

Comparing social media use in school management: experiences from Ukraine and the United States

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Abstract. This paper analyses and compares the use of social media in school management in Ukraine and the United States. It examines the types of social media used, purposes for use, and challenges faced. Key findings show that Facebook, YouTube, Instagram and X are most popular in both countries. Social media communicates with stakeholders, showcases school activities, and builds relationships. Challenges include data privacy, digital literacy, and misinformation. The paper reviews training programs in both countries to improve social media competency for school leaders. It concludes that social media has become an essential communications tool in education, accelerated by the pandemic's impacts.

Keywords: social media, school management, education, Ukraine, United States, communication

1. Introduction

The active and comprehensive implementation of information and communication technologies characterises the modern period of school management development. The main goal of their implementation is to improve the quality of education and interactions among all participants in the educational process.

Social media usage has grown exponentially worldwide. According to GlobalWebIndex [13], people spend a third of their online time on social media platforms. Comscore data also shows that time spent on social media and messaging apps accounts for over a quarter of the time on mobile devices [6].

Social media is an online platform that allows users to easily create and share content, collaborate, and build networks and communities. Key characteristics include user participation,

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openness, conversation, community and connectedness [22]. Social media encompasses social networking sites like Facebook, microblogging sites like X, photo/video sharing platforms like Instagram and YouTube, messaging apps like WhatsApp and more.

Compared to traditional media's one-to-many model, social media facilitates many-to-many communications. This allows for more significant interaction, engagement and collaboration among users. It also changes power dynamics, giving individuals more influence alongside institutional voices [19].

Social media offers enhanced communication, learning, professional development and community-building opportunities in education. However, it also risks privacy, security, misinformation, and digital literacy. Wise use of social media requires critical evaluation of opportunities and challenges [29].

1.1. Related works

Kaplan and Haenlein [16] defined social media as “a group of Internet applications based on the ideological and technological foundations of Web 2.0 that allow to create and share user content”. Web 2.0 tends to develop websites on similar principles stemming from the focus on the project and service socialisation and its improvement by users [21]. Social media fundamentally differs from traditional media types by implementing a bidirectional information transfer strategy, meaning “many sources and many recipients” [31]. Traditional media, in turn, uses a unidirectional strategy, meaning one source and many recipients.

There is no generally accepted definition of the term “social media”. In our opinion, the most concise, simple and relevant definition of this phenomenon is: “Social media is broadly defined as a lot of relatively inexpensive and widely available electronic instruments that allow any person to publish and receive information, collaborate and build relationships with other people” [9].

Social media is an online communication in Thornley [38] terms with the understanding that a person can smoothly and flexibly change their role to appear as an audience or participant. Social software is used for this purpose, which makes it possible for anyone (without specific coding expertise) to post, comment, move, edit information, and create communities based on their interests.

Stephens [36] defines social media as “forms of communication either Internet or text-based that support social interactions of individuals”.

Azhnyuk [3] defines social media as an online service intended for the mass distribution of user-generated content, wherein anyone could be an author, as opposed to traditional media, wherein authors are pre-selected and have a limited audience.

Some researchers consider the concepts of “social media” and “social network” synonymous. However, this needs to be corrected. We are on board with the statement of Scott [31] that “social media is a superset and social network is a subset”. Thus, social networks are just a specific instance of social media, albeit the most popular one.

Azhnyuk [3] breaks up social media into three categories: 1) social networks; 2) blogs (including standalone, blog hosting, microblogging, etc.); 3) content hosting (photo services like Instagram and Flickr, video hosting services like YouTube, hosting for slides, documents, music like Slideshare, Scribd, Soundcloud, etc.). However, he notes that online media intended for

personal contact or group communication, rather than mass publication, should be kept from social media, particularly email, messengers, and online games.

