to tackle complex problems.

Our collaborative team, comprising researchers and educators, endeavoured to conceptualise an educational pathway that synergises tinkering workshops with the methodologies commonly employed in school contexts, from hands-on experiments to books, textbooks, and audiovisual resources. The aim was to craft a learning journey favourable to the collective knowledge construction by the classroom community.

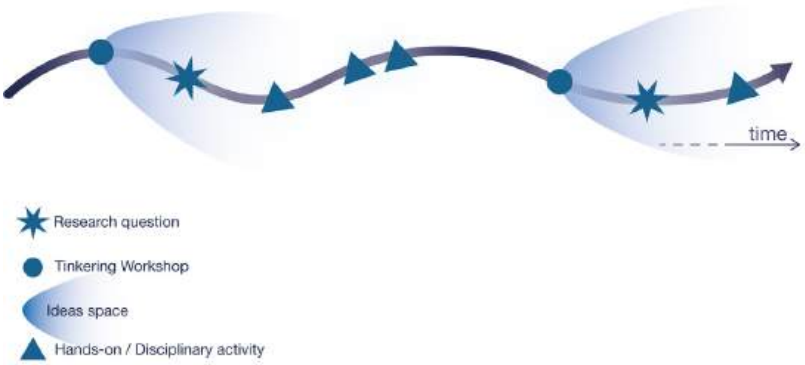

Figure 1 – The overall scheme of TIDE, a possible integration of Tinkering with disciplines.

So, with this idea in mind, we composed TIDE (Tinkering, Ideas generation, Disciplinary connection, Exploration), a preliminary and simple model that combines tinkering with disciplinary learning as in Figure 1. The wavy line represents a timeline that describes what happens in the classroom; this is a very simplified image given that it tries to depict the complex life of a classroom, and it represents a shift from the even simpler trajectory of the traditional classroom where a more instructionist approach (Papert, 1993) is in place and where the classroom's life is reduced to a series of juxtaposed and predefined learning experiences and goals.

We start with - or propose at some point - a tinkering workshop that, with its open, playful and exploratory nature, triggers various questions among the students, some of which may be answered during the workshop, but many remain open for further exploration. Each tinkering workshop is cen-

tred on a specific material or physical phenomenon, leading us to believe that the resulting idea space will be rich but relatively compact. The cloud of ideas represents different possible explorations generated from the tinkering experience. This state creates a fertile ground for connecting with disciplines. As Ciari states, a sensitive teacher will know how to choose. Being closest to the students, the teacher will discard unsuitable themes and delve deeper into the most significant and urgent questions and issues that align with the children's development. At this point, teachers can work with students using all the tools in their repertoire, books, illustrations, and other media, conducting experiments, and returning to tinkering with different skills and perspectives. During these subsequent moments, after a specific research question has surfaced throughout and after the tinkering sessions, the learning objective is evident to the teacher and the learners. Together, pupils and teachers will engage in re-constructing a piece of knowledge.

The only risk of this approach is that the two phases become blurred. Tinkering must remain an open-ended experience; however, this openness could lead to questions that teachers might feel unprepared to answer. Embracing children's questions means opening an investigation and accepting a temporary inadequacy. This process could be intimidating, but it is precisely the techniques of tinkering that can help. Tinkering practices force teachers to rethink their way of being in the classroom profoundly. To facilitate tinkering, the teachers must step out or step aside from their traditional role, constantly refocus on what is relevant and meaningful to the students, and allow learning to be constructed together through the classroom's learning practice. Tinkering empowers teachers, equipping them with the skills to think together through things and to guide exploration even in the absence of profound knowledge of the answers. Maintaining the facilitator's stance even during investigations related to disciplinary objectives is crucial for a real co-construction of learning.

The most ambitious goal of our project was to understand if, with appropriate tools and support, teachers could integrate tinkering practices deeply into classroom life. This integration could happen at different levels, depending mainly on the classroom's general conditions and the teachers' willingness to work in this direction.

