

УДК 373.24

DOI 10.52928/2070-1640-2024-42-2-27-31

**MODELING OF THE METHODOLOGICAL SYSTEM
FOR PREVENTING THE NEGATIVE IMPACT OF GADGETS
ON THE DEVELOPMENT OF PRESCHOOL CHILDREN'S SPEECH COMPETENCE**

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The article presents the authors' model devoted to solving the problem of the negative impact of gadgets on various aspects of child development, including their speech competence. The authors define the preschoolers' speech competence as a dynamic integral personal quality, manifested in the ability and willingness to successfully listen, perceive and reproduce information, be engaged in conversation, express personal opinions and points of view in the oral form in accordance with the age norm. The provided model consists of three interconnected blocks (modules): 1) pedagogical work with children, 2) interaction between the preschool institution staff and parents, and 3) measurement of the speech competence development. The pedagogical work with children implies a) the preschool institution's responsibilities, and 2) parents' responsibilities. The interaction between the preschool institution staff and parents starts with establishing continuous communication between the teachers and parents to provide information about gadgets use and its impact on children. Measurement of the competence development stipulates three levels of it (high, average, low) with general description of each.

Keywords: *screen time, negative impact of gadgets, preschool children's speech competence, preschool education.*

Introduction. As numerous studies show, in recent years there has been an unreasonably early acquaintance of children with electronic gadgets (smartphones, tablets, etc.), prolonged and uncontrolled interaction with them. That active use of gadgets negatively affects many aspects of children's development.

According to Madigan et al., gadget technology is "vastly outpacing research" [1, p. 665], and compared to research on older children, there is comparatively little research on younger children, especially when it comes to mobile gadgets [2; 3].

Every year there are more and more children with problems of speech development of one or another complexity, with the general underdevelopment of speech, in which the development of all components of the speech system related to its sound and meaningful aspect is disrupted in children with normal hearing and intelligence. Children suffering from such disorders have a limited language; some do not speak at all, which allows us to talk about a violation of the process of the speech competence development in them at the required age level.

Gadgets negatively impact children if their use is not regulated correctly. The duration of screen time also depends on cultural and socio-economic factors and may be affected and influenced by the habits of family members and parents of the child. According to M. Ulfah et al, in order to foster speech development and language acquisition, children should have chances to express themselves and be attentively heard. The valuable experience of observing, listening to, and participating in conversations with family members helps children understand that their context plays a crucial role in effective communication [4].

The purpose of this article is to show possible ways how to prevent the negative impact of gadgets on the development of the speech competence in preschool children through the building the model of such pedagogical work. However, in modern conditions, it seems impossible to completely isolate the child from interaction with electronic gadgets. It is important to establish the necessary optimal interaction of the child with gadgets, as well as pedagogically direct this interaction towards supporting the development of their speech competence, given there are separate studies confirming that with the right content and context, digital gadgets can help overcome difficulties in the child's development, and as for children between the ages of three and five, it is quite possible, that a well-developed application can even help improve their vocabulary (O. Solon).

Main part. Based on the contextual definition of the concept, speech competence is understood by us as "a dynamic integral personal quality manifested in the ability and willingness to successfully listen, perceive and reproduce information, be engaged in conversation, express personal opinions and points of view in the oral form in accordance with the age norm" [5, p. 21]. Speech competence involves using language to construct and express thoughts. Speech competence belongs to the group of fundamental phenomena, that is, those that are of particular importance in human life, so close attention should be paid to its formation. The child's speech competence includes lexical, dialogical, grammatical, phonetic, monological components.

Research revealed that improper use of gadgets could cause language and speech disorders. Several studies have found a negative association between increased gadget use and language development in children. Researchers have found that the more time children spend on smart phones, tablets and electronic games and other handheld gadgets the more likely the child have delays in expressive speech. Some studies have revealed, there is a connection between screen time duration and delays in both receptive and expressive language [6–8].

