

Developing preschool teachers' professional competencies with regard to forming children's safe traffic participation skills

Desarrollar las competencias profesionales de maestros de preescolar con respecto a la formación de niños en habilidades de participación segura

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Received: 19/06/2018 • Approved: 05/08/2018 • Published 08/12/2018

Contents

- [1. Introduction](#)
- [2. Methods](#)
- [3. Results](#)
- [4. Discussion](#)
- [5. Conclusion](#)
- [References](#)

ABSTRACT:

This paper presents the scientific and theoretical analysis of the social and educational project implementation experience at the national level regarding the formation of children's skills of safe participation in traffic. The analysis has given the authors the opportunity to highlight the main factors providing for the topicality of the problem and to justify the necessity to develop the structure of preschool teachers' professional competencies in forming children's skills of safe participation in traffic. We have defined the structure and content of teachers' professional competencies in forming children's skills of safe participation in traffic: social and legal competency, professional and specialized competency, and indicators of their achievement.

Keywords: preschool education, professional competencies, traffic, safe road traffic participant.

RESUMEN:

Este documento presenta el análisis científico y teórico de la experiencia de implementación de proyectos sociales y educativos a nivel nacional con respecto a la formación de las habilidades de los niños para una participación segura en el tráfico. El análisis ha brindado a los autores la oportunidad de resaltar los principales factores que explican la actualidad del problema y justificar la necesidad de desarrollar la estructura de las competencias profesionales de los maestros de preescolar para formar las habilidades de los niños de una participación segura en el tráfico. Hemos definido la estructura y el contenido de las competencias profesionales de los docentes en la formación de las habilidades de los niños para una participación segura en el tráfico: competencia social y legal, competencia profesional y especializada, e indicadores de sus logros.

Palabras clave: educación preescolar, competencias profesionales, tráfico, participante de tráfico seguro.

1. Introduction

The problem of ensuring road safety and forming children's skills of safe participation in traffic is still one of the most important in the country's social and economic development, and its solution is one of the priorities of the state policy.

Analyzing the domestic experience and practice of implementing projects aimed at forming children's skills of safe participation in traffic has shown that this issue is quite well presented in various studies and project activity of educational organizations.

This has provided the opportunity to highlight the main factors of the importance of this issue:

- first, the fast growth of the number of vehicles, the active expansion of the road infrastructure and traffic congestion lead to more psychological stress being experienced by traffic participants and, consequently, to more road accidents (Bezhentsev 2017);
- second, the issues of road safety and preventing dangerous behavior of traffic participants have integral (complex and interdisciplinary) nature. This necessitates the interaction and cooperation at the system level of scientific, education, law enforcement, medical, social and state institutions of different levels with regard to traffic education of children and teenagers, forming their skills of safe participation in traffic, and creating safe conditions for children's participation in traffic (Akhmadieva 2011);
- third, children belong to the most sensitive category of traffic participants, yet their psychological and physiological age peculiarities (impulsiveness, spontaneity, narrowed perception, distracted attention, lack of personal experience, as well as lack of capacity for anticipating, forecasting, etc.) often result in forming unstable skills of safe road behavior which brings them to the category of pedestrians being most at risk (Bicheva & Filatova 2017).

The Federal Targeted Program "Improving Road Safety in 2013-2020" has helped to bring up to date studies related to expanding the professional competence of teachers at various educational institutions (preschools, schools, and supplementary education institutions), as well as development of projects aimed at implementing special training of traffic participants (children and adults, pedestrians and drivers) (Federal Program No. 864 2013).

2. Methods

Solving the task of forming children's skills of safe participation in traffic has been the subject of several monographs and research papers published in 2014-2016 by such Russian scientists as M.I. Andreyeva, R.Sh. Akhmadieva, A.G. Babich, A.S. Blinov, V.V. Britvina, M.G. Belugin, P.P. Volodkin, I.B. Dimitrova, M.V. Doronina, M.Ye. Yeliseyev, L.Yu. Yerokhina, V.N. Zudin, A.N. Isayev, Ye.G. Kapustina, V.I. Kolesov, V.D. Kondratyev, V.G. Konyukhov, B.A. Korostelev, S.A. Krivospichenko, Z.Z. Latifov, Ye.S. Limareva, Ye.S. Mezentseva, N.N. Panov, S.A. Ratovskaya, A.A. Repnikov, A.S. Ryzhova, I.V. Solovyeva, R.G. Ter-Grigoryanz, T.N. Tomchinskaya, E.S. Tsygankov, A.V. Chernyavskaya, N.V. Chigirinskaya, V.V. Shchepkin and many others.

