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Introduction

Find
three Renoirs,
two Picassos,
and at least
one Matisse.

Authors' foreword

One can live without contact with art. This may not be the best opening sentence for a book about education and art, but it is worth realizing the point it makes before one gets indignant that communing with art is rarely among children's (and adults') top ten favourite activities.

Statistics show that, in 2019, 33% of Poles visited an exhibition, a gallery, or a museum at least once. Although a growth trend had been observed in this respect in recent years, it has now slowed down – almost the same proportion of Poles visited an exhibition, a gallery, or a museum in 2018. The most interesting thing is who makes up the 33%: these are mainly members of the professional-managerial class, specialists with higher education (65% of respondents in this group visit exhibitions, galleries, or museums), residents of big cities with a population above 500,000 (60%), people with the highest income (60%), and university or school students (56%)[1]. The relatively high percentage of students visiting exhibitions, galleries, and museums probably stems from the obligatory character of such outings as part of museum classes or excursions organized by schools. To a smaller degree – though their influence should not be underestimated – the responsibility for children's contact with art lies with parents, who take them to exhibitions either as part of active leisure where they live or during holiday trips.

1 Marta Bożewicz, *Aktywności i doświadczenia Polaków w 2019 roku*, Public Opinion Research Centre (CBOS) Research Report no. 17/2020, Warsaw 2020. Available online at https://www.cbos.pl/SPISKOM.POL/2020/K_017_20.PDF, accessed 25.10.2020. The study was conducted on a representative randomly selected sample of 1,016 adult Poles.

The data show that a considerable proportion of children who used to go to exhibitions, galleries, and museums abandon this activity after entering adulthood. The reasons can be many; a significant factor is probably socio-economic conditions, but these alone can hardly account for the absence of 67% of society from art venues. Contact with art is obviously easier to come by for the well-educated and prosperous residents of big cities, but public institutions of culture do offer free admission at specific times, and many of them are located in small towns. One might suppose that the lack of interest in institutions presenting art is caused by something else. We believe that the key reason is the lack of effective education introducing people to the world of art – in the course of their school and after-school experience, children neither develop a desire to discover and deepen their relationship with art nor acquire the habit of doing so.

What, then, should effective education drawing on art and – more broadly – on human creativity[2] consist in? Education that can be considered effective is one that leads to remembering new information and facilitates its subsequent retrieval. It should be remembered, however, that education is not only the assimilation of knowledge in the form of data and facts. It is also the entire socialization process, the development of mental abilities, an inquiring mind, sensitivity, empathy, and the understanding of phenomena and one's place in the world. This means that if lessons fail to provide new information, if they do not result in information being remembered and do not facilitate its subsequent use, or – more broadly – if they fail to stimulate the development of cognitive abilities, do not contribute to the

2 Other terms used in the literature are: "education through art," "education for art," "aesthetic education," and "art-based education"; we have chosen to refer to "art education" and "education drawing on art" in order to stress both the value of education about the world of art and the significance of art in the educational process.

development of an understanding attitude, and have no effect on the mental representation of the internal or external world – then the time devoted to them is lost from the educational perspective.

The ineffectiveness of educational interventions largely stems from their non-adjustment to the developmental characteristics of the children they target. Although the last one or two decades have witnessed immense development of the educational offer for children in Polish museums and galleries, many of the activities offered – if not actually most of them – take the perspective of adults and their ideas about what will be attractive, absorbing, and, above all, valuable for children. This results in numerous workshops during which the organizers, parents, and caregivers have great fun, while the children themselves get bored, tired, and discouraged from art. There are also many forms of attractive activities for children, providing them with opportunities to have great fun, but when they are over it turns out that the children have gained nothing from them. Applying the criteria for effective education, one can say that, while it is hardly possible to imagine successful educational interventions that are not attractive for children, attractiveness alone does not guarantee that they will bring the desired educational effect. Of course, people do not always go to exhibitions to learn something. Sometimes – perhaps even usually – what they are after is, simply, contact with art, entertainment, and an interesting form of leisure. Nevertheless, whatever the motivation, a visit to a gallery or museum can be an excellent opportunity to learn – not only about art and its history but above all about the world and the human being in it.

Contrary to what it may seem to be, our book is not yet another publication in the "how terrible that large numbers of Poles do not participate in culture" series. Nor is it yet another book focused on what an important role art plays in human life. This is because we do not write about what is obvious but

about what should be obvious, even though it is not. We are not outraged at reality; we do not seek to build a community of complainers and grumblers or aspire to be part of it. What we do instead is act – we show what can be done to make life better. We show how to make children's contact with art a usefully spent time, filled with joyful play, engagement, reflection, and learning rather than a duty and a source of boredom or frustration.

The knowledge provided in this book and the tips it offers concerning educational processes taking account of the child's perspective are based on the anthropological understanding of art as a social practice and a form of exploring and experiencing the world. In our book we present the main findings of contemporary psychology on memory, learning processes, and children's cognitive and socioemotional development. We also share our experience related to cultural education.

In this book we focus on the two earliest developmental stages that educational offers in the field of art are targeted at – namely, on preschool-age and early school-age children. We outline their developmental characteristics and suggest ways to take them into account when designing and conducting educational activities. We also present a constructivist perspective on the process of learning, the principles of effective education derived from contemporary knowledge about the functioning of memory and learning processes, and the applications of these principles in the case of the two age groups. Moreover, we propose a variety of educational interventions adjusted to children's age and developmental characteristics, suggesting ways to apply the principles of effective education in practice. The reproductions of works of art provided here – both old and contemporary – are meant to illustrate the psychological patterns we discuss; additionally, they can serve as a point of departure or an inspiration for designing one's own educational activities.

We hope that this book will be a reader-friendly and, above all, practical guide for every educator who is as anxious as we are for children to come to love art, to learn about it with bated breath, to experience it with joy, and to derive knowledge about themselves, about others, and about the world from it. And for this love to remain with them forever, so that they cannot live without art anymore, even when they grow up.

Przemysław Bąbel
Elżbieta Kaproń
Magdalena Kosno
Mikołaj Spodaryk

Through a parent's eyes

This book is personally important to me. I have two sons, who – like many of their peers – go to exhibitions, galleries, and museums with their parents and with school groups. It was they who gave me the best, though at the same time painful, lesson of what effective art education should look like.

It started very well. When I was exploring Paris with my older son, four years old at the time, he could spend 8–10 hours, three days in a row, in the Louvre and the Musée d'Orsay without protesting. A year later it was not that rosy anymore. After three days went relatively smoothly in the Prado, Thyssen-Bornemisza, and Reina Sofia Museums in Madrid, a visible crisis came in the Museo del Greco in Toledo. From that moment on, my son was mainly bored in museums and galleries. Meanwhile, we enrolled him in a series of museum workshops in one of Kraków's museums. My wife and I had quite good fun there, as opposed to our child, for whom smearing himself with paint was part of everyday life in the nursery school. In fact,

we could not help but feel that the situation was similar for most children and their parents. We therefore gave up attending these workshops and, with increasing difficulty, continued to pursue our passion for art in the company of our children. Our younger son did his first intensive tour of Berlin's museums when he was six months old and almost immediately joined his brother in the second phase of the development of a passion for art – the phase of boredom.

We tried various methods of managing the family crisis regarding art. My wife and I took it in turns to go to museums – one of us would spend time with the kids while the other would explore alone. Then we swapped over. Later, in order to provide our children with education in art after all, we modified this method and took them for a one-hour tour together, focused on the most iconic exhibits; then we explored the rest of the exhibition alone, taking turns. When this kind of arrangement was not possible, we took games to museums for the kids to get busy with while we were viewing works not included in their programme. As a result, the exploration of art sometimes alternated with games of noughts and crosses.

These were not optimal solutions, but when implementing them we learnt from our children; we observed what attracted their attention, what they were curious about, what kinds of activities were engaging for them, and when art prevailed over boredom and electronics. It quickly turned out – and came as no surprise – that what they liked the most was being allowed to do something with a museum exhibit, as you often are in contemporary art museums. For instance, both of them enthusiastically immersed themselves in *abakans* (three-dimensional fibre installations) at a large monographic exhibition of works by Magdalena Abakanowicz in the National Museum in Kraków in 2010 and later during a visit to the Four Domes Pavilion in Wrocław. (This also gave me an opportunity for contact with the

security and management of both institutions: “Well, yes, they are meant to be smelt and touched, but you know, nothing would be left of them if everyone did. If you’re aware of that, then all right, go ahead, but please make sure no one else can see you do it”). In the Pinacoteca di Brera in Milan we discovered that what had a good effect was reading the information about specific works to the children, such information being provided in the guide album that we took with us from our home book collection. In the Metropolitan Museum of Art in New York my wife introduced an innovation: acting out scenes from paintings. It worked! But of all the adventures so far, the one we have the fondest memory of is a visit to the Barnes Foundation in Philadelphia, which is home to one of the world’s largest collections of paintings by Impressionists, Post-Impressionists, and early Modernists. The paintings there are not accompanied by the usual captions on walls, which we used to carry out a kind of competition. In every room the children were supposed to identify a particular number of paintings by selected artists, for example: “Find three Renoirs, two Picassos, and at least one Matisse.” There was no end of fun!

What does this show? Our children have come to love van Gogh – they are able to recognize his works perfectly, they know much about his life, and they even know how to correctly pronounce his surname. Even if they prefer van Gogh themselves, they have understood why their parents love Caravaggio. My older son was deeply moved when seeing *Guernica* – so much so that, although we usually avoid hanging reproductions in our home, a large *Guernica* has been with us at every meal now. Exploring the world’s museums together was a true lesson in patriotism, too. Every work by a Polish artist that we encountered in famous collections, and even the representations of Poles by Rembrandt that they saw at the Frick Collection in New York or at the National Gallery of Art in Washington, filled them with pride.

Was that much? Probably not. Our sons have not developed a passion for art, and a visit to an exhibition, gallery, or museum is still not among the top ten activities they would like to do when we visit new countries. But they have learnt many things they would have been unlikely to learn at school. And even though their art education is progressing slowly, we still hope that one day they will propose going to a museum together. What would be very helpful for this purpose is professional and effective art education, appropriate to their age. This is precisely why this book is important to me personally.

I am extremely grateful that I had the opportunity to take part in the extraordinary adventure of which this publication is the outcome. I wish to give my sincere thanks for many hours of inspiring meetings and discussions to Magda Kosno, Mikołaj Spodaryk, Ela Kaproń, and – during the first stage of work on this book – Asia Orlik. I have learnt a lot from you!

Przemysław Bąbel

Art as a vehicle of cognition

Fot. K. Schubert, MIK 2021 ©

Every human capacity stems from the capacity for art, meaning the capacity for creative action.

Virtually every popular lecture in the history of art begins with a journey deep into the earth – into caves adorned with images of animals and sometimes also of people. It may sound paradoxical that, when speaking about these relics, we so readily use the concept of painting and the contemporary idea of art. Are cave paintings really art? Were they a decoration of the cold stone chambers, or are they a trace of other practices: an element of magic mysteries, documentations of shamanic trance, as David Lewis-Williams and Jean Clottes would have it[1]? This remains a riddle to us, and so does the mentality of the people who created them.

Nevertheless, cultural anthropology affords a perspective on the entire sphere of human production beyond the category of "art," which is a concept not nearly as ancient as cave "painting." In fact, today's manner of communing with art – treating it with distanced reverence, accompanied by a belief that it is a practice in its own right and for its own sake, a testimony to the sublimity of human thought, and a quest for beauty – has its source in aesthetics, which emerged as a science from the theory of cognition in the eighteenth century.

Besides, what is regarded as art in non-Western cultural contexts does not necessarily coincide with our ideas about art. It is much closer to concepts such as *techne*, which refers to production understood in a very broad sense (including technology and craft), or to the no less important *episteme*, referring to knowledge. A consequence of this broad way of thinking about creative work, covering both craft and knowledge about the world, is the lack of a clear anthropological definition of art. This is because art is

1 Jean Clottes, David Lewis-Williams, *Prehistoryczni szamani. Trans i magia w zdobionych grotach*, trans. Anna Gronowska, Warsaw 2009.

a historical concept, which implies that its meanings, its borders, and the functions attributed to it vary across periods and cultures.

The understanding of art as a social practice and, ultimately, as a form of thinking and experiencing is what underlies anthropological imagination. Drawing on the experiences of cultural anthropology makes it possible to overcome certain paradoxes of contemporary people's attitude to art – it enables us to see it as a symbolic form of human experience[2]. Thus understood, art and creative work become vehicles of cognition.

But what significance do these deliberations have? Above all, they allow us to revise our contemporary approach to art. In this book we treat art as a point of departure, a signpost, and a kind of exercise in imagination. We see it as a tool supporting children's development and an important dimension of education. We know that museum institutions do not always readily agree to this kind of perspective on art – instead, they invoke the autonomy of the artwork, the need to protect its integrity, the absolute character of historical artistic expression, or the objective of preserving the heritage. Today, galleries and museums are the main platform for the presentation of art indeed, but one should bear in mind that they are not the only "environment" where it exists – art is often found in non-exhibition contexts. To remind oneself of that, it is enough to enter a church, a synagogue, or a mosque, and sometimes – if an opportunity arises – to visit an old-style drawing room in the home of a distant relative with a penchant for collecting antiques.

Although the idea of a gallery as "a white cube" – a neutral space whose only purpose is the presentation of art – has come under extensive criticism,

2 Cf. Sławomir Raube, *Sztuka jako symboliczna interpretacja świata w filozofii Ernsta Cassirera*, "IDEA – Studia nad strukturą i rozwojem pojęć filozoficznych," no. XXVII, Białystok 2015, p. 105.

it remains the predominant solution in many exhibition institutions, often unconsciously accepted as obvious. Such an approach imposes a certain distance (not only physical) from the artworks displayed: it creates a seemingly neutral space whose main protagonist is art – treated with reverence, as a special type of selfless practice and an object of contemplation or purely intellectual reflection.

Naturally, this is a generalization – in many galleries it is possible to see socially committed art, attempts at revealing the institutional dimension of artistic practices, blowing apart the constrictions of exhibition spaces, and *site specific* artistic interventions (created with a particular place in mind). Even though one may still have thoughts about the petrification of works transferred to museums and about the anthropological dimension of art being lost, artists and curators are more and more often willing to take note of this dimension, breaking out of the imposed constraints under which they have come to function.

As regards cultural education, which is part of the programme in many institutions, it usually comes down to the popularization of knowledge about art. This makes it easy to lose the individual experience of art, frequently unrelated to the context of a given work, which may, after all, be a symbolic representation of problems concerning visitors themselves. In institutional education emphasis is often placed on the exposition of art history, artistic doctrines and techniques, or facts about the lives of artists. What is thereby lost is free interpretation and unconstrained experience that stems from individual horizons and knowledge about the world, associated with various anthropological and cultural contexts in which people function.

The year 1972 saw the publication of a text of no small importance for twentieth-century thinking about art. It was titled *Everyone Is an Artist* and

Graciela Carnevale, *Acción del Encierro (Lock-Up Action)* happening, Rosario 1968. Photo by Carlos Militello. Courtesy of the artist.

authored by artist and community animator Joseph Beuys. In his opinion, humans are creative beings – they create the social order, they create history, and all their knowledge comes from art, because "every human capacity stems from the capacity for art, meaning the capacity for creative action," while science "is merely an offshoot of general creativity"[3]. Beuys observes that "the state no longer attaches great value to the artistic or aesthetic education of the human being, attaching it instead to technological reproduction for the sake of maintaining the system of power"[4]. According to Beuys, by contrast, art is therapy *per se*[5]. It is not only an answer

3 Translated into English from: Joseph Beuys, *Każdy artystą*, trans. Krystyna Krzemień, in: *Zmierzch estetyki – rzekomy czy autentyczny?*, ed. Stefan Morawski, vol. 2, Warsaw 1987, p. 268.

4 Ibid., p. 269, English translation by PC.

5 Ibid.

Gallery

Contemporary artists are often opposed to the petrification of art in museums and galleries; they draw attention to the artificiality of these spaces and even to the institutional violence inherent in them. Institutional violence can be understood in various ways, for example as compulsion to adopt a particular way of looking at or "celebrating" art, the prohibition on approaching some of the works, taking artworks out of their original social context, subordinating the spectators to the exhibition curator's narrative, and depriving visitors of spontaneity in communing with art…

In 1968, Graciela Carnevale locked up the visitors invited to an exhibition in an empty gallery. In the beginning they treated the situation as a joke, but after a few hours it became unbearable. Left to their own devices, they were

forced to find an escape route. Fortunately, a person who was outside broke the window in the door, enabling everyone to leave the building. Instead of contemplating a work of art, the audience unintentionally became part of the provoked artistic situation in which the gallery building proved to be a laboratory allowing visitors to experience real confinement. Carnevale's event was an artistic comment on life under military dictatorship in Argentina.

Introducing children to the world of art does not necessarily mean a trip to a museum or gallery. Reproductions of paintings, sculptures, photographs, and artistic events are available in albums and on the Internet, and many interesting artistic works are created by children themselves. You can suggest arranging an art gallery of their own – in the classroom at school, in the park, on the sports field, and perhaps even inside a friendly café or in its display window, or… in a shoebox. Common decisions concerning the exhibition, selecting the works, organizing a vernissage, and showing the invited visitors around are excellent opportunities for children to develop an in-depth relationship with the world of art, based on their own creative experience.

to human needs but also an understanding and active approach to the world, based on "every individual's insight into the relationships within the whole"[6]. Education based on art defined in this way is the exploration of links between phenomena – it should penetrate all domains of life. This would make it possible to think about life in terms of relations with other people, in accordance with the principle of social and political responsibility, and in a spirit of care about the environment[7]. In Beuys's perspective art is, in some sense, as metaphor of the inspection that is activated by creative activity – it is none other than a cognitive process. If one accepts Beuys's manifesto as a point of departure for reflection on art, one will quite naturally encounter its anthropological dimension. The point is for members of the audience to develop a desire to learn and an attitude of openness, also with regard to what they do not understand.

This is how we understand the meaning of cultural education – the process that prepares an individual to function in the complicated world of interpersonal relations. Exploring and experiencing them makes it possible to gradually deepen the knowledge and develop the skills necessary to interpret various products of human activity, to understand cultural contexts, build relations with one's environment, and creatively transform reality. The purpose of education viewed in this way is to provide individuals with tools to interpret and attribute meanings on their own, to critically analyse and process stimuli and information coming from the environment, to understand and plan their activities, and to exercise agency in networks of interpersonal relations.

6 Ibid., English translation by PC.

7 Ibid., pp. 270–271.

We believe that the view of art as a vehicle of cognition and an instrument of education – especially if a person's contact with an artist's work goes beyond strictly historical exposition to serve as a pretext for reflection, exploration, and experience – has a chance to support the development of personality at every stage of life. According to Beuysean interpretation, art itself and art education can not only be a therapy enabling the development of an understanding attitude to the world but also support the processes of psychological development and education in the most basic senses of these words.

In fact, the intuitive awareness of this state of affairs is probably more familiar than any lecture in the history of art would be – particularly when art is thought of as a journey not only beyond the self but also into the self.

Learning: From theory to practice

Fot. K. Schubert, MIK 2021 ©

The learner is an active participant in the learning process.

We learn continually – not only in the framework of formal education at school, at university, or during specialist courses. Education accompanies us throughout the lifetime, when we gain new experience, try to cope in various situations, solve the problems we face, and consciously manage our choices.

A special role in this process falls to teachers and educators, whose task consists in organizing situations and events conducive to learning. What is needed for this process to be effective is knowledge of the mechanisms of human development and familiarity with the theories that describe and explain how knowledge and abilities are acquired, developed, and expanded at different stages of life. After all, the interventions required will be completely different in the case of nursery school pupils than in the case of adolescents or adults, whose cognitive processes related to learning have already developed. In order to consciously build interesting and effective educational processes for the youngest ones, one should know what factors support the learning process; therefore, we will present the main psychological views on learning in children from different age groups.

To begin with, let us pose the following question: what is learning and what factors influence the effectiveness of this process in children?

Learning is a process that takes place in the nervous system and leads to more or less lasting changes in the individual's abilities or behaviour. Changes in the behavioural potential become possible as a result of the person's experiences[1]. When our brain receives various experiences and processes the stimuli reaching us, biochemical reactions leave a memory trace in it,

1 Cf. Maria Przetacznik-Gierowska, Ziemowit Włodarski, *Psychologia wychowawcza*, vol. 1, Warsaw 1998.

and a representation of the external or internal world is formed or modified. The information we receive is brought together to make up declarative knowledge, concerning facts and events, and procedural knowledge, concerning skills and habits[2].