Numerous nations have released guidelines aimed at restricting and directing children's screen time. International studies reveal that a small proportion of parents and kids follow the guidelines regarding gadget use, even in spite of these recommendations [9; 10].

Those findings highlight how vital it is to investigate how parents influence their young children's gadget usage. In the end, parents must make sure that their young children acquire appropriate gadget-use habits since we shouldn't expect young children to be able to manage this newly developed skill or be able to control how much time they spend on gadgets. Therefore, we must take into account the attitudes and actions of parents in order to comprehend the intricate social and environmental factors that influence young children's gadget use.

The parental role in providing dialogical assistance is essential to reducing the adverse effects of gadget use. When using technology, parents should guide their children through its features and keep an eye on them. They should also provide developmental stage guidance. This is done so that parents can monitor their kids while they're using technology. For instance, allowing kids to engage with their surroundings can help them avoid becoming overly fixated on the gadgets they play with.

Children's exposure to different proximal processes is greatly influenced by their parents. When kids get older and have more freedom to choose, parents' attitudes and actions play a significant role in shaping how kids spend their time, even though their influence may diminish.

Parental role construction is a complicated phenomenon that takes into account responsibilities, social norms and expectations, meanings, and values, as well as verification from both the inside and outside. Additionally, studies have found that parents' rules regarding screen time are predicted by attitudes, normative perceptions, and pressures [11–13]. According to some studies on parental attitudes and beliefs about the potential benefits of media use for preschoolers, parents are more likely to encourage their kids to use digital technology if they see screen time – that is, time spent watching television, using computers, smartphones, and tablets—as beneficial for their child's physical, cognitive, and emotional development [14–16]. This implies that parents' opinions about screen time have an impact on their children's digital play, much like how parental attitudes about healthy behavior and outdoor play do. On the other hand, parents worry about the possible drawbacks of using digital technology, particularly when it is used excessively [16].

One could draw the conclusion that a child's development is seriously harmed when they use gadgets unlimitedly. It is also evident that parental supervision is crucial in every area of a child's development. Parents can lessen the detrimental effects of gadgets on their children's development by being actively involved in their lives instead of being passive ones. Encouraging children's habits requires active parental participation. Children's tendency to play with electronics is often triggered by parental neglect. However, a variety of factors, such as the role of parents, the hectic schedules of parents, and the babysitter's routine, can be blamed for this tendency. This comes together to form a package that affects kids' growth. On the other hand, it is the culmination of self-control and is impacted by a range of factors, both good and bad.

According to I. Maria and R. Novianti, "parents can't insulate kids from gadgets, but they can help their children by setting rules and supervising them, so they can have a positive effect from technology" [17, p. 79]. With the advancement of technology, parents now need to focus on helping their children use gadgets responsibly by enforcing rules and providing guidance. As a result, parents can no longer ignore the use of gadgets in their daily lives. Preschool institutions can help children avoid the negative effects of gadgets and benefit from them by enforcing the appropriate rules for their use. When it comes to the activities of using technology at home, preschools can offer guidelines in the form of checklists and assessments that are related to the duration of gadget use.

Parents and preschools play a crucial role in helping children understand who they are, where they live, and the challenges they face every day. Both play essential roles, and in order for kids to realize their full potential, parent and preschool collaboration needs to be in sync and mutually supportive. There should be consistency between preschool education and home upbringing. To do that, both parties must be able to communicate in a way that equalizes their perceptions and application of the rules. Parenting education programmes are the crucial tools preschool can use to improve parents' understanding of children's education and level the playing field for opinions about children's education.

Given the current state of affairs, where the majority of children require gadgets, one of the most crucial parenting lessons to teach parents is how to raise their kids in the digital age.

Existing models of correlates of young children's gadget use have not taken into account important components of the influence of language on speech proficiency, and in particular lack a comprehensive focus on the social environment of children's lives. In this regard, it is considered necessary to characterize the phenomena of speech competence and systematize the problems of its development in preschool children, analyze and summarize the global experience of research into the influence of gadgets on the speech development, and create a systematic model for preventing the negative impact of gadgets on the development of speech competence in preschool children.

