THE EDUCATION OF GIFTED PRE-SCHOOL CHILDREN USING INFORMATION COMMUNICATION TECHNOLOGY: THE OPINIONS OF TEACHERS

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ABSTRACT

The 21st century is identified in the country's strategic documents as a century of rapid technological, climatic and economic change, and countries must not be afraid of innovation and knowledge of the world through information technology. According to strategic documents, the education of gifted children is also one of the country's priorities. Gifted pre-school children need to develop and continuously improve their abilities, and the stimulation of these abilities can be enhanced by information and communication technologies. The article analyses the educational possibilities for gifted pre-school children using information communication technology, the characteristics of gifted pre-schoolers, and the possibilities for the identification of gifted pre-schoolers. The study suggests that gifted pre-school children are educated in an individualised way according to their needs, they are identified by their abilities which stand out from their peers, information communication technologies are used to diversify the education of gifted pre-school children, and that the biggest problem educators face while developing gifted children is the lack of information and the lack of communication tools.

KEY WORDS: *education, gifted children, information and communication technologies.*

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Introduction

The Convention on the Rights of the Child (1989) states that education should focus on the full development of the personality and the strengthening of human rights and fundamental freedoms. According to J. Hodges, J. Tay, Y. Maeda and M. Gentry (2018), the principles of education are based in the broadest sense on the idea that children should have full access to all the resources they need to achieve their dreams, and education for gifted children should address the many and varied needs they typically have. Lithuania's Strategy for Progress (2012) sets out the country's vision for the future and priorities of development, and identifies the 21st century as one of rapid technological, climatic and economic change, and therefore countries that are prepared for change and are not afraid of innovation will be the ones that will succeed, and this will require learning about the world and its diversity through modern cognitive tools, such as foreign languages and information technology. The education of gifted children is also identified as a national priority. The strategy aims to enable each learner to develop individually, and to support the development of gifted children. The Charter on the Rights of Gifted Students (2016) states that societies in all countries should

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support and contribute to the development of gifted and talented individuals, thereby meeting the challenges of the 21st century.

The first abilities of a child begin to emerge in pre-school, so it is important to help nurture and develop children's abilities as early as possible in order to develop their talents (Jawabreh, Danju, Sahla, 2022). The development of gifted children requires proper stimulation: appropriate intellectual work to unleash the child's potential and achieve self-realisation (Narkevičienė, 2012), and this stimulation of the gifted child's intellectual abilities can be helped by the diversification of information communication technologies (ICT) (Kontostavlou, Drigas, 2019). ICT helps to transform education and create a learner-centered environment (Das, 2019). In Lithuania, the education of gifted children is classified as special needs education, but more attention is paid to the education of children with special needs and difficulties, and although the education of gifted children is identified as one of the country's priorities, the education of these children receives less attention, and there is a lack of information on the identification of gifted children, and the organisation and process of education (Valiušytė, Lamanauskas, 2021).

The education of gifted children has been researched by various foreign and Lithuanian researchers: G. Čiuladienė (2012), B. Narkevičienė (2012), E. Oral (2017), J. Hodges, J. Tay, Y. Maeda and M. Gentry (2018), M. P. Gomez-Arizaga, N. Valdivia-Lefort, H. Castillo-Hermosilla, T. P. Hebert and M. L. Conejeros-Solar (2020), K. Valiušytė and V. Lamanauskas (2021), J. Van Tassel-Baska (2021), R. Jawabrej, I. Danju and S. Salha (2022). The education of gifted children using ICT has been studied by A. Y. A. Bakar (2016), U. A. Y. Jamali (2019), L. Karpova, L. Shtefan, V. Kovalska, O. Ionova and S. Luparenko (2020), E. Z. Kontostavlou and A. Drigas (2019), and Z. A. E. H. Ahmed and S. F. A. Bakhiet (2021).

Aim: to find out teachers' opinions on the possibilities of developing gifted pre-school children using information and communication technologies.

Object: educational opportunities for gifted pre-school children through information and communication technologies.

Objectives:

1. To describe the characteristics of gifted pre-school children, and the possibilities of education through ICT.
2. To investigate teachers' opinions on the potential of ICT for the education of gifted pre-school children.

Methods: analysis of scientific literature, document analysis, structured interviews, qualitative analysis.

1. Characteristics of gifted children

A gifted child has a characteristic or set of characteristics: the very good development of general or special abilities. He or she needs appropriate (intellectual) work in order to develop potential abilities and achieve self-fulfilment. To this day, there is no single definition of giftedness, but there is a consensus that it is the potential for initiative, activity, creativity, attentiveness and perseverance. Giftedness can be judged by observing a child's behaviour, which is characterised by certain qualities such as motivation, interests, communication skills, problem-solving skills, memory, insight, creativity, exploration and questioning, and humour (Čiuladienė, 2012).

