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## LEGO bricks – a toy for all the family

### Klocki LEGO – zabawka rodzinie zaangażowana

#### Abstract

**Introduction.** LEGO bricks are undoubtedly one of the most famous and strong construction toy brands. The name comes from the Danish phrase *leg godt* which means “play well”. The bricks have limitless capacity. They are used not only for playing but increasingly often in the educational context, from kindergartens to universities. LEGO is creativity and play as well as stimulation of mental development. The bricks excite the imagination of both children and adults.

**Aim.** The aim of the article is to show the Danish bricks as a tool of joint play, during which children and adults cooperate to build constructions. Family members focus on the collaborative creative process with key social concepts such as collaboration, shared attention, shared achievement, division of labour, sharing, role reversal, eye contact, verbal and non-verbal communication. The second layer focuses on presenting a modern family model based on selected sets from the LEGO City series.

**Materials and methods.** The author analysed the literature on the subject, magazines, online sources and LEGO social campaigns and selected City sets.

**Results.** Nowadays, they are boldly encroaching the adult world, because they have become a strong icon of pop culture and the socially engaged “toy”. LEGO encourages adults to play together with their children; promotes pro-health, pro-ecological attitudes; supports people with disabilities; supports different family models along the lines of “Everyone Is Awesome”.

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**Keywords:** bricks, LEGO, toy, game, family, education, pedagogy.

### Abstrakt

**Wprowadzenie.** LEGO jest bez wątpienia jedną z najbardziej znanych marek zabawek na świecie. Jej nazwa wywodzi się od słów *leg godt*, co po duńsku znaczy „baw się dobrze”. Klocki mają nieograniczony potencjał, wykorzystywane są nie tylko w zakresie stymulowania dzieci podczas zabawy, lecz także coraz częściej na płaszczyźnie edukacyjnej. LEGO to kreatywność i zabawa oraz pobudzanie rozwoju intelektualnego. Klocki te wpływają na wyobraźnię dzieci oraz dorosłych.

**Cel.** Celem artykułu jest ukazanie duńskich klocków jako narzędzia zabawy, podczas której dzieci i dorośli współpracują ze sobą, budując konstrukcje. Członkowie rodziny skupiają się na wspólnym procesie twórczym, mając na uwadze kluczowe koncepcje społeczne, takie jak współpraca, wspólna uwaga, wspólne osiągnięcie, podział pracy, dzielenie się, zamienianie się rolami, kontakt wzrokowy, komunikacja werbalna i niewerbalna. Drugim celem artykułu jest przedstawianie współczesnego modelu rodziny w oparciu o wybrane zestawy z serii LEGO City.

**Materiały i metody.** Autor dokonał analizy literatury przedmiotu, czasopism, źródeł internetowych oraz kampanii społecznych LEGO i wybranych zestawów klocków LEGO City.

**Wyniki.** Współcześnie klocki LEGO coraz śmielej wkraczają w dorosły świat, w którym stają się silnym elementem popkulturowym oraz „zabawką” społecznie zaangażowaną. Firma LEGO zachęca dorosłych do wspólnych zabaw z dziećmi, propaguje postawy prozdrowotne i proekologiczne. Wspiera także osoby z niepełnosprawnościami oraz popiera różne modele rodziny w myśl zasady „każdy jest niesamowity”.

**Słowa kluczowe:** klocki, LEGO, zabawka, zabawa, rodzina, edukacja, pedagogika.

## Introduction

LEGO is undoubtedly one of the best-known toy brands. Its name is derived from the word *leg godt*, which means “have fun” in Danish. Whereas its motto is the words: “The best is never too good”. Every year, between 80 and 90 million children around the world receive a set of Danish bricks, but little does anyone know that as many as 10 million adults also buy them for themselves. After all, the LEGO company has for years promoted the idea that every adult should let their inner child come to the fore. Since the early 1930s, it has been providing experiences for children young and adults, emphasising the importance of play in people’s lives (Andersen, 2022). In the process, it crosses social and cultural divides, always keeping up with the development of society. Over the 90 years of its existence, LEGO has not only become an important element of popular culture but above all a toy that is socially, educationally and even therapeutically involved. This is evidenced by the numerous series that have changed over the years – from LEGO DUPLO to LEGO

Adults<sup>1</sup>. LEGO is a journey into the world of fantasy and unbridled imagination. The motto behind the bricks' designers is included in the catalogue in the words:

[...] delight builders of all ages and ignite their limitless creativity. Give younger children more opportunities to play and allow them to gain confidence. Older children and adults can build more complex models and have immersive adventures (LEGO Catalogue January-June 2023, p. 2).

