PRESCHOOL EDUCATION IN POLAND. BRIEFLY ON THE MILESTONES IN THE HISTORY OF PRESCHOOL EDUCATION; MORE ON ACTIVITIES SUPPORTING THE EDUCATION OF PRESCHOOLERS TO BE WISE CITIZENS OF THE MODERN WORLD

Introduction: It has been over 180 years since the first pre-school education institution was established in 1839. Over the years, the theory and practice of preschool education have been created, taking into account Polish social and economic needs, marking good and bad times in preschool education. Research Aim: The aim of the article is to present the condition of preschool education in Poland from two perspectives: the background of milestones in the history of preschool education and the introduced pedagogical innovations by supporting preschool children in the development of speech along with shaping reading and writing skills, and developing the advances of mathematical talents. Evidence-based Facts: This article presents societal major events and decisions that have determined the process of shaping preschool education in Poland to the present day. These events were arranged by dates that set milestones in the history of preschool education. The year 1839 marks the first milestone, as it is the date of establishing the first kindergarten in Poland. The beginning of the second milestone is connected with the end of the First World War and covers the interwar period. Another milestone marks the changes in preschool education since the end of the Second
World War and those caused by the societal and economic turmoil of the 1980s. In 2008, favorable changes were introduced in the theory and practice of pre-school education and this date marks the next milestone in the history of pre-school education. The second part of the article discusses two important areas of pedagogical activity of modern kindergartens – achievements in the form of pedagogical innovations. The basis of these innovations are subject to academic studies and many years of scientific research supporting children in the development of speech along with the implementation of them to master reading skills and organizing mathematical education along with supporting children in developing mathematical talents. **Summary:** Thanks to this historical perspective and the innovations introduced, it is possible to notice how the dark and bright periods in the history of preschool education in Poland have intertwined and how beneficial changes can be implemented in upbringing children to be wise citizens of the world.

**Keywords:** history of preschool education, preschool education in times of societal and economic changes, social and economic development of children, supporting children’s speech development, fostering reading skills of preschool children, supporting children in developing early signs of mathematical abilities, concern for adequate standard of teaching knowledge and mathematical skills of children

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**INTRODUCTION**

It is 180 years since the first preschool education institution called *ochronka* (a day-care facility for poor children of working-class parents) was established in Poland. Since then, arduously and gradually, the theory and practice of preschool education has been evolving. It is worth looking at the milestones that mark the good and bad times of preschool education in Poland, as this provides an in-depth understanding of the meaning and value of the changes currently being implemented in preschool education for the formation of wise citizens of the world.

**RESEARCH AIM**

The aim of the article is to present the condition of preschool education in Poland from two perspectives: the background of milestones in the history of preschool education and the introduced pedagogical innovations by supporting preschool children in the development of speech along with shaping reading and writing skills, and developing the advances of mathematical talents.
In 1839, upon the initiative of Teofil Janikowski the first preschool education institution was opened in Warsaw under the official name ochronka. It was organized by Teofil Nowosielski in line with the conception of Jan V. Svoboda. This event was the first milestone in the history of preschool education in Poland.

In the following years, the number of preschool education institutions grew rapidly. In the second half of the 19th century, these facilities became diversified depending on the social and economic situation of parents of children at a preschool age. Free ochronka institutions were attended by children of the poorest parents, who stayed there from 10 to 12 hours a day. Children from more affluent homes could attend paid ogródki freblowskie [Fröbel’s Gardens] offering classes that took from 4 to 5 hours a day. These facilities were focused on the psychomotor development of children and prepared them for school.

Initially, those facilities were staffed by men, but quickly the care of children would be taken over by women. A lady like this was called ochroniarka [female ochronka worker] or ogrodniczka [female garden worker], depending on where she worked, either in an ochronka or in ogródek freblowski, respectively. The operation of preschool education institutions and the duties of their employees were regulated by documents called Instructions. The educators gained their pedagogi-
cal qualifications by attending courses organized at the best preschool facilities. Efforts were made to create a native concept of preschool education, drawing on the findings of Jan W. Dawid (1886, 1895), Justyna Strzemeska and Maria Weryho (1895), Stanisław Karpowicz (1897, 1905, 1907), and the pedagogical activity of Aniela Szycówna.6

The vocational awareness of preschool educators at the time became quickly crystallized. In 1896, the Congress of Preschool Teachers, Women Teachers’ College Graduates7 took place, and in 1906, the First Congress of Women Childminders and Teachers was held.8 The attendees proposed that the number of Fröbel’s courses for ochronka educators and teachers should be increased. Courses organized in model kindergartens and run by Stanisław Karpowicz and Maria Weryho became popular since they promoted a concept of preschool education that was directly relevant to Polish needs. It should be emphasized that the courses organized by Weryho laid the groundwork for the creation of the teaching college for preschool educators. Starting in 1915, during the First World War, Weryho organized a network of ochronkas and the training of preschool educators following her own concept, with a view to meeting the needs of the nation that was liberated after years of captivity.