The transformation of abilities takes place during three periods of active learning: pre-school, school and university or vocational training. During these periods, not only these factors but also learning and the learning environment are important for the transformation of abilities. In the first years, the influence of the family is important, then the learning environment begins to have an impact, and the influence of teachers and the educational institution environment begins to increase (Undro, Girdzijauskienė, 2019). The pre-school age is considered a sensitive and important learning/development stage, lasting from birth to five years of age, during which the child's personality, desires, curiosity and mental abilities are formed (Jawabreh, Danju, Salha, 2022).

Gifted pre-schoolers are characterised by unusual agility and vitality in infancy; they develop rapidly in the early stages of development; they understand instructions early; they have a richer vocabulary than their peers; they can create stories, fairy tales and songs spontaneously; they construct interesting shapes or images from blocks, boards, clay or other materials; they solve complex puzzles; they understand abstract and complex concepts; they acquire new skills and concepts unusually quickly; they express themselves in coherent language; they remember and understand the relationships between events; they disassemble and reassemble objects; they successfully follow instructions to complete several tasks in order; they like novelty; they can keep up their attention for long periods of time, especially when performing tasks; gifted children have a good memory; they simplify their language when interacting with people less able than themselves; gifted children are curious; they understand the feelings of others and are capable of expressing them; they are attentive and observant of their surroundings; and they use their language skills to resolve conflicts or to influence the behaviour of others (Šimelionienė, 2008).

Gifted children also have better cognitive abilities than their peers, with well-developed skills of abstraction, perception and synthesis, an understanding of cause and effect relationships, the rapid discovery of similarities and differences, fluency in thinking and generating possibilities, consequences or related ideas, flexible thinking using a range of alternatives and approaches to problem solving, and they are more mature (Bakar, 2016; Bildiren, 2017). Gifted children are also characterised by emotional intensity, perfectionism, risk aversion, self-criticism, the rejection of their talents, and avoidance of group activities (Klimecka, 2020).

Gifted children are divided into types according to their characteristics:

- A successful gifted child is characterised by high achievement and high intelligence or knowledge test scores. Teachers spot and assess this type of gifted child early on: they follow the rules and behave as expected. Their motivation is extrinsic, they behave well in order to receive praise. These children benefit from the opportunity to try out different forms of learning.
- Gifted children of the difficult gifted type tend to be undisciplined, so their talents are often not visible. These gifted children are highly creative, but often bored. They are often tense and competitive, have erratic work skills, poor self-control, impatience and mood swings.
- Gifted children of the hiding type appear to be intelligent and successful. They hide their abilities because they do not want to stand out from their peers, often feel embarrassed and insecure, belittle their abilities, and avoid participating in activities and projects.
- Drop-out type children have behavioural difficulties, often do not complete tasks, get tired and exhausted quickly, are angry, sad and disruptive towards others. Non-traditional and alternative forms of education are suitable for these children.
- Dual-exceptional gifted children are both gifted and have some type of disorder. They often have good intellectual skills but are unable to cope with their feelings, their behaviour can be destructive, and their learning efforts are erratic. Alternative learning options are suitable for these children.
- Self-sufficient children are self-directed, persistent, independent, creative, inquisitive, and good at expressing their feelings and needs. These children need feedback and learning alternatives (Šimelionienė, 2008). In order for gifted pupils to have a positive and enriched learning experience, they need a pedagogue who recognises and adapts learning, differentiates education (Gomez-Arizaga, Valdivia-Lefort, Castillo-Hermosilla, Hebert, Conejeros-Solar, 2020). Pre-school pedagogues have a responsibility to adapt the learning content to the needs of gifted children, as well as to create a learning environment that encourages experimentation and the expansion of children's thinking, and allows the child to develop; but to do this, the pedagogue must first identify the child's gifts. Once gifted pre-schoolers are identified and early educational intervention is applied, it allows gifted pre-schoolers to develop their talents, and reduces the likelihood of future social, emotional and behavioural problems (Al-Oweidi, 2019; Jawabreh, Danju, Salha, 2022).

2. ICT in gifted education

ICT can be an opportunity to develop and diversify the skills of gifted children. ICT is defined as technologies for collecting, storing, sharing and disseminating information. It also includes the creation, transmission and storage of verbal, visual, textual and digital output, using the latest digital technologies (computers, cameras, multimedia, etc) (Ahmed, Bakhiet, 2021). There are six types of technology-enhanced learning activities for gifted children that can be used by pedagogues: information resources, e-books, interactive projects, online training, publishing platforms, and mentoring resources (Chen, Dai, Zhou, 2013).