Zhdanova [41] identifies seven types of social media:

1. Social networks are online services that prompt you to make new acquaintances and form interest communities. A user has an online profile and several ways to interact with others (through groups, events, polls, games, etc.) on such sites. Facebook and LinkedIn are the most famous examples of social networks.
2. Messengers are online messaging services where users interact through personal correspondence. Messenger applications like Telegram, Viber, and WhatsApp are available on mobile devices.
3. Social bookmarking sites help users save and share interesting information as a link to other resources. For example, the Pinterest network allows to store a large number of images in different categories in order to facilitate the search later.
4. Blogs and forums offer comments to many users simultaneously. Medium, Blogger and WordPress are well-known blogging platforms.
5. Microblogging lets send short updates to everybody subscribed to such updates. The most outstanding microblogging, X, has gained much attention among journalists, allowing them to quickly track developments and get information on what is happening.
6. Social news services allow users to create or publish links to news from other sources. The main element is voting; the community chooses which news will become the most important and visible to the rest of the users. The most famous example is Reddit.
7. Multimedia hosting is a service possessing most of the social network peculiarities (user profile, circle of friends, opportunities to distribute and comment on information). However, it is primarily focused on the ability to download video, photo and audio files. Examples include YouTube, Vimeo, and Flickr.

1.2. Social media in educational management

One critical task of educational management is to ensure the development of the educational institution as an independent organisation through establishing interaction with all participants of the educational process, partnership with public organisations and support of local businesses. Relationship networks take the position of one effective interaction model for all participants of the educational process. The skills of active communication through social networks are currently necessary for everyone. Facebook, X, YouTube and other networks have moved beyond a framework of face-to-face interaction, and it is a powerful communication platform facilitating both building a brand and being a virtual representation for government, business, and public organisations.

Unlike the official websites of general secondary educational institutions requiring training in a more professional way for updating information and establishing feedback, the pages of institutions in social media have their characteristics determined by the properties of electronic communication, such as prompt dissemination of information, accessibility, simplified search the target audience, ease of the feedback set up and so forth. Its structure and organisational and technological parameters affect the nature of social connections. It is an element of the

constructing mechanism for the communicative space within modern society, performing several functions while creating a value basis for its existence.

Primbs [26] identifies key needs for users in social media:

- managing relationships from Facebook dating as a replacement for exchanging visiting cards to close contacts in the family or community of friends;
- managing information by filtering news and relevant information based on user preferences through friends and subscriptions;
- managing one's identity by forming a personal brand.

For the preceding reasons, a follower of the website of the educational institution or school principal having independently joined a school community on social media is in a position to:

- establish contacts between the participants of the educational process and terminate communication without explanations at any moment;
- set up constant access to information on news of the educational institution activity due to the operational aspects of search algorithms of social media;
- develop own attitude to specific events in the educational field relying upon an opinion of the experts of the ultimate educational brands. It means that the actual attitude of the experts to a particular educational institution and a vision for further developments is relevant for the followers rather than the information in itself under the context of big data on educational reforms reported by thousands of sources.

Thus, for the head of an educational institution, the presence on the social network personally or through the institution's page allows them to promptly inform the participants of the educational process with the life of the organisation, purposefully manage the flows of various information, influence their consciousness and worldview transforming parents from "readers/observers" to active co-experiencers/fans or vice versa. However, awareness ensures that the adverse developments of individual autonomy are reduced.

Returning to the [26], the role of fans should be emphasised: "Real fans are much more than mere readers/listeners/viewers/target group, fans interact. Fans are ready to do something for the object of their worship. Fans are the first to submit photos when you are announcing a photo contest. Fans write the first comments under your posts breaking the ice. Fans cut trolls down to size excusing from a nasty work. Fans will also stand with you when you get a shitstorm. They provide entertainment for regular visitors of your community. And they give you stuff you can work with again".

The communication efficiency on the network is manifested by a high level of trust within the network, as opposed to distrust of external persons; the existence of a unifying ideology/religion/lifestyle that allows to act together; targeted message delivery, which makes possible it to be received precisely by the person who needs it, as opposed to communication with a mass but passive audience in the case of traditional media [25]. These mechanisms for group functioning ensure the integration of individual actions in joint group activity and communication.

One of the crucial components of the management process in an educational institution is to inform participants of the educational process and communities on its activity in open public resources [5].

2. Research methodology

The pedagogical research under consideration has been carried out as part of the research work “Training of competitive specialists in the context of educational changes” (RK 0117U002378) conducted by the Department of Pedagogy, Administration and Social Work of the Educational and Scientific Institute of Management and Psychology of the University of Educational Management of the National Academy of Educational Sciences of Ukraine.

The article aims to provide a comparative analysis of the features of using social media in school management: the experience of Ukraine and the United States of America.

We monitored 120 sites of Ukrainian middle schools and 123 sites of American schools (several sites from each state).

The monitoring parameters are:

- Which social media do principals use in managing the schools, teams of teachers and students?
- What are the purposes of using social media?