The second milestone in the history of preschool education was marked by the achievements and failures between 1918 and 1939 When the First World War was over and Poland regained independence, an inventory of preschool education facilities was taken under Weryho’s direction. It was found that in the territory of Poland there were a total of 1,041 preschool day-care facilities for children aged 4–7 and day-care schools for children aged 7–10 years and older. Those establishments

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6 Szycówna set up the Children Research Society, comprising the Drawing Commission, Child’s Speech Examination Commission, Mathematical Concepts Examination Commission, Retarded Children Examination Commission, Character Examination Commission. Upon the Society’s initiative, scientific research was done on children’s drawings and the development of speech and thinking in children.

7 There were calls, for example, for a broader promotion of preschool facilities (ochronka and ogródek freblowski) and for actions intended to increase the didactic and educational knowledge of preschool children’s parents.

8 It was attended by about 120 educators from rural kindergartens and about 80 teachers from Warsaw kindergartens. The working conditions and terms of vocational training for educators of these two institutions (ochronka and ogródek freblowski) were determined. There were also protests against a direct transposition of methods and ways of working used by German and French day-care institutions.
were attended by a total of 33,944 children. Laborious work on the unification of the organizational forms of preschool education started.\(^9\)

The conclusions and proposals formulated at the First National Congress of Teachers held in 1919 proved useful in this regard. Bearing in mind their pedagogical and social value, it is crucial to mention some of the key points. It was demanded that the Polish State:\(^{10}\)

- provide childcare from the youngest age in the form of generally available educational establishments, and that ochronkas be separated from schools and become educational institutions because of the specific nature of child development,
- permit the opening of ochronkas by those who have been trained for this purpose and supervise their educational activity,
- establish and maintain model ochronkas as soon as possible and create the conditions for organizing similar facilities.

The fulfillment of such demands was not supported by the Law on the School System of 1932, known as *Ustawa Jędrzejewiczowska*, which made preschool education facilities rely on subsidies granted by local governments and social organizations. This caused the network of preschool education institutions to shrink. In 1928, there were 603 state kindergartens in Poland, and only 486 a decade later. The number of private kindergartens grew (from 954 to 1,173), but they did not rely on uniform educational-didactic curriculum, which was harmful to educational outcomes.

The situation of preschool education was further worsened by a circular issued in 1936 by the Ministry. It introduced an unfavorable distinction between kindergartens subject to the supervision of school authorities and care institutions for preschool children. The latter were merely expected to conduct “[...] activities seemingly similar to those conducted in kindergartens”. Their main role was now to ensure material and moral care and protection of children from “[...] the negative influence of the street or environment”. These provisions provoked intense protests from pedagogues (Bobrowska-Nowak, 1978, p. 316).

In spite of these unfavorable changes, care was taken to ensure that pedagogical activity in kindergartens supported the development of children. Publications

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\(^{9}\) At that time, the Temporary Rules for Day-Care Homes were formulated to define: the scope of duties of educators, rules of organization of preschool education institutions as well as funding rules.

\(^{10}\) In addition, the following were demanded: (a) creation of a relief fund for ochronkas to provide allowances for private day-care establishments in need of help, (b) publication of a magazine that will give tips on how to work with children, (c) organization of courses for preschool educators and nannies in crèches, and (d) setting up children’s playgrounds in cities.
of the following authors were fundamental: Jan W. Dawid (1911; 1912), Aniela Szycówka (1899; 1904), Józefa Joteyko (1924), Sergiusz Hessen (1935), Ludwika Jeleńska (1930), Stefan Baley (1935), Stefan Szuman (1947),11 and Janusz Korczak.12

A series of textbooks and guides promoting the Polish concept of preschool education were also published (Weryho, 1930, 1931; Schätzel, 1919; Cicimirska, 1928). Wychowanie Przedszkolne, Przedszkołe and Plan Prac w Przedszkolu magazines started to be published. Teachers could now learn about pedagogical achievements concerning children’s development and methods and forms of preschool education.