Learning takes place through experiences – through what one directly participates in or encounters. What is particularly important for younger children is sensorimotor experiences and social interactions, during which they get to know the objects in the world around them, learn the language, and acquire knowledge about themselves and others. In subsequent periods of development knowledge can already be transmitted to a greater extent by means of language – one can learn, for instance, by listening to a lecture or by reading a book (which no longer has to contain as many illustrations as books for younger children do). Thanks to the acquired knowledge and skills, our behavioural potential and possibilities increase: for example, the acquired knowledge about history can be shown in a test, but it can also give us a better understanding of artworks created in a given epoch or the social phenomena observed in the world today.

Therefore, if education is to have satisfactory effects, and, above all, if it is to contribute to the learning children's comprehensive development, it is necessary to select methods and arrange educational situations that will allow them to explore the world in accordance with their needs and cognitive abilities at a given stage of development.

We will begin by outlining the main psychological theories that explain how children learn and what fosters this process, and in further chapters we will

2 Cf. Maria Ledzińska, Ewa Czerniawska, *Psychologia nauczania. Ujęcie poznawcze*, Warsaw 2011.

present the developmental characteristics of preschool-age and school-age children in order to highlight the factors, specific to each developmental stage, that should be considered when planning educational activities.

The child's active role in building knowledge about the world: A constructivist perspective on learning

The currently predominant perspective in educational psychology is the constructivist approach, based on the assumption that the learner is an active participant in the learning process[3]. As opposed to traditional approaches, in which learning was seen as a passive process of assimilating the knowledge provided by the teacher, in the constructivist approach it is an active process of building knowledge, and teaching is treated as a dialogue – it is meant, above all, to create conditions for self-study.

The main originators of constructivist theories of learning – Jean Piaget, Lev Vygotsky, and Jerome S. Bruner – stress the importance of learner's personal activity in knowledge acquisition. The process of learning as they describe it takes place in constant interaction with the environment, thanks to which the learner constructs a picture of the world. Learning is thus a process of gradually building knowledge and consists in interpreting new data using the knowledge already possessed, in strict connection with the situation in which this process is taking place[4].

3 Cf. ibid.

4 We draw on the broadest classical constructivist theories, showing their significant contribution to reflection on children's development and learning. Readers interested in exploring the topics discussed here more deeply are encouraged to refer to the publications listed in the References section.

The map printed in the 1885 edition of Robert Louis Stevenson's *Treasure Island*. Wikimedia Commons

Narrative exploration

Although, as adults, we are usually prepared to view art collections or museum exhibitions on our own, many of us gladly use audio guides or thematic tours and attend meetings with artists and exhibition curators. Thus we give ourselves a chance to explore the contexts, understand the artist's intentions, and experience a deeper encounter with the vision presented in a work of art.

In the case of children there is a much greater need for impulses that will help evoke their curiosity and guide their attention in such a way that the museum visit becomes an exciting adventure. Even the most traditional exhibition can be given an additional dimension if a special route is prepared for the youngest visitors in the form of an adventure game or a narrative quest.

The game may include various tasks that require, among other things, carefully inspecting the characteristics of exhibits (what tools did the artist use to make the sculpture? what colours is the forest made up of?), finding tips "hidden" in paintings (who is the figure in the painting looking at? what is she thinking about?), doing simple artistic tasks (such as copying a fragment of period clothing or furniture), and imitating a pose or facial expression of a selected figure in order to understand his or her emotions (is the king angry? are the musicians playing a joyful melody or a sad one?).

It is also advisable to use simple aids: a magnifying glass, a paper telescope, or a frame will be helpful in finding details; a small chest of herbs will make it possible to smell the aromas of a meadow or pantry; a music box tune or a carillon will emphasize the mood, and a hundred-year-old toy or game may inspire new games to play after leaving the gallery. It is worth preparing tasks for children in the form of a booklet or (even better!) a map with tasks – this will be a good exercise in spatial orientation and in planning the successive stages of exploration; it will also provide good training in analytical skills. It is essential that the challenges are narratively linked and that they require diverse activities.

Learning through experience – Jean Piaget's theory

Learning is strictly linked with human biological development, especially with the development of the nervous system. The maturation of specific brain structures, such as those related to attention, significantly determines the child's capabilities to participate in various forms of education. Education becomes effective when the child is ready to learn a particular kind of contents or skills. This means that, to assimilate particular knowledge, the child must reach an adequate level of cognitive development – if it is difficult to teach a three-year-old to perform arithmetic operations, this is because they do not yet understand the concept of numbers and do not have adequately developed intellectual functions that are necessary to perform calculations.

Piaget stressed the child's active role in the learning process: it is through actions involving objects and through exploring the surroundings with the senses that children build their knowledge about the world[5]. It is therefore crucial in education to provide children with opportunities to manipulate diverse objects on their own and perform various actions and operations that require making use of specific elements of reality.

In his theory of cognitive development, Piaget distinguished four developmental stages that lead to acquiring the ability perceive and reason in a mature, rational, and logical way[6]. The development of thinking starts with sensorimotor development. Exploring objects, manipulating various items, and receiving a variety of sensory impressions enables the child to

5 Jean Piaget, *Mowa i myślenie dziecka*, trans. Janina Kołudzka, Warsaw 2005.

6 Jean Piaget, *The origins of intelligence in children*, trans. Margaret Cook, New York 1952.

create mental representations of objects and events, and thanks to the development of language preschool-age children are already able to develop symbolic thinking. In school-age children, the enrichment of cognitive of operations leads to the emergence of logical thinking, though when solving problems these children still need to refer to specific objects. It is not until the period of adolescence that logical and mature conceptual abstract thinking develops. It is necessary to consider specific stages of cognitive development in order to adjust the forms of education to children's cognitive abilities[7].

Jean Piaget focused mainly on children's intraindividual cognitive development – namely, on the changes taking place in their cognitive processes and behaviours, while at the same time emphasizing the significance of the child's interactions with the physical environment. He was nevertheless aware of the important role that interactions with peers play in the development of knowledge and learning in children. In the course of contacts, when the child has to cope with the discrepancies between his or her view of a problem and a peer's view, a cognitive conflict arises, which the child tries to overcome in order to achieve balance. Thus, interactions force children to compare knowledge, experience, and abilities and to take different points of view into account. This stimulates the mechanism of cognitive development: by coordinating different perspectives on a given problem, the child manages to work out new solutions. As a result of contact with peers, in which the child begins to recognize and consider points of view other than their own, thinking acquires a dialogical character[8].

7 Cf. Carol Sigelman, Elizabeth Rider, *Cognition*, in: eaedem, *Life-span human development*, 7th ed., Boston 2011.

8 Cf. Jean Piaget, *Mowa i myślenie dziecka*, op. cit.

Exhibition of works by Magdalena Abakanowicz from the *Abakans* series in the Starmach Gallery in Kraków, 2015. Photo by Beata Zawrzel / REPORTER

Multisensoriness

In museums and galleries visitors are rarely allowed to touch works of art. We have got used to artworks being meant to be looked at only. Visuality as the dominant mode of exploring the world is obvious to us. But is it possible for art to transcend it? And what are works of art actually made of?

When organizing lessons for children in a museum or gallery, one should remember that children's organisms and minds are accustomed to multisensory exploration of the world. Therefore, when introducing works whose important aspects include texture or solid form, it is worth preparing aids made of similar materials, which everyone will be free to touch, explore, smell, and set in motion. This will keep different senses involved, and contact with art will take on a multidimensional character. In order to explain why visitors are not allowed to touch works of art, it is a good idea to carry out an exercise with a mirror: what will happen if one person touches the mirror? What if ten people touch it?

According to Piaget, the effects of social interactions depend on the level of the child's cognitive development. The ability to take another person's point of view, which is necessary to be able to learn from a peer and to achieve balance in a situation of cognitive conflict, does not appear until the age of seven. Cognitive conflict can therefore become a mechanism of cognitive development only in older children, who are already capable of expressing their own point of view and arguing their position.

Personal activity, opportunities to take action, and experience are significant factors in learning. Peer interactions are conducive to taking different perspectives and adopting new ways of solving problems, but this form of learning is the most effective in school-age and older children.

Learning through interactions with others – Lev Vygotsky's theory

One of the most important constructivist theories of development, applied not only in education but also in therapeutic programmes for children, is the sociohistorical theory of development formulated by Lev Vygotsky. Vygotsky emphasized the special role of social interactions in children's development and learning. In his opinion, engaging in activities together with competent partners – adults or peers – is conducive to the child's acquisition of new skills and knowledge.

According to Vygotsky's theory, particular cognitive functions stem from communication with other people, and in their development they make a transition from the external (social) to the internal (individual). What can serve as an example is speech: it initially appears in social interactions and

serves the purpose of communicating with others. A parent teaching their child to draw names the various actions performed and the shapes drawn. When the child starts making independent attempts at performing a given activity, they often speak to themselves, describing and commenting on what they are doing. With time, this kind of speech transforms into silent inner speech, thus becoming an element of thinking. The child continues to comment on their actions and name the objects drawn, but they do this silently, in their mind only[9].

Vygotsky believed that, just like physical activity, intellectual activity was mediated by tools, including cultural ones, namely objects and abilities developed by every society and passed on from generation to generation in order to maintain tradition. Adults use various tools to pass on to their children the ways of thinking and solving problems that are valued by their culture. The cultural tools include both technological tools – books, bicycles, calculators, clocks, calendars, maps, computers, and other physical objects – and psychological ones: language, learning skills, concepts and symbols, literacy, mathematics, and scientific theories. They also include works and products of art. The systems of signs acquired in the course of social interactions enable children to control their thinking and to attribute new meanings to their behaviours[10].

9 Lev S. Vygotsky, *Wybrane prace psychologiczne*, trans. Edda Flesznerowa, Józef Fleszner, Warsaw 1971; idem, *Narzędzie i znak w rozwoju dziecka*, trans. Barbara Grell, Warsaw 1978/2006.

10 Lev S. Vygotsky, *Wybrane prace psychologiczne*, op. cit.; Talia Musatti, *Wczesne relacje rówieśnicze według Piageta i Wygotskiego*, in: *Dziecko wśród rówieśników i dorosłych*, ed. Anna Brzezińska, Grzegorz Lutomski, Błażej Smykowski, Poznań 1986/1995, pp. 107–146.

Hannah Hoch, *Little Sun*, 1969.
Art Collection of Berliner Sparkasse, © Adagp, Paris 2021

A concept important for learning, introduced by Vygotsky, is the zone of proximal development. The zone of current development is what the child knows and can do on their own: it is the child's "today." The child's zone of proximal development, in contrast, is defined by what the child can do under an adult's guidance or during cooperation with a more competent peer. By solving problems in their zone of proximal development, children can cope with more difficult problems which they would not be able to solve on their own. Social interactions thus constitute the space in which new forms of behaviour organization appear the earliest.

Specifying the zone of proximal development[11] has practical implications in education, too. According to Vygotsky, properly organized education should anticipate development – the adult should shape the structure of interactions in such a way that the children can take part in activities which they are not yet capable of performing independently. By repeating such activities, children increase their level of self-control and self-sufficiency

11 Lev S. Vygotsky, *Narzędzie i znak w rozwoju dziecka*, op. cit.

Collage

One of the main principles of effective education is the ability to integrate newly acquired information with the children's interests and prior knowledge. An interesting way to learn about children's passions and preferences can be to create (individually or as a group) works inspired by the technique of collage. The technique makes it possible to freely incorporate elements from different orders of reality into children's works (what do I like doing? what do I want to learn? what are my favourite toys and colours?) and at the same time to include emotions and abstract concepts, such as boredom or

the perception of passing time – by means of references to the stimuli that induce them. This is a good point of departure for discussing emotions, their causes, and the situations that fill the children with joy or inspire aversion. In this way, children share their self-knowledge with you, while you can support the development of their understanding of phenomena and stimuli.

You can suggest the technique of collage or assemblage to the children (the latter being a type of collage in which three-dimensional items are incorporated into the composition). Preparing sheets of paper in different colours will facilitate work (even the very selection of the background colour will signal the child's preferences); it is also possible to start with outlining each child's body on a large sheet, so that everyone can draw or glue on representations of matters important to them to this kind of individual ground. If you meet the same group of children many times, at school or at a community centre, this process can be much longer – spreading the work out over time will make it possible to more deeply analyse, together with the children, various aspects of life that may be important to them.

until they have mastered a given skill. The teacher's actions should take account of the child's degree of readiness to receive a given type of stimulation.

Vygotsky distinguished three types of learning: spontaneous, spontaneous--reactive, and reactive[12].

1. Spontaneous learning proceeds according to the child's internal programme. It is characteristic of children in their early childhood (up to the age of 3), when learning is based on imitation. In their actions children are guided by what coincides with their interests or current needs. In this period, the adult's task is to organize opportunities and encourage the child to make attempts at exploring the world.
2. In middle childhood children continue to learn spontaneously, but they also become more sensitive to the reactive way of learning – they are able to follow the adult's instructions and accept the programme presented by him or her. At this age, children still have difficulties following what the adult presents for a long time and are much more eager to learn in situations of play, when they can realize their ideas and pursue their interests.
3. School-age children are already capable of reactive learning, according to an external plan, under the guidance of their parent or teacher. In this period the adult's task to appropriately instruct the child, to ask questions, to give recommendations, to provide feedback, and to monitor task performance.

According to Vygotsky, the most important element in the education of children is the development of their learning skills, preparing them to fully use their potential. The child's abilities of thinking clearly and creatively,

12 Idem, *Wybrane prace psychologiczne*, op. cit.

planning, putting plans into practice, and communicating are much more important than knowledge as such.

Social interactions via cultural tools are a significant factor in development. Learning and teaching are most effective in the zone of proximal development. Children of different ages learn in different ways: in preschool-age children the characteristic mode is spontaneous-reactive learning, and it is not until school age that children are capable of reactive learning.

Scaffolding – Jerome S. Bruner's and Marc Bornstein's theories

The importance of interactions with a more competent partner is also pointed out by authors who write about scaffolding. In his interactionist theory, Jerome S. Bruner emphasized the role of both biological and environmental factors in the child's development[13]. In his opinion, through social interactions in the course of various activities in the zone of proximal development the adult brings the child closer to mastering different skills and acquiring knowledge about the world. In this way, he or she builds a scaffold that enables the child to gain new abilities and knowledge[14]. In the initial phase of learning or acquiring skills, the adult provides the child with many tips and hints and demonstrates the way of performing an action or solving a problem. When the child begins to make attempts to perform the task on their own, the adult's role is to support them and provide additional tips and hints when noticing that the child needs them. When the child performs tasks independently, the adult may withdraw their help and support.

13 Cf. Ewa Filipiak, *Z Wygotskim i Brunerem w tle: słownik pojęć kluczowych*, Bydgoszcz 2011.

14 Cf. ibid., pp. 23–27.

Elaborating Jerome S. Bruner's theory, Marc Bornstein distinguished two types of child–caregiver interactions: social and didactic. Social interactions take place through different verbal and physical strategies used by adults, who thus express their feelings towards the children and try to engage them in interpersonal exchange. Didactic interactions consist in stimulating and sparking children's interest in objects and events of the external world in such a way as to direct their attention to individual objects or events in their environment. By introducing, mediating, and interpreting the external world, the adult provides the child with an opportunity to observe, imitate, and learn[15].

The didactic procedures described by Bornstein can be physical or verbal. One the forms of didactic interactions is scaffolding, which includes all caregiver's or teacher's behaviours undertaken in interactions with the child in order to support their procedural learning skills. In other words, scaffolding is a process in which the adult organizes and supports the child's activity in such a way that the child can perform a task exceeding his or her current abilities and capabilities[16].

Scaffolding takes place in the child's zone of proximal development and effectively supports the child's acquisition of knowledge and skills. The adult may monitor the learning process and provide additional support and tips in case of difficulties. When the child begins to perform the task more and more independently, the adult may withdraw support and leave room for the child.

15 Marc H. Bornstein, *Pomiędzy opiekunami a ich potomstwem: dwa rodzaje interakcji i ich konsekwencje dla rozwoju poznawczego*, in: *Dziecko wśród rówieśników i dorosłych*, op. cit., pp. 39–64.

16 Ibid., p. 43.

Art as a tool for exploring and experiencing the world – Stefan Szuman's theories

A person explores the world with the mind, as well as directly, through the senses and actions: one sees, hears, feels, and learns via concrete images constituting the contents of the perception of reality.

A significant role in learning is played both by biological factors (the maturation of the nervous system), which determine particular stages in the child's development, and by environmental factors, such as social interactions or the child's cultural milieu. An important space where children acquire knowledge and various skills is educational institutions. It is they that organize situations in which children can learn and develop.

Vygotsky underscored the importance of art as a cultural tool that can act as a mediator in development and learning. In his opinion, and also according to Stefan Szuman, art deepens people's perception of reality, broadens their cognitive horizons, and makes it possible to achieve the important goals of education: comprehensive human development and upbringing.

Szuman underscored the significance of art for the development of children's and adolescents' personality – according to his theory, aesthetic education teaches to perceive, experience, and feel reality and to understand the essence and purpose of human life through the lens of art. Art is a kind of mirror in which we see the world and experience it anew. Through art we can explore, analyse, and transform it more deeply, thereby enriching and expanding our personality[17].

17 Stefan Szuman, *Sztuka dziecka. Psychologia twórczości rysunkowej dziecka*, Warsaw 1990.

According to Szuman, the methods of aesthetic education require acquainting the audience of art with the nature and meaning of its language. Despite its direct sensory reference, concreteness, and accuracy in the expression of contents, the language of artworks is not comprehensible to everyone and requires learning its characteristic code. Each of the arts "speaks its own language" – it expresses itself through shapes and colours, sounds, words, movements, or gestures. By educating individuals aesthetically, we teach them to understand the expression and message of a work of art; we teach them to get – through its physical manifestation (form) – to its content. The educator's or organizer's task is therefore to build a scaffold that will enable the child to explore art independently and benefit from it. What is important in aesthetic education is, on the one hand, to make art available – ensuring that works of art directly reach the audience – and, on the other hand, to make it accessible through all kinds of activities that generate demand for art, stimulate interest in art, and foster the ability to perceive, understand, and experience it appropriately[18].

Art is an important tool for exploring and experiencing the world. Through contact with works of art, we learn to perceive a variety of the world's dimensions and broaden the perception of reality to include new, metaphorically expressed meanings. The language of each form of art requires learning a specific communication code, which goes beyond the patterns accessible to logical reasoning.

18 Ibid.

The principles of effective education

The rules that govern learning processes are universal. However, in order to effectively organize and plan education using these processes, it is necessary to consider the developmental characteristics of children of different ages. In each stage of development a person acquires different skills and remembers different kinds of information, which makes it so important to consider the abilities and developmental limitations of children in specific age brackets.

Memory

Learning is linked with memory processes involved in the acquisition, storage, and subsequent retrieval of information[19]. The effectiveness of learning is directly related to the proper functioning of all memory processes. Knowledge about their functioning in different stages of development makes it possible to organize lessons and the education process in such a way that they promote remembering, storing, and retrieving information.

Memory can be divided into declarative (concerning facts and events) and procedural (concerning skills and habits). Declarative memory, which is usually easy to verbalize, is divided into semantic memory (general knowledge, awareness of various facts) and episodic memory (concerning various events, including spatial and temporal relations between them). A special type of episodic memory is autobiographical memory, which concerns the events of one's life. Procedural memory is non-declarative, which makes

19 Cf. Edward Nęcka, Jarosław Orzechowski, Błażej Szymura, *Psychologia poznawcza*, Warsaw 2013, p. 320.

Discovering the past

Learning about the past requires both assimilating information about past events and the ability to make links between them. Mechanical memorization of the dates of events, the names of heroes, or the significance of geographical and technological discoveries is not conducive to building a picture of the past as a space of real events in which people lived their daily lives. What is needed for this purpose is knowledge on what reality looked like from the perspective of various social groups and what changes took place in the closest environment of people living in a given period.

