



EFFECTIVENESS OF THE MODEL FOR DEVELOPING MEDIA LITERACY IN EDUCATION MANAGERS: EXPERIMENTAL AND TRIAL RESULTS

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Abstract: This article analyzes the effectiveness of a model aimed at developing the media culture of education managers and examines the results of its practical implementation. The study involved experimental work focused on developing education managers' competencies in searching for, analyzing, evaluating, and selecting media information, as well as its effective use in professional management activities. Based on the experimental results, changes in the level of media culture among education managers were identified according to established criteria and indicators, and a comparative analysis of the experimental and control groups was conducted. The findings demonstrate the effectiveness of the developed model in improving media literacy, information and communication competence, critical thinking, and responsible behavior within the digital information environment. The practical significance of the model for improving the management of educational organizations in the context of the digitalization of education is substantiated.

Keywords: education manager, media culture, media literacy, digital competence, information and communication competence, experimental work, educational management, critical thinking, digital educational environment.

In today's era of globalization and digitalization, the development of the education system is inextricably linked to the advancement of information-communication technologies, digital platforms, and the media environment. In the process of effectively managing an educational institution, leaders and managers must work with various information sources, utilize digital platforms, establish electronic communication with teaching staff, students, parents, and other stakeholders, and manage the institution's digital image.

The modern professional profile of an education manager is not limited to performing administrative duties. A contemporary manager must possess competencies in searching for and processing information, distinguishing between reliable and unreliable sources, analyzing media content, understanding the substance and purpose of media messages, using digital tools purposefully, and effectively organizing communication processes.

On one hand, the expansion of the media environment is creating new opportunities for education managers. On the other hand, it is also giving rise to risks such as information overload, false information, manipulative content, cybersecurity challenges, and issues with media ethics and errors in digital communication.

Therefore, developing the media literacy of education managers is becoming one of the critical priorities of modern educational management.

In a broad sense, media culture signifies an individual's ability to use media tools and information resources consciously, critically, responsibly, and creatively. For an education manager, media culture is a set of competencies that serves to provide informational support for professional activities, substantiate management decisions, establish effective

communication with educational stakeholders, form a positive media image for the educational institution, and ensure information security.

The purpose of this research is to determine the effectiveness of the model for developing the media culture of education managers based on experimental test results and to scientifically substantiate the model's practical significance.

The objectives of the research are as follows:

- to identify the main components that constitute the media culture of education managers;
- to define the levels of development of media culture;
- to implement the model for developing the media culture of education managers;
- to organize the experimental tests;
- to conduct a comparative analysis of the results of the experimental and control groups;
- to determine the effectiveness of the model;
- to develop practical recommendations for improving the media culture of education managers.

In studying the problem of developing the media culture of education managers, competency-based, systemic, person-centered, activity-based, and acmeological approaches were established as the methodological basis.

First, the competency-based approach;

Second, the systemic approach;

Third, the activity-based approach.

The competency-based approach entails the formation of an integrated system of knowledge, skills, qualifications, values, and practical experience necessary for an education manager to operate effectively in a media environment. Under this approach, media culture is not limited to the acquisition of theoretical knowledge. The manager must be able to apply acquired knowledge in real management situations, evaluate media information, select the appropriate media tool for the communicative situation, and, where necessary, independently create a media product.

The systems approach allows the media culture of education managers to be viewed as a holistic pedagogical system composed of interconnected components. The research identified the following structural components of media culture:

1. motivational-axiological component;
2. cognitive component;
3. operational-activity component;
4. communicative component;
5. reflective-evaluative component.

The harmonious integration of these components determines the effectiveness of the education manager's activities in the media environment.

In the activity-based approach, practical activity is of particular importance in the process of forming media culture. For this reason, the experimental process utilized case studies, problem-based scenarios, practical assignments, media projects, group discussions, media content analysis, and reflective exercises, in addition to lectures and theoretical sessions.

The model developed during the research is comprised of interconnected goal-oriented, content, procedural, and results-based blocks. The goal-oriented block of the model defines the overall aim, objectives, and expected outcomes for developing the media culture of education managers. Within the content block, a body of knowledge was formed concerning media literacy, media analysis, information security, digital communication, media content creation, media ethics, and digital governance. The procedural block incorporates a system of pedagogical technologies, interactive methods, practical exercises, and digital tools designed to ensure the active participation of education managers. The results-based block was aimed at determining the level of media culture development in education managers at the conclusion of the experimental trial. The conceptual structure of the model is expressed in the following sequence: Goal → Content → Pedagogical Conditions → Methods and Tools → Practical Activity → Monitoring and Evaluation → Result. The primary pedagogical conditions ensuring the model's effectiveness are as follows:

- strengthening the internal motivation of education managers to develop their media culture;
- integrating media education content with professional management activities;
- utilizing practical assignments and real-world management scenarios;
- systematically applying digital and interactive educational tools;
- organizing individual and group reflection sessions;
- regularly monitoring media competencies.