The milestone in the history of preschool education from the end of World War II to the 1980s. It is difficult to describe the immensity of destruction of the Second World War. Demolished towns had no kindergartens, libraries and private book collections had been burnt down, etc. In such conditions, laborious reconstruction of the Polish preschool education system started.

Under an act of 1948, the care of children and young people aged 3 to 15 was transferred to the Minister of Education. A little later, in 1961, the Law on the Development of the Education System defined the status of kindergarten in the Polish education system. Preschool education has become the first element of this system. The goal of preschool education was to support the overall development of children, prepare them well for school as well as help working parents by providing educational childcare from the age of 3 to the start of school. These considerations still hold validity today.

At the same time, intensive work on the psychological foundations of preschool education began. As early as in 1945, Psychologia wychowawcza wieku dziecięcego. Podręcznik dla matek i wychowawczyń w przedszkolach i domach dziecięcych oraz

11 In the inter-war period, Szuman published the following studies: Badania nad rozwojem spostrzegania i reprodukcji prostych kształtów przez dziecko [Research on the Development of Perception and Reproduction of Simple Shapes in the Child], Obserwacje dotyczące tak zwanego synkretycznego spostrzegania u dziecka [Observations on the So-Called Syncretic Perception in the Child], O testach ruchowych i możliwościami zastosowania ich do wychowania fizycznego [On Motor Tests and Their Application to Physical Education], Psychologia twórczości rysunkowej dziecka [The Psychology of the Child’s Drawing], Sztuka dziecka [Children’s Art], Badania nad rozwojem i znanieniem gestu wskazywania i ruchu rzucania za siebie oraz wykrzykników wskazujących i wyrażów stwierdzających nieobecność u dziecka [Research on the Development and Meaning of the Gesture of Pointing and the Motion of Throwing Behind Oneself as well as of Exclamations and Words denoting Absence in Children]; Geneza przedmiotu [The Genesis of an Object], Charakter jako wyższa forma przystosowania się do rzeczywistości [Character as a Higher Form of Adaptation to the Reality], Rozwój pytań dziecka [Development of Questions in Children]. The value of those publications is illustrated by the fact that they are still cited by psychologists and pedagogues.

12 Korczak’s more important treatises are: Helcia, Momenty wychowawcze [Educational Moments], Prawidła życia [Rules of Life], Pedagogika żartobliwa [Playful Pedagogy], Prawo dziecka do szacunku [The Child’s Right to Respect], Jak kochać dziecko [How to Love a Child].
dla nauczycieli i studentów studiujących rozwój psychiczny dziecka [Educational Psychology of Childhood. A Handbook for Mothers and Educators in Kindergartens and Children’s Homes and for Teachers and Students Studying the Psychological Development of Children] came out (Szuman, 1945), and a year later Zarys psychologii w związku z rozwójem dziecka [An Outline of the Psychology of Child Development] (Baley, 1946) was published. In the 1960s, a well-known textbook by Elisabeth Hurlock (1965) titled Child Development was offered to Polish readers; six years later, a textbook written by Polish authors under the title Psychologia rozwojowa dzieci i młodzieży [Developmental Psychology of Children and Youth] was published. In the 1960s and early 1970s, Jean Piaget (1966a, 1966b), Jerome S. Bruner (1964), Paul H. Mussen (1970), Lew S. Wygotski (1971) were published in Poland, as well as the following publishing series: Materiały do nauczania psychologii [Materials for Teaching Psychology], Biblioteka Nauczyciela [Teacher’s Library], and Biblioteka psychologiczna [Psychological Library].

The sixties, seventies and eighties of the 20th century saw intensive development of preschool pedagogy. Textbooks were published that are still used by students and teachers who choose to study preschool education (Kwiatowska, Topińska, 1978; Kwiatowska, 1985; Bobrowska-Nowak, 1978; Dunin-Wąsowicz, 1977). Two publishing series are particularly valuable: popular textbooks (Dudzińska, 1976; Przetacznik-Gierowska, Makiełło-Jarża, 1977; Bartkowiak, 1978; Krzysztofek, 1975) for those who study preschool education and the series Biblioteka pedagogiczna nauczyciela przedszkola [The Pedagogical Library of a Kindergarten Teacher], covering publications on the major preschool education issues (Właźnik, 1972; Mysłkowska, 1984; Kozłowska, 1984; Nartowska, 1980; Kielar-Turska, 1992; Dudzińska, 1981; Moroz, 1982). Thanks to those achievements of the 1970s, preschool pedagogy became a separate sub-discipline of pedagogy that uses a unique research methodology and combines theoretical findings with practical applications.