Genre painting and press illustrations are rich sources of knowledge about the daily lives and customs of our ancestors. An interesting way to help children assimilate knowledge about past epochs is to accompany them in looking for the links between the life immortalized in art and their own contemporary experience – to compare the order of play, study, and work familiar to them to analogous issues in the past. What did their peers' life look like in previous epochs? What games did children play in cities and what games did they play in the countryside? What clothes did they wear? What (if anything) did they get for dessert?

Charles Hunt, *Children Acting the 'Play Scene' from "Hamlet," Act II, Scene ii,"* 1863

Yale Center for British Art, Paul Mellon Fund

it difficult to put it into words – it is much easier to show the child how to hold a spoon than to describe this action[20].

In terms of information storage time, the following types of memory can be distinguished: sensory memory – specific to different sensory modalities (characterized by ultra-short information storage time, up to a few hundred milliseconds), short-term memory – storing a limited amount of information (approximately seven elements) for a short time (up to twenty seconds), and long-term memory, in which the person's entire knowledge about the world is accumulated, plus memories and skills (it is characterized by the longest storage time and unlimited capacity)[21].

An important type of memory, which plays a significant role in learning and academic achievement, is working memory, also referred to as operational memory. It is short-term memory – responsible for storing and at the same time processing the information remembered. It is involved in all controlled information processing[22].

It is possible to speak of the learning process only when some of the almost unlimited number of stimuli reaching sensory memory are noticed, transferred to working memory, and then consolidated and accumulated in long-term memory.

20 Cf. ibid., pp. 324–326.

21 Cf. ibid., pp. 340–349.

22 Cf. ibid., pp. 349–351.

Attention

An important element of the learning process is the ability to focus attention. What we focus on and what we ignore is linked with the selectiveness of attention, which works like a filter enabling information received by means of various senses to get into short-term memory – it allows us to focus on a specific stimulus while at the same time ignoring others[23].

Research using brain imaging methods have shown that, when attention is focused on something, the regions of the brain responsible for processing a given category of information are activated[24]. This process leads to a change in synaptic strength, which makes learning possible. Therefore, if we want the child to remember something, we should direct their attention to focus on what is important at a particular moment[25].

In what ways can we help children receive and remember important elements of lessons[26]?

1. Highlighting the most important information by:

- presenting it in a graphic form – writing it on a board (or displaying it as a multimedia presentation), using illustrations,

23 Cf. ibid., pp. 178–186.

24 James B. Brewer et al., "Making memories: Brain activity that predicts how well visual experience will be remembered", *Science* 1998, vol. 281, issue 5380, pp. 1185–1187.

25 Cf. Manfred Spitzer, *Jak uczy się mózg*, trans. Małgorzata Guzowska-Dąbrowska, Warsaw 2012, pp. 111–120.

26 Cf. Przemysław Bąbel, Marzena Wiśniak, *12 zasad skutecznej edukacji. Czyli jak uczyć, żeby nauczyć*, Sopot 2015.

- communicating information expressively (facial expression; gesticulation; voice modulation);
- announcing that an important issue is going to be discussed,
- asking intriguing questions,
- using the surprise and astonishment effect;

2. Providing breaks; alternating activities that require concentration and less cognitively absorbing ones (for example, games involving physical movement);

3. Arranging situations in which children can reach important information on their own, for example by solving puzzles, looking for differences or similarities, and identifying elements that diverge from the pattern;

4. Arousing interest, for example by introducing an element of mystery and encouraging independent exploration; organizing lessons around a storyline; diversifying classes with elements of fun and games.

Imagination

Imagination is the ability to create visual representations of the world in the mind. It can be reconstructive – when the object imagined is a familiar one that has been perceived before (such as a cat) – or creative, when fantasy or impossible structures are generated (for instance, one can imagine a "catstronaut," meaning a cat astronaut)[27].

27 Cf. Edward Nęcka, Jarosław Orzechowski, Błażej Szymura, op. cit., pp. 64–65.

We tend to remember images better than words. The use of mental images and imagination is conducive to remembering, because an image is written in our memory using two codes – visual and verbal – which gives us better (dual) access to it. Dual coding enables the retrieval of the remembered object in the form of an image or by recalling its name. Verbally communicated information is coded in a verbal form only, which is why we may remember it less distinctly. It is therefore worth encouraging children to use their imagination when learning. As teachers, we can use various teaching aids in the form of concrete objects, images, and illustrations that help understand and consolidate important information and concepts. In the case of young children such techniques are necessary, especially as the concreteness of thinking at this age makes it difficult for them to remember material that is provided only verbally, particularly if it contains abstract concepts[28].

In order to make use of children's imaginations, it is worth introducing elements of thematic games or pretend play and prepare creative tasks for them, requiring the engagement of imagination.

What techniques will help children put their imagination to work?

1. Using props, concrete objects, pictures, illustrations, etc.;

2. Encouraging children to close their eyes and imagine various figures, objects, or events;

3. Encouraging children to invent their own pretend games and activities that involve creating a story or narrative; encouraging them to draw, sculpt, or craft various objects (for example, out of recyclable

28 Cf. Przemysław Bąbel, Marzena Wiśniak, op. cit.

materials – thus we additionally induce them to see one thing in another);

4. Encouraging children to "animate" unfamiliar objects, items, and human figures in paintings; thinking up what might have happened before or after the situation presented in a painting or sculpture;

5. Making use of music matching the subject of the lesson;

6. Encouraging children to put together non-obvious objects, words, situations, or figures from different epochs;

7. Inventing creative applications for unusual objects.

Relating information to the self

Numerous studies on memory show that we remember information much better if the information concerns us. It is therefore essential to link the information provided to children with what is familiar or important to them. If the contents reaching us are linked with our experience in some way or directly reveal something about us, they are not only easier for us to discern but also more firmly embedded in our memory. In situations when a given topic is difficult to link directly to the experience of the young members of the audience – for example, when distant times are discussed – it can be presented from their peer's perspective. In such cases, it is worth encouraging the children to compare their contemporary experience to the living conditions of children in the historical period discussed[29].

29 Cf. ibid.

What is equally important is to link new knowledge with the knowledge the children already have and to refer back to previous lessons or creative workshops. It is also worth encouraging children to use previously acquired information in a new context or situation. Thanks to this, the acquired information is represented again – which means it is once again processed and recorded in the memory, and this in turn contributes to such information being remembered better.

What techniques help children relate new knowledge to their own experience?

1. Choosing lesson topics that are related to the children's experiences, to what the children know, and to what is important to them. It is worth inviting the children to decide on the topic together;

2. Asking questions about the links between the contents discussed and the children's experience or knowledge;

3. Encouraging the children to imagine themselves in a particular situation or historical period or to put themselves in the shoes of the figure being discussed, such as an artist.

Learning through experience

According to constructivists' approach, what contributes to remembering information – and thereby also to building knowledge – is the child's own activity. Learning effectiveness considerably increases when the child is engaged in the learning process: he or she can then experience a variety of situations and go through a variety of events. Children also remember

the ways of solving a problem much better when they take part in generating ideas and in the process of reaching a solution. This stems from the fact that remembering information engages not only semantic but also episodic memory, in which, apart from meanings, information about the place and time of events is recorded as well. It is therefore worth planning lessons in such a way that those who attend them have an opportunity to go through and personally experience various situations[30].

What techniques will help the children engage in the proposed lessons?

1. Arranging interactive activities during which the children can do various tasks on their own, look for information, explore the applications of different objects, or look for ways to solve problems;

2. Planning tasks that engage different senses: sight, hearing, taste, smell, touch, balance, and kinaesthesia (the sense that precisely determines the position of each part of the body in space);

3. Preparing tasks appropriate for a given age group, which the children will be able to perform unaided – it is necessary to consider their abilities and be mindful of their limitations (for instance, it will be difficult for a three-year-old to cut out shapes or plan out on their own how to make an artistic work);

4. Engaging older children in group work – apart from working individually, they will have a chance to cooperate and to exchange ideas, perspectives, and views. This makes children more engaged in the task, which promotes remembering. They have an opportunity to get to

30 Cf. ibid.

know different points of view and different ways of solving problems, which may broaden their knowledge and improve their skills.

Emotions

An important factor that influences cognitive processes, such as attention, memory, or learning ability, is emotions. The effectiveness of learning and the ability to perform various tasks are modulated by the level of emotional arousal. This means that not only excessively low but also excessively high emotional arousal can decrease learning effectiveness. When we are activated and interested to a small degree, we find it difficult to engage in learning and doing various tasks. Also excessively high arousal – for example, being strongly excited or stressed – makes it difficult to focus attention and to remember information[31].

Strong emotions lead to what is known as cognitive tunneling, which consists in remembering exclusively the most important or central information and ignoring background information, even though the latter may often be significant[32]. Younger children find it more difficult to regulate their emotional arousal and very often need an adult's help to decrease or increase its level as appropriate in order to make it optimal for a given task. When designing various activities or tasks, it is therefore worth ensuring that positive emotions are induced, preferably moderate.

When arousal is too low, one may propose a motor or pretend game; one may also plan an activity for children to engage in on their own. In contrast,

31 Cf. Manfred Spitzer, op. cit., pp. 121–130.

32 Cf. Przemysław Bąbel, Marzena Wiśniak, op. cit., pp. 134–144.

when observing excessively high arousal, it is advisable to propose a stationary game or a break – for example, the children may imagine various objects related to the subject of the lesson, listening to music or keeping their eyes closed. Another good solution is to organize a motor game in which the level of arousal gradually decreases – for example, one involving a transition from running by making large steps and then small steps to sitting in a chosen place and, finally, to lying down and hushing up (when giving successive instructions, it is advisable to lower one's voice or turn down the music if it accompanies the game).

What techniques will help provide the children with optimal conditions for learning?

1. Arranging activities that will give children pleasure and induce their positive emotions;

2. Playing together with the children, sharing positive emotions with them;

3. Introducing elements of surprise into lessons, inducing children's curiosity;

4. Monitoring the emotional arousal of the children, especially younger ones.

Additionally, during workshops one should bear in mind the principle of non-evaluation; at the beginning of the lesson one can agree on the rules of good cooperation with the child: we must not evaluate one another's works, comments, and ideas.

Motivation

Children learn when they are interested and motivated. Motivation is the willingness to engage in a particular activity and to continue this activity until the goal has been achieved, also despite difficulties or failures. Children may acquire various skills or knowledge incidentally (without realizing that they are learning something at a particular moment, for example during play) or intentionally (when they have set themselves the goal of learning something). In the former case, especially in younger children, the teacher's role is to create a situation of play which the children will engage in and as part of which spontaneous learning will be possible. In the case of intentional learning, it is necessary to use appropriate methods or techniques in order to transfer knowledge or impart a particular skill to the child and to encourage the child to take active part in this process. When engaging in an activity or attempting to solve a problem, each child may be guided by different motives: for one child it will be a desire to get to know something, for another it will be a desire to achieve the best result, and for still another it will be a desire to be part of a group and act together with others. If the teacher is aware of the motives that the children are guided by, it becomes easier to find appropriate ways to encourage them to engage in or continue a given activity[33].

Two types of motivation can be distinguished: extrinsic, whose source is outside the child, and intrinsic, whose source is within the child[34]. Exam-

33 Cf. Maria Ledzińska, Ewa Czerniawska, op. cit., pp. 243–252.

34 Cf. Mihaly Csikszentmihalyi, *Intrinsic motivation and effective teaching*, in: *Applications of flow in human development and education*, Dordrecht 2014. Available online at https://doi.org/10.1007/978-94-017-9094-9_8, accessed 23.03.2021.

Art to play with

Sometimes artists create works especially for children. Niki de Saint Phalle designed *The Golem* – a slide for children – and a sculpture garden in Jerusalem called *Noah's Ark*. Playgrounds were also created by artists such as Isamu Noguchi (*Playscapes* in Atlanta) or Jean Dubuffet (*The Enamel Garden* in the Dutch Kroller-Muller Museum), and Jimmy Boyle's gigantic concrete *Gulliver* served the residents of one of Edinburgh's districts for a few decades as a play site for children and a location for the creative activities of the local community.

Play is children's natural mode of exploring the world. Encounters with art should not be devoid of it too; on the contrary – by encouraging children to engage in various kinds of interaction with artists' works, we help them enter the world of artistic world spontaneously, according to their own – multisensory – perception of reality. Naturally, not every work of art can become an object of children's play, but it is worth looking for creative ways to facilitate direct contact with the objects exhibited. Perhaps at the stage of planning an exhibition artists can be persuaded to create a special object or place where children could explore – in their own way – the intriguing mechanisms, phenomena, and themes chosen for them, connected with the theme of the exhibition?

Niki de Saint Phalle, *The Golem*, 1972.

The Rabinovitch Park in Jerusalem. Pixabay

ples of extrinsic motivation are the reinforcements (such as a reward or a very good mark) or punishments (such as a ban on using a computer or a failing grade) applied by parents or teachers. This kind of motivation is meant to guide the child's behaviour, but it does not stem from his or her needs and can easily disappear when the external stimuli are gone. Intrinsic motivation is definitely more favourable – children develop and maintain it themselves; they act because they want to. Younger children, however, find it difficult to identify their motives. They engage in the activity they see as interesting, pleasant, and consistent with their needs. If one wants preschool-age children to engage in the activities proposed, one must organize the lesson in such a way as to make it interesting for them and make sure that it is adjusted to their abilities and preferences. As regards older, school-age children, their developed self-knowledge makes them capable of identifying their motives and independently inducing intrinsic motivation to engage in various activities. The closer the proposed classes are to the children's interests, the easier it will be for them to engage in activities and maintain intrinsic motivation.

What techniques will help motivate the children?

1. Providing children with an opportunity to decide on the subject of lessons or the choice of activities;

2. Referring to the children's prior knowledge and earlier experiences and to what may be important from their point of view;

3. Arranging situations that allow younger children to freely explore the surroundings and to experience a wide array of sensations through play;

4. Designing activities for school-aged children that foster their cooperation and communication with one another – the opportunity to take part in conversations and cooperation has a positive impact on interest and motivation to engage in the lesson; it also enables the children to better remember the experiences acquired during the lesson. By sharing their reflections, children verify and modify their ideas, and the experience of pleasure during play enhances their intrinsic motivation.

* * *

To sum up the discussion presented in this section, let us cite the findings reported by Barbara Piscitelli. Together with her collaborators, based on research projects in cooperation with museums, they detailed the most important principles of preparing museum lessons for children[35]. In their opinion, lessons should:

1. Focus on the children – the organizer of activities should know what the children know, be aware of what their abilities and needs are at a given age, and make use of their knowledge and skills;

2. Be developmentally appropriate – the developmental characteristics of the children attending the lesson must be taken into account;

3. Be responsive – characterized by dynamic two-way respectful adult––child interaction;

4. Be flexible – make it possible for children at different levels of development to take part in the lesson;

5. Be based on play – it is worth designing practical intellectual games that a child can engage in on their own;

6. Provide opportunities – the children should have a chance to make choices and learn independently by engaging in various activities and games, experimenting, exploring the environment, and sharing opinions and ideas with others.

35 Barbara Piscitelli, Michele Everett, Katrina Weier, the QUT Museums Collaborative, *Enhancing young children's museum experiences: A manual for museum staff*, Australian Research Council 2003.

Children's drawings

Fot. K. Schubert, MIK 2021 ©

Children's
drawings
do not become
better in
proportion to
how similar
they are
to those of
adults.

The development of drawing skills is strictly linked with other areas of the child's development – perception; motor skills; cognitive abilities – and with the social and emotional skills that the child gradually acquires. We will discuss the characteristic features of drawings made by children in different age groups by referring to the theory developed by French pioneer of research on children's drawings Georges-Henri Luquet and to the theory proposed by Polish educationalist, psychologist, and doctor Stefan Szuman.

<table>
<tr><th>Georges-Henri Luquet (1927)[1]</th><th>Stefan Szuman (1927/1990)[2]</th></tr>
<tr><td>Lack of realism
(1–3 years)</td><td>Scribbling stage
(1–3 years)</td></tr>
<tr><td>Fortuitous realism
(3–4 years)</td><td rowspan="2">Ideoplastic stage
(3–12 years)
• Simplified schema phase
(3–6 years)
• Enriched schema phase
(7–12 years)</td></tr>
<tr><td>Intellectual realism
(5–10 years)</td></tr>
<tr><td>Visual realism
(11–16 years)</td><td>Physioplastic stage (12–15 years)
• Sensational realism phase
(12–13 years)
• Intellectual realism phase
(13–15 years)</td></tr>
</table>

Stages in the development of graphism

1 Georges-Henri Luquet, *Le dessin enfantin*, Paris 1927.

2 Stefan Szuman, op. cit.

Early childhood, until about the age of three, is the stage at which the child only discovers what a coloured pencil is and what you can do with it. Children at this age are not yet capable of holding a writing tool properly; what gives them joy is the very activity of drawing and the mark left on a sheet of paper (or on a wall!). Luquet calls this period the lack of realism stage, because children's drawings do not yet take the form of symbolic representations of the world. When discussing the same period, Szuman refers to children's dots, lines, curves, and spirals as scribbles.

More or less at the age of three there occurs a transition from linear scribbles to object scribbles. Children make attempts to enclose space, and the first figure appears in their drawings – the circle. In this period, children begin to use symbols – in language, in games, and in drawing, in which there also appear the first representations of objects and figures such as "cephalopods" – drawings of human figures consisting of circles and lines. Luquet refers to this period in children's drawing development as fortuitous realism, because the first figures or objects are usually drawn accidentally, and the child names them only after they have been drawn or changes their name while drawing.

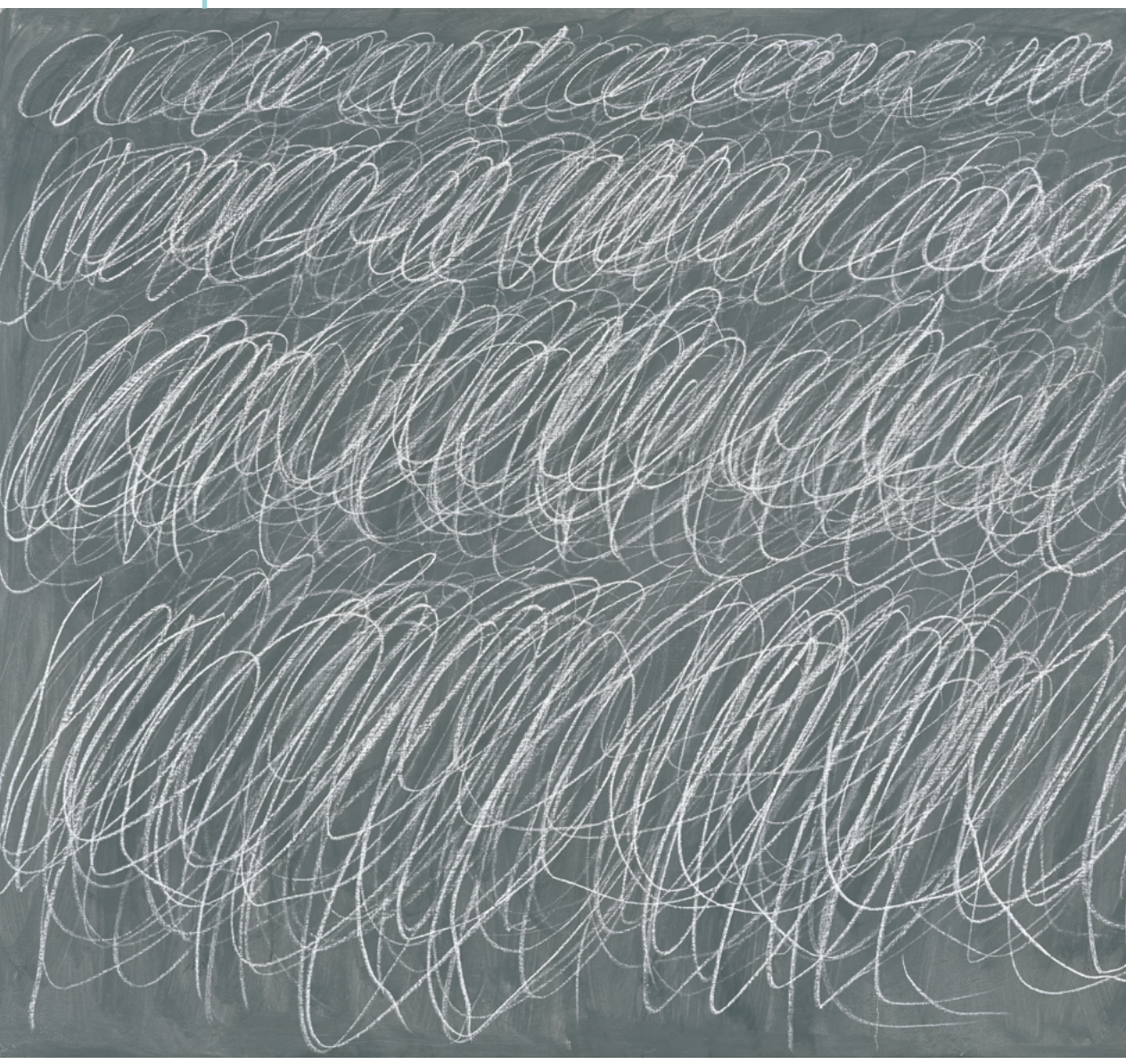
In preschool age, children enter the ideoplastic stage, in which they represent in their drawings what they know about themselves and the surrounding world. Luquet refers to this stage as intellectual realism. Within the ideoplastic stage, Szuman distinguishes the simplified schema phase, characteristic of preschool-age children, and the enriched schema phase, characteristic of school-age children. What is typical of drawings made by children at this age is the use of simple schemata, geometrized shapes (for instance, a house is a square and a triangle, while a tree is a rectangle and a circle). Analysing the contents of these drawings, Szuman emphasizes that this is a "nominal" world, presenting mainly human figures, animals, means

of transport, elements of the immediate surroundings, and natural motifs. Initially, the drawings consist of unrelated objects or figures represented side by side; towards the end of this phase there appear genre scenes, in which children try to link the elements represented on the sheet of paper.