Modern trends in mechanisation, informatisation and virtualisation are penetrating educational institutions and the educational process, so the creation of an information-educational space as a condition for child development is becoming more and more important, and inducing comprehensive development, while successfully meeting the needs of the life period (Karpova, Shtefan, Kovalska, Ionova, Luparenko, 2020). Gifted children are able to cope better with the changes brought about by the information technology revolution due to their exceptional abilities (Ahmed, Bakhiet, 2021), they learn faster than their peers, and they quickly become bored with educational activities, which, if prolonged, can lead to a loss of motivation to learn and engage in the educational process (Oral, 2017); so gifted children can use technology to learn independently and satisfy their thirst for knowledge. The use of modern technology in education not only enables gifted children to nurture their talents and their best qualities, but also helps pedagogues working with gifted children as a tool to develop their talents (Ahmed, Bakhiet, 2021). The ICT curriculum for gifted pre-school children should focus on promoting multi-level teaching and learning. For gifted pre-schoolers, the availability of direct and integrated educational resources suitable for the development and cultivation of the various competencies of the learner is an important prerequisite (Drigas, Kokkalia, 2014).

There are a variety of options for developing gifted pre-school children through ICT, including virtual simulations, virtual field trips, web-based tasks, and playing educational computer games (Ahmed, Bakhiet, 2021). Virtual exploration activities using ICT for gifted children enrich the educational content. ICT makes various content more accessible, and thus enables gifted children to expand their knowledge and satisfy their curiosity, and virtual environments can be used to develop cultural experiences in the arts, enabling virtual tours in museums, industrial enterprises and institutions. It also allows gifted children to manage their own learning. ICT enables group work, problem-solving and subsequent comparisons between groups (Chen, Dai, Zhou, 2013).

Robotics is also one of the ICT-based activities for gifted pre-school children, as it encourages learning through challenges and problem-solving, is particularly suitable for children who prefer more challenging activities than their peers, and also allows the gifted child to put theoretical knowledge into practice and to discover something new through experimentation (Jamali, 2019; Van Tassel-Baska, 2021).

Gifted pre-school children also respond well to various learning centres, such as the Art Centre, Science Centre, Reading Centre, Writing Centre and Building Centre, so bright wall displays and multimedia displays of various objects can also be displayed in these spaces to promote learning for gifted children. To enrich the education of gifted pre-school children, their work can be scanned and used to create presentations where the children can choose their own designs, titles and text. These works can be shared with parents and other children, or shared online. This helps gifted children to develop their skills and feel more comfortable sharing information with others (Drigas, Kokkalia, 2014).

The use of information technology in education provides the opportunity for gifted children to integrate existing knowledge in different areas, and promotes the development of the child's autonomy, activity, creativity and self-development; and the use of ICT in education enables differentiation in the education of pre-school age children (Periathiruvadi, Rinn, 2014; Karpova *et al.*, 2020).

3. Research methods and organisation

In order to reveal teachers' opinions on the possibilities for educating gifted pre-school children using information communication technologies, an empirical study was conducted, for which a qualitative research

method of structured interviews was chosen. The qualitative analysis method was used to analyse the data obtained during the study. The qualitative analysis approach reduces the amount of data generated, and is a systematic and flexible method for processing research data, allowing a focus on meanings, the description of the studied phenomenon in detail, and the investigation of it by delving deeper into the studied phenomenon (Gaižauskaitė, Valavičienė, 2016).

Principles of goodwill, fairness, selflessness, the right to receive accurate information, and respect for personal dignity, were observed in the research. A criterion sampling method was used to select informants from the population. This method selects subjects from the population who meet the following criteria: they work in pre-school educational institutions as pre-school teachers with potentially gifted children. According to B. Bitinas, L. Rupšienė and V. Žydžiūnaitė (2008), this method of selection helps to collect qualitative data and is effective.

The study involved five informants, all female, working in pre-school educational institutions. The average age of the informants was 28, and the average number of teaching years was five years.

The findings of the survey

The survey sought to uncover informants' views on how they identify gifted pre-school children. The findings are presented in Table 1.