4. Officina Design and Its Actual Implementation

We now describe a specific project in which, for the first time in a structured manner, we attempted to implement the TIDE model, particularly an experimental project from September 2021 to September 2022 that involved 13 primary school classrooms and 24 teachers in Bologna. In preparing for this project, the leading school won a grant. The dedicated fund covered materials, teachers' extra time, including documentation time, and external expert facilitators to sustain the teachers' actions.

Our goal was to determine whether, given access to multiple tinkering sessions, a repository of possible disciplinary connections, and documentation tools, teachers would deeply integrate tinkering into school life. We did not structure a detailed work plan for the teachers as we believed it was important to understand whether they could independently design an educational project centred on tinkering. We provided professional development sessions where participants could personally experience all the tinkering workshops later implemented in the classroom. During the three full training days, we also introduced the available resource library and tested several documentation tools presented by INDIRE (Istituto Nazionale di Documentazione, Innovazione e Ricerca Educativa) researchers. Besides designing the documentation structure, they facilitated some sessions devoted to documentation.

The central theme of this project is light. We selected the Light Play workshop as the main tinkering activity proposed at least three times for each class. We recontextualised the original workshop designed by the Tinkering Studio by modifying some of the materials, the setting, and the facilitation. We also developed a library of educational resources around this theme. We organised the material into three branches, documented on the INAF online platform https://play.inaf.it/officinadellaluce/

- Tinkering workshops: workshop description, possible facilitation, materials and possible bridges with other workshops and art.
- Reference materials and hands-on science: a mini library of hands-on activities with explanations from which the teacher can draw a lesson plan or teaching ideas. This work was prepared by INAF researchers from the

Creative Learning, Tinkering, and Games working group, who developed and published this online repertoire.

- Documentation: Besides informal communication, we set up a documentation protocol that teachers could use to communicate with each other and with us: the fishbowl protocol. It is a reflective technique developed by Project Zero, a device aimed at building a safe and welcoming environment for teachers to discuss a piece of documentation collected from a learning activity. It is built on a few precisely timed steps in which one of the teachers shows a piece of evidence to reflect upon and relaunch their action in the classroom (Giudici et al. 2001, Mughini et al. 2020).

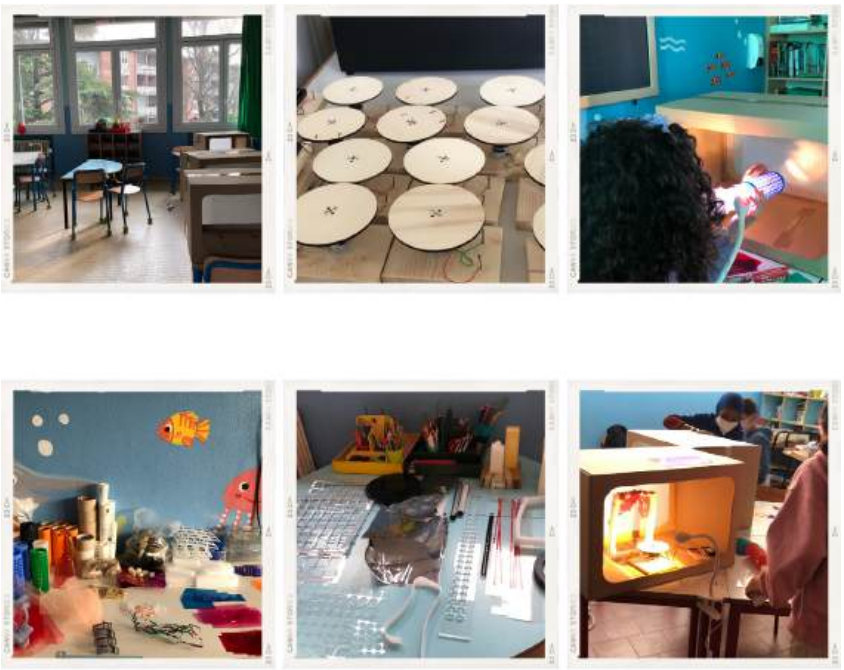

Figure 2 – The school setting, materials and students working in the Light Play workshop