The studies describe various aspects of solving the issue of forming children's skills of safe participation in traffic.

In their research, Babich and Ter-Grigoryanz (2016) have assessed the regional systems of continuing education developed to train children in safe traffic participation and prevent road traffic injuries of children on the basis of analyzing and integrating the data on the monitoring outcomes. The results have provided the possibility to develop an organizational, methodological and legal basis for the system of continuing education developed to train children in safe traffic participation and prevent road traffic injuries of children.

Belugin has developed a structural and functional model of organizational and pedagogical support to ensuring school children's traffic safety within the idea of the unified structure of coordinated blocks: value-based and goal-oriented, content-related, technological, and evaluating and resultative ones.

Belugin and Akhmadiyeva (2016) propose programs of forming the transport-safety competency of school students, as well as scientific and methodological recommendations on arranging organizational and pedagogical support to ensuring school children's traffic safety for teachers and administrative staff of general educational institutions; and the criteria basis of evaluating the quality of organizational and pedagogical support to ensuring school children's traffic safety.

Kapustina and Limareva (2017) have in their studies provided grounds for developing viable preventive mechanisms to ensure proper traffic safety level in the modern society including training the habit-forming skills of traffic participants.

Yerokhina (2015) has proposed the simulation method aimed at students' mastering of functions of traffic participants that facilitates learning of safety elements by traffic participants using traffic situation models with a predictive function and technological cards compiled on their basis.

Publishing road traffic regulations in different adapted variants is a positive experience that ensures a maximum educational effect for various age groups (A.A. Bezhentsev, K.Yu. Belaya, A. Bochko, Ye.A. Voronova, S.A. Gordienko, A.A. Gromakovskiy, S.F. Zelenin, S.V. Ignatova, A.I. Kopusov-Dolinin, T.F. Saulina, T. Usova, O.D. Ushakova, S.N. Cherepanova, G.P. Shalayeva, Ye.I. Shalamova, Ye.V. Shelmin, T.A. Shorygina, G.N. Elkin).

Thus, the modern Russian practice includes a large range of sources both for scientific and methodological aspects of the topics under review and for applicable aspects of working with children regarding the formation of children's safe traffic participation skills and prevention of road traffic injuries of children.

3. Results

The analysis of scientific papers and project practice of the educational institutions with regard to the issue under review has shown that the process of forming children's skills of safe traffic participation is methodologically grounded and systematized (Konratyev & Shchepkin 2017). This gives us the possibility to identify problem zones of functioning and possible areas of improving the policy in working with traffic participants and providing special training to traffic participants, to specify the checklist and content of teachers' professional competencies regarding the formation of children's safe traffic participation skills (Markova et al. 2014).

Within the implementation of the state contract for work performance (service rendering) dated September 19, 2017 No. 07.R61.11.0034 under the project "Advanced training of teaching teams of general educational institutions, supplementary educational institutions and preschool educational institutions with regard to forming children's safe traffic participation skills", we have developed the structure and content of preschool teachers' professional competencies regarding the formation of children's safe traffic participation skills.

Based on the methodology of the *system-activity*, *competency-based*, and *person-oriented approaches*, as well as the principles of the *universality*, *continuity*, *integrity*, and *variability of content*, we include the following in the structure of preschool teachers' competencies regarding the formation of children's safe traffic participation skills:

- *social and legal competency* – the ability to consciously perceive the social and legal basics of forming children's safe traffic participation skills in accordance with the strategy, goals, and tasks of the modern educational policy and in the prospect of developing federal legislative documents, statutes and regulations;
- *general professional competency* – the ability to evaluate the role of education informatization as development of its humanist traditions; to use the electronic educational resources and establish efficient information and communicative interaction, including network interaction, regarding the formation of children's safe traffic participation skills;
- *professional and specialized competency* – the ability to effectively use modern educational technologies, active and interactive work forms and methods aimed at forming children's

safe traffic participation skills taking into account the target audience.