The LEGO company is also increasingly brave in welcoming the so-called "AFOLI", or adult fan of LEGO, on its website, under the tab "Adults welcome" or in numerous advertising campaigns. LEGO for adults is characterised by its high-quality and collectable sets. The bricks are carefully selected and designed for larger hands. They are guided by the principle: "In today's hectic world, LEGO sets for adults allow you to take a break from everyday life and fully focus on attentive building. Creative relaxation. A zen zone. A welcomed inspiration" (*Czy zestawy LEGO nadają się dla dorosłych?* [Are LEGO sets suitable for adults?], 2023). For every adult and child, an interesting place to spend time together is, in addition to Legoland, the LEGO House, or LEGO Museum, established in the city of Billund (Denmark) in 2017. It is where the company proudly presents its history. The building is full of amazing attractions spread across six interactive zones (Hugo, 2017). In this globally unique place, LEGO fans can develop their creativity among 25 million bricks (LEGO House, 2023).

The history of LEGO bricks is composed of many factors that require separate elaboration. It is possible to distinguish several key moments in the development of this global brand. On October 12, 1932, a carpentry workshop founded by Ole Kirk Christiansen was established in Billund, Denmark. In the initial phase of the company's existence, toys were not manufactured, only over time did they start to be made from wooden waste. This was a key decision for the development of the company (Ciemcioch, 2016). The LEGO company offered a wide range of toys made from wood in the years before the creation of plastic bricks. In the 1930s, LEGO's wooden toys included the first cars and trains. In 1932, the first catalogue with LEGO products presented 28 wooden toys. The most popular toy of this type was produced in 1935 – the LEGO Duck. The first plastic toys did not appear

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<sup>1</sup> In the LEGO catalogue (January-May) 2023 the following series can be found: DUPLO, Disney - Mickey and Friends, Marvel Spidey and Super Buddies, Disney 4+, City 4+, Friends 4+, NINJAGO 4+, Classic, Disney, Friends, DOTS, Creator, Disney Pixar Buzz Lightyear, Minifigures, Super Mario, City, NINJAGO, Jurassic World, Harry Potter, Avatar, DC, Marvel, Speed Champions, Star Wars, Technic, and Adults.

until 1947 to complement the line of wooden items. These included a rattle in the shape of a fish and a sailor figure that slid down a string (Hugo, 2017). In 1957, the blocks became a worldwide success, thanks to improvements in their design (the connectivity of the blocks and the stability of the joints using a tab system). On January 28, 1958, at 13:58, an application was submitted to the Danish Patent and Trademark Office in Copenhagen for the unique design of the LEGO brick (Ciemcioch, 2016).

LEGO's vision has evolved over the decades, and the company has experienced financial ups and downs, sometimes also misguided ideas. On March 7, 1978, Klejd Kirk Kristiansen argued that the company's goal was to make it clear to the youngest children and their parents that LEGO was more than just bricks – in the new strategy, “consumers will begin to see LEGO not just as «construction toys», but as «creative and educational toys of high quality designed for children of all ages»” (Lunde, 2019, pp. 28–29). This was the start of an unbroken string of successes. In 2021, LEGO became the largest toy company in the world by revenue. To this day, it still ranks as such (Sandford, 2023). LEGO's bi-annual catalogues feature photographs of children's play with adults, guided by the principle: “Provide a great start to your child's life adventure with [...] learning and play sets” (LEGO catalogue January-June 2023, p. 4). Already in 2018, LEGO encouraged parents to play with their children in its global advertising campaign “Don't bother playing”. The Danish brick manufacturer drew attention to the importance of play in a child's development. It encouraged parents to give up the use of phones and computers during this time and devote their attention to their children. The campaign lasted 21 days, as that is all it takes to change habits, according to the company (*Lego w globalnej kampanii zachęca rodziców do zabaw z dziećmi* [Lego in global campaign encourages parents to play with their children], 2018).

