

SCTMG 2023

**International Scientific Conference «Social and Cultural Transformations in the Context of
Modern Globalism»**

STRATEGIES FOR SUPPORTING TEACHERS IN THE ORGANISATION'S DIGITAL EDUCATIONAL ENVIRONMENT

Pak Lyubov Gennadievna (a)*, Ivanishcheva Nadezhda Alexandrovna (b),

Kochemasova Lyubov Alexandrovna (c)

*Corresponding author

(a) Orenburg State Pedagogical University, 19, Sovetskaya St., Orenburg, Russia, lyubov-pak@mail.ru

(b) Orenburg State Pedagogical University, 19, Sovetskaya St., Orenburg, Russia, Ivanicheva@list.ru

(c) Orenburg State Pedagogical University, 19, Sovetskaya St., Orenburg, Russia, lkochem@mail.ru

Abstract

The article presents theoretical aspects of justification of strategies for supporting teachers in the digital educational environment of the organisation. The article describes the necessary professional and personal characteristics of modern "digital educators" as digital facilitators, integrators-mediators between the virtual and real worlds, generators of digital ideas. The ways to reduce the identified risks by means of substantiating the strategies of support for teachers in the digital educational environment of the organisation were determined. The strategy "Value orientation of teachers to accept the meanings and benefits of digitalisation of education" reflects the motivational orientation of this type of support for the conscious use by teachers of modern digital technologies, digital educational resources and technical means to improve the quality of creating various educational content in the digital educational environment of the organisation. The strategy "Activating the elimination of professional deficits of teachers in the field of information literacy" indicates the priority of timely identification of risky areas and emerging information difficulties in professional and pedagogical activities for their timely localisation and implementation of personalised support for teachers in the conditions of digital transformation of education. The strategy "Actualisation of the potential for constructive interaction between the participants of educational relations in a harmonious combination of online and offline formats" defines the guidelines for the organisation of blended, hybrid, distance learning from the position of building interactive communication.

2357-1330 © 2024 Published by European Publisher.

Keywords: Digitalisation of education, digital educational environment, digital teacher, digital educational technologies and resources, online and offline learning formats, teacher support strategies

1. Introduction

Scientific and technological progress, global digitalisation of society and the education system reflect a radical shift beyond the centuries-old meanings of professional and pedagogical work, determine a fundamental departure from the traditional (pre-digital) conditions of learning, determine the importance of teachers' use of the possibilities of the digital educational environment of the organisation, formed in a radically new reality. The priority of modern teachers' activity, along with traditional formats of training, is to take into account the main trends of informatisation of education. This is transprofessionalism of pedagogical staff on the basis of digitalisation as a basis for optimal life in the profession and digital society; penetration of elements of online education into the traditional system (offline) of education. This also involves priority of formation of "soft" (soft skills) skills of the 21st century in the participants of educational relations; addition of distance technologies with virtual reality technologies; development of a new digital environment for teachers and teachers; and the use of virtual reality technologies.

The ability and readiness of teachers to master the possibilities of the organisation's digital educational environment productively, i.e. to apply relevant information resources optimally, to think critically and implement them productively, taking into account the educational objectives set. Teachers in today's world need to be digital facilitators, digital mentors, digital tutors, digital tutors, experts in ensuring multi-purpose use of digital innovations in the organisation's digital learning environment (Cattaneo et al., 2021).

However, the analysis of literature and best practices has revealed the fact that teachers are not sufficiently prepared to work in the digital educational environment of the organisation, their digital literacy is fragmented, and they lack knowledge and skills in this area (Goryainova et al., 2022; Sinebryukhova, 2021). It is necessary to provide targeted support for teachers in the field of pedagogical activities in the digital educational environment of the organisation in some aspects. The first is "forming their ability to digitise teaching and learning material and using it in educational practice. The second is developing the skills to develop electronic textbooks with elements of interactive technologies and programmed learning, to create mass open educational courses and implement the learning process in online and/or blended mode. This includes the skills of effective and efficient use of digital technologies in teaching and learning and developing the skills to use digital materials in the digital environment.