Table 1. Signs by which teachers recognise gifted pre-school children

Category	**Subcategory**	**Statements**	**Number of statements**
Signs of gifted children	Distinctive behaviour in activities	I2: '*Out of communication, the child speaks, reasoning outside the age-specific aspects of his thinking*' I3: '[...] *They seem more mobile and active. They want to be leaders* [...]' I4: '*They are evident in the development of education, in activities, in children's actions*' I5: '[...] *These children are often the "awkward" children in the group, because they do everything faster than everyone else, always want to be the leader, have no patience, often don't follow the group's rules, feel they are "smarter" and take advantage of it. These children often have problems cooperating with their peers and like to work individually*'	4
	Distinctive cognitive abilities	I1: '*I recognise a gifted child through his or her potential and willingness to learn. A gifted child has strong logical reasoning, learns quickly, and differs from other children by the fact that he or she understands a much larger amount of information and completes tasks very quickly*' I3: '[...] *Can perform more complex exercises and has more endurance. Successfully follows instructions to perform several tasks in succession. Can concentrate for longer periods of time. They are inquisitive and ask questions. They are attentive and observant of their environment. They have a richer vocabulary, feel a greater need to explore, experiment and understand*' I5: '*Gifted children stand out from other children because of their exceptional abilities in different areas of achievement. They have a higher level of intelligence, and a predominance of logical thinking. They tend to think like adults, and are able to create new and unusual things...*'	3

The informants identify gifted children by their abilities and behaviour in activities that distinguish them from their peers. In the informants' opinions, a gifted child is, I2: 'From the communication, the child speaks and reasons outside the age-specific aspects of his thinking;' I5: 'Gifted children stand out from other children because of their exceptional abilities in different areas of achievement. They have a higher level of intelligence, a predominance of logical thinking, and tend to think like adults. And they are able to create new and unusual things [...].' The data suggests that gifted pre-school children are identified by educators as differeing from their peers by their cognitive abilities. The findings are consistent with R. Jawabreh, I. Danju and S. Sahla (2022), who suggest that gifted pre-schoolers are identified by their superior cognitive abilities compared to their peers, which are evident in their participation in cognitive activities.

The study also sought to find out what methods teachers use to educate gifted pre-schoolers. The results are presented in Table 2.

Table 2. Teachers' views on methods of educating gifted children

Category	Subcategory	Statements	Number of statements
Education of gifted children	Education through personalisation of tasks	I1: '*I educate gifted children according to the pre-school and pre-primary curricula, differentiating tasks when needed, selecting the more challenging ones, and looking for creative solutions to meet the child's needs and to stimulate their development*' I2: '*I prepare individual tasks involving the child in a leadership position, e.g. asking them to help other children*' I3: '*I tailor a programme with reinforced tasks for them. The key is to not overstress them*'	3
	Education through giving more tasks	I4: '*I try to prepare more tasks and include unplanned educational activities during the day*' I5: '*Educating these children is more challenging, because they complete tasks much faster than their peers, so it's essential to always have extra tasks*'	2

The informants in the study develop gifted children by differentiating and personalising tasks according to the needs of gifted children. According to the informants, when educating gifted children, I2: 'I prepare individual tasks involving the child in a leadership position, e.g. asking them to help other children;' I1: 'I educate gifted children according to the pre-school and pre-primary curricula, differentiating tasks when needed, selecting the more challenging ones and looking for creative solutions to meet the child's needs and to stimulate their development.' The findings of the study suggest that when educating gifted children, educators adapt the content of their education to the needs of gifted children. The findings are consistent with F. Sahin's (2015) view that tailoring educational content for gifted children helps to maintain a positive learning experience and enhances learning success, and improves metacognitive and cognitive skills and critical thinking.

The study also sought to find out the purpose of teachers' use of ICT in their work with gifted pre-school children. The results are presented in Table 3.

The teachers who participated in the study used ICT to diversify the education of gifted children. According to the informants, I3: 'I use ICT to give the educational activities more quality and to make them more interesting;' I5: 'I use ICT in the education of gifted children in order to diversify their education, to make it more interesting, to make it more enriched, and to make them go deeper into the educational material.' The findings suggest that educators look for ways to maintain the curiosity of gifted children, and to enable them to develop in different ways during their education. The findings echo E. Oral (2017), who suggests that gifted children may eventually become bored and unmotivated in educational activities, and therefore need a variety of educational tools and methods.

The survey also sought teachers' views on the challenges they face in using ICT in the education of gifted pre-school children. The results are presented in Table 4.

Table 3. Teachers' views on the aims of ICT in the education of gifted pre-school children

Category	Subcategory	Statements	Number of statements
Objectives of ICT for the education of gifted children	To better consolidate knowledge	I1: '*We use ICT to consolidate knowledge, to engage gifted children in the subject and to develop their imagination*' I2: '*To increase learning efficiency and motivation (I use educational games). Well-chosen activities and ICT tools help to improve learning* [...]'	2
	To motivate children	I4: '*I use ICT because today's children are no longer interested in learning without ICT tools, and because ICT keeps them interested, motivated, learning and developing*'	1
	Seeking to diversify education	I2: '[...] *And to add variety to the activities to develop children's creativity. ICT helps to develop basic literacy, reading, musical and artistic skills*' I3: '*I use ICT to give educational activities more quality and to make them more interesting*' I5: '*I use ICT in the education of gifted children to diversify their education, to make it more interesting and enriched, and to enable them to delve deeper into material*'	3