In the literature, we can find many approaches to the term family. One of the first authors who undertook to define the family on Polish grounds was Maria Ziem-ska (1973, pp. 10–11). In her opinion, “the family is a small, natural social group, in which the central roles are those of the mother and father, constituting a relatively permanent whole, subject to dynamic transformations connected mainly with the course of life of the individuals comprising it”. The concept of family, contrary to popular opinion, is given many meanings and senses. The literature very often fails to keep up with social changes, definitions are rapidly devalued. It is therefore difficult to find a single model family. The small family is, admittedly, the most common form, but not the dominant one (Żurek, 2012). The transformation of the family is also related to changes in the macro-structures of society. Its internal life is permeated by the economic situation of the country, political, social and economic processes, the development of knowledge, technology, progress, and development

in the means of mass communication, and changes in material and spiritual culture (Segiet, 2004). The establishment of modern society is increasingly associated with the breakdown of interpersonal ties, with the result that young people increasingly see family and marriage as desirable values (Dyczewski, 2002). The processes of individualisation affect marriage, family and parenthood not in the sense of the “end of the family” or the creation of a society of individuals, but of changes in the forms of family life, of its opacity in the relationships between people, whether within or outside the family (Rewera, 2012). The family, colloquially referred to as the basic cell of society (Adamski, 2006), “is a very important educational and socialisation environment that significantly influences the formation of certain values, beliefs, and attitudes, as well as aspirations and life aspirations in children” (Kupisiewicz, Kupisiewicz, 2009, pp. 155–156). Among its many functions, one of the most important seems to be the socialisation and upbringing function, in which the family is supposed to undertake activities aimed at preparing the child for life in society by providing it with knowledge about the world, basic behavioural patterns, customs, specific moral values, cultural heritage, it is also supposed to prepare it to perform social roles (Wollman, 2011). These functions are also fulfilled by children playing together with their parents using LEGO bricks as socially engaged toys.

### **LEGO – a tool for children to play together with parents**

No doubt LEGO is the strongest toy brand aimed at families – children and adults. During its history, the bricks have been associated with many generations. The first generation included the early products of the 1950s, created based on simplicity and construction experience. The 1960s products were enriched with moving parts in the form of wheels (including gears). The third generation, meanwhile, was created in the 1970s and was based on minifigures that allowed for thematic division and role-playing, which consequently facilitated “playing house”. The new generation are products that introduce intelligence and behavioural elements into play. The strategic goal was and still is to make the LEGO brand represent more than just toys. It is to be associated with human development through a lifelong learning process (Lunde, 2019). LEGO is therefore about collaborative play, where children and adults work together to build structures. This task requires the division into different, but interdependent, roles; and interaction, as well as verbal and non-verbal communication, is necessary between participants. Play partners focus on the joint creative process, keeping in mind key social concepts such as cooperation, joint attention, joint achievement, division of labour, sharing, swapping roles, eye contact, and verbal as well as non-verbal communication.

Play, next to learning and work, is one of the main forms of human activity, undertaken willingly, of a non-utilitarian nature, combined with positive emotional and often cognitive sensations (Kupisiewicz, Kupisiewicz, 2009). According to Łukasz Gołębiowski (1831, p. 5), “Fun is the aim of play at its simplest [...]. It is sought after by both childhood, middle age, and old age, it is not rejected even by late old age”. Games have always had a socialising function, preparing girls and boys for their roles in society. Games are even an attribute of humanity. In the case of adult play, these involve the construction of a parallel reality to ordinary life, while in the case of children, games are a way of mastering reality (Żołądź-Strzelczyk, Kabacińska, 2008).

From earliest times, children have used a variety of objects known as toys to engage in play. Alongside the incidental ones (natural, such as sand, mud, or chestnuts), there were also toys proper, which were specially made objects prepared for play by adults or children themselves. The origins of such toys can be traced back to distant times, but it can be argued that the basic stock of children’s toys was formed in the Middle Ages (Żołądź-Strzelczyk, Kabacińska-Łuczak, 2012). A toy is “a material object specially made for play, which contains cultural content [...], shapes physical, mental or emotional development” (Bujak, 1988, p. 24). In pedagogical terms, a toy “is an object (or set of objects) made to stimulate a child’s playful activity (motor, mental or emotional), providing an opportunity to broaden experience, play imagination and graded reality” (Dunin-Wąsowicz, 1977, p. 24).