The importance of substantiating the strategies for supporting teachers in the digital educational environment of the organisation is reflected in the Federal Project "Digital Educational Environment" of the National Project "Education". It fixes the importance of "creating a digital educational environment in educational organisations, as well as ensuring the implementation of digital transformation of the education system, equipping organisations with modern equipment and developing digital services and content for educational activities". To implement this project, the Methodological Recommendations for the introduction of modern digital technologies into basic general education programmes were approved (Order of the Ministry of Education and Science of Russia No. R-44 of 18 May 2020). The Concept of the training of pedagogical staff for the education system for the period until 2030 defines the need to support teachers as part of their professionalisation, updating the opportunities for "the use in educational

organisations of an electronic educational environment, including various digital services for students and teachers".

The substantiation of an effective set of strategies for supporting teachers in the digital educational environment of the organisation sets the guidelines for minimising risky areas of fragmented implementation of the main trends of informatisation in the educational process. That improves the quality of teaching and achieving high professional results from the position of multifunctional use of opportunities (motivating, activating, transforming) and properties of this environment (personalisation, interactivity, multimedia, cross-platform).

The above-mentioned determines the need to develop in pedagogical science and practice strategies to support teachers in the digital educational environment of the organisation. They aim at improving their information literacy for optimal implementation of work actions and functions in the context of the flexible restructuring of the directions and content of pedagogical work in diverse and complementary online and offline formats of teaching and education of the younger generation.

2. Problem Statement

In the course of analysing the results of a survey of 2,451 teachers from seven regions of the Russian Federation, conducted by E. A. Golodov, I. V. Gerlakh, I. E. Kopchenko, O. N. Spirina, V. M. Khlopkova, and E. V. Chiyanova, we found that in real educational practice there is a rather high number of teachers (65% of respondents). They demonstrate a fragmented level of competent mastery of techniques for using digital technologies and resources for optimal organisation of the educational process in online and offline formats. Less than 35% of the surveyed teachers have a high level of information and communication competences. They show only the ability to work with "such programs as text editors, spreadsheets, presentation editors, PDF editors, graphic editors. At the same time, only 20% of the respondents are fluent in Word or its analogue and can use it effectively in their professional activities. 12% are fluent in Excel spreadsheet or its analogue and can analyse and filter data, build diagrams and graphs.

R. R. Aetdinova and O. M. Chorosova outline (based on the results of the survey) the significant sources of teachers' problems in the digital educational environment of the organisation. 72% of the respondents demonstrate a low level of personal digital competencies. 67% of the respondents have unformed motivation to use digital devices in the learning process and inability to constructively use time periods and organisational resources to prepare for classes with elements of "digitisation" (Aetdinova & Chorosova, 2021). M. L. Grunis and G. I. Kirilova identified the cognitive risks of teachers associated with mastering new digital technologies and testing their productivity in professional activities, reflecting the emergence of a subjective sense of danger when immersed in the digital educational environment of the organisation. This type of risk is caused by a change in teachers' traditional understanding of the content of knowledge transfer to students in the pre-digital format and the spread of new educational practices with elements of "digital didactics"; leaving the established position of the usual conditions of professional activity, fear of risk and unforeseen difficulties (Grunis & Kirilova, 2023). This provokes increased general anxiety due to situations of high unpredictability and uncertainty, leading to the emergence of errors in the introduction of digital innovations in the education system; insufficient

acceptance of digital innovations in the educational system; and a lack of knowledge of the content of digital technologies.

The identification of risky areas of fragmented implementation by teachers of new technological possibilities of using digital resources and technologies to update educational practice makes it necessary to investigate the problem of substantiating strategies to support teachers in the digital educational environment of the organisation.

3. Research Questions

The subject of the article is the substantive substantiation of strategies for supporting teachers in the digital educational environment of the organisation and their classification according to the substantive grounds. This allows solving new problems in teaching, expands the sphere of online and offline communication, determines new ways of constructing multi-paradigm consciousness of pedagogical workers using modern means of digital civilisation.

4. Purpose of the Study

The purpose of the article is to substantiate the content of strategies for supporting teachers in the digital educational environment of the organisation to ensure productive formation of digital literacy of teaching staff.