Younger children draw the outlines of individual objects, and only later do they begin to use patches, colouring each element of the drawing. Their drawings are flat, and the proportions between different elements of a drawing (including the proportions within a particular element) are not kept. There are no spatial relations between the objects drawn, and the elements represented do not make up a composition. Preschool-age children use mainly intense basic colours. In their choice of colours they are guided by their own tastes rather than by the need to reproduce the actual hues. According to Luquet, what is characteristic of preschool-age children is the desire to present all their knowledge about a given object or figure – for example, when drawing a house these children also depict the elements located inside it, even though in the real world they would not be visible.

In school age, children enter the stage that Luquet called visual realism: in their drawings they try to present what they can see and depict what they perceive in reality. In Szuman's theory, the corresponding period in graphic development is referred to as the enriched schema phase, because while children's drawings still follow familiar schemata, they become richer in details. What also appears is composition. The elements presented are no longer loosely connected; they make up a whole – these can be thematic illustrations, landscape compositions, or scenes from the immediate environment, from stories or fairy tales, from imagination, and from the children's own experience. Initially, children use register composition, clearly marking horizontal sections of the drawing (for example, the lower part of the sheet is the ground and grass, while the upper part is the sky); then

Cy Twombly, *Untitled*, 1970. © Cy Twombly Foundation



Children's perspective

Children draw and paint what they find interesting and absorbing. Looking at their works, you learn about their interests and experience together with them what was the subject of their ideas, feelings, and thoughts while they were drawing or painting – and what was rooted in their lives and experiences. When looking at children's creations, one should remember that children's drawings do not become better in proportion to how similar they are to those of adults, even though it is adults who seem to be more experienced and knowledgeable about art. Just like we value the distinct kinds of beauty in artworks created in the styles of different periods in the development of painting, we should take into account the existence of various "styles" in the development of children's art and the unique beauty of each of them[1].

Marina Picasso, the famous painter's granddaughter, recalls his words to the effect that he was able to paint like Raphael as early as the age of eight but spent a lifetime learning to paint like a child[2]. Educators might find it worthwhile to use this idea as an inspiration to reflect on their way of perceiving and recording the world. Are we capable of looking at reality the way a child does? We would probably be able to paint what we can see and what we feel, but the task of drawing what we know about the world is immensely difficult – or so it seems at first. Nevertheless, attempting to do this may help us understand how children discover and organize different elements of reality. What may serve as an inspiration is both children's works and ones created by many eminent painters, such as Paul Klee, Marc Chagall, or Cy Twombly.

1 Cf. Stefan Szuman, *Rysunki i malowanki dzieci*, in: idem, *O sztuce i wychowaniu estetycznym*, Warsaw 1969, pp. 312–357.

2 Marina Picasso, Louis Valentin, *Picasso, my grandfather*, New York 2002, p. 182.

they move on to topographic composition (bird's-eye view); finally, overlapping compositions also appear, showing perspective and depth. In this period children already try to keep the proportions of the elements they draw and start to use local colours and shading, trying to reproduce the actual colours of objects. Spontaneous drawing from imagination gives way to drawing what the child can see here and now.

Adolescence is marked by a transition to the physioplastic stage, in which the drawn representation of reality is based on direct observation. According to Szuman, in the initial phase of this stage – referred to as sensational realism – teenagers have a tendency to draw what they see, "from nature." They try to express a sensational perspective – to reproduce as accurately as possible what they currently perceive. Depicting various genre scenes with elements of landscape, teenagers are already able to keep the right proportions, create compositions, and use patches in the pictures they draw. The compositions begin to comprise multiple elements and layers. The colours are highly vivid, with a tendency to gradually evolve towards local colours – less contrasting and less distinctive but at the same time more delicate and refined than pure colours.

According to Szuman, with the transition to the intellectual realism phase, older teenagers enter the adult art stage. The contents of drawings are often based on a direct model; there is also an observable return to spontaneous intellectual contents – derived from imagination, involving the use of abstract forms and the creation of personal symbols. The proportions and shapes presented are realistic, though there appear conscious attempts at deformation, modification, transformation, and personal interpretation. Compositions are multi-layered and consist of multiple elements. The colours used are local and frequently also abstract.

What the three consecutive stages of children's drawing development bring to our attention is not only the characteristic features of their works but also – or perhaps above all – the fact that each age is marked by a different kind of interest in the world of visible objects. In each phase of psychological development children are interested in different phenomena, have different ways of probing what they perceive, and experience what they can see differently – all of this is reflected in their drawings.

and early school-aged children

Fot. K. Schubert, MIK 2021 ©

Developmental characteristics of preschool-age

Peace
and quiet
give way
to loud
talking,
laughter, and
exclamations
filled with
emotion.

Let us imagine visiting an art gallery or a museum. When we close our eyes, most of us will probably draw on our own experience and think of adults slowly walking from one room to another. They stop at every artwork or installation, view them with a thoughtful expression, read the captions provided beside them, and then move on along the visitors' route. They may approach a selected artwork or step back from it in order to look at it from different perspectives. They contemplate it in silence or exchange reflections or impressions with someone. Peace and quiet reign, as if time has stopped and concentrated in the work of art that is being seen.

Now, let us imagine children instead of adults in the same gallery…

It is hardly possible to visualize this scene in the same way as before. What immediately comes to mind is a group of colourfully dressed children running about the whole place and eager to touch everything. Peace and quiet give way to loud talking, laughter, and exclamations filled with emotion. The speed of movement between the artworks increases considerably, and some of them go totally unnoticed.

Why has our mental picture of the situation changed so much? What makes children unable to experience art the way adults do? In the chapters that follow we will try to answer these questions, though we are convinced that they should be rephrased: How do preschool-age and school-age children's developmental characteristics influence their experience of art? How to arrange children's encounters with art to ensure that they can explore and experience it as much as they need to and as far as their abilities allow?

Why do we insist on rephrasing the questions in this way? Firstly, it is worth changing the current way of thinking about children's developmental characteristics and focusing on the skills and capabilities that children already have

rather than looking at them through the lens of deficiencies and differences, as compared to adults. Secondly, this perspective will allow us to look at the workshops or encounters with art that we organize from the child's perspective – so as to make them interesting and educative precisely for children.

Individual characteristics of the child

Apart from the developmental characteristics specific to children of a particular age, what must not be ignored is children's individual characteristics. They influence behaviour, emotions, and cognitive processes regardless of age or situation. The most important component of these characteristics is temperament – the biologically determined individual differences visible in the emotional, motor, and cognitive spheres. Temperament determines the tendency to engage in various actions and respond to stimuli[1].

Every child has a unique configuration of various traits and characteristics.

The major ones include:

- reactivity, which concerns the characteristics of responding to different stimuli, such as response threshold and response intensity;
- activity, which concerns expending energy on the actions one engages in;
- emotionality, defined as a tendency to respond with strong emotional arousal;

1 Cf. Mary K. Rothbart, Lesa K. Ellis, Michael I. Posner, *Temperament and self-regulation*, in: *Handbook of self-regulation: Research, theory, and applications*, ed. Roy F. Baumeister, Kathleen D. Vohs, New York 2004, pp. 357–370.

- sociability: a general tendency to seek other people, spend time with them, and avoid loneliness.

The way a child behaves and responds to stimuli results from both developmental and temperamental characteristics.

Fot. K. Schubert, MIK 2019 ©

Preschool-age children

Play is the
predominant
activity
in childhood,
which is why
this period
of development
is often called
the age of play.

Preschool age, also referred to as middle childhood, is the period in children's development between the ages of three and six years; it ends when the child is ready to begin their school education. We will start with the general characteristics of children at this age and then proceed to identify those characteristics that are the most significant for designing lessons.

Developmental characteristics

Sensory and motor development

One of the most prominent characteristics of preschool-age children is their high need for movement – this is a time of improving motor skills. Children develop gross motor skills: running, jumping, coordinating movements, maintaining balance, and combining movements (running and throwing), as well as fine motor skills, associated with hand movements: performing self-care activities (doing up buttons), manual activities (drawing; painting; cutting with scissors; moulding plasticine), and eye–hand coordination (synchronizing hand movements with what the eye can see). Initially, motor coordination is difficult for children – they need exercises that will help them develop particular motor skills and improve the fluidity and precision of movements[1].

Motor development is strictly related to the development of specific nervous system regions. As a result of engagement in motor games and various activities, children learn to adjust their movements to the aim of their activity,

1 Cf. Carol Sigelman, Elizabeth Rider, *Health and physical development*, in: eaedem, *Life-span human development*, op. cit.

Wassily Kandinsky, *Composition 8*, 1923.
The Solomon R. Guggenheim Foundation / Art Resource, NY / Scala, Florence

and sensory feedback helps them improve these movements. Engaging in motor activities and processing the sensory stimuli associated with them strengthens nervous connections between different brain regions and stimulates their development. Thanks to the integration of connections from different regions of the nervous system, the movements of a preschool-age child become more fluid, precise, coordinated, and increasingly well planned and controlled[2].

The high need for movement at this age – called "thirst for movement" – results in children often engaging in a variety of games and physical activities[3]. Preschool-age children enjoy exploring various objects and examine

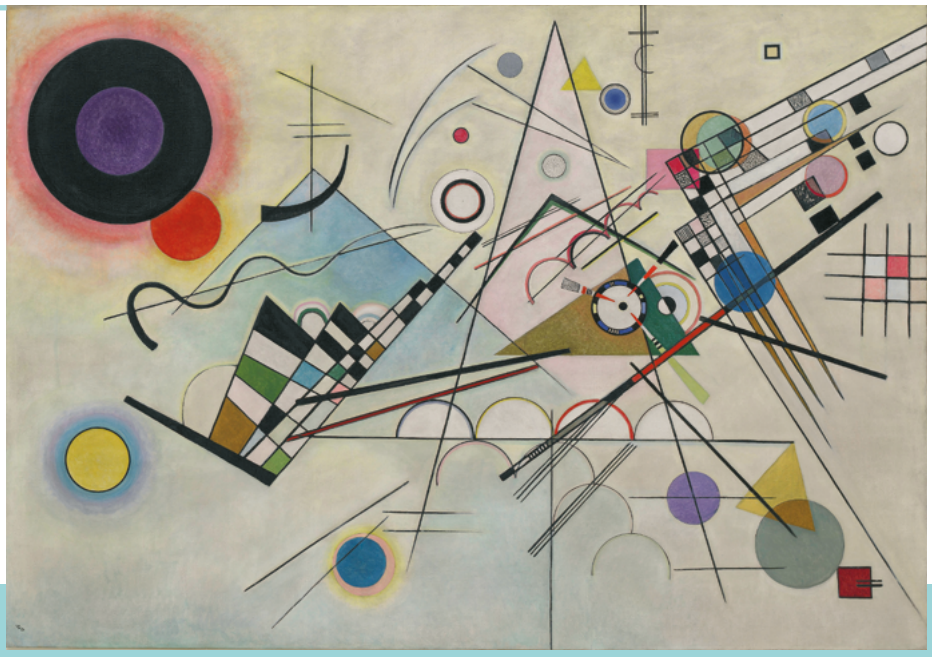
2 Cf. ibid., pp. 149–150.

3 Cf. Maria Kielar-Turska, *Średnie dzieciństwo – wiek przedszkolny*, in: *Psychologia rozwoju człowieka*, ed. Janusz Trempała, Warsaw 2011, pp. 202–204.

Synaesthesia

Can sound have a particular appearance: colour or shape? Can music evoke a taste sensation, and can an image evoke a smell (or the other way around)? Some artists, such as Wassily Kandinsky, use the phenomenon of synaesthesia in their works. It consists in perceiving various kinds of sensory impressions induced by a stimulus that acts on only one sense – for instance, auditory impressions may be accompanied by visual imagery or a sensation of softness. Many of the works created by Kandinsky explored the links between colour, shape, light, sound, and movement.

Creating illustrations for music is an activity that can be proposed even to preschool children. These may be coloured abstract lines, strokes, points, or "scribbles," even if they present nothing but the dynamics or mood of



the selected piece. What will be helpful in reproducing the rhythm is improvised painting tools: a sieve filled with coloured powder will facilitate the “scattering” of fragmented sounds, a block dipped in paint will help to tap out the rhythmic elements of music, and a string covered with paint will leave a trace of a “wavy” melody behind it. The larger the format of the work, the more attractive the process of its creation will be.

If you have adequate space at your disposal, you may carry out the exercise on a grander scale: in a large room padded with sheets of paper, participants make spontaneous movements that the resounding music induces them to make. Using chalk, they draw the traces of their movement on walls and on the floor. Can they recognize the kind of music piece on the basis of its depiction made by a different group of participants in the game? Was the piece fast or slow? Rhythmic or irregular? Joyful or sad?

What you can also propose to the children is a game that consists in associating sounds or colours with smells and different textures of materials. The accuracy of the matches is not of prime importance here; what matters above all is activating the association mechanisms.

them with all the senses: sight, hearing, touch, taste, and smell. What is also important is the development of the sense of balance and kinaesthesia, also referred to as proprioception – the sense associated with processing somatosensory information from muscles and joints.

To explore new objects and get to know various phenomena, children need activity and experience engaging multiple senses. According to the dynamic systems theory, successive achievements in motor development take place thanks to the process of self-organization, stretching over time. When performing particular movements or actions, the child uses sensory feedback that allows them to develop the most effective ways of achieving the desired outcome. When learning to throw a ball at a target, they modify their movements (such as their strength and manner of performance) so as to achieve the expected effect. The skills acquired emerge from earlier ones through attempts and adaptation to the demands of the environment[4].

Three-year-old children find it difficult to perform manual tasks, such as drawing – they cannot hold a drawing tool properly yet, they may put inappropriate pressure on the surface of the sheet with it, and they find it difficult to coordinate visual and somatosensory information. Six- and seven-year-olds, by contrast, are capable of reproducing patterns and prepared to learn to write small signs such as letters, since they are able to coordinate their movements and integrate information provided by different senses. Engaging in diverse activities, examining various objects, and exploring the environment by means of multiple senses have a positive effect on children's cognitive development, too.

4 Cf. Carol Sigelman, Elizabeth Rider, *Life-span human development*, op. cit., pp. 149–150.

Cognitive development

Cognitive development comprises changes in the processes of perception, attention, memory, thinking, and higher cognitive processes associated with self-regulation, defined as the ability to monitor and modulate one's behaviour, emotions, and cognitive processes. Another element of cognitive development in the preschool period is the formation of theory of mind – the ability to recognize one's own and other people's mental states so as to understand and anticipate their behaviours[5].

In the preschool period children develop their attention and memory abilities, but both attention and memory are involuntary – they are guided by external factors, and remembering takes place incidentally, as it were: without conscious memorization effort and without the child controlling the cognitive processes. Children at that age have difficulties focusing attention and are easily distracted – their attention is attracted by external stimuli, such as noise or various objects around them[6].

Children very quickly learn the meanings of words, and they gain knowledge about the world by remembering a variety of information and acquiring new skills. They are not yet able to use memory strategies effectively or consciously manage memory processes – therefore, in their case, knowledge acquisition requires the management of attention and memory processes by other individuals from the outside. Preschool-age children remember events and situations that were important to them and stood out among everyday activities. They may find it difficult to say what they did at nursery

5 Cf. Peter K. Smith, Helen Cowie, Mark Blades, *Children's understanding of mind*, in: iidem, *Understanding children's development*, Wiley-Blackwell 2011.

6 Cf. Maria Kielar-Turska, op. cit., pp. 204–208.

Berndnaut Smilde, *Nimbus II*, 2012. Photo by Cassander Eeftinck Schattenkerk.
Courtesy of the artist and the Ronchini Gallery

Culture and nature

According to many artists, there are no grounds for the arbitrary division between the worlds of "culture" and "nature." Landscape painting and countless photographs document the constant interpenetration of these two dimensions of reality: they seek to capture the changing shapes of clouds, to depict the terror of a storm or tempest, and to reproduce the colours that accompany sunrises and sunsets. "It would be a monotonous world without the smiles and frowns of the sky. The artistic possibilities of the clouds are infinite," insisted the famous British photographer Henry Peach Robinson[1]. Dutch artist Berndnaut Smilde creates clouds himself and photographs them in palace interiors, in former factories, and even in a desert – in this case it is actually difficult to decide which is art: the cloud or the photo of it.

The knowledge acquired by children is not divided into separate domains. It is worth combining creative activities with the observation of nature: weather phenomena, puffs of breath in icy air, patterns of ice or raindrops dripping down the windowpane, ripples spreading in widening circles on the surface of the water, reflections in a puddle, and the lunar phases. This can be done in the form of play involving light (creating a rainbow by means of a prism, simulating the changing seasons observed through the windows of a cardboard house or rocket), or animating snowfall in a solid model of a garden or forest made of plasticine (or of stones, cones, and sticks gathered during a walk). Children may also try to create their own original clouds: painted on transparent strips of plastic wrap, these clouds can be set in motion so that they change their position in the painted landscape; alternatively, the children can place them in the classroom, in their own rooms, or… wherever their imagination suggests.

1 Henry Peach Robinson, *The elements of a pictorial photograph*, Bradford–London 1896, p. 118.

school that day or what they had for lunch, but they will have a very clear memory of their birthday or a holiday trip[7].

An important element that supports remembering is emotions, which may increase the durability of memory traces – this is why play is such an effective form of learning. Children experience plenty of positive emotions during play, which helps them remember various events and information better. Another important emotion is surprise, thanks to which an event or activity is remembered better as one that stands out from everyday routine and goes beyond the knowledge that the child already has, thus arousing the child's interest and motivating him or her to explore and engage in new activities.

One of the most significant elements of cognitive development in this period is the development of symbolic thinking. Through exploring their surroundings, doing motor activities, and engaging multiple senses, children build their knowledge about the world, creating cognitive representations – namely, mental equivalents of elements found in the external or internal world. It is in the preschool period that children begin to use symbols to represent various objects and events, thus improving their symbolic thinking. A symbol can be a real object, an activity, a gesture, a word, or a drawing that substitutes something else (for example, a stone may be a car, and a circle in a drawing may be a mother)[8].

Undeniably the most important tool in the development of thinking is language, which allows us not only to communicate but also to represent

7 Cf. Maria Jagodzińska, *Od dziecka do dorosłego – rozwój pamięci*, in: eadem, *Psychologia pamięci. Badania, teorie, zastosowania*, Gliwice 2008, pp. 385–412.

8 Cf. Carol Sigelman, Elizabeth Rider, *Life-span human development*, op. cit., pp. 217–220.

the external and internal worlds. According to Vygotsky, it is in preschool age that there is an observable transition from out-loud egocentric speech, which helps children regulate their behaviour and process information, to silent inner speech, which becomes an element of thinking. The best way to develop symbolic thinking is through symbolic play, also referred to as pretend play or make-believe play[9].