In this first experiment, we did not provide teachers with a predefined path. Instead, we offered methodological training on tinkering, and we provided a digital library of hands-on workshops and educational resources that teachers could freely use to integrate tinkering into their disciplinary teaching as

they saw fit. We also offered teachers the opportunity to involve us directly—either to lead one of the proposed workshops in the classroom or to support other activities they wanted to offer their students but didn't feel confident facilitating on their own. Three classes invited us to collaborate in experimenting with additive and subtractive colour mixing.

The initial classroom design included five tinkering workshops interspersed with documentation and documentation-sharing activities between teachers and researchers starting in September 2022. Four primary schools were involved in the area of Bologna, with 13 classrooms and 24 teachers (approximately 300 students). Every classroom experiences tinkering workshops at least five times (10 hours min.). Unfortunately, the evolution of the pandemic forced us to compress the project into four months instead of the planned eight months. Thus, we modified the original design for organisational reasons and to address the needs of the pupils still in a problematic situation. In fact, during the post-pandemic year, we had to re-focus on cooperation and playful interaction with peers because teachers reported that students had almost lost these essential skills. Children continuously asked for permission to touch materials, share them, and interact with each other.

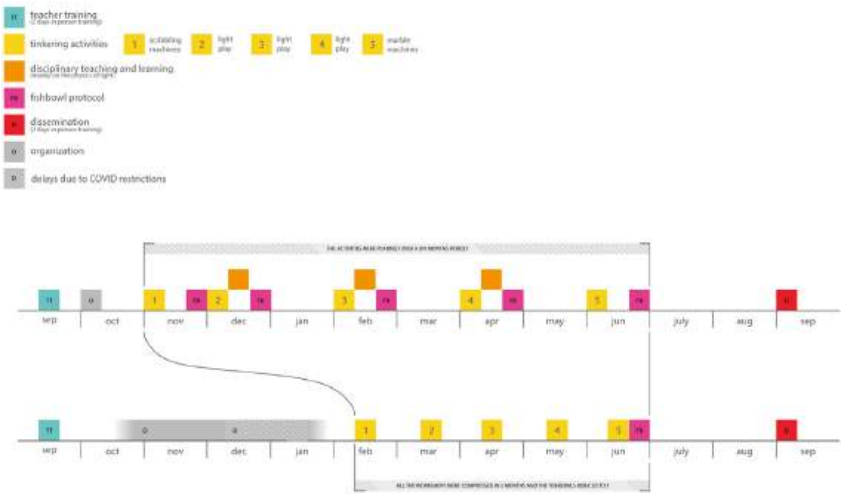

Figure 3 – Officina della Luce: planned and actual project activity schedule

We refocused our research together with teachers, allowing them to reorganise the activities and autonomously plan individual projects while still supporting the planned ones. Unfortunately, this problem significantly impacted documentation because it was only possible to run the fishbowl documentation protocol once for each team of teachers and only at the end of the program, after they had done all the workshops. So, while the fishbowl moments were initially intended as a time for sharing within the group of teachers, for reflecting and subsequently relaunching action in the classroom, they became more of a final reflection moment.

Documentation was carried out by the classroom teachers themselves. Each tinkering session typically involved one teacher acting as co-facilitator and another as documenter, while one or two external facilitators led the activity. The documentation formats included written notes, photographs, and short video recordings, some of which were shared with families or transformed into class product (https://tinyurl.com/tinkeringIC11). As researchers, we only accessed the materials that teachers chose to share—either during the fishbowl discussions or through informal exchanges between workshops. Due to pandemic-related constraints, the documentation component was inevitably the most impacted and remained the most fragmented part of the project. Despite these challenges, we can draw conclusions that are already helping us design the next steps.