From the end of World War II to the late 1980s, an impressive number of preschool education facilities were organized (Piwowarski, 1985). For example, in the school year 1946/1947, there were only 3,733 such establishments, but after

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13 The textbook Psychologia rozwojowa dzieci i młodzieży [Developmental Psychology of Children and Adolescents] [ed. M. Żebrowska (1966). Warszawa: PWN] has been published many times. The fact that teachers and university students still use it proves its value.


15 This series (published by PZWS) comprises studies extending the pedagogical knowledge of teachers and university students.

16 This series comprises 14 volumes on developmental and educational psychology, published by WSiP between 1973 and 1980.
5 years, the number doubled (7,515), and between 1970 and 1976, their number increased by 71.3% (to 24,719). These figures, however, made teachers dissatisfied because they were low. The target\(^{17}\) was common access to preschool education.\(^{18}\)

The report led to the adoption of the Sejm resolution on national education of 1972 (it was not a statutory act) (Wołoszyn, 1989). It stipulated that the realization of the schooling obligation must be preceded by children attending kindergarten or a preschool class. This was justified by the need to support children in their mental and physical development and develop the competences necessary to achieve school maturity. These considerations, with minor adjustments, are still respected.

To gain a full picture of preschool education of those years, some figures ought to be presented (Wilgocka-Okoń, 1985). In the school year 1980/1981, a total of 62.7% of children attended kindergartens and preschool classes, 34.8% attended preschool clubs, and preschool education was already provided to 97.5% of six-year-olds (including 91.8% of preschoolers in rural areas).

In 1970, favorable changes took place in the education of pre-school education teachers. The Charter of the Teacher’s Rights and Obligations, still in force, was adopted. In accordance with its recommendations,\(^{19}\) university master’s courses were organized offering uniform pedagogical education programs for teachers in general, including preschool teachers. Also, the training of already working teachers on an extramural basis started. The outcomes of those changes were reflected by these figures: only 26% of teachers had higher education in 1977, whereas in 1984, already 56.7% of them had university training.

Another milestone in the history of preschool education is the consequences of the political changes and the transition to a market economy which began in the 1980s. The fact that things started to go wrong since the 1990s is illustrated by the data from the school year 1999/2000 (Zahorska, 2003). At that time, preschool attendance in the countryside was as follows: 8% of three-year-olds, 13% of four-year-olds, 22% of five-year-olds, and in cities the rates were 23%, 33% and

\(^{17}\) In 1973, the Report on the School Education in the Polish People’s Republic (prepared by a committee of experts), in the part “The Network and the Material Base”, stated that: “The network of kindergartens is particularly inadequate in the countryside, [...] in towns every second child attends kindergarten, but every ninth child living in the country”. In the part “Conditions and Availability Of Kindergartens”, the authors wrote: “Lifting the status of the kindergarten as a common element of the schooling system is an essential condition for creating equal educational opportunities for a host of children of workers and peasants. This is particularly important for the further school development of these children and vital for their proper physical and mental development [...]”.

\(^{18}\) Covering at least 80% of the child population between 3 and 6 years old.

41%, respectively. The level of preschool attendance among children aged 3–5 in Poland was one of the lowest in the European Union at that time.

The reason behind this (as the State was being decentralized) was that the management of the nursery schools was delegated to the commune authorities, which were neither technically nor financially prepared for this (no relevant subsidies were granted). Since the maintenance of preschool education facilities proved to be expensive, payments were required in the form of tuition fees for children’s stay in kindergartens. Since many parents (on account of the high unemployment rate) could not afford that, they decided not to send their children to kindergarten. The small number of children enrolled in a kindergarten justified the decision to close it down. In addition, many of them were set up to support state-owned workplaces and collective farms. As the transition to a market economy was causing their economic situation to deteriorate, social benefits were being reduced, including the closure of kindergartens.

The destructive changes continued. Since the 1990s, significantly fewer scholarly studies in preschool pedagogy and psychology were published, as in the case of textbooks and methodology handbooks for preschool teachers. In many universities the number of admissions to teaching courses was restricted due to fear that the graduates would not find jobs in their professions.

