

# USING INTERNET TECHNOLOGIES FOR POPULARIZATION OF SCIENCE

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**Abstract:** *The objective is to describe the advanced practice of using internet technologies for popularization of science by a well-known interregional public association, which systematically performs large-scale science-popularization activity. The author explores how to combine the varied and commonly used internet technologies and resources for solving the complex task of increasing the level of scientific knowledge in adult population. Broad application of this practice by autonomous public organizations can help to increase the overall culture and educational level in citizens, facilitate their participation in public life, develop public initiative and activity, and promote the broader use of rights and freedoms provided by the democratic state. To solve the set task, we applied the general dialectic method, serving to comprehend the internal self-development of the object under study; the historical method; and the method of complex comparative analysis. The research results confirm that internet technologies, if used with due substantiation and relevant content, are an effective means of increasing the culture and educational level in citizens within autonomous public organizations. The author describes the system of popularization of science by a well-known public association, for this experience to be used by other public organizations, considering their specific tasks.*

**Keywords:** *internet technologies, popularization of science, public organization, initiative, complex, Workers' Academy Fund.*

## Introduction

Apart from the historically established state forms of arranging public life, various forms of public self-government become more and more significant as the society develops. Advance of these forms, as well as the increased use of the historically established democratic procedures by the citizens, requires appropriate preparation, free from the narrowness of a specific profession. This can be provided not only during professional retraining by various institutions and professional educational establishments for adults, but also by public associations. At the modern stage of scientific and technological advance, internet technologies are broadly introduced into educational and popularization activities. This is true not only for state and private establishments of all kinds, but also for public associations functioning on voluntary basis as a public initiative. Our research object is public science-popularization activity under the conditions of internet development and the techniques related to it. Today, it is possible to combine learning full-time and by correspondence, to place recorded lectures and seminars at various internet-resources, to carry out discussions at network resources, to use electronic libraries place in the websites and containing the necessary literature and recordings of the previous sessions, and, which is especially important, to check the students' progress with the distant learning systems (DLS). When comprehending the

truth, one should not just absorb or consume knowledge, but be able to reproduce and creatively apply it. This is impossible without students performing assignments independently and experts correcting them. The above issues have been in certain aspects researched by a collective headed by Doctor of Economic and Doctor of Philosophy, Honored Researcher V. Ya. Elmeyev [1], in a monograph by Professors V.G. Dolgov, V.Ya. Elmeyev and M.V. Popov [2], a book by Yu.L.Rysev [3], a monograph by Doctor of Economic O. A. Mazur [4], a monograph by Professor A. V. Zolotov [5], a monograph by Professors A. S. Kazennov and M.V. Popov [6], Works of an International scientific-practical conference on the issues of trade unions' functioning [7], monographs by M.V. Popov [8], [9], articles [10],[11], and collective monographs [12], [13], and [14].

## Materials and methods

Researching a historically emerging and changing phenomenon, or a process developing with time, we have to use the dialectic method, which implies a holistic view at development as a contradictory process from the lower to the upper, from the simple to the complex. The phenomenon under study is viewed as a result of the preceding development, as the unwound beginning. The object of this research is a well-known interregional association founded a quarter of a century ago –Workers' Academy Fund (Fund for Promoting Workers' Education). It was founded 25 years ago by Union of Moscow Workers, Association of Workers of Nizhniy Novgorod, Association of Workers of Industry, Transport and Communications of Leningrad, and Petrovskaya Academy of Sciences and Arts, headed by Doctor of Engineering, Professor, laureate of State Award of the USSR, a well-known expert in spaceships control systems Leonid A. Mayboroda. Workers' Academy Fund(Fund for Promoting Workers' Education) was registered on 28December 1994 by the Ministry of Justice of the Russian Federation. We research its current functioning as the result of comprehensive development and, besides the general scientific dialectic method, use the historical method and the method of comprehensive comparative analysis. The functioning of the public association Workers' Academy Fund (Fund for Promoting Workers' Education) is studied to identify and reveal the system of science-popularization activity developed by it.