Table 4. Teachers' perception of the problems encountered in the application of ICT for gifted pre-schoolers

Category	Subcategory	Statements	Number of statements
Problems faced by educators when using ICT	Lack of ICT tools	I1: '*ICT shortages are a common problem. Few groups in the institution have ICT facilities, so we rarely have the opportunity to use them...*' I3: '*I have the problem that there are very few ICT tools in the groups. It is very difficult to work when there is only a computer but no projector* [...]' I4. '*The problem is that we only have one laptop in the ICT groups; displaying the material on a small screen is probably more useless than useful, as the number of children in the group is high and the computer screen is small, and the group lacks at least a projector*' I5. '*I am faced with a lack of resources. The group only has a computer and a projector, but I would like to have a wider range of tools that other children could use or that the gifted could use more often*'	4
	Lack of knowledge on how to use ICT	I1: '[...] *There is a skills gap in the use of ICT. Sometimes there is a lack of knowledge, which prevents us from making good use of these tools*'	1
	Children's inability to use ICT sparingly	I2: '*The child is unable to concentrate on a single image for a long time. It is difficult to step away from the computer, loss of awareness of time. It is more fun to play with the computer than with children*'	1
	Negative parental attitudes towards ICT	I3: '[...] *Parents' attitudes towards ICT tools are also ambiguous: they are not always aware that technology is the present and the future of today's children*'	1

The main problem faced by teachers who participated in the study is the lack of ICT tools for educating gifted children. I1: 'ICT shortages are a common problem. Few groups in the institution have ICT facilities, so we rarely have the opportunity to use them...;' I5: 'I am faced with a lack of resources. The group only has a computer and a projector, but I would like to have a wider range of tools that other children could use or that the gifted could use more often.' The data suggests that although teachers are keen on using ICT for the education of gifted pre-school children, they do not have the appropriate resources to make use of the available ICT opportunities. The findings echo the view of N. Kara and K. Cagiltay (2017) that there is a lack of ICT tools in pre-schools, which makes it difficult for educators to use them in education.

The study also sought to find out teachers' views on which ICT tools would help enrich the education of gifted pre-school children. The teachers who took part in the study expressed the opinion that the education of gifted pre-school children could be enriched by a more extensive and targeted use of ICT, such as interactive whiteboards, projectors, robots and tablets. I1: 'I think that a light table and an interactive whiteboard could enrich the education of gifted children. These tools would allow gifted children to perform a wider range of tasks, it would be easier for them to adapt, and their use would increase children's interest, independence and critical thinking;' I2: 'Interactive whiteboards, floors, games, also tablets, cameras, computers, interactive games and smart watches;' I3: 'The current light table enriches education, expands the imagination, and develops creativity. We would like to purchase a bee bot, Photon robot to teach children the basics of programming and logical thinking. Also, experiential education based on STEAM brings a lot of joy and discovery into children's lives: we would like to have more tools to carry out experiments, e.g. magnifying glasses, different measuring cylinders, microscopes, etc;' I4: 'The following ICT tools could enrich the education of gifted children: tablets, interactive cubes, an engineering-science kit, Robotics Workshop, a science and experimental kit;' I5: 'We would like to have robotics that the children can program themselves. Also tablets, maybe not necessarily for every child, but at least a few, as we don't have any at the moment.'

Findings

The study found that educators believe that gifted pre-schoolers are identified by cognitive abilities that stand out from their peers and are manifested in their educational activities. The study also found that educators perceive gifted pre-school children as individualised in their education. The study also revealed that educators use ICT to diversify the education of gifted pre-school children, in order to prevent them from losing their motivation to learn and being bored. The study found that, according to the teachers, the most common problem they face in educating gifted pre-school children is the lack of ICT tools, which prevents them from making the most of the opportunities available to educate gifted children. In the survey, educators expressed the opinion that the education of gifted children could be enriched by a wider range of ICT tools, such as tablets, smart boards, robots, cameras and interactive cubes.

Conclusions

Gifted pre-school children have very good development in certain abilities, and need appropriate intellectual activities to achieve fulfilment. Gifted pre-school children are characterised by initiative, activity, creativity, attentiveness, perseverance, motivation, interest, communication skills, problem-solving skills, memory, reasoning, insight, creativity, exploration and questioning. The development of gifted pre-school children through ICT can include virtual simulations with various computer programs, virtual trips or excursions to museums and institutions, playing educational games, and creating and sharing presentations with parents. Robotics, which allows for experimentation and the practical application of theoretical knowledge, helps to reveal children's individual talents, and to develop them in an appropriate and targeted way.