Based on the above, we propose a model of the methodical system that takes into account various interrelated aspects of the child's social environment, both near and far, which aims to reduce the negative impact of gadgets on preschool children's speech competence (figure).

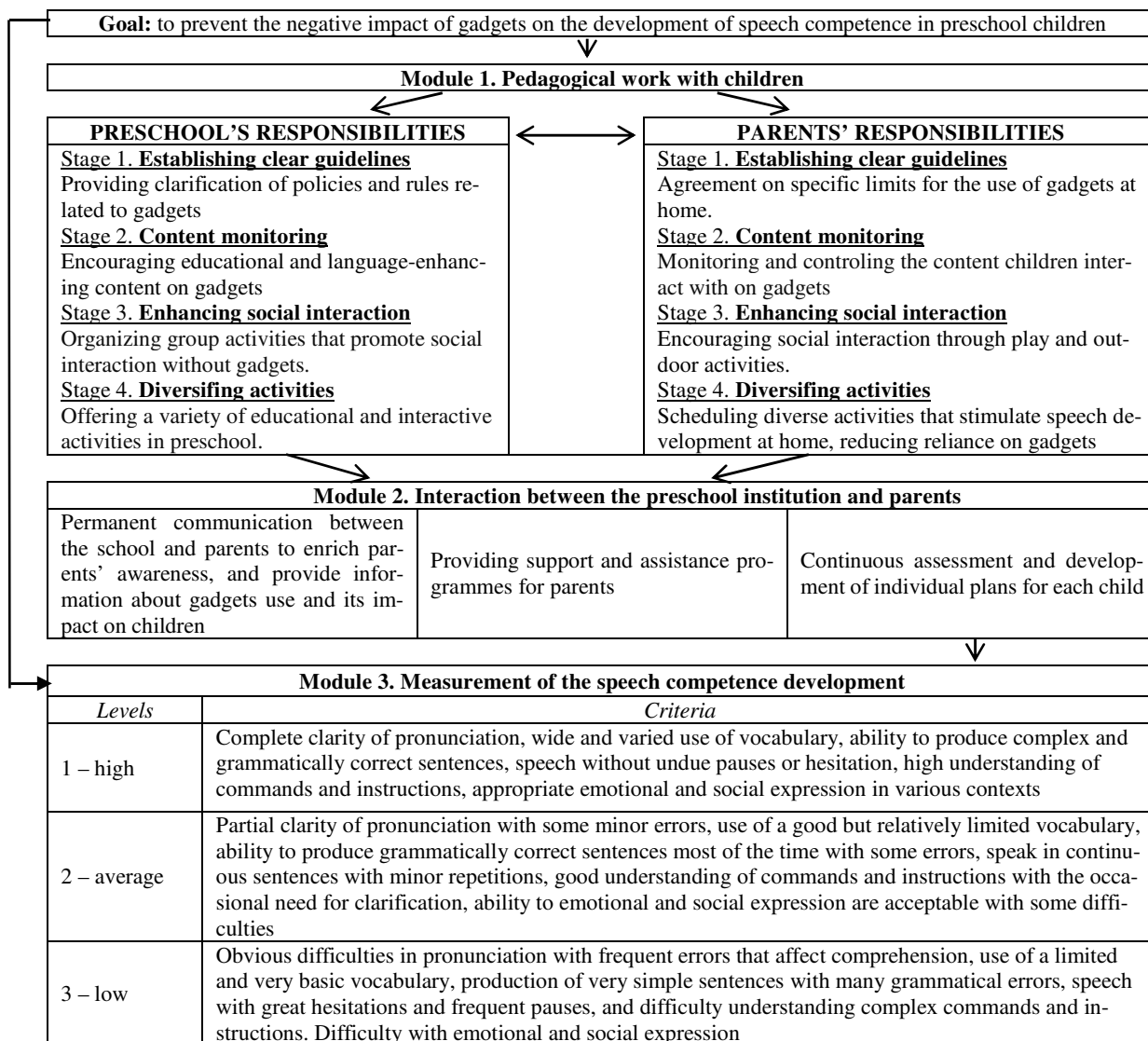


Figure. – Model of the methodical system for preventing the negative impact of gadgets on the development of the speech competence in preschool children

It makes sense to explain each module of the model in some detail.