Favorable changes in the theory and practice of preschool education implemented in 2008 constitute another milestone in the history of preschool education. Those changes were anticipated by a decision made in 2003 to ensure one year of preschool education to all six-year-olds. Four years later, considerable changes were made by the Act on the Education System and making the school year 2008/2009 the Year of the Preschooler. Also, the Regulation of the Minister of National Education became effective concerning the organization of alternative forms of preschool education. Administrative and legal rules were

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20 In the previous years, no such fees were charged because children stayed in kindergarten as part of the social security package. This is why many kindergartens were set up with larger workplaces.

21 Known as PGRs (Panown as PGRs (re charged b).

22 Schools started to organize preparatory classes [zerówka – translator’s note], even if they had been closed earlier.


25 Regulation of the Minister of National Education of 10 January 2008 on types of other forms of preschool education, conditions for creating and organizing these forms and the way they operate (Dz. U. of 2008, No. 7, item 38) and Regulation of the Minister of National Education of 13
established governing the establishment of small kindergartens.\textsuperscript{26} The deepening demographic decline led to a situation where many small localities had only a handful of preschool children.\textsuperscript{27} It was ensured that the organizational formula of such establishments secured the proper psycho-motor development of children and was adapted to the social needs of their parents.

The effects came very soon. Up to this day the number of preschool education units (zespół wychowania przedszkolnego) and preschool education centers (punkty przedszkolne) has been increasing year to year. They are set up not only in small towns. The mass closures of traditional preschool education facilities were stopped too.

In 2008, a regulation of the Minister of National Education was legislated\textsuperscript{28} introducing the new \textit{Core Curriculum for Preschool Education}, which regulates the pedagogical activity of preschool establishments, regardless of their organizational formula. This document ensures continuity of care and education between preschool and school education. It specifies the competences children should develop at the end of their preschool education. With respect to those, educational aims and content of the first year of school education were determined. Thanks to this, a smooth transition between preschool education and the first stage of school education was ensured. Therefore, the year 2008 should be considered as a good year in the turbulent history of preschool education in Poland.

In February 2009, the Sejm decided to lower the school starting age.\textsuperscript{29} It was agreed that as of September 2012, six-year-olds would start school. A major dispute broke out over the status of preschool education in the context of children education. No week passed without critical articles in the press and TV debates on the so-called “defense of childhood” and the insufficient preparation of schools to admit six-year-olds to grade one. Under such pressure, the implementation of this decision was delayed by two years. At the same time, parents’ rights regarding their children’s compulsory schooling were extended.
Half a year later, the Law on School Education\(^{30}\) was enacted, still in force up to date. The document establishes, among other things, that the *schooling obligation becomes effective at the beginning of the school year in the calendar year in which the child turns seven*. Preschool education applies to children from the *age of three to the year in which they start school*. A six-year-old child is obliged to undergo a period of one year of preschool education in a kindergarten or another form of preschool education. With regard to younger children, it was ruled that in justified cases preschool education might be extended to children who were over two and a half years old.

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**EVIDENCE-BASED REVIEW. PART TWO**

**ON THE ACTIVITIES UNDERTAKEN CURRENTLY TO SUPPORT THE EDUCATION OF PRESCHOOLERS TO BE WISE CITIZENS OF THE MODERN WORLD**

In this section we will briefly discuss those achievements that have already changed preschool education for the better or are being implemented in Polish kindergarten for this purpose. Additional information is provided in the footnotes.

**SPEECH DEVELOPMENT AND PREPARATION OF CHILDREN TO ACQUIRE READING LITERACY AT SCHOOLS AS A WAY OF DEVELOPING THEIR MINDS AND AN EXPRESSION OF CONCERN FOR THEIR SCHOOL SUCCESS**

It should be mentioned that speech characterizes every human being, and this ability determines proper social, cognitive and emotional development. Language and communication competences are formed as part of speech\(^{31}\) (Przetacznik-Gierowska, Makiello-Jarżę, 1985; Vasta, Haith, Miller, 1995; Piaget, 1992). Each child has its own pace and rhythm of development resulting from the capabilities of their physical and environmental conditions. An individual’s ability to speak often develops at different pace, so the acquisition of language competence is

\(^{30}\) The Act on School Education is dated 14 December 2016, but it entered into force on 1 September 2017 (Dz. U. of 2017, item 59). Two years later, an announcement of the Marshal of the Polish Sejm was published concerning the announcement of the Law on School Education (Dz. U. of 2018, item 996). Its provisions are currently in force.