The analysis of the participants' opinions revealed that the education of gifted children is difficult due to the complexity of identification and the lack of full educational opportunities. Teachers recognise the use of ICT as one of the educational options for developing gifted children. These tools allow to diversify the

education of gifted pre-school children, and to motivate gifted children more. The use of ICT in the educational process allows gifted pre-school children to consolidate their knowledge better. The inclusion of ICT in the educational process of gifted children is partly limited by the lack of ICT tools, the lack of knowledge of educators working with gifted pre-school children about the use of ICT in the educational process, the children's inability to moderate the use of technology, and the negative attitude of parents towards the use of ICT in educational activities.

References

Ahmed, Z. A. R. E. H., Bakhiet, S. F. A. (2021). The Availability and Use of Information and Communication Technology at Gifted Primary Schools in the Sudan. *International Journal of Innovation, Creativity and Change*, *15* (5), 816–848. Internet access: https://www.ijicc.net/images/Vol_15/Iss_5/15526_Ahmed_2021_E1_R.pdf

Al-Oweidi, A. (2019). The Impact Training of a Program on Improving the Cognitive Competencies of Teachers in Identifying Gifted Preschoolers. *Journal for the Education of Gifted Young Scientists*, *7* (2), 363–375. Internet access: https://dergipark.org.tr/en/download/article-file/741387

Bakar, A. Y. A. (2016). Digital Classroom: An Innovative Teaching and Learning Technique for Gifted Learners Using ICT. *Creative Education*, *7*, 55–61. Internet access: https://www.scirp.org/pdf/CE_2016012216135894.pdf

Bildiren, A. (2017). Developmental characteristics of gifted children aged 0-6 years: parental observations. *Early Child Development and Care*, *188* (8), 997–1011. Internet access: https://www.tandfonline.com/doi/pdf/10.1080/03004430.2017.1389919?needAccess=true

Bitinas, B., Rupšienė, L., Žydžiūnaitė, V. (2008). *Kokybinių tyrimų metodologija*. Klaipėda: S. Jokužio leidykla-spaustuvė.

Charter on the Rights of Gifted Students. (2016). European Youth Summit, Austria. Internet access: http://etsn.eu/wp-content/uploads/2017/10/Charter-of-the-Right-of-gifted-and-talented-students-.pdf

Chen, J., Dai, D. Y., Zhou, Y. (2013). Enable, Enhance, and Transform: How Technology Use Can Improve Gifted Education. *Roeper Review*, *35* (3), 166–176. Internet access: https://www.tandfonline.com/doi/pdf/10.1080/02783193.2013.794892?needAccess=true

Čiuladienė, G. (2012). Gabių vaikų situacija mokykloje: konfliktinė sąveika su bendraklasiais ir mokytojais ir jos korekcija. *Acta Paedagogica Vilnensia*, *28*, 133–147. Internet access: https://www.journals.vu.lt/acta-paedagogica-vilnensia/article/view/2931/2078

Das, K. (2019). The Role and Impact of ICT in Improving the Quality of Education: An Overview. *International Journal of Innovative Studies in Sociology and Humanities* (IJISSH) (Online), *4*(6), 97–103. Internet access: https://ijissh.org/storage/Volume4/Issue6/IJISSH-040611.pdf

Dėl valstybės pažangos strategijos „Lietuvos pažangos strategija „Lietuva 2030" patvirtinimo. (2012). LR Seimo nutarimas, Nr. XI-2015. Internet access: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.425517?jfwid=-wd7z67vy4

Drigas, A. S., Kokkialia, G. K. (2014). ICTs in Kidergarten. *International Journal of Recent Contributions from Engineering Science & IT*, *9* (2), 52–58. Internet access: https://online-journals.org/index.php/i-jet/article/view/3278/3046

Gaižauskaitė, I., Valavičienė, N. (2016). *Socialinių tyrimų metodai: kokybinis interviu*. Vilnius: MRU. Internet access: https://repository.mruni.eu/bitstream/handle/007/16724/9789955302056.pdf?sequence=1&isAllowed=y

Gomez-Arizaga, M. P., Valdivia-Lefort, M., Castillo-Hermosilla, H., Hebert, T. P., Conejeros-Solar, M. L. (2020). Tales from within: Gifted Students' Lived Experiences with Teaching Practices in Regular Classrooms. *Education Sciences*, *10* (5), 137–145. Internet access: https://www.mdpi.com/2227-7102/10/5/137/htm

Hodges, J., Tay, J., Maeda, Y., Gentry M. (2018). A meta-analysis of gifted and talented identification practices. *Gifted Child Quarterly*, *62* (2), 147–174. Internet access: https://doi.org/10.1177/0016986217752107.