The experimental-pilot study was organized to test the model for developing the media culture of education managers in practice and to determine its effectiveness. A total of 80 education managers participated in the research. Of these, 40 were assigned to the experimental group and 40 to the control group.

Table 1. Distribution of Study Participants by Group

Group	Number of Participants	Percentage
Experimental Group	40 participants	50.0%
Control Group	40 participants	50.0%
Total	80 participants	100%

The experimental-pilot process was organized in three stages:

1. the diagnostic stage;
2. the formative stage;
3. the final-control stage.

In the diagnostic stage, the existing level of media culture among education managers was studied. This involved using methods such as questionnaires, interviews, tests, practical assignments, observation, and self-assessment. In the formative stage, special training sessions, seminars, practical assignments, media projects, and reflective activities were organized for the experimental group based on the developed model. In the final-control stage, the final results of the experiment were compared with the initial indicators.

To assess the media culture of education managers, criteria and indicators corresponding to its structural components were developed.

Motivational-Axiological Criterion - This criterion reflects the manager's need to use media tools, their level of understanding of the importance of media culture in professional activities, and their aspiration to develop their own media competence.

Cognitive Criterion - This criterion represents the theoretical knowledge of working with media and information. It assessed the knowledge of media concepts, the ability to differentiate information sources, determine the purpose of media messages, and identify false information.

Operational-Activity Criterion - This criterion determines the ability to practically use media tools. It covered skills such as using digital platforms, searching and sorting information, creating media content, and preparing visual materials.

Communicative Criterion - This criterion represents the manager's ability to communicate effectively with the pedagogical team and other stakeholders through media tools.

Reflective-Evaluative Criterion - This criterion signifies the ability to analyze one's own media activities, identify errors, and improve future activities. Based on these criteria, three levels of media culture were defined:

- high level;
- medium level;
- low level.

The main task of the ascertainment stage was to determine the state of media culture among education managers before the start of the experiment.

The initial diagnostic results showed that the level of media culture in the experimental and control groups was similar.

Table 2. Distribution of media culture levels by group at the beginning of the experiment

Media Culture Level	Experimental Group	Control Group
High	7 individuals (17.5%)	6 individuals (15.0%)
Medium	19 individuals (47.5%)	20 individuals (50.0%)
Low	14 individuals (35.0%)	14 individuals (35.0%)
Total	40 individuals (100%)	40 individuals (100%)

As can be seen from the table, at the start of the experiment, managers with a high level of media literacy constituted 17.5% in the experimental group and 15.0% in the control group. The medium-level indicator was 47.5% and 50.0%, respectively. The low-level indicator was 35.0% in both groups. This indicates that the baseline conditions of the experimental and control groups were closely aligned.

Table 3. Initial state of media literacy components in the experimental group

Component	High	Medium	Low
Motivational-Axiological	20.0%	47.5%	32.5%
Cognitive	17.5%	45.0%	37.5%

Component	High	Medium	Low
Operational-Activity	15.0%	47.5%	37.5%
Communicative	20.0%	50.0%	30.0%
Reflective-Evaluative	15.0%	45.0%	40.0%

In the initial diagnostic, the highest indicator was recorded for the communicative component. Here, 20.0% of participants were assessed at a high level, 50.0% at a medium level, and 30.0% at a low level. The lowest result was observed in the reflective-evaluative component. For this component, high-level participants accounted for 15.0%, medium-level for 45.0%, and low-level for 40.0%. This situation indicates that although the education managers have experience using media tools, their skills for systematically analyzing and evaluating their own media activities are not sufficiently developed.

During the formative experimental stage, comprehensive pedagogical activities were conducted with 40 education managers in the experimental group. **The training sessions covered the following areas:**

1. the theoretical foundations of media culture and media literacy;
2. selecting and evaluating information sources;
3. critically analyzing media messages;
4. identifying fake and manipulative information;
5. digital communication culture;
6. using social networks for professional purposes;
7. managing the educational institution's media image;
8. creating media content;
9. digital security;
10. copyright and media ethics;
11. media monitoring;
12. using digital management tools.

The training sessions utilized problem-based learning, case studies, project-based methods, discussions, brainstorming, media text analysis, group assignments, and reflective methods. The education managers were given assignments designed to be similar to real professional activities. For example, they were tasked with analyzing media messages from various information sources, assessing their reliability, identifying manipulative elements, and justifying the potential for using these messages in the educational process.

Throughout the experiment, special attention was paid to linking theoretical knowledge with practical activities. **The education managers were assigned to create media products related to the activities of their own educational institutions, including:**

- informational material about the educational institution's activities;
- a short video script;
- an educational post for a social network;
- a presentation;
- an infographic;
- media monitoring report;
- a digital communication plan with parents;

- a concept for developing the media image of an educational institution.