Module 1. Pedagogical work with children. Each stage within this module equally important for both sides: parents and the teaching staff.

Stage 1 – Establishing clear guidelines. While parents cannot completely prevent their children from using gadgets, they can positively impact children’s behavior by setting limits and closely monitoring their children. Setting a time limit for gadget use is one of the most important restrictions on their use. Research has shown a link between the amounts of time spent using a gadget and delays in both receptive and expressive language [6; 7; 8].

Parental control includes monitoring children while they play gadgets, letting them use the devices only when authorized, and selecting appropriate apps for the gadgets. It is hoped that parents, who are so important in a child’s upbringing, will be able to shield their offspring from the negative of the Internet. It ought to be feasible for parents to prevent their children from becoming dependent on gadgets.

Storytelling is an effective tool for preschool teachers to teach children about responsible gadget usage, when to use them, and what to do when they're done. Together with planning games that educate children about the advantages and disadvantages gadgets – like the time-setting game that teaches them how to gauge when is a good time to watch.

Stage 2 – Content monitoring. Early childhood is also a crucial period for the establishment of family health routines and behaviors. Therefore, it's critical to keep an eye on consumed content and determine how best to help the child interact with technology. Improved language outcomes for children are associated with parents choosing higher-quality educational programming for their children [1]. We shouldn't expect small children to be able to manage this newly developed skill, so parents must ensure that their children develop appropriate gadget-use habits. Through the use of various educational applications and programs, preschool institutions can positively and orderly incorporate technology

into educational activities and expose their children to top-notch content that aids in the development of speech competence in a way that is appropriate for their age.

Stage 3 – Enhancing social interaction. The limited amount of time spent interacting with friends and family is why speech delay is more common in children who spend time with electronic media, such as watching TV, using gadgets, and the Internet [13]. Allowing children to interact with their surroundings can help them avoid focusing excessively on the tools they are playing with. Motivating the child to participate in group activities and games that require verbal communication to solve problems and exchanging ideas and listening to others is that what contributes to the development of their social language skills. It is the direct responsibility of parents and preschools to organize social activities and motivate children to participate in them and in collaborative games at home and in schools

Stage 4 – Diversification of activities. Parental supervision is crucial in every area of a child's development. Parents can reduce the harmful effects of gadgets on their children's development by actively participating in their daily lives and activating family participation and activities such as family visits, outdoor outings, board games (such as puzzle, chess, group games), and children practicing physical activities such as running, cycling, swimming, walking, creating a reading corner full of interesting books and stories inside the preschool institution and at home, and encouraging children to read. Encouraging regular, structured activities that don't involve gadgets can help parents balance their children's day.

Module 2. Interaction between the preschool institution and parents

Permanent communication between the school and parents to enrich parents' awareness, and provide information about gadgets use and its impact on children. This important condition which can be understood as an attempt by parents to mediate between children and the use of gadgets, is one of the topics that should be taught in parenting activities. In order to educate children about the digital age, we see, firstly, the importance of devoting workshops and lectures to educate parents about the significance of using gadgets in the following aspects:

- educating parents about the importance of limiting the use of technological gadgets and providing alternative activities;
- providing advice and support to parents in implementing appropriate activities at home;
- providing educational resources for parents about the impact of using gadgets on children's speech competence;
- providing advice and guidance on how to reduce the negative impact of gadgets and encourage real interaction, and explaining the importance of choosing the appropriate content of appropriate quality;
- consultations with speech and language specialists for additional advice on how to reduce the negative impact of gadgets on children's speech development.