At the end of the activities with the pupils, we designed a questionnaire proposed in September 2023 during the project's feedback session with all participants. The questionnaire aimed, on the one hand, to quantify how capable teachers felt in integrating tinkering with learning objectives despite the challenging context; on the other hand, we took the opportunity to measure and delve deeper into what many teachers had frequently reported over time: the unexpectedly high engagement, participation, and effectiveness observed in students often regarded as disengaged from school or even problematic. In the following paragraphs, we examine this questionnaire completed by 20 teachers in the program. We will also discuss the analysis of a recorded fishbowl protocol that will shed light on teachers' attitudes regarding science teaching and their possible uneasiness in accepting and relaunching scientific questions when they do not feel prepared enough.

5. "School-Oriented" and "Non-Aligned" Students in the Tinkering Workshop

Through this analysis, we aim to investigate how different types of students may benefit—or somehow fail to benefit—from tinkering practices. This research question emerged because, over the years, teachers reported that the students with whom they had the least expectations were often the ones who performed well in tinkering activities and were sometimes even activity leaders. At the same time, some students whose teachers expected them to perform very well encountered significant difficulties in tackling the workshop. In particular, an otherwise highly performing student almost refused to participate and said, "I'm not doing the activity; I'm just helping them", shielding themselves from the possibility of failure.

In the questionnaire, we asked if the tinkering practice revealed unexpected or partially expected behaviour, and then we asked them to express what they noticed. 70% of the teachers answered positively, commenting, "Children who struggle the most with traditional educational activities showed they could navigate them easily and enthusiastically; a very academically proficient girl, on the other hand, experienced several frustrations. Everyone showed enthusiasm when working in pairs/groups, even with classmates with whom they often conflict." "Children who usually do not take on a leading role during traditional lessons became protagonists within the small group, while, on the contrary, some children who are usually considered 'capable' felt unsettled by the practical task."

Through two additional specific questions, we asked:

1. "How did the highly "school-oriented" children (those who naturally fit into the school system) perform during the Tinkering workshops?"
2. "How did the less "school-oriented" children (those who show little interest during school activities or struggle to adapt to the mechanisms of school) perform during the Tinkering workshops?"

From now on, we will refer to these two interpretative clusters as "aligned" students and "non-aligned" students, based on patterns that emerged inductively from teachers' feedback during post-workshop discussions. These last

kids are the ones who more often have problems finding their motivation in school and accepting the proposed activities. We analysed the answers of 20 teachers who participated in the study, coding the teachers' brief descriptive texts using seven themes for "aligned" students and eight themes for "non-aligned" students, as illustrated in Figures 4 and 5.

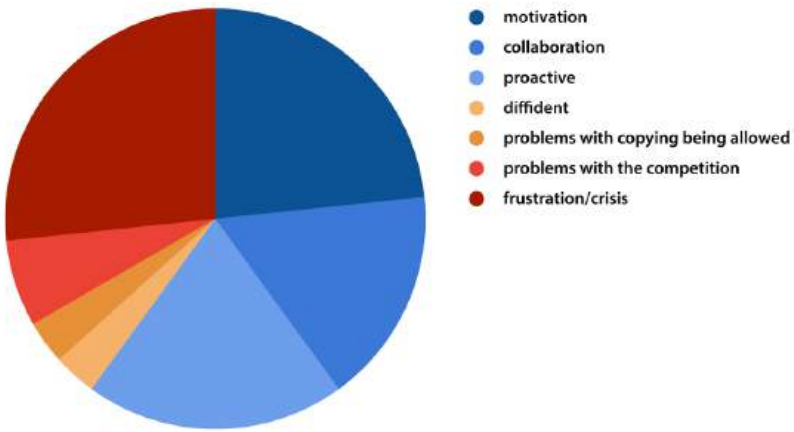

Figure 4 – Coded answer to question 1: aligned students

As evident from the chart in Figure 4, some students from the aligned group respond very positively to tinkering, while for others, it becomes a source of frustration and, at times, even crises.