5. Research Methods

The following research methods were used in the work: interdisciplinary literature analysis, analysis of best practices, synthesis, comparison, generalisation, pedagogical observation, interpretation of results.

6. Findings

The study establishes that strategies for supporting teachers in the conditions of digital transformation of education are a specific type of facilitating activity aimed at the optimal solution of problems of consistent improvement and increase in the level of formation of information literacy of pedagogical staff in the short and long term (Zhdanova, 2020).

Three types of author's strategies for supporting teachers in the digital educational environment of the organisation were substantiated on the basis of the generalisation of the literature analysis and own best practices.

1. The strategy "Value orientation of teachers to accept the meanings and benefits of digitalisation of education" reflects the motivational orientation of this type of support for teachers to the understanding and acceptance of the target orientations of the modern digital educational environment of the organisation. This involves the need to use modern digital technologies, digital educational resources and technical means to improve the quality of creating various forms of educational content that corresponds to the modern technological progress of science, etc. In this case, it is important to activate the

professional and personal position of teachers in relation to the optimal implementation of "digital" in the educational process and the development of aspiration to achieve high results of mastering digital innovations. In addition, attention is paid to the understanding by teachers of the safety aspects of using various information and technical systems in the digital educational environment of the organisation for all participants of educational relations (Golodov et al., 2022; Ivanishcheva et al., 2023; Pak et al., 2022).

This strategy of support for teachers in the digital educational environment of the organisation defines a purposeful set of motivating actions of a recommendatory, guiding and meaning-making nature, related to the provision of timely assistance to teachers in:

- i. Awareness of the updated functionality and the change of role positions occupied by educators in the digital educational environment of the organisation when "interconnecting" offline and online learning formats. This is an integrator-mediator between the virtual and real worlds, a creator (designer) of learning-oriented situations with the help of digital devices and network technologies, a verifier of educational trajectories in personalised learning of digital skills development, a guide through unstructured and redundant information space.
- ii. The teachers' understanding of their own positive aspects, professional and personal characteristics that allow them to make optimal use of digital technologies and resources for the implementation of innovative educational activities in the digital educational environment of the organisation.
- iii. Development of aspiration to search, selecting and implementing new trends of digitalisation of education within the framework of determining the ways of adequate assessment of the use of digital content in the subject area in the digital educational environment of the organisation, manifestations of a high degree of information and communication activity.
- iv. Ensuring the safety of physical and psychological health of participants of educational relations from the position of productive orientation in various types of digital educational resources and their optimal implementation in the digital educational environment of the organisation, the formation of new behavioural patterns, ways of searching for information, building constructive interactive communication.
- v. Attracting organisational resources for workshops, problem seminars, webinars, panel discussions, etc. to expand the value-added aspect of immersive, integrated (blended) learning, flipped learning, introduction to digital didactics and implementation of its basic elements, etc.

2. The strategy "Activation of elimination of professional deficits of teachers in the field of information literacy" indicates the priority of timely identification of risky areas of irrational use of a variety of digital technologies and resources in the digital educational environment of the organisation for productive localisation of information difficulties. They arise in professional and pedagogical activities and development of a risk management system (their localisation and reduction) in the activities of modern pedagogical staff in the conditions of cyberspace.

This strategy involves overcoming the risky areas of labour functions and actions of teachers in the digital educational environment of the organisation by means of:

- i. deepening the awareness of teaching staff about new services and regularly updated opportunities of the organisation's digital educational environment, the diversity of combining

different ways of receiving and broadcasting information in a mixed format to expand didactic functionality and improve the quality of the content of the educational process. This includes strengthening their own competitiveness with the multifunctional use of existing applications, web-technologies, digital educational platforms, videoconferencing services, etc.;