Also, we monitored the pages of Ukrainian and U.S. principals on social networks.

We conducted a survey of 138 school principals in Ukraine. The key survey questions were:

- Do you have a personal page on social networks?
- Does your school have its page on social networks?
- What social networks do you use in your managerial activities?
- Are there any barriers to school communication in social networks?
- Which information in social networks is the most interesting for participants of the educational process?

We had a content analysis on the massive open online courses (MOOCs [40]) by the Ukrainian platforms EdEra, Prometheus and VUM online and the English ones such as edX, Udemy, FutureLearn, XuetangX and Coursera, whose self-study contributes to the readiness for the effective using of social media in school management.

We have also used the online survey results of 3,9 thousand principals of general secondary educational institutions, educators, parents and students from 9–11 grades on distance learning in schools of Ukraine that the State Education Inspectorate of Ukraine conducted.

For comparison we took the results of a survey of American school principals from the report at the official website of U.S. Department of Education “Social media in school emergency management: Using new media technology to improve emergency management communications” [36], the report of Pew Research Center “Social networking fact sheet” [24], reports “Global Guide 2020” [12], “90 days that changed K-12 teaching & learning: strengthening the bonds of communications” [1], “2019 Social Media Trends in Education Report” [15].

3. Results and discussion

Using social media, the schools can:

- quickly respond to the needs of the audience: hear the parent, student and the public community (highlight the main topics for discussion, get feedback);
- prevent conflicts due to operational coverage of problems in the activities of the school;
- through social networks learn more about the activities of other schools and build own strategy for activities in social networks;
- fills vacancies and provides the school with highly qualified personnel by searching for personnel in social networks—for example, the group “Jobs for educators” on Facebook. The goal is to post messages about available vacancies in schools and for teachers who find work.

In the school, social media are primarily an external communication tool. For large schools with a large number of participants in the educational process, social media can be a tool for interaction between participants in the educational process among themselves (for example, quickly obtaining the necessary information and providing mutual assistance). Social media allow the teaching staff, especially the director, to quickly resolve issues related to the adaptation and rotation of personnel.

We obtained the following experimental results (table 1).

Table 1

The results of monitoring of the use by school principals of social media in school management.

Social media	The results of monitoring of Ukraine	The results of monitoring of the USA
Facebook	96 %	98 %
Instagram	33 %	87 %
X	1 %	99 %
Telegram	10 %	-
WhatsApp	4 %	76 %
Viber	36 %	11 %
Youtube	25 %	84 %
LinkedIn	-	28 %
Google Blogger	5 %	87 %
Google+	5 %	89 %
Pinterest	7 %	56 %
Skype	12 %	42 %
Flickr	-	63 %

Most principals avoid committing to the professional use of social media because it is entirely overwhelming. Knowing what will yield the best results between Instagram, X, YouTube, and Facebook takes much work. It is crucial to consider the best social media for purposes.

Every principal tries to choose the best way to promote a wonderful school community. For learning and interacting, the American principals of middle schools use X. It is the gold standard for them. Instagram and YouTube are the best and most popular tools for documenting and sharing remarkable work in school. Flickr is useful for sharing pictures. American principals of middle schools use Facebook for calendar reminders and to get the word out quickly about calendar changes and event planning.

Table 2

Comparative analysis of the goals of using social media in school management in the USA and Ukraine.

The goals of using social media in school management	The purpose rating of Ukraine	The purpose rating of the USA
Simplified search for the target audience allowing to expand personal and professional contacts between participants of the educational process	1 (90 %)	3 (87 %)
Demonstration of educational measures	2 (70 %)	4 (85 %)
Public disclosure of successes of students, teachers and school classes	3 (62 %)	1 (99 %)
Public disclosure of urgent announcement	4 (57 %)	2 (98 %)
Demonstration of various forms of training	5 (49 %)	6 (76 %)
Project and competition reporting where both students and teachers can participate	6 (43 %)	7 (62 %)
Clarification on the issues of the educational process (school enrollment, standardised external testing, state final examination, etc.)	7 (41 %)	8 (39 %)
Explanation of educational reforms and innovations	8 (33 %)	9 (11 %)
Challenges of participants of educational process consolidation concerning engagement in socially important projects	9 (17 %)	5 (81 %)