The majority of responses, although positive, highlighted the presence of factors related to frustration and crises. For instance, one states, "School-oriented children learned to manage the frustration of not achieving immediate success. They became more relaxed, focusing more on the process and reasoning. They reconciled with the possibility of making mistakes." "The school-oriented children greatly appreciated the importance and value of collaboration, self-reflection, and mutual assistance. Some were 'challenged' by the possibility of being allowed to copy, while others found the competitive nature of the marble machine workshop to be a source of difficulty."

We conducted the same analysis for the second question dedicated to "non-aligned students". Also, in this case, each text was eventually associated with more than one theme. What is evident is that teachers report for non-aligned students extremely positive attitudes within the tinkering practices.

We report some representative answers to get the general tone: "They participated willingly and even felt like protagonists." "They responded positively by actively participating, revealing their skills and richness." "High motivation, sustained attention and engagement over time, and creativity.".

We also report the two answers coded as non-completely positive: "Some of them demonstrated a greater predisposition, while others maintained a 'delegation' attitude toward the rest of the group. To address this, we continuously adjusted the group configurations to encourage an active and participatory attitude from everyone". "Some performed well. In contrast, others (one in particular) were easily distracted and struggled to pursue a specific goal."

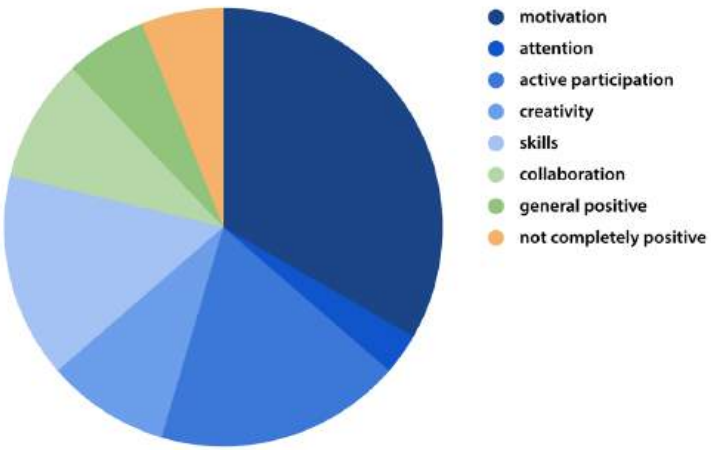

Figure 5 – Coded answer to question 2: non-aligned students

In the end, we discussed these graphs with the teachers, identifying at least three student types based on these observations: The first type describes students who grasp the teacher's requests and suggestions, understand the school dynamics, but can also focus on their interests, being able to develop them within the school context. These are the aligned students with a positive experience during tinkering, represented in Figure 4 from light to dark blue sector. The second type is a student who understands the teacher's requests and suggestions, is aware of the school dynamics, and is highly focused on meeting these demands rather than pursuing their own interests.

These are the aligned students with a challenging experience during tinkering, represented in Figure 4, orange to red sector. The third type is a student who is either unable or uninterested in responding to the teacher's requests and suggestions, does not grasp the school dynamics, and is intensely focused on their own interests. These are the non-aligned students, represented in Figure 5. This classification depends on the student's school experience, personal history, and situation.

The fact that students considered generally uninterested respond exceptionally positively to these activities has led teachers to reflect deeply. They have seen firsthand that we can genuinely engage students on the school path's margins with interventions like tinkering. Similarly, revealing the fragility of students whose motivation in school activities relies almost entirely on mutual recognition between teacher and student is significant, as these students—often seen as high achievers—are, in reality, quite vulnerable.

The teachers discovered a powerful tool for re-engaging students who are often passive or disinterested. At the same time, they became aware of vulnerabilities that had not surfaced within the school routine. In this sense, the Tinkering workshop was helpful to observe the students in an unusual context, allowing for a deeper understanding of them.