Jamali, U. A. Y. (2019). Fostering creativity using robotics among gifted primaty school students. *Gifted and Talented International*, *34* (1–2), 71–78. Internet access: https://ezproxy.biblioteka.ku.lt:4418/doi/epub/10.1080/15332276.2020.1711545?needAccess=true

Kara, N., Cagiltay, K. (2017). In – service Preschool Teachers' Thoughts about Technology and Technology Use in Early Educational Settings. *Contemporary Educational Technology*, *8* (2), 119–141. Internet access: https://dergipark.org.tr/en/pub/cet/issue/29518/316760

Karpova, L., Shtefan, L., Kovalska, V., Ionova, O., Luparenko, S. (2020). Information – Education Environment as a Condition of Formation of Gifted Children's Informational – Digital Competence. *Postmodern Openings*, *11* (2), 60–78. Internet access: https://lumenpublishing.com/journals/index.php/po/article/view/2892/2475

Klimecka, E. (2020). Labelling of gifted children in the family from the perspective of teachers and its manifestations and school. *Sodobna pedagogika / Journal of Contemporary Educational Studies*, *71* (137), 196–212. Internet access: https://publikace.k.utb.cz/bitstream/handle/10563/1009817/Fulltext_1009817.pdf?sequence=1&isAllowed=y

Kontostavlou, E., Z., Drigas, A. (2019). The Use of Information and Communications Technology (I.C.T) in Gifted Students. *International Journal of Recent Contributions from Engineering Science & IT*, *7* (2), 60–67. Internet access: https://www.researchgate.net/publication/333930519_The_Use_of_Information_and_Communications_Technology_ICT_in_Gifted_Students

Narkevičienė, B. (2012). *Kad augtumėm. (Itin) gabių vaikų ugdymo modelis.* Gairės mokytojo pedagoginei kūrybai. Vilnius: VŠĮ Nacionalinė moksleivių akademija. Internet access: http://www.sugimnazija.lt/svietimodokumentai/GVU_modelis.pdf

Oral, E. (2017). Examination of Pre-School Teachers' Self-Efficacy Beliefs and Self-Efficacy Regarding Gifted Education. *Journal for the Education of Gifted Young Scientists*, 5(*4*), 49–58. Internet access: https://dergipark.org.tr/en/download/article-file/486809

Periathiruvadi, S., Rinn, A. N. (2014). Technology in Gifted Education. *Journal of Research on Technology in Education*, *45* (2), 153–169. Internet access: https://www.tandfonline.com/doi/pdf/10.1080/15391523.2012.10782601?needAccess=true

Sahin, F. (2015). Curriculum Differentiation of Gifted Students in General Education Classes: Mentorship as an Implementable Strategy. *The Journal of Academic Social Science*, *3* (33), 125–139. Internet access: https://www.researchgate.net/publication/275510023_Curriculum_Differentiation_of_Gifted_Students_in_General_Educational_Classes_Mentorship_as_an_Implementable_Strategy

Šimelionienė, A. (2008). *Kaip atpažinti vaiko gabumus?* Vilnius: Švietimo aprūpinimo centras. Internet access: https://www.nsa.smm.lt/wp-content/uploads/2016/01/10_Vaiko-gabumai.pdf

Undro, E., Girdzijauskienė, S. (2019). Gabių mergaičių mokymosi patyrimas bendrojo ugdymo mokykloje. *Acta Paedagogica Vilnensia*, *43*, 57–70 Internet access: https://www.zurnalai.vu.lt/acta-paedagogica-vilnensia/article/view/16158/15329

Vaiko teisių konvencija. (1989). Priimta Generalinės Asamblėjos 44/25 rezoliucija pagal Trečiojo komiteto pranešimą (A/44/736). Internet access: https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.19848

Valiušytė, K., Lamanauskas, V. (2021). Gabių mokinių ugdymo organizavimas bendrojo ugdymo mokyklose: mokytojų pozicija. *Švietimas: politika, vadyba, kokybė*, *13* (1), 22–31. Internet access: http://gu.puslapiai.lt/spvk/wp-content/uploads/sites/3/journal/published_paper/volume-13/issue-1/VhaosKsm.pdf

VanTassel-Baska, J. (2021). Curriculum in Gifted Education: The Core of the Enterprise. *Gifted child today*, *11*, 44–47. Internet access: https://journals.sagepub.com/doi/pdf/10.1177/1076217520940747