For example, the school principal Eric Sheninger, 2013 American “Best Director Award” winner and bestselling author of “Digital Leadership: Changing Paradigms for Changing Times” [34], allowed his teachers to submit their daily reports using the blog. Sheninger’s blog was viewed by 6,500 people worldwide, and over 600 are constantly following the life of the principal and his school. Interestingly, it was an incentive not only to report to the administration on their work for teachers but also to share with others the experience they have gained by introducing gadgets into teaching and the success stories achieved by the students in these lessons. The topics of blog posts began gradually to expand, and teachers shared the system of grades in school, their rubrics, how they interact with children outside of school, how gadgets improve academic performance, and so on. A new perspective on education and blog creation has transformed the lives of teachers and students. Firstly, the US government purchased the latest equipment at the school Eric Sheninger writes proudly about on his blog [34]. Secondly, teachers from around the world came to the school in New Jersey to learn about the experience. In addition, the virtual reality company provided a program that allowed New Milford school students and their teachers to attend virtual space meetings where children could ask questions and virtual training courses were provided.

The principal of Renner Elementary School, Teresa Tulipana, embraces social media as a communication tool. Facebook and X accounts keep families abreast of school events and happenings. She envisioned them as systems to provide calendar reminders. She thinks Facebook is also an excellent tool for efficiently sharing our school’s academic and behavioural focus areas in a fun and engaging way. Recently, a kindergarten teacher posted an Animoto highlighting pictures from the Writer’s Workshop, which communicated the importance of writing at our

school. When the fourth grade completed Famous Missourian research projects, these were posted so parents could understand the value and importance of their research. Social media has also allowed the deployment of crucial professional development content in Renner Elementary School. Recently, they used Blackboard, an educational social media tool, to host a virtual faculty meeting. Through Blackboard, staff watched a short Rick Wormeli video on defining mastery and then responded to reflection questions on a discussion board. This flexible format allowed staff members to learn at a time that was convenient to their calendars and increased engagement by assuring that every voice was heard [9].

The principal of Tomahawk Creek Middle School says that her school's teachers utilise social media whenever they can. They currently have a Facebook page for the school and PTA. She has found this a great way to get messages out to parents and students. Several teachers use Edmodo to post discussions and assignments for their students and have reported remarkable success using this tool. For example, one teacher had 25 kids on Edmodo the day he started using it. They are considering implementing an X account next year to help get information out to the community. Although this is not a replacement for standard means of communication (Web sites, letters home, etc.), it is a great additional way to share information with the community.

Regarding discipline issues, they attempt to address those who cause the issues. The technology is here to stay, so they try to implement it where they can and deal with the trouble issues when they arise. Thus far, they have had no problems using these means of communication [9].

The principal of South Side Elementary School in Bristol, Connecticut, David Huber, thinks X is more than just a social media platform. It is also a professional learning resource, a tool to communicate with students' families, and a way to showcase student achievements [11].

One area of social network usage being the origin of its popularity in Ukraine was the involvement in solving socially important issues of participants in the educational process. In particular, Facebook has been used to inform, mobilise and raise funds for volunteers during the Revolution of Dignity since November 2013. Therefore, the school administration resorts to this tool to continue this work, assist and support the ATO warriors, and report on the work done. In addition, content analysis of the pages of the administration and teachers of educational institutions of Ukraine shows the effectiveness of similar charitable work in collecting assistance among participants in the educational process supporting socially disadvantaged sections of the population or volunteers as orphanages, older adults, rural libraries, hospitals, etc.

In addition, not only prompt information but also targeted support directly to the participants of the educational process is provided through the Facebook network and messengers, among which Viber is the most popular for the management of the educational institution. It is about involving many indifferent people to help the participants of the educational process who were in an emergency like fire, accident, surgical treatment, etc. Such assistance massively reduces fraud and disillusionment with charities through direct personal contacts.

Another example of social network usage in school management is the establishment of successful cooperation and communication between educational institutions of municipal ownership and its public within the framework of project activities aimed at repairing or arranging the territory and premises of educational institutions, as well as build-out of a creative, development or inclusive environment. The key to the success of such projects is the proper organisation of its advertising on social networks by the project's author, in particular, the administration of the educational institution, as well as the high activity of participants in

the educational process to support projects in social networks. 663 educational projects have mainly won according to the results of the “Public Budget 2020” project out of 1564 projects in 13 categories having passed the planning and implementation stage in Kyiv, which is 42 % of all projects [14].