This first analysis helped us refine our focus and better understand what we should investigate further. While the findings offer valuable insights into student behaviours, they also reveal important aspects of the school system in which these students operate, as well as the underlying assumptions and pedagogical orientations of their teachers. Our broader field observations—beyond this specific experience—suggest that teachers who expressed the greatest surprise at students' agency during tinkering activities were often those more accustomed to formal, content-driven instructional models, where creativity and self-expression are not central. Conversely, in classrooms where individual contributions and expressive approaches are regularly valued, such reactions were less pronounced or absent.

This discrepancy points to the need for a deeper exploration—not only of student profiles, but also of how different teaching styles influence the perception and development of student agency in open-ended contexts like tinkering. Further research should include more targeted analyses of student trajectories, ideally cross-referenced with teachers' pedagogical beliefs and classroom practices.

6. Physics: Students' Research Questions and Teachers' Comfort Zone

Some interesting results and themes emerged from the preliminary analysis of some fishbowl protocols. Specifically, we report here the study of a fishbowl protocol where the documenting teacher teaches humanities, and thus, integration with the science curriculum was not initially planned. For the fishbowl, the teacher selected a fragment of documentation where the students enthusiastically raised a relevant research question related to the physics of light. They wondered how to produce white light using the available light bulb (white) and various coloured plastic filters. Initially raised by just one group, this question spread throughout the workshop, eventually challenging the entire class.

She commented on the documentation and reported that the students tried to apply prior knowledge. Remembering the phrase "the sum of all colours makes white", they attempted to overlap all the gel sheets to achieve white light but without success because when all filters are combined, they block all the light, which ultimately does not pass through. The teacher admitted to us that at that moment, she felt challenged because she did not know how to answer the students' questions. As a result, the significant research question was left unresolved.

As the documentation session progressed, the teacher realised what had happened and recognised her difficulty in fully understanding and addressing the students' profound research questions. While tinkering, the learners wondered why what they had learned the previous year, studying the eye (additive mixing), did not apply in this case (subtractive mixing). The documenter/teacher recognised that it would have been essential to address and explore this crucial question, but also acknowledged, along with the other teachers, that they were not ready from a disciplinary standpoint.

The vital evidence of this documentation is twofold: Tinkering sparked an essential and profound research question, and the teacher recognised her inadequacy in embracing this question. We noticed that deep experimentation with light and matter raises many theoretical and abstract questions as the previous. Similarly, many questions arose because of the desire to achieve a specific aesthetic or narrative result, such as: "I want to create a marine back-

drop and have lights going in all directions that look like sparkles; how do I do that?" This question often allows learners to reflect and wonder about another disciplinary idea of the physics of light: reflection. Here, we observe what we are accustomed to seeing in many tinkering sessions, as also investigated in Bevan, Gutwill et al. (2014): many research questions emerge and are partially resolved during tinkering sessions.

Let us now focus on the teachers' sense of inadequacy, particularly regarding the physics of light. At the end of the documentation session, the teacher expressed that it would be necessary to integrate some form of disciplinary training to help teachers feel more competent and, consequently, better equipped to guide students' inquiries. This same sense of inadequacy or uneasiness is also evident in the teachers' preferences when selecting a disciplinary area to investigate further after the tinkering activity. After being trained in tinkering practices and following the presentation of resources on light and documentation, teachers were free to decide independently if and how to make curricular connections, which were entirely optional and voluntary.

At the end of the project, we aimed to gain a comprehensive understanding of the disciplinary areas autonomously explored by the teachers. So we included two questions in the final questionnaire for the teachers: "Have you carried out activities connected to or stemming from the tinkering workshop?" and then "In activities not conducted by external experts, in which area did you primarily work with your class?"

We organised the responses of the 20 teachers into a chart that highlights their preferences. The first significant finding is that the majority of teachers did not isolate tinkering activities but chose to integrate the workshops into the life of the classroom, albeit through pathways of varying intensity and complexity.

Despite the availble educational library was centered on science curricula, the teachers vastly preferred integrating activities focusing on language, expression, and storytelling. This shift may have been accentuated by the particular historical context experienced and the need to reconnect with personal expression, but also by the particular tinkering workshop proposed in fact creating kinetic light sculptures may easily suggest a storytelling approach.