GABIŲ IKIMOKYKLINIO AMŽIAUS VAIKŲ UGDYMAS TAIKANT INFORMACINES KOMUNIKACINES TECHNOLOGIJAS: PEDAGOGŲ NUOMONĖ

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Santrauka

Lietuvos pažangos strategijoje „Lietuva 2030“ (2012), kuri nusako valstybės raidos prioritetus, siekiant sėkmingai vystytis ir užtikrinant sparčią kaitą, kaip svarbus įvardijamas pasaulio pažinimas, pasitelkiant šiuolaikines pažinimo priemones – užsienio kalbas ir informacines komunikacines technologijas (IKT). Kaip valstybės prioritetas skiriamas ir gabių vaikų ugdymas, strategijoje numatyta remti kiekvieno besimokančiojo individualų tobulėjimų bei gabių vaikų ugdymą, užtikrinant būtinas sąlygas. „Gabių mokinių teisių chartijoje“ (2016) teigiama, kad visų šalių visuomenės turi remti gabių ir talentingų asmenybių ugdymą, taip priimant XXI amžiaus iššūkius, tokius kaip sparti technologijų, klimato, ekonomikos kaita. Pirmieji vaikų gabumai pasireiškia ikimokykliniame amžiuje, tad jau šio amžiaus gabiems vaikams būtinas gebėjimus

stimuliuojantis intelektinis darbas, tai gali paįvairinti IKT priemonės, kurios leidžia sukurti į besimokantįjį orientuotą mokymosi aplinką (Das, 2019).

Straipsnio tikslas – išsiaiškinti pedagogų nuomones dėl gabių ikimokyklinio amžiaus vaikų ugdymo, pasitelkiant IKT, galimybių. Objektas – gabių ikimokyklinio amžiaus vaikų ugdymo galimybės, pasitelkiant IKT. Uždaviniai – apibūdinti gabių ikimokyklinio amžiaus vaikų ypatumus ir ugdymo galimybes, pasitelkiant IKT, ištirti pedagogų nuomones dėl jų ugdymo galimybių pasitelkiant IKT. Taikyti metodai: mokslinės literatūros ir dokumentų analizė, struktūruotas interviu, kokybinė turinio analizė.

Gabūs ikimokyklinio amžiaus vaikai yra motyvuoti, turi puikius komunikacinius įgūdžius, problemų sprendimo gebėjimų, atmintį, pasižymi gera dėmesio koncentracija ilgesniam laikui, kūrybiškumu, atkaklumu, plačiu interesų lauku, smalsumu, mėgsta tyrinėti. Jie paprastai judrūs, geba sparčiai įgyti naujų įgūdžių, rišliai reikšti savo mintis, jų geresni nei bendraamžių pažintiniai, kalbiniai gebėjimai, jie yra smalsūs, brandesni už savo bendraamžius, sklandžiai mąsto. IKT ugdant gabius ikimokyklinio amžiaus vaikus leidžia paįvairinti ugdymo procesą, išlaikyti gabių vaikų susidomėjimą, eksperimentuoti ir praktiškai pritaikyti teorines žinias, sudaro sąlygas kryptingai ugdytis gabumus. Gabių ikimokyklinio amžiaus vaikų ugdymas pasitelkus IKT suteikia įvairių galimybių: virtualus modeliavimas, virtualios išvykos ar ekskursijos į įvairias įstaigas, mokomųjų kompiuterinių žaidimų žaidimas, robotika, pristatymų kūrimas.

Atlikus pedagogų nuomonių dėl gabių vaikų ugdymo galimybių, pasitelkus IKT, tyrimą, išsiaiškinta, kad gabūs ikimokyklinio amžiaus vaikai pedagogų atpažįstami iš ugdomojoje veikloje pasireiškiančių gebėjimų, kurie juos išskiria tarp bendraamžių. Pasak tyrime dalyvavusių pedagogų, gabūs ikimokyklinio amžiaus vaikai ugdomi individualizuojant jų ugdymo programą, siekiant tinkamai ir kryptingai ugdyti jų gabumus. Atlikus tyrimą sužinota, kad pedagogai, ugdydami gabius ikimokyklinio amžiaus vaikus, taiko IKT, siekdami paįvairinti ugdymo procesą, kad gabus vaikas nenuobodžiautų, neprarastų susidomėjimo ir išlaikytų motyvaciją mokytis. Atlikus tyrimą paaiškėjo, kad didžiausia problema, su kuria susiduria pedagogai, siekdami ugdyti gabius ikimokyklinio amžiaus vaikus pasitelkdami IKT, – IKT priemonių trūkumas, neleidžiantis išnaudoti visų gabių vaikų ugdymo galimybių.

PAGRINDINIAI ŽODŽIAI: *gabūs vaikai, ugdymas, informacinės komunikacinės technologijos*.

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