Play is the predominant activity in childhood, which is why this period of development is often called the age of play. Due to their need for movement children engage in physical and motor games, through which they improve their motor skills and explore the world that surrounds them. They also gladly engage in construction games, which consist in creating something – for example, structures built out of blocks, drawings, or plasticine figures. Moreover, this period is marked by the intensive development of symbolic play, in which a person, a thing, or an action acts as a symbol or a substitute for another person, thing, or action – for instance, the child may pretend that a banana is a phone, that dad is a superhero, or that waving a pencil turns someone into a frog. Pretend play is an important element of children's cognitive development – many studies have shown that engaging in numerous make-believe games is associated with better scores in tests measuring cognitive development, language skills, and creativity[10].

Preschool-age children's thinking is not yet logical; it is difficult for them to notice cause-and-effect relationships, and in their exploration of the world they are guided by what is accessible through perception and action. The symbolic thinking that develops in this period does not yet enable children

9 Cf. ibid., pp. 234–236.

10 Cf. ibid., pp. 465–467.

to engage in abstract reasoning, which does not develop until adolescence[11]. The forms of symbolic thinking are reflected in language development; in the preschool period children improve their language skills in the areas of phonology, semantics, syntax, and pragmatics. Their vocabulary gradually expands, but the concepts refer mainly to concrete objects, people, events, and phenomena that the children deal with; abstract concepts are still too difficult for them to understand.

Children make more and more complex sentences and communicate with increasing efficiency; they also learn to take the interlocutor's perspective into account and use increasingly social forms of expression, such as questions or requests. Initially they have difficulty waiting for their turn, giving answers, listening to other people, and analysing what others say, but thanks to the development of cognitive abilities – attention, memory, self-regulation, and theory of mind – they begin to consider other people's words, respond to them, and improve their own communications so as to make them comprehensible to the addressee. Research on children's interactions revealed that younger preschool-age children tried to engage others in their activities, and it was not until the age of five and six that children became capable of taking the interaction partner's perspective into account and adjusting their actions to another person's actions[12].

What plays a special role in the development of children's communication skills is questions, which is why preschool age is often called "the age of questioning." Asking questions is what children need to make and maintain contact; it enables them to gain information and expand their knowledge

11 Cf. ibid., pp. 217–221.

12 Cf. Grace Shugar, *Interakcja, koordynacja linii działania i funkcjonowania językowego*, trans. Barbara Mroziak, Warsaw 1982.

about the world, too. Willingness to ask questions is also the first step in the development of critical thinking. In preschool age, children begin to ask "why?" questions, inspired by the objects, people, events and phenomena they observe. There also appear heuristic questions, through which the child seeks to clarify and organize their knowledge about the world and to learn the general rules and laws (for instance, "Where does money come from?")[13].

A skill that develops intensively in preschool age is theory of mind, the ability to recognize one's own and other people's mental states – desires, intentions, emotions, and beliefs – so as to be able to understand and predict behaviours. This ability develops thanks to social interactions, which the child engages in from the earliest stages of life. An important moment in the development of theory of mind is the age of four – this is when children are already able to distinguish their own beliefs from those of other people and begin to treat other people's beliefs as representations that are products of the mind. They are capable of discerning that someone may have a false belief about reality (for example, that someone may think there are chocolates in a box, whereas in fact there are coloured pencils in it). This allows children to distinguish their own perspective from that of others. Theory of mind develops thanks to children's engagement in social interactions and through pretend games, during which children learn to share their perceptions, ideas, and symbols and to take other people's perceptions into account[14].

Preschool-age children begin to recognize and name emotions, too. They are able to name the causes of emotions and say why someone may feel

13 Cf. Maria Kielar-Turska, *Średnie dzieciństwo*, in: Barbara Harwas-Napierała, Janusz Trempała, *Psychologia rozwoju człowieka*, vol. 2.: *Charakterystyka okresów życia człowieka*, Warsaw 2005, pp. 111–112.

14 Cf. Peter K. Smith, Helen Cowie, Mark Blades, op. cit.

A story in a work of art

Works of painting can serve as pretexts for spinning a variety of tales and inferring the characteristics of the figures depicted in them. The course of events presented in two paintings by Cranach is fairly easy for an adult to reconstruct. But is it going to be equally simple to work out why the mythical Greek hero is surrounded by figures wearing clothes typical of sixteenth--century Saxony? It is worth encouraging children to look closely at the two paintings and link them with a tale. And what if their order were reversed?

A good exercise for school-age children may consist in creating comic strips and cartoons or making up stories out of randomly juxtaposed photographs or paintings. They should be allowed to spin their own tales, even the strangest ones, without considering the original context of the scenes used in the story at first, although it may prove necessary to explain the important facts, especially when the story invented by the children does not correspond with the reality presented by artists. This will enable the participants to confront their ideas with the tales made up by artists or other storytellers.

Lucas Cranach the Younger, *The Sleeping Hercules and the Pygmies* and *The Awakened Hercules with the Pygmies*, 1551. Gemaldegalerie Alte Meister Dresden; c bpk | Staatliche Kunstsammlungen Dresden | Elke Estel | Hans-Peter Klut

in a particular way in a given situation. They begin to realize that emotions can be caused not only by real events but also by people's ideas or beliefs – for example, they know that someone may be afraid because they believe there are scary creatures under their bed. Children have difficulties regulating their emotions, however[15].

Preschool age is also an important stage in the development of self-regulation, which is the ability to monitor and modulate one's behaviour, emotions, and cognitive processes so as to adjust them to the changing goals or demands of the environment. Self-regulation comprises processes such as: the ability to restrain oneself and delay gratification, the ability to flexibly switch one's attention between the changing tasks and rules, working memory (the ability to store information in the memory and perform various mental operations on that information), and the ability to plan, organize, and monitor one's actions. Significant changes in self-regulation are observed between the ages of three and six, but many of these cognitive functions will continue to develop in the subsequent stages of growing up[16].

For preschool-age children it is still difficult to inhibit their actions and regulate their emotions – for example, to refrain from answering or hitting a peer who took their toy away. They may also fail to cope with tasks that require adjusting their behaviour to changing conditions or different rules.

15 Cf. Marta Białecka-Pikul, Małgorzata Stępień-Nycz, *Dynamika rozwoju emocjonalnego*, in: *Dynamika emocji. Teoria i praktyka*, ed. Dariusz Doliński, Wojciech Błaszczak, Warsaw 2009, pp. 215–238.

16 Cf. Philip David Zelazo, Stephanie M. Carlson, Amanda Kesek, *The development of executive function in childhood*, in: *Developmental cognitive neuroscience: Handbook of developmental cognitive neuroscience*, ed. Monica Luciana Collins, Charles A. Nelson, Cambridge, *Massachusetts* 2008, pp. 553–574.

It is difficult for them to plan and monitor the performance of a task and to achieve a goal that has been set. Their high distractibility makes it also difficult for them to perform various intellectual operations in the memory.

Self-regulation difficulties are most clearly visible in the domain of emotion regulation. Strong emotional arousal, both positive (excitement) and negative (sadness; anger; frustration), makes it harder for children to control their behaviour. It often happens that children are unable to refrain from behaviours that are unacceptable or inappropriate in a given situation, such as making loud comments about someone else's behaviour, hitting someone, or taking someone's toy away from them.

Socioemotional development

The social development of preschool-age children is also visible in the development of pretend play. Initially, games take place on an individual basis: children play alone, often side by side, only observing what others are doing or imitating their peers' behaviour. Four- and five-year-olds already engage in pretend games played together with others; they are capable of sharing roles and begin to coordinate their behaviour. They still find it difficult to cooperate, negotiate the course of play with other children, and take other people's beliefs and desires into account, especially when these differ from their own beliefs and desires. It is only towards the end of preschool age that, thanks to social, cognitive, and communication skills, children begin to consider other people's perspectives, cooperate, pursue common goals, and negotiate[17].

17 Cf. Carol Sigelman, Elizabeth Rider, *Life-span human development*, op. cit., pp. 465–467.

Rene Magritte, *Hegel's Holiday*, 1958.

Engagement in social pretend play helps children build theory of mind, develop the understanding of other people's perspectives, and improve their social skills. It might be for this reason that preschoolers who often take part in social pretend games tend to be more popular with their peers and have higher social skills compared to children who take part in such games less often.

What is also observed in preschool-age children is intensive changes associated with emotional development, which concern not only the understanding and experience but also the regulation of emotions. Children at this age are already capable of recognizing primary emotions – such as joy, sadness, anger, fear, or astonishment – based on facial expressions. They begin to name emotions, both their own and other people's. There is also a marked increase in their knowledge about the causes of emotions[18].

18 Cf. Marta Białecka-Pikul, Małgorzata Stępień-Nycz, op. cit.

Giving applications to objects

Surrealists sought to free the artist's imagination from the principles of logical thinking and all kinds of aesthetic norms. They attributed an important role to the unconscious and to imagination; they valued absurd associations, the surprise effect, and intellectual provocation. René Magritte, who was admitted into and expelled from the circle of surrealists many times, claimed that "everything we see hides another thing"[1].

1 Marcel Paquet, *René Magritte 1898–1967: Thought rendered visible*, Cologne 2017, p. 11.

The shapes and functions of objects are defined by their creators and users. They do not, however, exhaust all possible applications of a particular object; creative imagination may give them entirely new meanings. A hat, an umbrella, glasses, a chair, and many other familiar and seemingly ordinary objects may acquire their imagined alternative applications.

To begin with, it is worth taking a look at the shadows objects cast: depending on distance and the angle at which light falls, they will have completely different shapes and sizes. When set in motion, they will begin to unfold their extraordinary features, accessible thanks to imagination. To animate them, you can also use the stop motion technique and work together with the children to create a record of the “tales of objects” they make up. Games involving objects allow children to explore their characteristics and at the same time to discover (and create!) their multiple – symbolic and metaphorical – meanings.

Initially, children discern the external, observable causes of emotions – such as the fact that a person feels sad because they fell down or is angry because someone took a toy away from them. Gradually, thanks to the development of theory of mind, children begin to realize that also people's thoughts and ideas can be causes of emotions – for example, they begin to notice that someone may be sad because they miss their mother or because they are afraid that there are monsters living in the wardrobe. There is a change in the understanding of emotions: their basic understanding – which comprises differentiating the expression of emotions, naming them, and having knowledge about the situations that trigger them as well as basic knowledge about the results of emotional behaviours – is extended to include a mentalistic understanding of emotions. Children realize that emotional response depends on the subjective interpretation of the situation and that emotions may result from beliefs or stem from the individual story of a particular person's life[19].

In the preschool period children develop the ability to control emotions, though a characteristic feature of this age is the experience of emotional lability, manifesting itself in quick changes of the emotions experienced. Three-year-olds still have considerable difficulty controlling their ways of expressing them – aggressive behaviour or shouting may frequently occur as an expression of negative emotions.

19 Cf. ibid., pp. 220–221.

The major aspects of development related to the learning process

Learning through play

Play is the dominant form of activity for preschool-age children. It is also the best form of learning for them. Due to their short attention span, their great need for movement, and their still developing self-regulation ability, they are not yet able to learn reactively – by listening to the teacher, reading, and talking to others. This way of learning becomes possible only in school age. Preschool-age children, by contrast, learn involuntarily and spontaneously. The still developing abilities of controlling their own behaviours, cognitive processes, and emotions do not yet allow them to intentionally manage their actions – they learn these abilities, without realizing that they are engaging in this kind of intentional activity. Research on the functioning of memory in children showed that those who enacted a fairy tale in their play after listening to it remembered its content better than those who heard it twice. It also turned out that teacher's support in designing the game improved the reconstruction of all significant elements of the fairy tale and contributed to the tale being better remembered[20].

During play children are physically and sensorily engaged, activate symbolic thinking, practice their language and communication skills, and experience a variety of emotions that facilitate remembering new information. This makes it so important that the contents which the children are supposed to remember be provided to them in the form of play. One should remember, however, that children engage in play or join it to various degrees, depending

20 Maria Jagodzińska, op. cit.

Obstruction, a 1964 replica of the object created by Man Ray in 1920.

on age. Younger preschoolers may still have difficulty engaging in social pretend games; they need greater support from an adult to determine the course of play and the division of roles or to manage communication. Older preschoolers are already able to engage in games on a variety of themes both on their own and with their peers, invent game scenarios, cooperate, and coordinate their actions. Younger children's games are more imitative, based on copying the observed behaviours or re-enacting familiar game scripts, whereas older preschoolers will engage in play more creatively, inventing new elements of scenarios, modifying familiar ones, or thinking up entirely new game scripts.

Apart from engaging different senses and the already acquired social communication skills, imagination, symbolic thinking, and emotions, play releases the child's intrinsic motivation and itself provides many pleasant experiences and sensations. As a result, information is easily remembered

Mobiles

A new direction of artistic explorations, called kinetic art, was originated by Alexander Calder. Out of metal elements he created "mobiles": solid installations set in motion by the force of gravity, puffs of air, changes of temperature, or spectators' touch. Works had been designed in a similar vein before by artists such as Man Ray. His object called *Obstruction* consists of sixty-three wooden coat hangers and resembles an unusual chandelier or a three-dimensional family tree.

Creating mobile sculptures is a good exercise to develop children's patience, concentration, manual skills, and motor coordination. The process of creating kinetic objects is also combined with learning

the basic laws of physics – the construction of “mobiles” requires independent observation and exploration of various materials: pieces of sheet metal, magnets, paper figures, or ribbons fastened to flexible wires or plastic lines.

Structures can vary in complexity: from individual artefacts (such as a fan or butterfly on a wire) to sophisticated multipartite compositions using elements of different weight – the force of gravity or puffs of wind will impact them with varying intensity, and the elements themselves will also reciprocally influence the direction of movement of the remaining parts of the sculpture. Younger children will need an adult’s support, whereas for school-age children this kind of task can be prepared to be done in pairs or groups.

and practising the already acquired as well as new skills does not require putting effort into learning as such. According to Vygotsky, in play the child is "a head taller than himself"[21] – capable of transcending their current skills and gaining knowledge.

Attention

A very important cognitive process involved in learning is attention – it is a filter through which information gets into the memory, where it is subsequently processed and organized. If a piece of information passing through the filter of attention is not labelled "important," it may be ignored rather than remembered.

Attention comprises many aspects:

- concentration – focusing on the selected stimulus and ignoring irrelevant ones;
- selectiveness – differentiating stimuli into relevant and irrelevant;
- search – finding a specific piece of information among others;
- divisibility – focusing on two or more significant pieces of information simultaneously;
- alternating attention – switching from one task to another[22].

21 Lev S. Vygotsky, *Zabawa i jej rola w rozwoju psychicznym dziecka*, trans. Anna Brzezińska, Tomasz Czub, in: *Dziecko w zabawie i świecie języka*, ed. Anna Brzezińska, Tomasz Czub, Grzegorz Lutomski, Błażej Smykowski, Poznań 2000, p. 81.

22 Cf. Edward Nęcka, Jarosław Orzechowski, Błażej Szymura, op. cit., pp. 177–186.

The concentration of attention requires a selection of incoming information. One must judge what is important and what one should focus on while at the same time ignoring other stimuli that are irrelevant at a given moment. One must seek out important information and, in the case of more complex tasks, focus on more pieces of information at once or switch between different tasks. This requires the ability to manage one's attention, direct it at will, and engage the necessary cognitive resources.

In preschool-age children attention operates on a bottom-up (involuntary) basis, which means it is guided from outside. Children are not yet capable of selecting information and ignoring irrelevant stimuli. The attention span of preschool-age children varies between 5 and 20 minutes. Different external stimuli will draw children's attention, which may distract them from what is being said or shown to them. They have not yet developed self-regulation abilities sufficient to inhibit unnecessary information or easily switch from task to task. It is therefore important to be mindful of the limitations of attention in preschool-age children and to consciously manage their attention in such a way as to help them notice important elements and information.

Self-regulation

Self-regulation is the ability to monitor and modulate one's behaviours, emotions, and cognitive processes in such a way as to adjust them to the changing goals or demands of the environment[23]. The preschool period is the time when different elements of self-regulation begin to develop intensively. It is extremely important to take them into account when planning and preparing lessons for children. They define the framework of activity

23 Cf. Andrea Berger, *Self-regulation: Brain, cognition, and development*, Washington, DC 2011.

Bronisław Chromy, *Rock Notes*, Dębnicki Park in Kraków, 2003.
Photo by Klaudyna Schubert

Textures and sculptures

What the concept of sculpture brings to mind is artworks made of stone, wood, or plaster. However, many features of sculptural works can be observed both in the world of nature and in artefacts made by the human hand: in landform features, in the pattern of depressions and deformations of surfaces, and in forms given to engineering structures (bridges; electric traction systems; engine rooms; ships). Sculpture techniques are inspired by careful observation and study of the specific features of materials traditionally used in art (e.g., wood; marble; concrete; bronze), but sometimes they are also a field of experimentation using seemingly "non-artistic" materials (plastic, wire, fabric, and various "finds"). Bronisław Chromy's source of inspiration was nature; he created a unique collection of sculptures combining stones – pebbles – with bronze elements.

Similar sculptures can serve as an inspiration for an artistic lesson using "nature's products," such as stones, pieces of bark, sticks, feathers, dried fragments of plants, or seeds. To begin with, together with the children, it is worth examining the properties of the materials collected: their shapes, weights, and texture. You may transfer the texture of items to paper using a pencil (the technique of frottage) or paint (as you do using a stamp) in order to observe the patterns created by the irregularities of the surface. The next stage will be the combination of initially abstract elements into a figurative whole: a tower, a dragon, or a fragment of landscape. Works may have the form of solid objects (an adult's help will be necessary in connecting elements that have different properties) or "low reliefs" impressed in a shallow container filled with sand or plasticine. An important part of the creative process will consist in looking for associations and transforming them into three-dimensional visual representations; it is therefore worth encouraging the children to give titles to their works and to make up short tales whose protagonists will be the figures or objects thought up by them.

and require reflection on what the children can cope with on their own and in what situations they will need support.

Preschool-age children find it difficult to coordinate their actions with the actions of others – they are not yet able to inhibit their behaviours and words, switch between their own activity and what others are doing, or plan and organize actions. It is much easier for them to do tasks on their own or in pairs with other children than in larger groups that require co-operation between their members. Preschoolers also have difficulties following rules and taking actions appropriate for the situational context and for the demands of a given task. On the one hand, this may stem from memory problems (children may simply forget about the new rules); on the other, it may stem from difficulties in inhibiting their behaviours or flexibly adjusting them to the changing rules. Rules should therefore be recalled and repeated. Optimally, they should be worded positively to highlight the expected behaviour (for example, rather than "Do not shout," one can say: "Speak quietly"). It may also be helpful to present the rules in a pictorial form[24].

Engaging in various tasks and activities requires the ability to plan, organize, and monitor their course so as to achieve the desired goal. These cognitive functions take the longest to develop, and one can hardly expect preschoolers to use them effectively. It is necessary to support them both in planning the performance of a task (by preparing a simple instruction or working it out together with the children) and in the activity itself (by reminding them what the successive stages are). Let us remember that it is our job to prepare the materials necessary to do the task, though alternatively we may provide the children with a variety of different materials

24 Cf. Philip David Zelazo, Stephanie M. Carlson, Amanda Kesek, op. cit.

and let them freely choose those that they wish to make use of. The adult must also monitor the successive stages of the task and the time of task performance.

As far as emotion regulation is concerned, we must remember that it is difficult for children to delay pleasant things (for example, to wait for their turn when giving answers, playing, drawing lots, or receiving materials for drawing). Classes should be organized in such a way that the materials are easily accessible, so that no one has to wait for their turn. It may be helpful to prepare separate workstations for doing the task and to talk to smaller groups of children. It is also worth ensuring a sufficient amount of materials to be used during the lesson, as younger children may have difficulties sharing them.

Creating one's own works engages many emotions; situations may happen that will require regulating them – for instance, when a drawing does not turn out well or is criticized, the child will need our support to calm down and cope with negative emotions. The regulation of positive emotions, particularly strong ones, will require our support as well: strong excitement may interfere with the performance of tasks that demand the involvement of cognitive processes (such as attention); it may also induce the child to engage in seemingly inappropriate behaviours (running; shouting). Difficulties in inhibiting the reaction that imposes itself stem from children's high distractibility.

As mentioned before in the section devoted to attention, cognitive processes will also require support from an adult to be properly regulated. It is difficult for children to refrain from taking note of a stimulus that attracts attention but is not a relevant element they should focus on at the moment. To guide and manage children's attention is the adult's task.