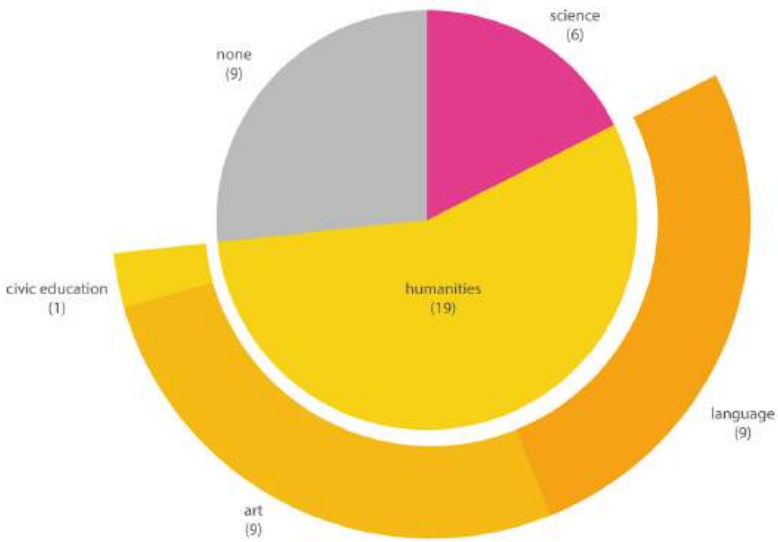

Figure 6 – "Integrating tinkering with disciplinary learning in which area did you primarily work?"

To provide just a few examples: some teachers developed a complete PBL (Project-Based Learning) project, creating a collective storytelling experience and subsequently presenting it to their peers, embarking on a complex and extended activity. Another class produced a video by working with light play and creating a complementary sound design, drawing on the students' diverse knowledge and emphasising teamwork throughout the process. Yet another class focused primarily on disciplinary aspects related to physics, conducting a series of experiments and hands-on activities.

7. Conclusion and Future Perspectives

The research path presented here is the result of approximately three years of work within schools, aimed at observing how tinkering and constructionist practices influence teachers' daily routines.

For the first time, we introduce TIDE, a potential approach to integrating tinkering with learning objectives. While situated in a specific context, our research allows us—albeit preliminarily—to draw meaningful conclusions

and observations that are valuable for assessing the progress made so far and reorienting our stance and research questions for future developments:

A key finding is teachers' uneasiness in engaging with scientific disciplinary exploration. Teachers often feel insufficiently competent in scientific subjects, particularly physics. This is evident from the responses in Figure 6, which summarise the teachers' preferences toward humanities or expressive domains for integrating tinkering into the curriculum. The analysis of the fishbowl conducted in the previous paragraph aligns with this direction: even when an honest and authentic scientific question emerged in the classroom, teachers did not feel equipped to address it or adopt the research question as the focus for subsequent activities.

Tinkering in schools has proven to be a powerful tool for re-engaging students who often struggle with traditional educational mechanisms while simultaneously revealing potential vulnerabilities among some high-performing students. On one hand, this shifts teachers' perception of their students; on the other, it provides an opportunity for teachers to transform their attitudes toward learning processes.

Although not implemented as initially planned, the documentation process, particularly the fishbowl protocol, effectively highlights fundamental aspects of the ongoing educational process that might otherwise have remained invisible. We believe that documentation may create opportunities for further intentional relaunch.

These conclusions indicate that, in continuing this action-research process, it will also be essential to provide teachers with support in disciplinary preparation. The training and co-design phases, which until the Officina della Luce focused on the methodological aspects of tinkering and documentation practices, should also include dedicated sessions addressing appropriate disciplinary content.

To fully validate the TIDE model, it will be necessary to document children's ideas over time, exploring their learning outcomes and the development of scientific thinking that frames knowledge as a field of inquiry and experimentation rather than as a set of crystallised facts.

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