\(^{31}\) Speech consists of sounds produced orally to convey some information. Its fluency is assessed by comparing a set of single sounds and their combinations used by the child with a norm corresponding to a given age group.
a long-term process. Speech and language competence are formed from the child’s birth, across the consecutive periods of adolescence, until the last stages of life. The most intensive stage of speech development occurs during childhood as a result of natural learning processes and stages which often overlap.

Since preschool education covers children aged two and a half years – and many of them are characterized by delayed speech development – it is necessary to raise the awareness of preschool teachers concerning the correct way of supporting young children in developing fluent speech and effective communication with adults and children both at home and in kindergarten. The idea behind it is that language and communication competences are tightly connected, and the level of speech precision must be adjusted to the content, the interlocutor and the context of both verbal and non-verbal message. Undoubtedly, recognizing and naming one’s emotions allows the child to better understand themselves, their desires and fears. It also plays a key role in building empathy, trying to understand others, their situation and feelings. This allows the child to communicate to the caregiver the emotions they currently deal with.

Any delays in speech development (articulation disorders, too simplistic syntactic constructions, poor vocabulary and limitations in verbal communication) adversely impact the development of the child’s personality. Thus, supporting children in speech development and building their language culture is of prime importance in preschool education (Mystkowska, 1991; Gruszczyk-Kolczyńska, 2019).

Supporting children in the development of their speech and language culture takes place at home occasionally but systematically in the preschool setting. Therefore, recommendations for supporting speech development in preschoolers are covered within every educational curriculum,32 and the core knowledge is provided in publications recommended to preschool teachers conducting various forms of education (Schaffer, 2017; Kurcz, 2005; Gruszczyk-Kolczyńska, 2014, 2019; Borowska, 2016).

There is no doubt that children’s early desire to learn to read proves their excellent mental abilities. The willingness to read is demonstrated already by five-year-olds, or even younger children. They are interested in books, signboards; they ask for letters’ naming, trying to put them together into words and sentences. Therefore, the newly written textbooks for kindergarten teachers and parents recommend that children should be supported in mastering this difficult

32 This is in line with the ministerial appendix no. 1 titled Podstawa programowa wychowania przedszkolnego dla przedszkoli, oddziałów przedszkolnych w szkołach podstawowych oraz innych form wychowania przedszkolnego [The Core Curriculum for Preschool Education in Kindergartens, Preschool Classes in Primary Schools and Other Forms of Preschool Education], Dz. U. of 2017, item 356.
skill, because the earlier they learn to read, the greater their chances of success at school (Borowska, 2017).

Reading is about decoding, i.e. recognition, identification, and meaningful combination of printed or written letters into words and sentences. Learning to read is a complex process for which children should be prepared through a variety of exercises intended to improve the auditory and visual analyses, and the vocal apparatus. During play, children can discover the work of the vocal folds, lips and tongue. By training their phonetic and visual memory, the child comes into contact with speech units, which they have to remember as vocal phenomena (speech sounds) and visual ones (letters). Children read through the way they speak, so it is extremely important that the sounds in isolation are correctly produced and that the word synthesis and phonemic analysis are proper. In didactic work, the teacher and pupils move on to reading only when the latter can easily recognize letters and have mastered the skill of putting together words out of the sounds of the language (Borowska, 2018). Theoretical and didactic knowledge about the reading process is promoted at scientific conferences and training courses for preschool teachers. It is also incorporated into kindergarten curricula, as well as provided by publications addressed to preschool teachers and parents (Gruszczynska-Kolczeńska, Zielińska, Grabowska, 2017; Kwaśniewska, Żaba-Żabińska, Lendzion, 2018; Janus, 2019).

It should be stressed that the order in which milestones appear in children’s language development is similar. Even in children with developmental disorders, the sequence is the same though performed at a slower pace (Gruszczynska-Kolczeńska, Zielińska, 2019, p. 113), which is why preschool teachers are supported by speech therapists. By the law, a preschool director is obliged to organize speech therapy assistance in order to meet children’s developmental and educational needs and to support their development and learning effectiveness.

Finally, research on early detection of children’s difficulties in reading and grasping mathematical skills is currently being carried out under an international research-based project *More Opportunities for Every Child: Early Detection of Child Difficulties in Kindergarten* led by Universita Cattolica del Sacro Cuore (Italy). The project partners are: John Paul II Catholic University of Lublin (Poland);  

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33 Regulation of the Minister of National Education and Sport of 7 January 2003 on the rules of providing and organizing psychological and pedagogical assistance in public kindergartens, schools and institutions (Dz. U. of 2003, No. 11, item 114).