The classifications of toys are manifold, created according to the types of play. The classification of toys in pedagogical terms is mainly based on Peter Antonovic Rudik’s classification of play, which distinguished motor, constructional, thematic and didactic play. Bricks are classified as construction toys, alongside sand and clay. Constructive toys “exercise the precision of movements, influence the development of thought processes [...] shape certain personality traits, systematicity, perseverance, and ability to overcome difficulties” (Kabacińska-Łuczak, Wojewoda, 2020, pp. 79–81). It is worth noting that

[...] blocks have their origins in antiquity. Back then, children built various constructions (houses, towers) out of shapeless pieces of clay or wood. By contrast, bricks as an educational toy were created from stone by the German educationalist Stanislaw Tillich. He showed that these inconspicuous toys develop a child’s spatial imagination, intelligence and perceptiveness. In the shops, Tillich bricks – as the bricks created by the aforementioned educationalists were called – arrived at the turn of the 18th and 19th centuries. However, mass production did not begin until the late 19th century. These were wooden bricks. After World War II, plastic building blocks in a variety of forms became particularly popular, with LEGO leading the way (Cywińska, 2010, p. 239).

In the second half of the nineteenth and early twentieth century, bricks as building toys were intended to “entertain the boy” (Nawrot-Borowska, 2010, p. 180). Today, LEGO bricks are not only a toy for children, but also a hobby, a passion, and a journey into the world of childhood for many adults.

Danish bricks also focus on creating reality, as exemplified by the social campaign “Rebuild the world”, which

[...] is to focus on the power of creativity and its ability to change the world. It encourages children’s creativity as an essential skill to thrive in an ever-changing environment. Playing with bricks allows them to build and rebuild ad infinitum while stimulating their imagination to create creative solutions, extraordinary stories and new worlds (*Rusza kampania LEGO „Rebuild the world”* [LEGO “Rebuild the world” campaign launches], 2019).

The campaign aims to revolutionise the world of Danish building block play and demonstrate its different aspects. “Rebuild the world” allows children to create their own city, their own world or even a universe where nothing will be obvious and overcoming difficulties can unleash creativity and ingenuity in solving them. The main slogans behind this campaign are: “a way to play”, “a way to think”, “a way to run a brand”, “a way to see the world”, and “an invitation”. LEGO is a way to play in the name of the principle of “build things you love – with or without instructions. LEGO bricks and a child’s imagination always go hand in hand”, it is also a way of thinking: “playing with LEGO bricks helps children to develop their creativity and encourages them to experiment, break the rules and not give up when things don’t work out”. The third idea behind “Rebuild the world” is a method of leading the brand – “we are constantly coming up with new ways to make a positive impact on children, the planet and play”. LEGO is also a way of seeing the world, as “all it takes is a little optimism and creativity, and together we can all build a better version of our world” (*Rusza kampania LEGO...*, 2019), and an invitation not only for children but also for adults, as “where adults see challenges, children see opportunities. Imagine what we could do if we all looked at the world through the eyes of a child!” (*Rusza kampania LEGO...*, 2019).

The campaign idea is for children of all ages to spend time together with their friends and parents. It is free time that can have multiple educational benefits. After all, play and education have always filled a significant part of a child’s life. Frequently, they have intermingled. The play contained educational elements, while education in turn was carried out through play (Żołądź-Strzelczyk, Kabacińska-Łuczak, 2012). Play accompanies a person “from the cradle to death, taking on ever different forms in the course of life, always characterised by an element of enjoy-

ment” (Kaczmarek, 1997, p. 6). The joint play of children and adults with LEGO bricks has a positive effect on everyone in the family. Nowadays, as Erik Erikson argued, the adult during play “enters another, as it were, parallel reality, while the playing child moves forward, reaches successive phases of mastery over objects and situations” (Erikson, 1997, p. 232). The majority of adults are the creators of “Lego MOCs” (My own creation), building structures of their own creation. These include mainly men born in the 1970s, 1980s, and 1990s, who have returned to the building with nostalgia, following the principle that “play is for all people, regardless of age it has a great developmental and educational value” (Czaja-Chudyba, 2006, p. 22). However, the group of women using LEGO is also growing every year. LEGO as a construction toy is a commodity for all “children (dads)” and works well for different age ranges (Sadowska, 2016). It can be assumed that playing with LEGO bricks together with children will more often involve fathers than mothers. The LEGO company for a selected set of bricks has prepared several instructions to encourage each family member to build together.