During the project, managers were required to search for, select, analyze, and process information, as well as create and present media products. This process had a significant impact on the development of the operational-activity and communicative components of media culture.

At the conclusion of the formative experiment, a re-diagnosis was conducted. The final results were compared with the initial indicators.

Table 4. Pre- and post-experiment results of media culture components in the experimental group

Component	Initial High Level	Final High Level	Growth
Motivational-Axiological	20.0%	37.5%	+17.5%
Cognitive	17.5%	40.0%	+22.5%
Operational-Activity	15.0%	42.5%	+27.5%
Communicative	20.0%	45.0%	+25.0%
Reflective-Evaluative	15.0%	37.5%	+22.5%

The data in the table indicate a positive dynamic across all components within the experimental group. The most significant growth was observed in the operational-activity component. In this component, the proportion of participants at a high level increased from 15.0% to 42.5%, an increase of 27.5 percentage points. For the communicative component, the proportion of high-level participants rose from 20.0% to 45.0%. The high-level indicator for the cognitive component increased from 17.5% to 40.0%. These results show that during the formative experimental process, not only the theoretical knowledge of the education managers was enhanced, but their practical and communicative skills were also developed.

Dynamic Changes in Media Literacy Levels. In evaluating the effectiveness of the experiment, changes in the high, medium, and low levels of media literacy were analyzed separately.

Table 5. Dynamics of Media Literacy Levels in the Experimental Group

Level	At the start of the experiment	At the end of the experiment	Change
High	17.5%	42.5%	+25.0%
Medium	47.5%	47.5%	0%
Low	35.0%	10.0%	-25.0%
Total	100%	100%	—

As can be seen from this table, the high-level media literacy indicator for the experimental group increased by 25.0 percentage points. The share of participants at the low level decreased from 35.0% to 10.0%. The medium-level indicator remaining at 47.5% is explained by some participants moving from the low to the medium level, while other medium-level participants advanced to the high level.

To determine the effectiveness of the experiment, the final results of the experimental and control groups were compared.

Table 6. Distribution of Media Literacy Levels by Group at the Conclusion of the Experiment

Media Literacy Level	Experimental Group	Control Group
High	17 individuals (42.5%)	9 individuals (22.5%)
Medium	19 individuals (47.5%)	22 individuals (55.0%)
Low	4 individuals (10.0%)	9 individuals (22.5%)
Total	40 individuals (100%)	40 individuals (100%)

The final results indicate a significant difference between the experimental and control groups. In the experimental group, the number of managers with a high level of media literacy increased from 7 to 17, meaning the proportion of participants at this level rose from 17.5% to 42.5%. Conversely, the number of participants at a low level decreased from 14 to 4. While positive changes were also observed in the control group, the high-level indicator only increased from 15.0% to 22.5%. The results of the study demonstrated that developing the media literacy of educational managers is a crucial component of modern educational management. The rapid evolution of the digital information environment requires educational managers to possess not only managerial competencies but also the skills to search for, analyze, critically evaluate, filter, and effectively utilize media information. The model for developing the media literacy of educational managers, created within the framework of this study, was based on ensuring the interconnectedness of its content, organizational-methodological, and results-oriented components. The effectiveness of this model was verified through experimental testing, which established the following as primary criteria: media literacy, information and communication competence, critical thinking, the ability to use digital tools, and the developmental dynamics of a responsible attitude toward media information. The model for developing the media culture of education managers developed within the framework of the study is based on ensuring the interconnectedness of content, organizational-methodological, and result-oriented components.

The results of the pilot study showed that a systematic methodological approach aimed at developing the media literacy of education managers makes it possible to enrich traditional information-use skills with modern digital and media competencies. In particular, positive changes were observed in the skills of critically analyzing media information, distinguishing between reliable and unreliable sources, evaluating the content and communicative features of information, and purposefully using digital technologies in management activities. The research findings also indicated that the development of media literacy should not be limited to forming technical skills alone, but must also include fostering critical-reflexive thinking, information security, media ethics, communicative responsibility, and independent decision-making competencies in a digital environment among education managers. Overall, the demonstration of the developed model's methodological and practical effectiveness during the pilot testing process confirms that it is possible to form a holistic pedagogical mechanism for developing the media literacy of education managers. It is advisable to use this approach in retraining and professional development courses for education managers, in the training of management personnel at higher education institutions, and within the context of the digital transformation of educational organizations. In the future, adapting the model to various educational stages and management levels, evaluating its effectiveness based on long-term

monitoring, and researching the dynamics of changes in media literacy under the influence of new digital technologies will remain important scientific and practical tasks.

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