## Results

As shown by comprehensive analysis of the functioning of the public association under study, Workers' Academy Fund(Fund for Promoting Workers' Education)is broadly rendered in the internet due to the modern digital technologies. The page of Workers' Academy Fund in Wikipedia states: "The Fund proclaims as its tasks such as researching and solving the problems related to the development of the Russian science, education and industry, and researching the issues of theory and practice of workers' movement, as well as facilitating all-round education of workers. To this end, the Fund performs educational courses of lectures — "Red University" (established in spring 2012 by lecturers of Workers' Academy Fund based on a special lecture course "World outlook of Marxism-Leninism" with a view of studying philosophical, political and economic works by G.W. F. Hegel, Karl Marx, F. Engels, and V. I. Lenin) and "University of Workers Correspondents". The Fund publishes newspapers "Narodnaya Pravda" (accredited in the State Duma of Federal Assembly of the Russian Federation, Administration and Legislative Assembly of Saint Petersburg), "Pravda truda" and "Za rabocheye delo".

The research result is disclosure of the system of science-popularization activity applied by Workers' Academy Fund. It has been proved that forms of this activity are not abstract and isolated but specific and universal; the system of science-popularization methods can be applied everywhere due to the use of advanced internet technologies. For every worker to have an opportunity to educate through the internet, Workers' Academy Fund (Fund for Promoting Workers' Education) established several specialized websites. The main website of Workers' Academy Fund [15] is supervised by a PhD (Engineering), Associate Professor Ivan M. Gerasimov. The site regularly publishes digital materials on all issues and aspects of the Fund activity. There is a digital archive of newspapers published by the Fund and a video collection of lectures and other materials, as well as a collection of books and journalistic materials of the Fund. The site publishes both materials for educating workers and articles written by the workers on the issues of improving conditions of labor and wages, reducing working time and increasing leisure time for free development. The rubrics include: Experience of collective actions, Collective labor disputes, Collective contracts, Institute of trade union movement, Russian Committee of Workers, Federation of Trade Unions of Russia. The materials are collected and updated.

The website of the Moscow regional division of Workers' Academy Fund [16] is supervised by its Head Aleksey V. Kuzmin. The site contains a large digital library, comprising various aspects of science-popularization activity. There is "Workers' TV of Moscow", which interviews the most successful trade union activists and broadcasts discussions on the topical issues of workers' movement. The most interesting and important for trade union education were two interviews with the Chairman of Federation of Trade Unions of Russia, Secretary General of Labor Confederation of Russia, President of the Federal trade union of air traffic controllers Sergey A. Kovalev. The said trade union is the most successful of all in reducing working time and increasing vacations and salaries, as well as in improving other working conditions. During one of the recent discussions on the "Workers' TV of Moscow" entitled "Death rate, birth rate, and cost of working force", the representatives of labor collectives of Moscow plants Sergey Gorbushkin and Artem Ivanyuk discussed relation between the material goods consumed by workers and the number of population in Russia. The site places invitations to conferences on trade union activities, to the sessions of the Russian Committee of Workers, as well as their solutions and video reports on its activity. Of great interest are analytical reports on transferring to a 6-hour-long working day, criticizing the attempts to shorten a working week by prolonging a working day. The latter project aggravates the problems of workers' development, which are already acute, impeding possibilities for their education and participation in trade union struggle. Under the rubrics of "Trade union struggle", the web-site of the Moscow regional division of Workers' Academy Fund places video lectures with transcripts on the courses "Social-labor conflicts and technique of settling them" and "Political components of social-labor conflicts". The site publishes articles and commentaries of workers on the topical issues of struggle for improving the workers' conditions, as well as a newspaper "Hegel in action".

The informational and enlightening activity using digital technologies is also carried out on another web-site of Workers' Academy Fund, which is peculiar for its structure, form of material presentation, and audience [17]. It is supervised by the Head of Novosibirsk regional division of Workers' Academy Fund Aleksandr Yu. Bulgakov. Just as other supervisors of websites of Workers' Academy Fund, he edits the site and provides it with the latest information on pro bono basis and creatively applies modern internet technologies. The site contains video recordings of the sessions of a study group on

Hegel's dialectics and a study group on "Capital" by K. Marx, on progressive collective contracts and calculation of labor costs. The rubrics include: Actions in the society; Interests of the working class; Increasing wages; Reducing working day; Improving labor conditions; Lectures on conflictology; Organizing workers; Trade unions; Soviets; Struggle for collective contracts; Russian Committee of Workers; Collective actions; and others.