Nevertheless, social networks are equally threatening. The freedom of information distribution through social networks and communities, regardless of its content and quality, particularly transforms the virtual Internet space into a risk zone for the spiritual and moral sphere of the individual, shifting classical values and developing a new virtual culture.

An exciting transformation occurred to the Facebook community “Parents SOS” founded in June 2014 due to the initiative “talk on the Social Network” in order to discuss problems related to education and assist parents in the case of mistreatment of their children in school or kindergarten and initiate systemic changes in education.

The community works according to a simple plan:

- 1) the situation is announced (at school or in education in general);
- 2) it is discovered how this situation complies with the law;
- 3) the conclusion what should be changed, whether the situation or the legislation, and they change it together.

Although the public organisation initiated many changes in the education system through civic initiatives during its existence, its members often resorted to systematic violation of netiquette, resorting to rude, obscene, evaluative expressions and personal affronts in the beginning. Instead of solving a problem, sometimes it was possible to be sunk in the information rain of value judgments supporting a particular message have not received a solution to the problem in the real world.

It should be noted that the group’s administrators are currently working hard to address these shortcomings, as evidenced by the article’s content analysis of the group’s 2019 publications. In particular, publications are increasingly focusing on situations of success as systemic changes, concrete victories over bureaucracy in education and extortion, legal clarification of the rights and freedoms of participants in the educational process, and transparent algorithms for solving the most common educational problems for all participants.

So we have determined, based on our analysis, that the following types of social media are the most popular for USA and Ukrainian schools:

1. *Blogs.*

A blog is a 21st-century newsletter. Blogs provide a two-way interaction and allow the school administration to integrate multimedia content in order to make the school popular. There is no better way to share strategies, ideas and success stories. Teaching blogs are no less popular, with the help of which teachers can effectively manage the independent extracurricular work of students, as well as create tasks aimed at improving the skills of speech activity. Learning different types of letters (search, viewing, familiarisation and studying) is facilitated by the unlimited ability to post links to different materials in any quantity. Also, blogs are in no way inferior in acquiring speaking and listening skills. This happens through podcasts, educational texts of radio programs, and videos freely available on the Internet. Integrating all the listed training methods into a blog allows

you to listen to files repeatedly and, if necessary, stop and revise files. American Schools use Google Blogger, WordPress, Edutopia (San Rafael, California), FreeTech4Teachers (Maine), Rubicon (Portland, Oregon), Hands On As We Grow (Iowa), Class Tech Tips Blog (New Jersey), The Applicious Teacher (Orlando, Florida), Teaching Heart Blog (Pittsburgh, Pennsylvania) and other platforms. For example, Eric Sheninger, in addition to his official blog as Principal of New Milford [33], has created a professional blog to tell the story of the school's digital transformation and learn from others interested in digital leadership. On the Internet, several impressive blogs by heads of school heads in Ukraine exist. In particular, the Google request "blog of a school principal" represents 19 million search results. However, it should be understood that the use of blogs in the management of general secondary education is often due to external circumstances as a requirement for certification. For this reason, the Internet is a whole of blogs formally created with a glut of popular articles, elements of plagiarism or unstructured content. Quality content can only be seen by executives who are passionate about this type of work and update the materials systematically. However, interviews with more than 400 education executives show that blogs in Ukraine currently need to be updated and can be entirely replaced by social networks. Therefore, a mere 5 % of heads of our online respondents use blogs in their management activities.

2. *Digital photo sharing.*

Photos can quickly depict and share student work, improvements and achievements. American and Ukrainian school principals and teachers take pictures of student projects and post them on Instagram. American teachers also use Pics4Learning during classroom observations. They share photos from their Instagram accounts with others, such as X.

3. *Video platform.*

Creating a YouTube, TeacherTube, SchoolTube channel, or Vine account for the school allows them to record and share educational and social processes. Teachers and administration of American schools share live events such as school concerts in real-time using tools like Ustream, ClassVR, etc. In Ukraine, the principals use YouTube.

4. *X.*

X, the best-known free microblogging application, is useful for quickly exchanging thoughts, ideas, and information. American scientists were among the first users of the social network X. During the first years, reports of scientific conferences, symposiums, research citations, etc dominated it. Tweets (from the former X name, Twitter) are a dynamic combination of text, images, videos, and website links. Having created a hashtag for the school, one could share a conversation with related parties with the ability to search for any problematic topic identified through X. At the beginning of each school year, American school leaders send parents a letter describing how to create an X account and to set up options for receiving text messages. The ability to receive X updates on its terms makes it unlike any traditional communication tool [31].