34 On 16 July 2019, under Key Action 202 “Cooperation for Innovation and the Exchange of Good Practices: Vocational Education and Training” (D13E1ED8), the National Agency of the Erasmus+ Programme approved the implementation of the **International Innovative Project** of a scientific and research character titled *More Opportunities for Every Child: Early Detection of Child Difficulties in Kindergarten*. 
Universidad Pontificia Comillas (Spain); Université Catholique de l’Ouest (France); Istituto Comprensivo “G. Falcone e P. Borsellino” (Italy); Istituto Comprensivo “Gabrio Piola” (Italy); Municipal Preschool No. 5 in Puławy (Poland); Norte Dame de la Source (France); and Institución Profesional Salesiana (Spain). The project is run from 1 October 2019 to 30 September 2022.

MATHEMATICAL EDUCATION WITH SUPPORT OF CHILDREN SHOWING EARLY SIGNS OF MATHEMATICAL ABILITIES

For a start, based on the findings of Gruszczyk-Kolczyńska (1985, 2013), it should be said that it is estimated that every fourth child (!) starting to learn at school has math difficulties. The reason for this is that they start learning in grade one without reaching mental maturity to learn mathematics at school. To rectify this situation, significant changes in the mathematical education of preschoolers and schoolchildren had to be introduced as quickly as possible. To this end, Author developed an educational concept called *Dziecięca matematyka* [Children’s Math] (an educational program35 and a series of books for parents and teachers of preschool children, e.g. Gruszczyk-Kolczyńska, Zielińska, 2015). This concept was verified when children’s school history was analysed (Gruszczyk-Kolczyńska, 2012a). The outcomes proved to be so promising that the *Dziecięca matematyka* is now implemented, in whole or partially, in kindergartens all over Poland. In addition, maturity (readiness) indicators for learning math at school were defined to ensure children’s success as well as teaching methods for diagnosing maturity: research plans, guidelines for interpreting research results and formulating conclusions about children’s future (Gruszczyk-Kolczyńska, Zielińska, 2013; 2014).

The results of research conducted in 201036 (Gruszczyk-Kolczyńska, 2012b) reveal that more than half of preschool children show early signs of mathematical abilities. Among five-year-olds mathematical abilities can already be seen, and every fifth child shows outstanding talents. Among six-year-olds, one in four manifests high abilities. For children, this is an optimal moment to reveal their mathematical talents.

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35 E. Gruszczyk-Kolczyńska, E. Zielińska (1999). *Dziecięca matematyka. Program dla przedszkoli, klas zerowych i placówek integracyjnych*. Warszawa: WSiP. The educational effectiveness of this program has been confirmed by experimental research.

36 Carried out as part of the program R 17006 03 titled “Recognizing and Supporting the Development of Mathematical Abilities in Older Preschoolers and Young Pupils”, with the funding allocated to education in 2007–2010 by the Ministry of Science and Higher Education.
Edyta Gruszczyk-Kolczyńska (2012c) also noted that children who attend school show their mathematical abilities much less frequently. Only one in eight of the examined children demonstrated high levels of mathematical aptitude. The examined first-grade schoolchildren proved to be less critical and daring in independent math problem creation, showing less involvement in mathematical activities.

The results of this research sparked further changes in the mathematical education of children. An original program was developed by Gruszczyk-Kolczyńska (2012d) to support children in the development of their mathematical abilities at home and kindergarten settings, and in classes 1 to 3 of primary school. Training courses are organized to improve the qualifications of teachers who wish to support children in their development of their mathematical talents as part of pedagogical innovations in kindergartens and schools. Educational establishments that implement such innovative solutions enjoy professional support. Parents were involved in supporting their children’s development of their mathematical abilities by organizing games and task situations as part of an online project under a Facebook name #20minutdlaMATEMATYKI.

The above-mentioned initiatives have been launched in hope that the school life of mathematically talented children will change for the better. After all, their education affects the condition of exact sciences and the development of probably every area of the economy for the sake of sustainable development.

**SUMMARY**

Finally, some reflections ought to be drawn, namely: “In pedagogy nothing new can be invented, but things need to be read anew and proper conclusions should be drawn”. This thought applies also to preschool education. Therefore, an assessment of the pedagogical value of current achievements needs a broader perspective. Providing some historical background of preschool education sheds light on the

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**Footnotes:**

37 These are courses and post-graduate studies for preschool and primary teachers run since 2015 in Warsaw and other cities in Poland.