All websites of Workers' Academy Fund publish not only materials for enlightening workers, but also article written by the workers about their needs, life and struggle, as well as discussions on the studied issues and practice of problem solving. Since autumn 2019, educational work on internet was started by "Krasnoye radio", established within Workers' Academy Fund by Petr V. Gomelauri [18]. It broadcasts lectures and reports of the experts of Workers' Academy Fund, as well as the news of trade union and workers' movement. It is preparing to arrange for the experts to regularly answer the questions asked by the workers. Similar work is carried out by "Engels" club, established in cooperation with Akademiya Smyslov (Marat S. Udovichenko). Its sessions are published on internet, and the audience of this resource, which practices answering the citizens' questions, is constantly growing[19]. Spreading of the internet allowed arranging distant learning at two universities of Workers' Academy Fund – "University of Workers Correspondents" and "Red University". "University of Workers Correspondents"(Rector – PhD (Economics) Viktor I. Galko) arranges sessions from October to May for the residents of Saint Petersburg. Every Thursday, in a premises near the Smolny Institute (the address is given in "Narodnaya pravda" newspaper and in the internet at *University of Workers Correspondents*), open lectures are given; lecturers answer the questions, and the audience may speak and get the feedback from the lecturer. As the sessions are recorded and published at Workers' Academy Fund channel at YouTube [20] (supervisor Sergey V. Tyulenev), the knowledge disseminated by the University becomes available for the Russian citizens and Russian-speaking residents of other countries.

As for "Red University" (Rector – Head of Leningrad internet-television Len.ru Vladimir V. Pronin) of Workers' Academy Fund and Leningrad internet-television[21], 2019 is its eighth year of functioning. Professors and PhDs give lectures and hold seminars, exams and tests for the full-time students (residents of Saint Petersburg) or via a distant learning system (DLS). The program includes philosophy, political economy and scientific socialism, experience of workers' and trade union movement. Participants do not only get ideological training, but also answers to the questions about what they should know and do to actively participate in the workers' movement, trade union struggle, and social and political life of the country and the world. Residents of Saint Petersburg study full-time, while students from other parts of Russia and abroad are educated via a distant learning system (DLS). All sessions are broadcasted on internet by Leningrad internet-television and, if possible, "Workers' TV" of Workers' Academy Fund at YouTube (supervisor Sergey V. Tyulenev). After a one-year-long study at the University, all those who received diplomas are considered to be second-level students and continue their studies independently, receiving all the necessary consultations and support from the Red University professors via the internet. All tuition is free of charge, and due to the use of digital technologies the audience is constantly growing. The eighth intake of students comprised over 600 participants.

Special attention should be paid to the activities of "Workers' TV of Moscow", "Workers' TV of Leningrad", and "Workers' TV of Nizhny Novgorod". "Workers' TVs" daily publish lectures, interviews and social-political reports of professors of Workers' Academy Fund; cover the activity of the Russian Committee of Workers and the best trade

union leaders; reveal the experience of trade union and workers' movement; provide the floor for representatives of labor collectives, workers and other employees, helping them to be educated and grow as political figures. All this is done with the broad use of digital technologies. Enlightenment activity of Workers' Academy Fund is supported by pages of the Fund in social networks, first, in VKontakte network. The experience of enlightenment activity of Workers' Academy Fund using internet technologies provides a theoretically substantiated practical example of the technical and technological progress facilitating the social progress in general.

## Discussion

As a matter of fact, we deal with a unique experience of complex use of internet technologies within a deployed system not only comprising the aspects of science-popularization content, but also combining this content with its presentation by various internet resources. This advanced experience stands out against the background of multiple individual self-contained blogs and other specific internet resources, implementing specific preferences and political views of their creators, as well as against the background of various groups often demonstrating insufficient scientific qualification and poor knowledge of their creators. The experience presented in this paper deserves studying, disseminating and using by other science-popularization associations acting on the pro bono basis. It deserves public attention and support.

## Conclusion

The article summarizes the valuable experience of systemic science-popularization activity using internet technologies, arranged on the pro bono basis by the selfless participants of this socially significant process. One may be confident that this comprehensive public initiative will be further maintained by highly qualified experts in relevant spheres, on the one hand, and students, on the other, the latter forming the future disseminators of knowledge required by the people.

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