### **What is the family in the LEGO world and what attitudes does it promote?**

The motif of “playing house” originated at the end of the 15th century, but in the 17th century, the fashion for dolls’ houses began. The most popular contemporary, Barbie, also has a lavishly equipped house (Żołądź-Strzelczyk, Kabacińska, 2008). Playing with LEGO City sets is entertainment for the child and relaxation for the parent. It is spending time together where, through play, parents have the opportunity to get to know their children better. Situations from city life can be a good reason for free play, where children can decide for themselves what will happen in the city from the bricks. LEGO bricks from the City series are an ideal tool for this, allowing them to build a city by combining the different sets according to their ideas (*Zabawa dla dzieci i dorosłych przy klockach: Kolekcje od LEGO City* [Fun for children and adults at the bricks: Collections from LEGO City], 2023). In 2023, there are several sets from the LEGO world in which a family is represented. These are the sets from the City series: the January 2021 set “Family house” (catalogue number 60291), the January 2023 set “Family house and electric car” (catalogue number 60398), and “Cosy house” (catalogue number 31139) from the Creator series, which premiered in March 2023. The minifigures in the world of Danish bricks are residents of single-family homes. It was not until 2023 that LEGO unveiled the “Apartment building” set (catalogue number 60365), which is a multi-family home aimed at the affluent section of society. It is one of the few sets in which grandma can be seen, reflecting the low popularity of multi-generational families.



The family in the world of bricks is generally based on a 2 + 1 model, i.e., parents and child, usually of the male gender. Only the “Family home” set depicts a 2 + 2 family model, where the children are male and female. The Danish company draws attention to the challenges of gender stereotyping, as exemplified by the “Girls can do anything” campaign (*Dziewczynki mogą wszystko* [Girls can do anything], 2022) or the “Day at school” set (catalogue number 60329), which features a child among the pupils whose gender cannot be clearly categorised. The function of toys has always been socialising, which is why there has long been a division between toys for girls (dolls) and for boys (horses, balls). Nowadays, differentiation can be seen in many toy shops according to the gender of the child. This division is clear (Krajewska, 2003). The girls’ section is filled with toy kitchens, irons and hooovers, while the boys’ section is filled with remote-controlled cars or superhero costumes. According to Beata Kucejko, LEGO marketing director for Poland, Ukraine, and the Baltic States:

[...]The LEGO brand believes that every child should have the opportunity to develop their full potential, regardless of gender [...] We want to inspire us, adults, to look at children not through the lens of their gender, but through the lens of who they are, what character traits they have, how they like to play and what interests them (*Dziewczynki mogą wszystko: Marka LEGO inspiruje do zabawy wolnej od stereotypów* [Girls can do anything: LEGO brand inspires stereotype-free play], 2022).

These words are perfectly aligned with the aim of the “Girls can do anything” campaign. Even though girls do not notice gender divisions, parents are more likely to encourage them to play games stereotypically attributed to the female gender, which in effect can limit freedom of self-expression and self-development. Research in Poland has shown that as many as 90 % of girls aged 6 to 14 agree with the statement that “it’s ok if girls want to play football and boys want to dance ballet” (*Dziewczynki mogą wszystko: Marka LEGO...*, 2022). However, certain patterns are reproduced by the next generation. The campaigners draw attention to the fact that modern girls are witnessing a revolution taking place in society and the activities of pro-women and feminist movements. The young generation is therefore open to diversity and gender equality. Freedom of action and creativity allow children to explore the unknown, cope with the challenges of adulthood and strengthen their self-esteem (*Dziewczynki mogą wszystko*, 2022).

LEGO bricks have become a pop culture element and, in recent years, a socially engaged toy. LEGO focuses on diversity, emphasising the fact that “everyone is amazing! Because we appreciate every LEGO builder” (Nowak-Kluczyński,

2022). It is under this slogan that the “rainbow” Lego set “Everyone is awesome” was created.

Customers will find bricks in the set, as well as brand new character figures in 11 colours, which together will form a rainbow. However, it will not only be the rainbow symbol used by the LGBT+ community, but also white, pale blue, pink, black, and brown [...]. The choice of colours is intended to reflect not only sexual diversity but also the background of people in the LGBT+ community. All minifigures except for the purple one have no gender assigned, which is meant to express individuality (Nowak-Kluczynski, 2022).