Movement / multisensoriness

Children acquire knowledge through active exploration of their surroundings – they need to act, move, and engage their body together with all the senses. Their cognitive curiosity manifests itself in a desire to manipulate various objects, examine their properties, and ask many questions. Experiencing through acting and using multiple senses results in new information being recorded in the mind in many different ways, integrated, and thereby remembered more effectively. It should be noted that talking about something is processed by the human brain exclusively in the verbal code; as a result, children – especially preschool-age ones, who may have concentration difficulties – may not remember the information communicated to them.

Practical tips

How can the characteristics of preschool-age children be translated into practice to be applied in designing educational and creative lessons?

1. Organize lessons for preschool age children in the form of play;

2. Diversify games to include motor, construction, pretend, and other types of play;

3. Arrange situations in which the children can take actions that involve movement and engage different senses;

4. Let the children act. It is worth creating conditions for the children to explore various objects and the surroundings – on their own or with an adult's support;

5. Encourage asking questions and try to answer the children's questions;

6. Encourage the exchange of ideas, observations, and comments. Set clear rules for participation in the exchange: listening to one another, taking turns to speak, accepting all ideas. It will be necessary to support the children in following these rules;

7. Design play in such a way that it is adjusted to the children's developmental characteristics. Consider its nature: is it supposed to be individual or social play? Creative or imitative? Think of how much and what kind of support from an adult the children will need to engage in it;

8. Let the children work individually or in pairs. Work in larger groups will require considerable support from adults. Provide the children with a sufficient amount of materials;

9. Clearly define the aim of the lesson and think about which information is the most important; limit the information provided to that which you want the children to remember from the lesson;

10. Guide the children's attention – highlight and repeat the most important information. Express it in a simple and lucid manner. Use familiar words and short messages;

11. Use diverse tools to focus the children's attention on the relevant elements or information – the following may be helpful: a painting, a short nursery rhyme, movement, gesticulation, facial expressions, a change of volume and modulation of voice, a costume, a hand puppet, etc. It is easier for children to follow what is said if it takes the form of a plot, a story, or a fairy tale;

12. Plan breaks during which you will propose tasks engaging the children's attention to a smaller degree, such as motor tasks.

Proposals for workshops with preschool-age children

Creating a sensory object

Concepts introduced during the lesson

Sculpture is one of the forms of plastic arts. It is three-dimensional, which means it can be viewed from all sides. Sculptures can be coloured or not – in the latter case, they have the natural colour of the material they are made of, such as glass, wood, clay, or metal. They have different textures, which means they may seem smooth or coarse. Some are small, others are big or even monumental – truly great in size. Sculptures can take various forms – a special one among them is low relief, which looks like a painting at first glance but consists of solid elements.

A monument is a special type of sculpture created to commemorate an important event or figure. A monument can be a statue, which is a sculpture representing an entire human figure; sometimes it is a column, a stone with an inscription, or a memorial plaque.

An object is a contemporary version of sculpture. While some contemporary artists create traditional sculptures, the works of others take unusual forms – they are made of various materials, including delicate ones such as paper or plasticine. For example, a layer cake placed in a gallery would be referred to as an object.

An installation is an arrangement of various objects in a certain space. What "installation" brings to mind is mainly electrical engineering, but this is a good lead – just like cables, bulbs, switches, and devices make up an electrical installation, in an artistic installation various elements make up a whole. An installation is connected with a place. It may be a kind of arrangement made up of many objects, pictures, sculptures, and even videos,

for which the location of the artwork is significant. In a way, your room is a kind of installation too.

Sean Lynch, *Beuys (Still a Discussion)* – a reconstruction of Joseph Beuys's *Irish Energy*, 1974. Courtesy of the artist

Inspiration

An inspiration for the workshop will be Joseph Beuys's work titled *Irish Energy* and its subsequent reconstruction by Sean Lynch, *Beuys (Still a Discussion)*. The work is "a layer cake" made from peat briquettes spread with Kerrygold butter produced in Ireland.

JOSEPH BEUYS (1921–1986) – a German artist, art theorist, teacher, activist, and social and political reformer. The author of the famous phrase "Everyone is an artist." Before becoming an artist, he served in the army as an airman. His plane crashed in winter over Crimea. According to his own account, Beuys was saved by Tatars, who cured him using traditional methods, smearing tallow on his body and wrapping him up in felt. This experience, just like his interest in nature, is visible throughout his works. In his sculptures and objects he used natural and often fragile elements – such as grease, wax, or even hair. Beuys is considered to be one of the major artists interested in ecology. His *Irish Energy* (which has not survived but was reconstructed in 2007 by Sean Lynch) refers to the history of Ireland, where a particularly important tradition was the extraction of peat as a fuel used, among other purposes, to heat houses and to power steam engines. Peat – associated with work and extraction – is juxtaposed with a different source of energy important for people, namely butter.

SEAN LYNCH (b. 1978) is a contemporary Irish visual artist. The reconstruction of Beuys's sculpture (in this case, the recreation of the artwork: making it anew in accordance with the existing instructions) was part of a larger installation titled *Beuys (Still a Discussion)*. Among other issues, Lynch explores little-known local historical topics.

Lesson scenario

The aim of the lesson is to create an object – a layer cake. It is important to specify at the beginning of the lesson what occasion the cake is to be prepared for and let the children express their free associations when characterizing the properties of the materials that will be used to create it.

The layer cake will consist of many materials of different textures. The children will attribute specific properties to each of them. For instance: smooth yellow fabric can be lemon cream, coarse brown sponge can be chocolate pastry, and white net curtain fabric can serve as sugar sprinkle. Kneaded plasticine can be used to decorate the cake, like marzipan, etc.

Stage I: Learning the concepts of sculpture and object

1. Present the lesson plan to the children.

2. Introduce the concept of sculpture; supporting questions can be used:
   - How does a sculpture differ from a painting?
   - What can a painting be made of?
   - Where can sculptures be seen?

3. Present examples of sculptures to the children: a sculpture, a low relief, and a monument.

Illustrations can be selected at your discretion and depending on the local context – for instance, it is a good idea to talk about a monument that the children are likely to know from their neighbourhood.

4. Discuss with the children why a monument has to be durable and what materials it can be made of – can a monument be made from crêpe paper? What will happen if rains falls on it? Together with the children, carry out an experiment – pour water on samples of various materials: crêpe paper, a block of wood, and metal; observe the effect of water on each of them. Tell the children about the properties of wood and metal, allowing them to explore their weight and estimate their durability.

5. Introduce the concept of object and present examples of artistic objects.

Stage II: Creating an artistic object

Depending on age and group size, the children may create small objects individually or work as a group to create one big object composed of smaller elements. It is essential that everyone can take their own piece of the layer cake after the lesson.

1. Present the work by Joseph Beuys / Sean Lynch; supporting questions can be used:

- Can a layer cake be a work of art?
- What ingredients can this cake be made from?
- Can the cake concocted by Beuys be tasty?
- Why has Beuys's object not survived to this day?

Remember to explain to the children what peat is, so that they can understand and imagine what Beuys's/Lynch's "layer cake" is made of.

2. Inform the children about the task to be done: encourage them to devise and create a cake-object of their own from the materials available.

3. Discuss the properties of various materials together (encourage the children to propose what each layer of the cake can be; it is worth starting with an example, however – for instance, by saying that a sponge is sponge cake, the base of the layer cake to be made).

4. Divide the materials among the participants, making sure that every child has access to diverse materials.

5. The children get down to composing their own "layers" of the cake--object – it should have as many layers as possible; it is a good idea to paint it, too.

6. Presentation of the completed work: encourage the children to stress the taste, smell, and appearance of the cake as well as the occasion it has been made for; interpret each of the cake's layers together with the children.

Teaching aids:

- water,
- crêpe paper,
- a wooden block or figure,
- a piece of metal or a small metal figurine,
- illustrations presenting examples of various sculptures, low reliefs, and monuments.

Workshop materials:

- sponges,
- fabrics of different textures and colours,

- thick sticky tape,
- watercolours,
- plasticine.

Working methods:

- a talk illustrated with examples of the concepts explained – the content should be easy to understand: avoid abstract concepts, simplify specialist terms, and show example works to the children;
- individual and group workshop activities.

Additionally:

1. Analogous lessons can be conducted on collage and hodgepodge of materials with different textures, in which participants will, similarly, attribute different properties to different materials;

2. An inspiration for the lesson may be other works, not necessarily solid;

3. Depending on the children's abilities and the size of the group, it is possible to try to make a really big layer cake. In that case, it is worthwhile to take a picture of the object and make sure that every participant gets a photo as a souvenir.

Making a salad

Concepts introduced during the lesson

Painting and drawing differ mainly in the tool applied to achieve the final effect. In the case of drawing the main means of expression is a line, whereas in the case of painting it is a patch of colour.

A print is made by engraving an image onto a durable flat surface (for example, a wooden board) which is then covered with special paint and impressed on the chosen material (such as paper). If paint covers only the parts protruding from the surface, we speak of relief printing. An example of a relief print is a stamp.

A landscape is a depiction of a view, such as an expanse of scenery, nature, city, or sea, in a painting or photograph. It may be enlivened by various human or animal figures.

A still life is usually an arrangement or various objects that the artist chose to represent in a painting. It may be a bouquet of flowers in a vase, a breakfast, or a fragment of a library. Some elements may have special meaning – for instance, a clock may represent the inevitably passing time.

A portrait is a representation of one person or a few people. A special kind of portrait is self-portrait, a painting in which the artist has represented themselves. Sometimes the artist tries to depict not only the appearance of the person portrayed but also their character traits – what facial expressions they make, whether or not they smile, or whether perhaps they lift their head up or often wave their arms. They may also depict objects significant for the person (for example, a wise man will be represented as

looking through a book) or relevant surroundings (is it not best to present an untidy person against a background of mess?).

Grotesque derives from the French word *grotesque*, meaning something bizarre. It may combine beauty with ugliness, truth with fantasy, or cheerful things with sad ones. It is usually funny, but sometimes it can be frightening.

A caricature is a special type of portrait in which it is mostly the characteristic features of the portrayed person's appearance that have been depicted: their large nose, heavy glasses, menacingly wrinkled forehead, or quite the contrary – a very cheerful smile. One can easily recognize the person thus portrayed, even though they do not look like themselves as much as they do in a photo.

The Chimera was a fire-breathing mythical monster with the head of a lion, the body of a goat, and the tail of a snake. The word is also used to refer to the not quite real beasts created by artists through a combination of various living elements, mysterious and frequently… whimsical.

Giuseppe Arcimboldo, *Rudolf II of Habsburg as Vertumnus*, 1591.
Photo by Erik Lernestål, Skoklosters slott/SHM (PDM)

Inspiration

The lesson will be inspired by Giuseppe Arcimboldo's paintings.

GIUSEPPE ARCIMBOLDO (1527–1593) was an Italian painter known for creating portraits composed of diverse elements: objects, animals, fruit, and vegetables. He worked at the courts in Vienna and Prague. For many years Arcimboldo's paintings were simply considered as caricatures, but contemporary scholars believe this to be an oversimplification and tend to see them as a kind of rebus. Arcimboldo created a vision of the world in which the human being is profoundly related to nature and even lives in special harmony with it. Many of his symbols are rooted in Renaissance philosophical theories.

Lesson scenario

The aim of the lesson is to create artistic arrangements. When the concept of portrait has been introduced, the children will try to recreate paintings of their choice or ones selected by the instructor using fruit and vegetables. Depending on the children's manual skills, it is possible to restrict the task to making flat arrangements out of vegetables or take advantage of their natural texture and use them as stamps (cabbage leaves are perfectly fit for this purpose, with paint deposited on them by means of sponge rollers); it is also possible to create standing objects. After the workshop the vegetables are unlikely to be fit for consumption!

Stage I: Learning about various types of paintings

1. Learning to distinguish paintings from drawings and prints (this task can be carried out in the form of a quiz game, with children guessing if a given artwork is an example of painting, drawing, or print).

2. Introduce the terms for the most popular themes and genres of painting (you can make use of glossary entries of supplement them with your own). When all of these have been presented, this part can also be held as a quiz game.

3. Present examples of portraits painted by Arcimboldo – you may ask the children if they consider them portraits or still lifes.

Stage II: Creating one's own artistic vegetable arrangement

1. Inform the children about the task to be done: encourage them to create their own vegetable interpretation of a selected painting. A possible variant consists in translating traditional portraits into "vegetable" ones – it is worth seeking out portraits of people with a distinctive appearance.

2. Divide the materials among the participants, making sure that every child has access to diverse materials.

3. Individual work: arranging vegetables and other objects into portraits (flat or solid). It is worth taking advantage of the natural texture of vegetables and using them as stamps to imprint the arrangements on paper. Special caution must be taken while cutting the vegetables.

It is recommended that vegetables should be cut by the person conducting the workshop or by the children's caregivers.

4. Presentation of the works. It is worth trying to characterize the person depicted in each portrait together with the children – for example, by asking the authors the following questions: Is the person portrayed cheerful or angry? What do they like doing? What expression do they have on their face?

5. Group work: creating a portrait together. Towards the end of the lesson it is a good idea to create a grander painting, and then to document it and make sure that every child gets a photographic reproduction as a souvenir.

Teaching aids:

- illustrations presenting various paintings and drawings, representing various genres of painting.

Workshop materials:

- vegetables, fruit,
- paint rollers or sponges,
- paints,
- adhesive tape,
- plasticine,
- rolls of paper,
- toothpicks,
- hot glue,
- a knife and a peeler.

Working methods:

- a talk illustrated with examples of the concepts explained – the content should be easy to understand: avoid abstract concepts, simplify specialist terms, and show example works to the children; at your discretion, only selected terms may be explained – there cannot be too many of them;
- individual and group workshop activities.

Additionally:

1. A similar lesson may be held using the collage technique. Work that involves cutting out is a good exercise in fine manual skills;

2. An equally attractive activity can be making still life arrangements and photographing them.

Other proposed lesson topics

Arranging still lifes, pasting together collages, creating chimeras out of newspaper cuttings, sculpting plasticine or grey soap, acting out scenes from paintings, dressing-up games, pantomimes, recreating works of art using various media.

Fot. K. Schubert, MIK 2019©

Early school-age children

In early school age children move on to a subsequent stage in the understanding of emotions, which can be called understanding emotions in practice.

Late childhood, or school age, is the developmental period between the ages of 7 and 11. It begins when children start to attend school and continues until adolescence. There is an observable change in the forms of activity during this time: apart from play, which dominated in the preschool period, children devote a considerable part of their day to learning.

Children who start going to school should have a number of skills that enable them to learn reactively, from the person who conducts the teaching process. These skills, collectively referred to as school readiness, encompass many motor, cognitive, and socioemotional competencies. Below we present the characteristics of children's development in late childhood, and then we proceed to identify the characteristics that are most important for conducting educational and creative classes.

Developmental characteristics

Motor development

A visible developmental change in late childhood is the lower need for movement compared to the preschool period. Children still do need movement, but – thanks to the development of motor coordination, fluidity, and balance – they are now capable of engaging in more organized and goal-oriented activities: they very effectively acquire new motor skills and easily learn various sports disciplines. Good motor coordination and balance allow them to learn to ride a bicycle, rollerblade, play football or volleyball, and play instruments. Apart from the development of gross motor skills, there are also changes in fine motor skills. Children are able to

coordinate hand and eye movements, which enables them to acquire skills such as writing[1].

The precision of movements – both gross and fine – is possible thanks to the efficiently functioning senses. Children are capable of perceiving fine differences between stimuli in various sensory modalities – for example, visual (discerning the differences between similar letters), auditory (distinguishing sounds or similarly pronounced words), or tactile (perceiving different textures of materials).

Early school-age children are eager to engage in various motor games and activities. They can also successfully participate in team games that require coordinating one's actions with those of other players and following rules.

Cognitive development

An important element of cognitive development and at the same time a significant element of school readiness is the development of attention. In early school-age children attention span increases while distractibility decreases. Attention becomes voluntary (top-down) – it is now guided to a greater degree by the child than by external factors. There is also an increase in the systematicity of attention – children are already able to plan managing their attention and do this in an orderly way; for example, when searching their field of vision they begin to use search strategies (such as following the direction of reading: from left to right)[2].

1 Cf. Carol Sigelman, Elizabeth Rider, *Life-span human development*, op. cit., pp. 151–152.

2 Cf. ibid., pp. 189–191.

Children's memory also becomes increasingly voluntary. Children begin to understand what memory is and know that one has to make an effort to remember something. They start to use a variety of memory strategies, such as repeating or organizing the material they are supposed to remember. These strategies are ineffective at first, and sometimes their use strongly engages cognitive processes, thereby decreasing the effectiveness of remembering. With time, training in the use of strategies makes these activities automatic – they no longer require the amount of resources and cognitive control they used to require, which results in the material being processed and remembered more efficiently.

The development of memory is also associated with an increase in the speed of information processing, which leads to a growth in the capacity of short-term and working memory. A particularly rapid growth in short-term memory capacity takes place between the age of 6–7 and the age of 12–13 – from that moment on, further changes will be slight. The speed of intellectual processes is also known to increase with age, thanks to which older children and adults are able to perform more intellectual actions in their working memory than younger children. This improvement is linked with the maturation of the hippocampus and other parts of the brain believed to be most involved in the consolidation of memories. When the basic intellectual processes become automatic they may require little cognitive effort – as a result, working memory space becomes available that can be used for other tasks, such as storing information needed to solve a problem[3].

An important step in the child's cognitive development is the emergence of logical thinking. At this stage in the development of thinking, which Jean Piaget referred to as the concrete operational stage, children begin to apply

3 Cf. Maria Jagodzińska, op. cit.

Carlos Amorales, a fragment of the *Life in the Folds* exhibition in the Mexican Pavilion, Venice Art Biennale, 2017. Photo by Samuele Cherubini. Courtesy of the artist

Writing and signs

Today we think about writing as a work of art, too. When looking through photographs of old manuscripts and old prints, one will find richly decorated initials there. Many artists draw inspiration from various kinds of writing and create their own designs of letters or signs that present entire concepts (these are called ideograms or ideographs). For authors of concrete poetry, writing and its graphic composition are strictly linked with the meaning they contribute to.

Some artists go even further than this. At the Venice Art Biennale, Carlos Amorales presented an alphabet of his own design, made of ceramic glyphs resembling flint tools, which at the same time were pipes! All texts at his exhibition were written using the typeface he invented and required deciphering. Amorales also prepared sound works and films. All sounds were in fact sentences played on specific letters-instruments.

A lesson in creating one's own signs, ideograms, and graphic ciphers in which letters correspond to symbols or simplified drawings, as well as creating concrete poems, may be intellectually stimulating, especially for children at the stage of learning to read and write. What you can propose to younger children is making up and solving rebuses (not necessarily drawn ones: real objects can be used to create them). It is worth thinking about creating ideograms easily legible for children, presenting the main rules to follow during the lesson – invoking them will be more comprehensible and pleasant than recalling rules formulated exclusively by means of words.

mental operations that lead to solving problems. They are already capable of thinking in terms of cause and effect and discerning relationships between different elements or situations. What also emerges is inductive thinking, which consists in the ability to make inferences about cause and effect relationships based on the available facts. It should be remembered, however, that children still find it much easier to perform mental operations concerning concrete examples than ones concerning abstract concepts or symbols[4].

Children develop decentration – the ability to focus on different aspects of the analysed stimulus or situation. Unlike preschoolers, who focus on only one element of the stimulus, as a result of which their thinking is based on perception to a greater degree than on reasoning, school-age children are able to look at a problem from different perspectives and take its different aspects into account. They begin to analyse problems and verify hypotheses, but their reasoning is not yet systematic, which makes it error-prone.

In school-age children thinking becomes reversible, which means they are capable of performing the intellectual process of undoing or reversing an action. There also appears transformative thinking – the ability to understand transformations and processes of one state changing into another. All these characteristics of thinking enable children to learn in a more systematic way and assimilate basic knowledge in different fields[5].

School-age children continue to develop theory of mind, the ability to recognize one's own and other people's mental states so as to be able to understand and predict behaviours. At this age, children are already capable

4 Cf. Carol Sigelman, Elizabeth Rider, *Life-span human development*, op. cit., pp. 221–222.

5 Cf. ibid.

of taking other people's perspectives and consider these perspectives when analysing a problem. They consider what different individuals may be thinking and what they may know. Thanks to the development of language, thinking – also about language itself – becomes recursive, which means that reasoning involving many nested levels is now possible (for example, children may wonder what the teacher thinks a friend is thinking)[6].