38 For example, the Nowosądecki Projekt Edukacyjny [Nowy Sącz Educational Project], which has been underway since the beginning of the school year 2019/2020, commissioned by the NEWAG Foundation. Its aim is to increase the level of mathematical education and develop the signs of mathematical talents that preschool and primary school children exhibit.

39 This project, run by Zuzanna Jastrzębska-Krajewska, is designed to promote effective mathematical education in everyday situations. Essentially, it draws on E. Gruszczyk-Kolczyńska, Dziecięca matematyka. The project is being popularized in social media on the Instagram profile @pani_zuzia, or on Facebook as ”Pani Zuzia”. More information can be found at www.jastrzebska-krajewska.pl
knowledge of what has been achieved so far. As a consequence, we may assess the importance of the changes made to preschool education.

REFERENCES


**Edukacja przedszkolna w Polsce.**
**Krótko o kamieniach milowych w dziejach przedszkoli, szerzej o działaniach sprzyjających wychowaniu przedszkolaków na mądrych obywateli współczesnego świata**

**Wprowadzenie:** Od zorganizowania pierwszej placówki wychowania przedszkolnego w 1839 roku upłynęło ponad 180 lat. W latach tych tworzono teorię i praktykę edukacji przedszkolnej, która uwzględniała polskie potrzeby społeczne i ekonomiczne, wyznaczać dobre i złe czasy w edukacji przedszkolnej. **Cel badań:** Celem artykułu jest przedstawienie kondycji wychowania przedszkolnego w Polsce z dwóch perspektyw: na tle kamieni milowych w historii wychowania przedszkolnego i wprowadzanych innowacji pedagogicznych poprzez wspomaganie dzieci przedszkolnych w rozwoju mowy wraz z kształtowaniem umiejętności czytania i pisania oraz
rozwijanie zadań uzdolnień matematycznych. **Stan wiedzy:** W artykule zostały przedstawione wydarzenia społeczne i decyzje, które wyznaczały proces kształtowania wychowania przedszkolnego w Polsce po czasy obecne. Wydarzenia te zostały uporządkowane datami wyznaczającymi kamienie milowe w dziejach wychowania przedszkolnego. Rok 1839 wyznacza pierwszy kamień milowy, gdyż jest to data zorganizowania pierwszego przedszkola w Polsce. Początek drugiego kamienia milowego łączy się z zakończeniem pierwszej wojny światowej i obejmuje czasy międzywojenne. Kolejny kamień milowy wyznacza zmiany w wychowaniu przedszkolnym od zakończenia drugiej wojny światowej oraz te, które zostały spowodowane zawierzaniami społecznymi i gospodarczymi lat 80. ubiegłego stulecia. W 2008 roku wprowadzono korzystne zmiany w teorii i praktyce wychowania przedszkolnego i data ta wyznacza następny kamień milowy w dziejach wychowania przedszkolnego. W drugiej części artykułu zostały omówione dwa ważne obszary działalności pedagogicznej współczesnych przedszkoli – osiągnięcia w formie innowacji pedagogicznych. Podstawą tych innowacji są studia i wieloletnie badania naukowe wspomagania dzieci w rozwoju mowy wraz z wdrażaniem ich do opanowania umiejętności czytania oraz organizowanie edukacji matematycznej wraz ze wspomaganiami w wychowaniu przedszkolnym w Polsce. W jakim sposób można wprowadzać korzystne zmiany w trosce o wychowanie dzieci na mądrych obywateli świata. **Podsumowanie:** Dzięki tej historycznej perspektywie i wprowadzanym innowacjom można dostrzec, jak przeplatały się ciemne i jasne okresy w dziejach wychowania przedszkolnego w Polsce i w jaki sposób można wprowadzać korzystne zmiany w trosce o wychowanie dzieci na mądrych obywateli świata.

**Słowa kluczowe:** kamienie milowe w historii wychowania przedszkolnego, wychowanie przedszkolne w czasach przemian społeczno-gospodarczych, wspomaganie rozwoju dzieci w zakresie mowy, kształtowanie umiejętności czytania dzieci przedszkolnych, wspomaganie dzieci w rozwijaniu zadań uzdolnień matematycznych, kształtowanie wiadomości i umiejętności matematycznych dzieci.