Furthermore, it is the purple minifigure that is a tribute “to all fantastic drag queens” (Nowak-Kluczyński, 2022). A similar message can be found in the “Queer Eye – the fab five’s flat” set from the LEGO ICONS series, aimed at fans of the Queer Eye series (in the Polish translation: *Porady różowej brygady*), which is a representation of the flat of the five boys from Atlanta. The set’s watchwords have become the words “positivity” and “kindness”. The permanent characters of the series are men (homosexuals) who, in each episode, help one participant to metamorphose their appearance and their flat and to change their perception of themselves as well as the world around them.

In the Danish building bricks world, the family has their pet, which is usually a dog – a Labrador in set 60291, which is looked after by the daughter, who washes it in a special bowl; a German Shepherd in set 60398, which the son looks after; and an unspecified breed in set 31139. In the latter, you can also find a snail or a birdhouse hanging on the front façade of the house, which can indicate a love of animals.

In LEGO City, parents, especially fathers, engage in joint play with their children, often sharing their hobbies. In set 60291, a father and son play hockey, and in set 31139, a father with a cup in his hand watches his son play with a remote-controlled car. Sport occupies an important place in the world of Danish bricks – for example, the minifigures ride bicycles, play football, or tennis, and are popularisers of combat or competitive sports. In the construction world of the sets indicated, the younger generation has its passions or interests. In the “Family home” set, the son’s room is furnished with a poster of an RPG game, which may be indicative of console play (the pad and console are in the living room), and a samurai katana, which may be considered a love of sporting combat. A guitar can be found in the daughter’s room, as well as a paintbrush for painting pictures. In the “Cosy house” set, apart from the remote-controlled car, LEGO bricks are discernible, a reference to real sets or constructions. In the son’s room, the “Family home and electric car” set,

for example, has space for a console pad and a TV set. Consoles have been placed in several sets, and the showpiece of the gaming face of the LEGO City residents is the “Game tournament truck” set (catalogue number 60388).

With the minifigures, LEGO also fights against social exclusion. In a world made of bricks, there are people with disabilities: in a wheelchair (including a sports wheelchair) – the “Car tuning workshop” set (60389), with a prosthetic leg – the “Grocery store” set (60347), with a hearing aid - the “Downtown noodle shop” set (31131), with a guide dog – the “Town centre” set (60292). LEGO City residents also include Paralympic athletes. A mini doll named Autumn, from the Lego Friends series – “Liann’s room” (41739) without a left forearm and a dog with hind limb paresis – “Nova’s room” (41755) – appeared in 2023. In the sets analysed in this article, minifigures with hearing aids can be spotted – in set 60398 the son has one and in set 31139 the father has one.

The LEGO company produces 340 million minifigures a year, with a prototype created in 1978. Its creator is Jens Nygard Knudsen (Farshtey, Lipkowitz, 2015). They can become extremely helpful when expressing emotions in play. The breakthrough year was 2001, when double faces appeared on the heads of the minifigures, where, for example, on one side the face expressed happiness and contentment, and on the other side, fear, surprise, or anger. Lego does not impose emotions on the characters and heroes of the sets, noting that these can change during play.

LEGO also promotes eco-friendly attitudes in its sets. Food trucks with pizza or ice cream are replaced by vans with fruit, vegetables, and juices. In addition to pizzerias, patisseries, or ice cream parlours, there is also a fruit and vegetable shop in LEGO City. The LEGO houses, often with lush plants on the facade and a flowered garden, have been equipped with photovoltaic panels (60291, 60398) and the cars are electric (60291, 60398). The houses indicated have vehicle charging stations. A special sewage disposal system to minimise water wastage can also be seen. Bicycle paths and charging stations for electric scooters have been implemented in the city and rubbish trucks adapted for waste separation have taken to the roads. Taking care of the energy source, each builder can construct a wind turbine, thanks to a specially designed kit (10268). In 2021, LEGO announced its intention to replace the plastic inner packaging in the box sets with paper and paper instructions are already made from inferior paper. Today, it is also experimenting with prototype bricks made from recycled plastic. In addition, in 2018 the company committed to phasing out plastic completely by 2030 and switching to plant-based materials (Sandford, 2023). The minifigures in the indicated sets have an increasing focus on healthy eating. In the “Family house”, a barbecue with a chicken leg on the balcony of the house can be found, as well as a hot dog or a fizzy drink. The food includes also an apple, cherries, and carrots grown in front of the house. Looking into the fridge

of the “Family house and electric car” set, we can see milk. Importantly, the house has a hothouse where vegetables – tomatoes, carrots, and parsley – are grown. The LEGO family and its world are definitely following the real thing, keeping in mind social transformations on many levels.