Entering the advanced phase in the development of theory of mind enables learning from other people. The relationship between theory of mind and the understanding of teaching and learning is bidirectional. On the one hand, the development of theory of mind facilitates the understanding of teaching and learning processes – the child must understand that the teacher asks them not because he or she does not know something but in order to check if the child possesses a specific piece of knowledge. On the other hand, exposure to contradictory perspectives and knowledge gaps may promote children's understanding that beliefs may be false and inconsistent with reality[7].

According to Piaget, cognitive development progresses thanks to cognitive conflicts that occur when the child encounters a different way of looking at or solving a problem. Discerning a different perspective induces the child to compare their way of reasoning with another, thanks to which they can expand their knowledge or learn a new way of thinking or solving problems[8].

6 Cf. Peter K. Smith, Helen Cowie, Mark Blades, op. cit.

7 Cf. Emma Flynn, *Underpinning collaborative learning*, in: *Self and social regulation: Social interaction and the development of social understanding and executive function*, ed. Bryan Sokol, Ulrich Muller, Jeremy Carpendale, Arlene Young, Grace Iarocci, New York 2010.

8 Jean Piaget, *Mowa i myślenie dziecka*, op. cit.

Jan Matejko *Rejtan, or the Fall of Poland*, 1866.

The Royal Castle in Warsaw – Museum. Photos by Andrzej Ring and Lech Sandzewicz

Emotions and intentions

Thanks to the development of children's cognitive skills (including recursive thinking) even a simple attempt to infer the emotional states of a figure presented in a painting can serve as an introduction to the analysis and interpretation of various works of art. School-age children already possess the ability to understand different perspectives and complex situations, which includes distinguishing the intentions of different individuals.

Trying to recreate scenes from paintings, also in the form of dressing-up, is an excellent game to play and provides practice in the recognition of emotions, moods, and intentions. It is worth using artworks that feature expressive gestures and distinctive facial expressions, easy to imitate. The degree of complexity of the emotions shown should be appropriate for a given age group – it is possible to start with simple examples of sadness and joy and then go on to work on acting out more complex states and situations. Conversations with children about what and why the figures presented are doing or how they feel can be inspired by historical scenes or illustrations depicting everyday life.

Cognitive development is stimulated by interactions with peers. Children's peer relations are horizontal, which means peers have similar skills and similar levels of knowledge. Child–adult relations, by contrast, are vertical, with the adult having greater skills and greater power over the child[9]. In their interactions with peers, children are more willing to express their opinions and to make attempts at experimenting or reaching solutions by trial and error. In interactions with adults, they more often accept adults' ideas and express their opinions to a smaller degree, especially if their opinions differ from those of adults. Interactions with peers force children to compare knowledge, experience, and abilities and to consider various points of view, which is significant for stimulating their development. According to Piaget, it is only in peer relations that the child experiences the correlation between cognitive acts and social reciprocity and is able to overcome egocentrism, which is a tendency to focus on one's own perspective and not to take other people's perspectives into account.

In late childhood there are also visible changes in self-regulation. An important element of school readiness is the child's ability to manage their attention, inhibit their behaviours, and plan and organize their activities. Emotion regulation abilities are significant as well.

Learning in the classroom requires:

- remembering a variety of information and issues – for which efficiently functioning working memory is needed;
- performing tasks without distraction and focusing on the important contents of the lesson – for which attention management skills are indispensable;

9 Cf. Talia Musatti, op. cit.

- controlling impulses and behaviour when doing the tasks assigned by the teacher – which requires an adequate level of inhibitory abilities[10].

Also indispensable in the learning process are the abilities to plan, organize, and monitor one's activities. These abilities take the longest to develop – until adulthood.

Attention management skills constantly increase. Preschool-age children are able to ignore distracting external stimuli and focus their attention for a long time, though they find it difficult to manage it effectively, which is why they need an adult to guide their attention during the learning process. They are already able to inhibit their behaviours: to inhibit the reaction that imposes itself and engage in a different one, more appropriate in a given situation; they also cope with tasks involving conflict.

School-age children are already capable of using compound sentences, expressing cause-and-effect relationships; the stories they create include temporal relations and descriptions of characters. Learning to read allows children to gain knowledge and new information more easily, though it should be remembered that the development of reading skills is a process: from decoding abilities, through automatization, to understanding a written text and selective reading serving the purpose of information acquisition[11]. Children aged seven or eight practise decoding and make this activity automatic. Reading comprehension emerges later, around the age of nine.

10 Cf. Laura L. Brock, Sara E. Rimm-Kaufman, Lori Nathanson, Kevin J. Grimm, *The contributions of 'hot' and 'cool' executive function to children's academic achievement, learning-related behaviors, and engagement in kindergarten*, "Early Childhood Research Quarterly" 2009, vol 24, issue 3, pp. 337–349.

11 Cf. Anna Kołodziejczyk, *Późne dzieciństwo – młodszy wiek szkolny*, in: *Psychologia rozwoju człowieka*, op. cit., pp. 243–245.

Irish pirate Anne Bonny.
© National Maritime Museum, Greenwich, London

Socioemotional development

Thanks to the development of theory of mind and self-regulation, school--age children are capable of engaging in team play and games and cooperating with their peers. Younger children engage in interactions mainly with their peers of the same gender. Differences are visible between boys' and girls' activities. Girls tend to enjoy playing in pairs or threes and more often engage in thematic games or roleplaying; they prefer calmer and more stationary types of play (such as drawing). Boys, by contrast, are more eager to interact in larger groups and engage in activities involving physical movement. The preference for playing with same-gender peers, referred to as gender segregation, is a common phenomenon, found across cultures. It is related to differences in temperamental characteristics and children's preferred activities; it is also linked with the development of gender identity. Preschool-age children identify their sex and learn what is perceived as typical of girls or boys in a given sociocultural group. School-age children realize that their biological sex is a permanent characteristic and have a

Social roles

Models of masculinity and femininity change over the centuries. So do ideas concerning the social roles attributed to women and men. Using artworks of different epochs as examples, you can talk to children about past and present stereotypes concerning women, men, or non-binary people and their roles in society, the family, and professional life.

Use the opportunity that learning about figurative works of art provides to ask questions – for example, who was considered a hero in antiquity, who was believed to be one in the Romantic period, and who could be regarded as a hero today? What ideals of beauty functioned in different periods?

Can female figures be found in artistic representations of important historical events? Who was the first to wear high heels: women or men? Was it possible for a woman in antiquity or in the Middle Ages to be a pirate, a doctor, or a teacher? Are there occupations today that are inaccessible to women or to men?

Remember to use the broadest possible spectrum of cultural references (including non-European cultures) and to select the examples discussed with the children in such a way that they can at least partly independently formulate their explanations and compare the newly learnt facts with the knowledge they have about the contemporary world. This will help avoid tedious talks and make use of children's naturally inquiring minds that seek to get to know the world by asking questions.

Henri de Toulouse-Lautrec, *Equestrienne (At the Cirque Fernando)*, 1887/88.
The Art Institute of Chicago / Art Resource, NY / Scala, Florence

clear picture of the characteristics and expectations socioculturally attributed to a given sex[12].

An important element of social development at this age is the need for peer approval. Specific relations develop in peer groups, and children may have different positions in them. The child's position in the peer group – known as the sociometric status – depends on a variety of factors: physical appearance, communication skills, emotion regulation, and the ability to join play, cooperate, and take other people's perspectives into account. Depending on their individual characteristics and skills, children may have the status of a popular child (liked by most of the group), a rejected child (disliked by most of the group), controversial child (liked and disliked by a similar number of peers), or ignored child (overlooked by most of the peers). The ability to identify children's statuses in the group is extremely important in organizing team activities or ones that require dividing pupils into groups. Sometimes it is necessary to conduct an orientation class for the children to get to know and accept one another in a new group. Also in a group of children who already know one another it is worth taking their positions in the group into consideration in order to effectively prevent peer exclusion and keep all children engaged in the activities[13].

In early school age children move on to a subsequent stage in the understanding of emotions, which can be called understanding emotions in practice – they gain knowledge on how to cope with emotions and begin to comply with the rules of expressing emotions. Thanks to the development of self-regulation, children are already capable of refraining from displaying emotions in less acceptable ways and capable of engaging in

12 Cf. Carol Sigelman, Elizabeth Rider, *Gender roles and sexuality*, in: eaedem, *Life-span human development*, op. cit.

13 Cf. eaedem, *Life-span human development*, op. cit., pp. 467–469.

Open composition

The world composed by the artist is restricted to the limited confines of the painting; one can only conjecture about what might be going on beyond its frames. When browsing paintings from different periods, one will find many examples of open composition, in which the presented scene or fragment of landscape has been deliberately shown without the closing elements of composition. This leaves the viewer plenty of room for interpretation and forces them to supply the "missing" parts on their own, thus inviting them to contribute to the creation of the work.

The use of open composition in work with children will allow them to develop the ability to carefully observe the world by examining details, analysing the fragments visible in the frame that suggest how they could be logically complemented. You can ask the children to add the elements to the presented scene that are not visible and then compare the results together. With older children, a similar exercise should be conducted using a fragment of a realistic photograph. When everyone has proposed their own vision of the reality surrounding the selected frame, these visions should be juxtaposed with the original full scene in order to find out if the children have inferred the surroundings of the scene correctly. This is a good point of departure for media education and an introduction to the topic of manipulation by means of image.

An analogous lesson may concern works painted in different styles: based on a fragment of a painting, children may create their own artistic interpretations of abstract, fairy-tale, or realistic works.

behaviour more appropriate for a given situation. They are also able to conceal their emotions as the social context demands – for example, to conceal dissatisfaction and express joy even when they dislike a present they have received[14].

An important aspect of school-age children's development is moral development – namely, acquiring the ability to understand and comply with norms and rules. Children are already capable of obeying rules but still find it difficult to understand that these rules stem from a social contract and can be changed, provided that all members of the group agree. Younger, seven- and eight-year-old children still have a rather rigid perception of rules and may regard them as immutable. It does happen, however, that they try to change the rules to their advantage during the game in order to win[15].

The major aspects of development related to the learning process

Rule-based play and games

From the moment they start their school education, children less often engage in pretend play. In this period, they devote most of their time to organized play and games with specified rules – board, computer, or sports games. At first they attach great importance to winning, and it is

14 Cf. Marta Białecka-Pikul, Małgorzata Stępień-Nycz, op. cit.

15 Cf. Carol Sigelman, Elizabeth Rider, *Life-span human development*, op. cit., pp. 432–435.

sometimes difficult for them to regulate their emotions in a situation of defeat. Therefore, when organizing games for seven- and eight-year-olds, it is advisable to make sure that elements of rivalry are not dominant in them.

School children are able to obey and follow rules. Younger ones among them, however, have difficulty negotiating rules and principles – they may need our support in following them. Older children cope much better with regulating their reactions to defeat and are able to negotiate and agree on the course of games as well as their rules. Regardless of age, in the first years of school education it is more conducive to development to involve children in shared activities and cooperation than in competition, as the latter introduces a division into winners and losers, thereby unnecessarily inducing negative emotions.

Learning through cooperation and perspective taking

School-age children are happy to engage in activities together with other people. When taking part in shared activities, they are capable of dividing roles, exchanging ideas, taking other people's perspectives, setting a plan, and pursuing its realization. Thanks to cooperation, children develop communication, social, and cognitive skills.

Peer interactions are typically characterized by a similar level of experience and by what is called a horizontal power relationship. Consequently, it is in peer relations that children are more willing to express their thoughts and emotions. This type of interaction allows them to freely share ideas, since they participate in a common activity as equal partners.

Pere Borrell del Caso, *Escaping Criticism*, 1874.
Colección Banco de España

Thanks to the development of theory of mind, school-age children are able to take different perspectives, discuss various ways of solving a problem, and negotiate a common approach to the task with their peers. The ability to take different perspectives manifests itself also in accepting and understanding the fact that each person may perceive and interpret the same elements of reality differently. Research on ambiguity comprehension revealed that five- and six-year-old children looking at ambiguous pictures (such as a duck-rabbit figure) found it difficult to answer the question of what another person might see in a particular picture – they usually attributed a specific interpretation to it (either a duck or a rabbit). It was not until the age of eight that children became aware that the ambiguity of the stimulus made it impossible to predict what another person would see in the same picture. At this age, children already understand that beliefs and interpretations are subjective products of a given person's mind[16].

Attention and self-regulation

School-age children develop the ability to regulate their behaviour, emotions, and cognitive processes. They are already capable of focusing on a task and on what another person is saying. Attention span increases to approximately 30 minutes. The children are less susceptible to distraction; they are able to manage their attention and switch between tasks. It is still important to monitor attention – especially younger children find it difficult to focus on less absorbing activities, such as listening to someone speaking for a relatively long time. It is worth engaging children in action, in doing various activities, in discovering and acquiring knowledge on their own – in this way we increase their motivation and support concentration practice.

16 Cf. Peter K. Smith, Helen Cowie, Mark Blades, op. cit.

Illusion

Illusionistic painting uses deceptively realistic representations of sceneries, landscapes, and spaces that create an illusion of three-dimensional reality. It was particularly used by Baroque artists in the decor of churches and palaces – interesting examples can be seen, for instance, in St Ignatius Church in Rome and St Anne's Collegiate Church in Kraków.

According to ancient accounts, an artist who achieved astonishing illusionistic effects was the Greek painter Parrhasius, living in the fourth and fifth centuries BC. He became famous for his masterpiece *Curtain*, imitating a real curtain so convincingly that his rival, the painter Zeuxis, asked him to draw it back so that he would see the work of art hidden behind it.

Illusion can be a very interesting subject of a lesson for early school-age children. Painting false windows and doors, creating pictures using photos to which continuations are added, creating animations using multiple sheets of paper, or manipulating figures and objects in the scenes presented (the technique of combining fragments of different photographs will work very well here) – these are only some of the possible activities that will enable the children to recognize optical illusions, develop their imaginations, and observe reality carefully.

School-age children are capable of inhibiting the reactions that impose themselves and postponing activities. They can also plan their actions and pursue the goal that has been set. Planning the stages of activity unaided may still be difficult for younger schoolchildren (aged around seven); it is therefore worth presenting successive steps to them and providing assistance in performing each activity.

Practical tips

How can the characteristics of early school-age children be translated into practice and applied in designing educational and creative lessons?

1. Diversify the activities proposed to the children – encourage taking unconstrained actions, exploring objects, and engaging in creative activities.

2. Provide younger school-age children with assistance in planning and performing the planned activities.

3. Encourage older children to plan activities together.

4. Organize rule-based play and games – the rules should be simple.

5. Organize play and games in such a way that they include elements of cooperation and keep all participants engaged.

6. Arrange situations in which the children will have a chance to share their interpretations and opinions in a friendly atmosphere.

7. In the beginning you may enter into a "contract" with the children, in which you will agree as a group that all ideas and opinions are good and that everyone is free to express them.

8. During the lesson, give the children opportunities to do tasks and engage in activities together.

Proposals for workshops with early school-age children

Creating an abstraction

Concepts introduced during the lesson

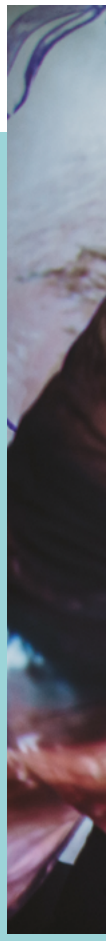
An abstraction is a work of art that is an arrangement of lines, patches of colour, planes, and solid figures. Although we are accustomed to works of art being depictions of something (for instance, a person, an event, or a landscape), some artists have abandoned this kind of presentation of the world – they focus on colours, shapes, and textures themselves. These can make up a language of their own. The art referred to as abstract is the kind of art that does not present anything specific – it may be an expression of what the artist is thinking and experiencing. Some abstract works may also be an outcome of coincidence.

Drip painting is a technique that consists in splashing liquid paint onto the ground to drip down and thus create an image in the form of damp patches.

Action painting (also called gesture painting) is a trend in contemporary painting in which emphasis is placed not so much on the artwork as on the creative process itself. The pattern the paints make on the canvas depends on the artist's gesture – such as the movement of the hand holding the paintbrush. The gesture is a movement, sometimes accidental, that has a certain meaning – waving one's hand by way of greeting can serve as an example. Behind every creative gesture there may (or may not) be the artist's intentions, emotions, or mental states. Speaking of gestures, they can often be described in a number of ways – they can be gentle or vehement, quick or slow, soft or rough.

Performance art is a form of art created live in the presence of spectators. It may resemble a stage performance, but the distinction between the

artist and the audience is often abandoned. The most important element of this kind of art is the artist, their body, and the actions they perform. A performance as such is an ephemeral work of art – it ceases to exist immediately after it is over. Some artists make video documentations of their performances.



Inspiration

During the lesson we will create an abstract painting inspired by the works of Grzegorz Mart.

GRZEGORZ MART is an artist and photographer from Kraków. He creates works of painting that he sometimes humorously refers to as scribbles. Inspired by the processing of music and film, he incorporates them into the creation of paintings. His works are often the outcome of performances: the artist paints publicly on a canvas or wall, trying to capture a frame from the film being shown, moving figures, or the rhythm of the music that accompanies the screening. (For one of his performances he invited a conductor, who did the conducting by means of felt-tips). This means that, in a way, his paintings are records of actions and the outcome of a performance, but after the performance is over they continue to exist as independent abstract works and a kind of documentation.

The artists that Grzegorz Mart draws on include **JACKSON POLLOCK**, the famous abstractionist and one of the originators of action painting. This American artist focused on gesture and allowed his body a certain degree of freedom in painting – his works came into being as a result of partly controlled paint splashing. In this sense, Pollock's paintings are images of his gestures.

Grzegorz Mart during a performance from the *Film Paintings* series.
Photo by Michał Sroka. Courtesy of the artist.

Lesson scenario

The lesson will be focused on discovering the secrets of abstract art. We will try to answer the following question: Can an abstract work of art have a hidden meaning? Abstract art is usually a message in itself and does not need to have a "deeper meaning," just like the clouds observed in the sky. Sometimes one is enchanted by the sight they make, while on other occasions one pays no attention to them at all. Abstract art is often approached with reluctance, as usually one expects a work of art to carry a specific message, the absence of which may be quite a surprise to some people. This does not mean that abstract art conveys nothing at all. It has its own language in the form of composition, colour, and texture. An abstraction can be more emotional than numerous realistic paintings are.

We will be painting on transparent material – plastic wrap or a pane of plastic glass – treating it as our "window on the world." The essence of the game will consist in trying to capture people or objects in motion. The game may also take the form of people portraying each other while standing on opposite sides of the material. Plastic wrap may be spread along the workshop space or outdoors, between trees. A possible variant of the workshop is to exactly reproduce one of Grzegorz Mart's techniques: painting film-based images. This would consist in trying to capture movement from the film being projected on a wall or on a large sheet of cloth.

We will be using painting tools freely, and we will also try our hand at drip painting if we feel like it.

Stage I: Discovering the secrets of abstraction

Present the lesson plan to the participants.

1. Introduce the concept of abstraction. Juxtapose examples of representational and abstract paintings. Depending on the illustrating material and the titles of works, you may propose a game of associations to the children. It may concern looking for a relationship between the title and the painting or for associations with other works of art, figurative or representational. Another possibility is to try to name individual means of expression: contrasts, rhythm, or colours, or to determine the mood based on value (lightness or darkness).

2. Introductory exercise: try to draw nervousness, joy, or peace without lifting your felt-tip pen from the sheet of paper. Do not draw a face or a figure! Similar proposals: try to draw a plane take-off and a ball slowly falling down (for older children, you may introduce the concepts of vertical vs. horizontal and ascending vs. descending line; the exercise can be accompanied by a comparison of dynamic and static compositions).

3. Additional exercise involving music: without lifting your felt-tip pen from the sheet, try to draw the music you hear (both peaceful and dynamic music should be selected). Finally, let everyone compare their drawings with those made by others. Can you see any similarities?

Stage II: Creating an abstract work

1. Present Grzegorz Mart's works, encouraging participants to guess how they might have been created. Let us think of a steady hand movement. What mark would it leave on a canvas? What would a "sharp" stroke of a brush look like?