- ii. developing the readiness of teaching staff to systematically and critically analyse information flows, to find, interpret and broadcast verified sources of digital content to participants in educational relations. This allows making informed methodological decisions and effectively assessing the quality of educational curricula and various ways of controlling educational outcomes using variant forms of digital content, using virtual and augmented reality technologies in the educational process;
- iii. expanding technical skills in working with digital platforms and devices in the era of the new digital educational reality (access to universal and educational services, management, generation, transformation, exchange, processing, evaluation, creation, etc.) in various formats (video, audio, text, mixed) within the digital educational environment of the organisation, depending on the existing pedagogical deficits and age-related psychological characteristics of teachers;
- iv. deepening the critical analysis of the risks, advantages, consequences and prospects of the implementation of blended learning (integration of offline and online learning formats). This provides for enriching the skills of content development and methodological design of digital curriculum design in the digital educational environment of the organisation from the position of changes in standard organisational working procedures and processes, broadcasting the individualisation of the pedagogical style of "digital educators";
- v. improving "existing competences and development of additional competences related to the use of cloud resources, learning process management (LMS system), organisation of feedback, application of neuroscience techniques in training (control and the filtering of "unnecessary" information, neuroimaging, emotional learning, meaningful learning)" (Drobotenko, 2022).

3. The strategy "Actualisation of the potential of constructive interaction between the participants of educational relations in a harmonious combination of online and offline formats" defines the guidelines for changing the totality of pedagogical interactions between the subjects of education in the organisation of blended, hybrid, distance learning and the consequences of these changes. They are expressed in the transition from the "vertical" (hierarchical) to "horizontal" (partnership) type of relations from the position of interactive communication, teamwork with pronounced traits.

The implementation of this strategy reflects:

- i. development of teachers' readiness to use digital technologies to organise interactive interaction and constitution of creative discourse in the digital educational environment of the organisation from the position of taking into account the generational uniqueness of modern students as a new digital "Generation Z". This has special socio-psychological characteristics (infantilism, floating picture of the world, virtual escape from the realities of life, clipped thinking, value and meaning dissonance) and creativity, multitasking;

- ii. enriching the experience of constructive communication in the digital educational environment of the organisation, designing productive forms of communication in their harmony, interrelation and combination of traditional methods of learning in the classroom (Face-To-Face Learning) with online learning (Online Learning). It occurs within the framework of using a set of methods of developmental feedback, following the ethical standards of the real and digital world, mastering the skills of "digital hygiene";
- iii. activation of ways and means of exchange of meanings, knowledge, experience, values through interactive interaction of participants of educational relations in the digital educational environment of the organisation (from the position of partnership and building educational networks). It generates alternative, ambivalent ways of global perception of the specifics of digital communication and action in the diversity of the surrounding online and offline reality, penetrated by flows of heterogeneous information;
- iv. the importance of organising joint web-conferences, virtual collaboration networks, creating support groups for productive use of digital educational platforms, Web-application and messengers, thematic forums for collective work on updating and transforming the digital educational environment of the organisation, enriching the ways of using digital educational technologies and didactic tools.

7. Conclusion

In view of the above-mentioned, the conducted research allowed us to consider theoretical and methodological aspects of justification of strategies of support for teachers in the digital educational environment of the organisation.

The study, based on the analysis of interdisciplinary literature and own pedagogical experience, outlines the following author's strategies for supporting teachers in the digital educational environment of the organisation. The first is the "Value orientation of teachers to accept the meanings and benefits of digitalisation of education". The second is the "Activation of elimination of professional deficits of teachers in the field of information literacy". The third is "Actualisation of the potential of constructive interaction of participants of educational relations in a harmonious combination of online and offline forms of education" and the "Implementation of the potential of constructive interaction of participants of educational relations in a harmonious combination of online and offline forms of education".

The authors specified that the integrated implementation of author's strategies of this type of support determines the productive achievement of a high level of information literacy of pedagogical staff in the short and long term from the position of: mastering and conscious implementation by teachers of an expanded set of digital technologies. They include digital educational resources and technical means in the digital educational environment of the organisation. There is also development of orientation to build a constructive interactive interaction between the participants of the educational environment, development of a constructive and interactive interaction between the participants of the educational programme and the teachers of the organisation.

The complimentary use of the selected set of strategies for supporting teachers in the digital educational environment of the organisation results in the expansion of the range of achieving the set educational goals and improving the quality of educational results.

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