Providing support and assistance programmes for parents. This means providing reliable information about general health, child development and speech competence, including guidance on positive gadget use:

- providing brochures or electronic resources containing advice on best practices for using monitors;
- creating monthly newsletters or social media groups to share ideas and tips about using gadgets;
- creating a support group for parents where they can share experiences, challenges, and solutions related to screen time management.

Continuous assessment and development of individual plans for each child: This means the assessment of children's speech competence levels and work with parents to develop individual plans tailored to meet each child's needs and challenges related to gadgets use. It implies organizing periodic follow-up sessions to review the impact of gadgets use on children and adjusting plans as needed.

Module 3. Measurement of the speech competence development

Module 3 displays the expected results from the application of the methodical system proposed here. In this module, we divided the measurable possible results of the competence development into three levels (high, average, low). The first (high) level implies a high level of comprehension of commands and instructions; complete clarity of pronunciation; a wide and varied vocabulary; the ability to produce complex and grammatically correct sentences; the ability to speak without undue pauses or hesitation; the ability to express emotions and social interactions in an appropriate manner in the right context.

The second (average) level implies speaking in continuous sentences with only minor repetitions; using a good but limited vocabulary; using partial clarity in pronunciation with occasional minor errors; understanding commands and instructions well enough to occasionally need clarification; being able to express oneself with some difficulty.

The third (low) level implies clear pronunciation issues with frequent grammatical errors that impair comprehension; usage of a small and primitive vocabulary; creation of extremely basic sentences riddled with grammatical errors; speech marked by extreme hesitancy and frequent pauses; and trouble comprehending intricate directives and instructions. difficulty expressing oneself in several fields.

Conclusion. As explained previously, the definition of the concept of speech competence is generally understood as the desire of the child to make their speech understandable to others and readiness to understand someone else's speech. Speech competence involves using language to construct and express thoughts and willingness to communicate. The child's speech competence includes lexical, dialogical, grammatical, phonetic, monological components, and skills to ensure the correct construction and implementation of the statement.

The study of the essence and structure of the speech competence of pre-schoolers allowed the authors to develop a model of a methodical system devoted to solving the problem of the negative impact of gadgets on various aspects of child development, including their efficiency in speech. The model consists of three interconnected modules covering pedagogical work with children from teachers' and parents' sides, interaction between the preschool staff and parents,

and measurement of the speech competence development in children. The set goal makes all those modules inextricably linked and united, which, in turn, makes the entire pedagogic process systematic and logical.

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Поступила 05.09.2024

МОДЕЛИРОВАНИЕ МЕТОДИЧЕСКОЙ СИСТЕМЫ ПРЕДОТВРАЩЕНИЯ НЕГАТИВНОГО ВЛИЯНИЯ ГАДЖЕТОВ НА РАЗВИТИЕ РЕЧЕВОЙ КОМПЕТЕНТНОСТИ ДЕТЕЙ ДОШКОЛЬНОГО ВОЗРАСТА

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Представлена авторская модель, направленная на решение проблемы негативного влияния гаджетов на различные аспекты развития ребенка, в т.ч. его речевую компетентность. Авторы определяют речевую компетентность дошкольников как динамическое интегральное личностное качество, проявляющееся в умении и готовности успешно слушать, воспринимать и воспроизводить информацию, включаться в разговор, выражать личные мнения и точки зрения в устной форме в соответствии с возрастной нормой. Представленная модель состоит из трех взаимосвязанных блоков (модулей): 1) педагогическая работа с детьми, 2) взаимодействие персонала дошкольного учреждения с родителями, 3) измерение развития речевой компетентности. Педагогическая работа с детьми объединяет два аспекта: обязанности дошкольного учреждения и обязанности родителей. Взаимодействие между персоналом дошкольного учреждения и родителями начинается с установления постоянного общения между учителями и родителями для предоставления информации об использовании гаджетов и их влиянии на детей. Измерение развития компетентности предусматривает три ее уровня (высокий, средний, низкий) с общим описанием каждого.

Ключевые слова: экранное время, негативное влияние гаджетов, речевая компетентность дошкольников, дошкольное образование.