2. Introduce the artist and his creative work technique: perhaps you have also tried, for instance, to draw a walking person while looking out of the window? If so, you probably know how difficult it is to keep up with them!

3. Divide the participants into two groups. Stretch transparent wrap (it can be stretched between trees) or put up a pane of acrylic glass between the participants.

4. Inform the children about the task to be done: divided into two groups, standing on the opposite sides, they will be portraying one another while moving all the time.

5. This type of exercise will only seemingly have the features of competition, because the final outcome will be one double-sided work. Children may change sides during play. In the case of outdoor play, competition can be abandoned in favour of painting a large-format artwork together – a fragment of a view with moving torches, for instance. If you have a projector and materials such as a large canvas stretcher or a wall that can be covered with paintings, you may consider reproducing Grzegorz Mart's film-based painting activities.

6. Divide the materials among the participants, making sure that everyone has equal access to paint and various painting tools. In the case of outdoor play, the children may begin by depicting the static elements: trees, standing cars, the sun, the sky, etc., and then try to paint moving human figures. The instructor should start painting the moving elements in order to show the children what the task is about. When the work is already well under way and the layers of paint no longer suggest any attempts at realistic representation, it is worth encouraging the participants to use painting tools unconventionally – for example, you may remind them about the concept of drip painting.

7. In conclusion, each child may tell everyone what they feel like as a newly fledged abstract artist. It is worth asking which element of painting was the most interesting to them and whether they like the outcome of their common work.

Teaching aids:

- Illustrations presenting various abstract and figurative works (you may try to read them through the lens of emotions).

Workshop materials:

- transparent stretch wrap or transparent pieces of acrylic glass,
- paintbrushes of different sizes, paint rollers, spray paints, spatulas, and other painting tools,
- acrylic paints in large tubes,
- palettes or trays for mixing paints,

- cups,
- water,
- art smocks.

Working methods:

- a talk illustrated with examples of the concepts explained – the content should be easy to understand: avoid abstract concepts, simplify specialist terms, and show example works to the children;
- individual and group workshop activities.

Additionally:

The home assignment may be to create an abstract painting in accordance with the trend of ecological art. In the 1970s, **JACEK TYLICKI**, a Polish conceptual artist, left canvases in outdoor locations – in meadows and near rivers or lakes, only to return for them after some time. In a way, the resulting paintings were the work of random forces of nature. In some cases they did not differ from contemporary abstract painting!

Building instruments

Concepts introduced during the lesson

An illustration is a painting, a drawing, or a photograph that accompanies a text. An illustration may, for example, help the reader imagine the characters of a novel. It may also explain what is discussed in a complicated technical text – for instance, by presenting a diagram of how a particular machine works.

Programme music (a term referring mainly to classical music) is music whose purpose is to suggest extra-musical contents: it may illustrate a film, "tell" a story, or imitate various kinds of extra-musical sounds – such as thunders imitated by means of percussion instruments.

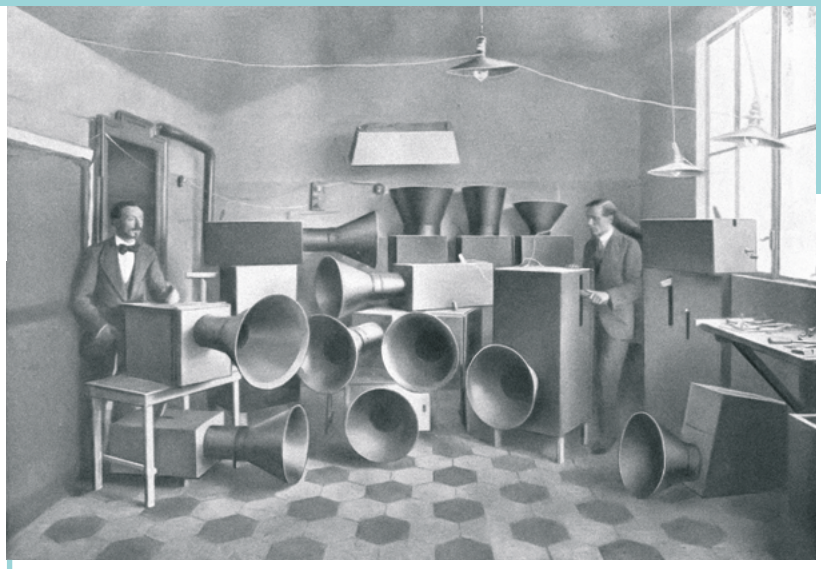
Object, installation (see: cake making workshop, p. 123).

A mobile is a type of movable sculpture (known as kinetic sculpture). It makes use of the principles of balance. It may consist, for example, of a row of bars with weighted objects or further bars hanging down from them. The objects hanging from the bars balance each other out. Elements of the sculpture may be moved by the wind or in some other way; some of them, like bells, may emit sound. The most important creator of mobile sculptures is Alexander Calder.

Inspirations

The inspiration for creative efforts will be the works of artists who transcend the traditional distinctions between forms of art.

LUIGI RUSSOLO (1885–1947) was an Italian artist who belonged to the movement of the Futurists, fascinated by modernity, motion, machines, and… noise. Noise is part of people's life – why would it not be a subject of art? Russolo built nearly thirty instruments for making noise, referred to as *intonarumoris*. They can hardly be classified as objects or installations, but if they were placed in a museum or gallery they could easily be called that. Russolo's instruments have not survived to the present day, but their reconstructions do exist.



Luigi Russolo and Ugo Piatti at an *intonarumori* acoustic noise generator; "L'Arte dei rumori," 1913. Wikimedia Commons

Władysław Hasior, *The Organ* at the Snozka Pass, 1966.
Photo by Klaudyna Schubert, © MIC 2018

Located at the Snozka Pass, near Czorsztyn, Poland, the installation created by **WŁADYSŁAW HASIOR** (1928–1999) is a memorial to all those who died as a result of military activities during and after World War II. Its title, *The Organ,* refers to the intended function of the "sounding monument" – it was meant to be a gigantic instrument with a system of pipes and gongs set in motion by the wind. Although the object was created relatively recently, it is not known if it has actually ever given any sound. According to the majority of scholars it has not, because the monument was not finished and has no pipes. Local tales, however, have it that the installation was deliberately damaged by highlanders because the wind blowing through the steel elements frightened their sheep.

Working at the interface of painting and theatre, **TADEUSZ KANTOR** (1915–1990) designed the scenography and objects for Cricot 2 Theatre performances himself. In the performance titled *The Madman and the Nun,* an important element was *The Aneantization Machine*, consisting of a metal structure and a few dozen old folding chairs, which started to make noise when set in motion. The title of the installation derives from the philosophical term “neantization,” which means annihilation or nullification. This means that the aneantization referred to in the title is the opposite of annihilation – what is making noise can hardly be considered non-existent.

Tadeusz Kantor, *The Aneantization Machine.* A photograph from the exhibition titled *Tadeusz Kantor*. *Scene I: Collection*, The CRICOTEKA Centre for the Documentation of the Art of Tadeusz Kantor in Kraków, 2014–2015.
Photo by Grzegorz Mart

Lesson scenario

The lesson consists in a common play activity during which random objects are transformed into instruments. It is worth collecting a wide variety of objects so that participants can find applications for them.

Stage I: Discovering programme music

1. Present the lesson plan to the children. Introduce the concepts of illustration and programme music. Can music be illustrative?

2. Listen to fragments of music pieces together. Depending on participants' age and the size of the group, children may, for instance, guess at the titles or themes of the pieces (as when playing charades), illustrate the music (they may draw pictures or abstract shapes and forms that they associate with the material they are listening to), or try to reproduce the rhythm. A different variant of the lesson will involve guessing at moods, stories, and landscapes.

Stage II: Creating instruments

1. Present the works of selected artists who create musical objects and installations (or ones that relate to music). These can be not only the suggested artworks by Luigi Russolo, Władysław Hasior, and Tadeusz Kantor but also examples of kinetic sculptures or works by artists using the acoustic properties of various objects.

2. Creating instruments – the children's tasks is to produce sounds using various items available or to create their own instrument-object from these items. Next, each participant is to "compose" a piece of

their own to illustrate some phenomenon – chosen by themselves or selected by the person conducting the workshop. What may prove to be a wonderful instrument is electrical conduits. By whirling them around over your head it is possible to make a pipe-like sound, and blowing them the way you blow the trumpet produces the sound of a horn. An example of sound illustration can be the rhythm of a heavy animal's steps imitated by pounding on things.

3. Children work individually on the presentation of their ideas – they should be encouraged to give names to the instruments they create. This stage is bound to be long and loud.

4. In the final part of the workshop the participants are gathered into groups and try to create a piece on an assigned topic together (for example: the stamping of white seagulls' feet; an elephant in the bush). The topic may be concrete or abstract, depending on the skills of the group. The game can also take the form of musical charades, with one group playing their piece and the other trying to guess its topic. Depending on time and needs, the game can be extended to include setting up a band and designing a visual identity for it (logo; album art).

Teaching aids:

- examples of programme music. Nikolai Rimsky-Korsakov's *Flight of the Bumblebee* by Nikolai Rimsky-Korsakov, well known to some of the children, is a good starting point for a talk on whether music can tell a story. The same goes for some pieces by Dmitri Shostakovich or Sergei Prokofiev. Another option is to use soundtracks, jazz, or noise-inspired pieces – or simply ask the participants in the workshop what they like listening to and what that music brings to their minds.

Workshop materials:

- electrical conduits,
- cardboard boxes,
- jars and cans,
- groats, grains, peas,
- pots,
- bags and plastic wraps,
- sticks,
- elastic and rubber bands,
- any objects and scraps that can be used to make sounds, broken instruments.

Working methods:

- a talk illustrated with examples of the concepts explained – the content should be easy to understand: avoid abstract concepts, simplify specialist terms, and show example works to the children;
- individual and group workshop activities.

Other proposed lesson topics

Creating collages, ebru (“marbling”) workshops, building solid objects, a lesson inspired by kinetic sculpture, creating installations, play in the form of games, lessons about colours, composition and perspective in painting, rudiments of the analysis and interpretation of artworks, designing graphic signs, ideograms, scripts, and codes.

Bibliography

Animacja kultury. Doświadczenie i przyszłość, ed. Grzegorz Godlewski, Iwona Kurz, Andrzej Mencwel, Michał Wojtowski, Warsaw 2006.

Bąbel Przemysław, Wiśniak Marzena, *12 zasad skutecznej edukacji. Czyli jak uczyć, żeby nauczyć*, Sopot 2015.

Berger Andrea, *Self-regulation: Brain, cognition, and development*, Washington, DC 2011.

Berger John, *Sposoby widzenia*, trans. Mariusz Bryl, Warsaw 2009.

Beuys Joseph, *Każdy artystą*, trans. Krystyna Krzemień, in: *Zmierzch estetyki – rzekomy czy autentyczny?*, ed. Stefan Morawski, vol. 2, Warsaw 1987.

Białecka-Pikul Marta, Stępień-Nycz Małgorzata, *Dynamika rozwoju emocjonalnego*, in: *Dynamika emocji. Teoria i praktyka*, ed. Dariusz Doliński, Wojciech Błaszczak, Warsaw 2009.

Bornstein Marc H., *Pomiędzy opiekunami a ich potomstwem: dwa rodzaje interakcji i ich konsekwencje dla rozwoju poznawczego*, in: *Dziecko wśród rówieśników i dorosłych*, ed. Anna Brzezińska, Grzegorz Lutomski, Błażej Smykowski, Poznań 1986/1995, pp. 39–64.

Bożewicz Marta, *Aktywności i doświadczenia Polaków w 2019 roku*, Public Opinion Research Centre (CBOS) Research Report no. 17/2020, Warsaw 2020. Available online at https://www.cbos.pl/SPISKOM.POL/2020/K_017_20.PDF, accessed 25.10.2020.

Brewer James B. et al., "Making memories: Brain activity that predicts how well visual experience will be remembered", *Science* 1998, vol. 281, issue 5380, pp. 1185–1187.

Brock Laura L., Rimm-Kaufman Sara E., Nathanson Lori, Grimm Kevin J., "The contributions of 'hot' and 'cool' executive function to children's academic achievement, learning-related behaviors, and engagement in kindergarten", *Early Childhood Research Quarterly* 2009, vol. 23, issue 3, pp. 337–349.

Brogowski Leszek, *Sztuka w obliczu przemian*, Warsaw 1990.

Brzezińska Anna I., *Psychologiczne portrety człowieka. Praktyczna psychologia rozwojowa*, Gdańsk 2019.

Clair Jean, *Kryzys muzeów*, trans. Jan Maria Kłoczowski, Gdańsk 2009.

Clottes Jean, Lewis-Williams David, *Prehistoryczni szamani. Trans i magia w zdobionych grotach*, trans. Anna Gronowska, Warsaw 2009.

Csikszentmihalyi Mihaly, *Intrinsic motivation and effective teaching*, in: *Applications of flow in human development and education*, Dordrecht 2014. Available online at https://doi.org/10.1007/978-94-017--9094-9_8, accessed 23.03.2021.

Czerniawska Ewa, Ledzińska Maria, *Jak się uczyć?*, Bielsko-Biała 2007.

Filipiak Ewa, *Z Wygotskim i Brunerem w tle: słownik pojęć kluczowych*, Bydgoszcz 2011.

Flynn Emma, *Underpinning collaborative learning*, in: *Self and social regulation: Social interaction and the development of social understanding and executive function*, ed. Bryan Sokol, Ulrich Muller, Jeremy Carpendale, Arlene Young, Grace Iarocci, New York 2010.

Dworakowska Zofia et al., *TERAZ! Animacja kultury. Culture Animation NOW!*, Warsaw 2008. Available online at https://ikp.uw.edu.pl/wp--content/uploads/2015/04/Teraz.-Animacja-kultury.pdf, accessed 29.06.2021.

Garstka Tomasz, *Psychopedagogiczne mity. Jak zachować naukowy sceptycyzm w edukacji i wychowaniu*, Warsaw 2016.

Garstka Tomasz, Śliwerski Andrzej, *Psychopedagogiczne mity 2. Dlaczego warto pytać o dowody*, Warsaw 2019.

Georges-Henri Luquet, *Le dessin enfantin*, Paris 1927.

Holmes Jeffrey D., *Edukacja i uczenie się. 16 największych mitów*, trans. Ewa Czerniawska, Warsaw 2019.

Idzikowska Weronika, Nęcka Monika, *Projektuj z dziećmi. Edukacja kulturowa w praktyce*, Kraków 2016.

Jagodzińska Maria, *Od dziecka do dorosłego – rozwój pamięci*, in: eadem, *Psychologia pamięci. Badania, teorie, zastosowania*, Gliwice 2008.

Jagodzińska Maria, *Psychologia pamięci. Badania, teorie, zastosowania*, Gliwice 2008.

Kielar-Turska Maria, *Średnie dzieciństwo – wiek przedszkolny*, in: *Psychologia rozwoju człowieka*, ed. Janusz Trempała, Warsaw 2011.

Kołodziejczyk Anna, *Późne dzieciństwo – młodszy wiek szkolny*, in: *Psychologia rozwoju człowieka*, ed. Janusz Trempała, Warsaw 2011.

Kowalik Stanisław, *Siedem wykładów z psychologii sztuki,* Poznań 2020.

Ledzińska Maria, Czerniawska Ewa, *Psychologia nauczania. Ujęcie poznawcze*, Warsaw 2011.

Mencwel Andrzej, *Wyobraźnia antropologiczna*, Warsaw 2006.

Musatti Talia, *Wczesne relacje rówieśnicze według Piageta i Wygotskiego*, in: *Dziecko wśród rówieśników i dorosłych*, ed. Anna Brzezińska, Grzegorz Lutomski, Błażej Smykowski, Poznań 1986/1995, pp. 107–146.

Nęcka Edward, *Psychologia twórczości*, Sopot 2012.

Nęcka Edward, Orzechowski Jarosław, Szymura Błażej, *Psychologia poznawcza*, Warsaw 2013.

Pankowska Krystyna, *Kultura – sztuka – edukacja w świecie przemian*, Warsaw 2013.

Paquet Marcel, *René Magritte 1898–1967: Thought rendered visible*, Cologne 2017.

Piaget Jean, *Mowa i myślenie dziecka*, trans. Janina Kołudzka, Warsaw 2005.

Piaget Jean, *The origins of intelligence in children*, trans. Margaret Cook, New York 1952.

Picasso Marina, Valentin Louis, *Picasso, my grandfather*, New York 2002.

Piscitelli Barbara, Everett Michele, Weier Katrina, the QUT Museums Collaborative, *Enhancing young children's museum experiences: A manual for museum staff*, Canberra 2003.

Przetacznik-Gierowska Maria, Włodarski Ziemowit, *Psychologia wychowawcza*, vol. 1, Warsaw 1998.

Raube Sławomir, *Sztuka jako symboliczna interpretacja świata w filozofii Ernsta Cassirera*, "IDEA – Studia nad strukturą i rozwojem pojęć filozoficznych," no. XXVII, Białystok 2015.

Read Herbert, *Wychowanie przez sztukę*, trans. Anna Trojanowska-Kaczmarska, Wrocław 1976.

Robinson Henry Peach, *The elements of a pictorial photograph*, Bradford–London 1896.

Rothbart Mary K., Ellis Lesa K., Posner Michael I., *Temperament and self-regulation*, in: *Handbook of self-regulation: Research, theory, and applications*, ed. Roy F. Baumeister, Kathleen D. Vohs, New York 2004.

Schaffer David R., Kipp Katherine, *Psychologia rozwoju. Od dziecka do dorosłości*, trans. Patricia Sorensen, Martyna Wojtaś, Gdańsk 2015.

Schreiber Hanna, *Koncepcja „sztuki prymitywnej". Odkrywanie, oswajanie i udomowienie Innego w świecie Zachodu*, Warsaw 2012.

Shugar Grace, *Interakcja, koordynacja linii działania i funkcjonowania językowego*, trans. Barbara Mroziak, Warsaw 1982.

Sigelman Carol, Rider Elizabeth, *Cognition*, in: *Life-span human development*, 7th ed., Boston 2011.

Sigelman Carol, Rider Elizabeth, *Health and physical development*, in: *Life-span human development*, 7th ed., Boston 2011.

Smith Peter K., Cowie Helen, Blades Mark, *Children's understanding of mind*, in: *Understanding children's development*, Wiley-Blackwell 2011.

Spitzer Manfred, *Jak uczy się mózg*, trans. Małgorzata Guzowska-Dąbrowska, Warsaw 2012.

Szmidt Krzysztof J., *Pedagogika twórczości*, Sopot 2020.

Szmidt Krzysztof J., Płóciennik Elżbieta, *Myślenie pytajne. Teoria i kształcenie*, Łodź 2020.

Szuman Stefan, *Rysunki i malowanki dzieci*, in: idem, *O sztuce i wychowaniu estetycznym*, Warsaw 1969, pp. 312–357.

Szuman Stefan, *Sztuka dziecka. Psychologia twórczości rysunkowej dziecka*, Warsaw 1990.

Vygotsky Lev S., *Narzędzie i znak w rozwoju dziecka*, trans. Barbara Grell, Warsaw 1978/2006.

Vygotsky Lev S., *Wybrane prace psychologiczne*, trans. Edda Flesznerowa, Jozef Fleszner, Warsaw 1971.

Vygotsky Lev S., *Zabawa i jej rola w rozwoju psychicznym dziecka*, trans. Anna Brzezińska, Tomasz Czub, in: *Dziecko w zabawie i świecie języka*, ed. Anna Brzezińska, Tomasz Czub, Grzegorz Lutomski, Błażej Smykowski, Poznań 2000.

Zalewska-Pawlak Mirosława, *Sztuka i wychowanie w XXI wieku. W poszukiwaniu zagubionej teorii sztuki życia i sztuki w wychowaniu*, Łodź 2017.

Zelazo Philip David, Carlson Stephanie M., Kesek Amanda, *The development of executive function in childhood*, in: *Developmental cognitive neuroscience: Handbook of developmental cognitive neuroscience*, ed. Monica Luciana Collins, Charles A. Nelson, Cambridge, Massachusetts 2008.

Zimbardo Philip G., Johnson Robert L., McCann Vivian, *Psychologia. Kluczowe koncepcje*, vol. 2. *Motywacja i uczenie się*, trans. Małgorzata Guzowska-Dąbrowska, Warsaw 2010.

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