## **Conclusion**

LEGO means creativity and fun, learning patience, shaping technical sense (LEGO Technic series), stimulating intellectual development or spending leisure time together. LEGO bricks develop a passion for storytelling, exploration and play, and stimulate the imagination of children and adults through shared play. After all, LEGO bricks are a prop-object that “only starts to be a toy thanks to the child’s imagination and actions” (Brzezińska et al., 2011, p. 14). When used in therapy, they improve concentration and focus, logical thinking, and develop fine motor skills. They create an intergenerational bridge through joint play. Building together, thanks to separate instructions, provides an opportunity for family time. There is no doubt that LEGO is a toy for everyone.

[...] learning through play will spark creativity and boost confidence in toddlers. Older children will be enthralled by the countless stories, detailed models and ambitious constructions. For adults, we have prepared a relaxing area where they can create and share their passions (LEGO Catalogue January-May 2022, p. 2).

In 2009, it was estimated that there were 62 LEGO bricks for every person in the world. In 2017, it was already 102 bricks (Hugo, 2017).

Playing with building blocks means all-round development, as it provides an opportunity to: improve manual skills, develop coordination of visual perception with hand movement, shape precision in construction, improve overall motor coordination, perform various spatial operations, develop serial skills, learn the sequence of successive actions, develop linguistic competence, understanding of speech and language expression, and develop the sense of rationalisation and the ability to look for new, non-stereotypical solutions (Cywińska, 2010). On January 28 each year, as mentioned, International LEGO Day is celebrated. On this day, especially in pre-school and early childhood education, LEGOs become the main building block of every lesson and activity. Nowadays, they are used at every level of education to learn, repeat and consolidate content in an atmosphere of creativity and play (Staroń, 2022). Francesco Ciccolella, an international branding specialist, wrote in February 2002 in the pages of the LEGO company newspaper: “Fun and

learning are the core elements that make up the values of Lego, and one of our priority tasks is to make parents aware of this. They need to know that we can stimulate their children's development" (Hugo, 2017, p. 144).

The educational context requires a detailed, separate study. LEGO bricks are used, for example, in Polish, mathematics, history, chemistry, geography, robotics, and programming. Following Glenn Doman's principle that "play is learning, learning is play. The more play, the more learning", the "6 bricks" method (using LEGO DUPLO bricks) was developed for preschool and early childhood education. This method

[...] is based on the concept of using short and accessible exercises in everyday practice to make the process of acquiring knowledge and developing skills and attitudes valuable for their further adult life more attractive to children [...]. Children should be involved in a variety of ways, with the possibility of using their bodies and senses in the process. By arousing curiosity with attractive tasks, the learning process becomes more effective (Zalewska, Piasecki, & Śliwiński, 2020, p. 4).

This method develops one of the important functions of the brain, namely the ability to control one's own behaviour in pursuit of a specific goal. In addition, it provides the child with self-control, which forms the basis for other learning processes. It is exercises that develop perception, language competence, numeracy, physical fitness, as well as social and emotional competence are the leitmotif for team games. These exercises are open-ended, allow the child to be creative, provide opportunities for cooperation with others, can be adapted by the teacher to the child's level of development and, above all, are "good fun".

LEGO bricks have unlimited potential in Polish language teaching, where the brick constructions help in learning to read, thanks to the syllabication method, and also become a visualisation of individual chapters of school reading, the leitmotifs of contemporary children's and youth literature. According to Małgorzata Żytka, LEGO bricks in education are an interesting and multipurpose material for experimenting, creating models, stimulating spatial imagination, understanding relationships and relations, analysing mistakes, explaining, arguing, discussing, negotiating, and finding new applications (Szurek, 2017). The use of LEGO in designing activities for children provides opportunities to motivate learning, to integrate, for example, mathematical content with other areas of education, and to build an intuitive and then fully developed understanding of mathematical relations, relationships, and dependencies. The workshop of mathematics teachers in the context of using LEGO in teaching methodology was enriched by Michał Szurek with his