The social and legal and general professional competencies reflect the invariant nature and universality of the content of the practice-oriented module for advanced training courses (including by module courses) of preschool teachers regarding the formation of children's safe traffic participation skills.

The professional and specialized competency demonstrates the variability and continuity of the activity taking into account the specific features of a preschool educational institution's educational process.

The degree of formation of the proposed competencies is evaluated on the basis of the developed achievement indicators.

1 Indicators of achieving the social and legal competency are the following:

1.1 Comprehension of personal responsibility and the importance of forming safe traffic participation skills of preschool children.

1.2 Compliance in professional activity with the main targets and areas of preschool education system development regarding road traffic safety in accordance with the conceptual documents of the Russian Federation.

1.3 Display of readiness to comply with and demonstrate legal norms of traffic participant's safe behavior.

1.4 Demonstration of knowledge and understanding of the main laws and regulations that govern the formation of preschool children's safe traffic participation skills.

1.5 Demonstration of readiness to build up productive relationships with participants in the educational process on the basis of cooperation.

2. Indicators of achieving the general professional competency are the following:

2.1 Understanding the importance of preschool education informatization as the leading direction of its modernization, possession of motivation for implementing electronic education with regard to the formation of preschool children's safe traffic participation skills.

2.2 Demonstration of possessing information instruments for developing projects/programs with regard to the formation of preschool children's safe traffic participation skills.

2.3 Continued professional self-development, self-analysis and self-reflection with regard to the formation of preschool children's safe traffic participation skills.

2.4 Objective evaluation of the results of own actions with regard to analyzing the degree of formation of preschool children's safe traffic participation skills.

2.5 Displaying readiness for innovative information search, creation, implementation, and sharing own creative experience (including using the information technologies) with regard to the formation of preschool children's safe traffic participation skills.

3. Indicators of achieving the professional and specialized competency are the following:

3.1 Taking into account the age-related characteristic aspects of physiological, mental, and psychological peculiarities of preschool children when choosing and (or) developing the essence, technology, methods, and instruments for forming safe traffic participation skills.

3.2 Possessing the system of knowledge in the area of road and transport safety and of concepts of building effective communication, interaction and cooperation with regard to the formation of preschool children's safe traffic participation skills.

3.3 Knowledge of methodological aspects of training sessions aimed at forming preschool children's safe traffic participation skills built on the basis of the activity-oriented approach.

3.4 Using modern educational technologies to form safe traffic participation skills of preschool children taking into account the specific nature of the educational process.

3.5 Demonstrating readiness for self-organization and the ability to effectively develop and implement program, methodological, and didactic materials, including electronic ones, to increase the efficiency of forming preschool children's safe traffic participation skills.

4. Discussion

The necessity to form competencies has preconditioned the goals and essence of the additional education program "Formation of children's safe traffic participation skills" for teachers of preschool educational institutions.

Achieving the goals is ensured by solving three tasks within three modules of the program:

- 1) to analyze the theoretical and methodological and organizational basics of forming preschool children's safe traffic participation skills – the "Safe Childhood Road: Value and Meanings" module.
- 2) to form comprehensive system perception of the complex nature of a teacher's activity to train preschool children's safe traffic participation skills, including with the help of electronic educational resources – the "Safe Childhood Road: Vector for Interactivity as Information Communication for Joint Actions" module.
- 3) to form professional readiness to implement in the educational process best practices regarding training preschool children's safe traffic participation skills – the "Safe Childhood Road: From a Monologue to a Dialogue" module.

The "Final Assessment" module demonstrates solving the education tasks within the supplementary education program.

The topicality of the issue under review is stated as the preamble based on the analysis of the modern social and economic context, the experience of implementing Russian and foreign projects aimed at forming children's safe traffic participation skills, and the practice of educational activity (Global Road Safety Action Plan 2011-2020).