innovations. He counts among the advantages of LEGO bricks the simplicity that develops imagination, the bright, diverse colours, the variety of (simple) shapes and the fact that the bricks are compatible with each other (Szurek, 2017), for example, even when we combine bricks from the LEGO DUPLO series with the LEGO CLASSIC series. LEGO bricks in this method have been used to teach colours and shapes, solids, figures, symmetry, scale, volume, geometry, mathematical formulas, the Fibonacci sequence, Archimedes' spiral, or Pythagoras' theorem. At the pre-school and early childhood education levels, LEGO is a good methodical building block for addition, subtraction, multiplication and division.

Exploring reading at primary school or philosophical thought at university, the LEGO-LOGOS method by Jarosław Marek Spychała – philosopher and founder of the Academy of Philosophy in Warsaw – will prove helpful. This method is based, among other things, on working with a text. The task is to read a given thought, a fragment of a book, and visualise it using LEGO bricks. The block construction is an interpretation of the read text according to the question: “What did the author mean?”. The final stage is a discussion about the construction. Each builder presents his or her work and has the opportunity to ask questions of the other builders. As Jarosław Marek Spychała points out, “[...] the students' task is, therefore, to illustrate the reading passage in the form of a plastic construction as each of them understood it. They have no restrictions or guidelines as to how to depict, how to build” (Spychała, 2020, pp. 13–14). The LEGO-LOGOS teaching method is popular and effective. It is based on the idea that children learn through play. It is effective in teaching children the basics of maths, science, engineering, and technology. It also helps them to develop creativity and social skills. It is a way to engage pupils in activities that are in line with their passions and interests. The aim is to create an environment where students can explore and learn in their own way, at their own pace.

Many schools are using LEGO bricks in robotics or programming classes (including games and apps) thanks to specially dedicated sets. With help comes the platform for creating games and applications, but also for learning “Unity”. It is not only fun but also for learning how to build 3D objects. It is characterised as follows: “[...] many younger (sometimes older) people also have a lot of experience playing with LEGO bricks, which not only entertain but also teach construction, spatial planning, engineering, and creativity. By joining forces, «Unity» and LEGO have created an interesting combination – the LEGO Microgame project, where anyone can create a mini-game based on LEGO bricks” (Ross, 2021). It is a platform for creating unforgettable worlds and creating relationships between the elements of these worlds. LEGO is also an object used to create animations (Pagano, Pickett, 2017). The famous bricks have also found successful applica-

tion in geography (dedicated sets “Map of the world” 31203 and “Globe” 21332), chemistry (periodic table of elements created with LEGO bricks), and history. The latter includes the history of Poland with LEGO bricks (HistoryLand), which is an interactive model of important places, events and people who have influenced the course of Polish history, such as the settlement of Biskupin, the Battle of Grunwald, the Battle of Oliwa, the Jasna Góra monastery, the Battle of Monte Casino, the defence of Westerplatte, the Gdańsk shipyard headed by Lech Wałęsa, Wawel Cathedral. and the main square in Kraków. The creators of *HistoryLand* – Marcin Tobolski, Marcin Pietrucha, and Krzysztof Tobolski – built the mock-ups from one million three hundred thousand LEGO bricks. While building the mock-ups, the creators worked with 12 historians to accurately represent everything. HistoryLand has already been viewed by the inhabitants of Krakow and Poznan. Historical moments in Polish history are constructed with LEGO by Marcin Polak. You can see his creations on the Futuredu/Edunews channel on Flickr. They include the Battle of Oliwa in 1627 or, depicted in many of the constructions, the martial law in Poland in 1981–1983. The constructions are an interesting pretext for discussions with children about martial law and the social, political and economic changes in Poland that followed.

What do adults “like” LEGO bricks for? They are for everyone (from LEGO DUPLO to LEGO ICONS), they don’t lie in a corner (they guarantee countless ways to play), and they teach many things (colours, shapes, numbers, names of animals, or objects, as well as overcoming difficulties and patience), they can be used in a thousand ways (from building a container for school supplies to Christmas baubles), they are safe (age-appropriate), almost indestructible (they don’t break or deform) and they fit together (many series are compatible) (Turska, 2016).

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