Within the "Safe Childhood Road: Value and Meanings" module, the general activity vector is established by familiarizing teachers with the Federal Targeted Program "Improving Road Safety in 2013-2020". The program helps focusing on key measures at the federal and regional levels, which will ensure the basic context of working with children in future when solving professional tasks (Fedorov et al. 2017).

It is also viable to demonstrate and further analyze such Russian projects as:

- "Light Gives Life" campaign;
- "Road without Danger";
- "City of Roads";
- "Safety Lab" – a mobile traffic training park;
- "Young Traffic Inspectors" campaign.

A review of successful foreign practices ensures deeper understanding of the issue and forming the social and legal competency of teachers. In this regard, the module includes the summary of children safety problem solution experience in such countries as Germany, Great Britain, France, the United States, Finland, and China. In parallel to reviewing the materials, we suggest performing typology and discussion of the presented experience.

Road safety regulation is improved along the following areas:

- creating an integral system of regulation and defining the forecast of its development;
- increasing the level of legal regulation of all management structure ranges;
- unifying the statutory documents regulating the authorized state bodies, separating and detailing activity areas in road safety sphere;
- systematizing current documents providing for cancelling obsolete acts or their multiplicity;
- ensuring the compliance of Russian legislative and other statutory acts with the international legal norms and standards.

Within the "Safe Childhood Road: Vector for Interactivity as Information Communication for Joint Actions" module the trainees are familiarized with the following:

1. Main classifications of electronic educational resources;

2. Types of electronic educational resources in accordance with the general classification approaches;
 3. Resource possibilities of creating and using own multimedia products to solve professional tasks.
- The familiarization with the typology of electronic educational resources includes the review of the most interesting examples:

1. Text examples – learning packages for preschool educational institutions aimed at training children's safe participation in traffic;
2. Graphic – materials from the federal portal "Road Without Danger";
3. Program – the training program "Safety: Road Traffic Rules"; the interactive program "On the Road with Kikoriki (Smeshariki)"; the multimedia game "Road Safety";
4. Multimedia – animated movies and multimedia presentations.

We recommend performing a familiarizing review of interactive equipment (interactive table and floor) and its software.

The method of using electronic educational resources includes, first of all, taking into account the hygiene requirements to using electronic educational resources in performing educational activities with preschool children.

The trainees' creativity is activated by the project task to develop author's workbook on forming children's safe traffic participation skills using electronic educational resources. In order to account for varying authors' approaches to development of learning and didactic materials, we recommend that model lessons' examples shown on the federal portals be proposed and not the rigid structure of lessons.

Within the "Safe Childhood Road: From a Monologue to a Dialogue" module, the professional and specialized preschool teachers' competency is formed regarding forming children's safe traffic participation skills and preventing road traffic injuries of children due to familiarizing with result and goal sets of a preschool teacher as indicators of the work effectiveness and, consequently, forming the ability to self-evaluate one's own activity and correcting the interim results of professional activity.

The essence of the activity aimed at training children's safe traffic participation skills is grasped by trainees during contact work with a teacher aimed at selecting forms and essence for organizing educational activity, as well as for forming a prospective yearly work plan of training preschool children's safe traffic participation skills at a preschool educational institution.

The technology package of forming teacher's professional competence with regard to forming children's safe traffic participation skills and preventing road traffic injuries of children as follow-up of trainees' learning within the practice-oriented context helps to systematize and summarize the accumulated materials and present them as didactic instruments (Ilaltdinova et al. 2018).

The "Final Assessment" module is aimed at evaluating the degree of maturity of the social and legal, general professional, and professional and specialized competencies of preschool teachers with regard to forming preschool children's safe traffic participation skills and preventing road traffic injuries of children and includes developing and defending a project (with a multimedia presentation) of prospective work plan for a school-year with regard to forming preschool children's safe traffic participation skills at a preschool educational institution.

5. Conclusion

The formation of the proposed competency system will allow increasing the quality work level of preschool teachers with regard to forming preschool children's safe traffic participation skills.

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