5. *Facebook.*

The world-famous resource Facebook has emerged as an academic social network. Initially, the website was available only for students at Harvard University. Then, registration was opened to other universities in Boston and, later, to students of all educational institutions in the USA. All the above tools could be integrated or published on the Facebook page

[38]. It is the favourite social media among Ukrainian and American school principals and teachers.

It is impossible to create and maintain confidence in the institution's operation being mandatory. Creating requirements for effective educational activities is only possible with prompt and complete information. That is why the administration should organise the activity of the educational institution under the conditions of information openness and communication with the participants of the educational process and the community.

Information transparency is ensured by the availability of educational facilities, including social networks—information transparency in the educational institution to inform the participants of the educational process. The educational institution decides what to inform and how to do it. The primary principle of information distribution is to report essential data to parents, who are the most concerned and critical audience.

It is for the purpose of enabling local educational managers to communicate quickly, correctly and clearly, not to be afraid of criticism and be able to turn to crisis situations, an online course “Effective Communications for Educational Managers” has been developed by the public organisation “Smart Education” powered by the EdEra online platform [8] and viewed by 4,400 people during 10 months of 2019.

In order to be successful communicators in the modern information space, its developers offer:

- be persistent and consistent in sending a message, ideas and facts, the audience will be grateful for accurate navigation in the chaos of educational information;
- repeat the message many times in different formats through interviews, events, photos, infographics, etc, aiming to be heard;
- know what bothers and what interests your audiences, and build your business and communication against this background;
- always keep efforts and resources on the mission of the institution;
- focus on the simplicity and clearness of messages;
- has unique inspirational stories;
- get your audiences as close as possible.

Much attention is paid to anti-crisis communications, whose goal is to immediately and firmly abandon attempts to conceal any unpredictable or unpleasant event in the educational institution. The overall penetration of modern communications into public life makes it impossible to conceal any information. One of the primary principles of public communication should be remembered: a person who first reported the event largely determines the further development of its media coverage.

The unpredictable event message should consist of three required components answering the following questions:

- “what happened?” – provide full information on the event, immediately blocking or at least substantially reducing the possibility of misinformation on it;

- “what are we doing?” – the school demonstrates its proactive stance in addressing the problem, what has been taken to remedy the problem, who has been further involved and informed;
- “what to expect?” – an uncomfortable state of uncertainty is removed or significantly reduced for the person, and the most probable developments are shown.

Lastly, you should always report how the problem is resolved. Given that, you also should be frank. If the problem cannot be finally resolved at the school level, it should be revealed and reported on further steps to resolve it [17].

Since information distribution and communication are grounded on the processes of dissemination and exchange of information, it is crucial to know how these processes are implemented and how they can be effectively organised. Building quality information distribution by the head to the participants of the educational process and the community can contribute in many ways to improving the level of media literacy of the administration and teaching staff of the institution.

The main characteristic of social networks is the rapid and prompt dissemination of information. A prime example is sharing of “innocent” fakes at the request of the school administration with good intention of preventing the consequences of participation in the games “Blue Cat”, “Run or Die”, “Momo”, “Candy” and a new game “Bounce!” through social networks by parents. Low media literacy of participants of the educational process, lack of ability to recognise the signs of fake news, and poor orientation of critical perception of information contribute to the testing of parents of various technologies of measuring the status of the audience and channels of information dissemination on social networks.

Information security should start with every participant in the educational process, especially with the school administration, and it should become a daily habit for us not to become the object of fake dissemination, a tool for the introduction of dirty technologies, a convenient toy in the game of manipulators. Such results are summed up in their posts by Ukrainian media educators Inna Ivanova (review of the “Candy” fakes, September 2018) and Svitlana Izbash (review of the “Bounce!” fakes, February 2020), as a result of this preventing parents from “advertising” such games.

The school principal should also consider other types of danger that students may encounter using any network, and that should be taken into account in the institution’s policy:

- content (access to information not intended for children of appropriate age);
- behaviour (offering actions that could endanger child safety, fraud);
- dangerous contacts (chatting, file sharing, messengers).

In order to avoid such risks, a school principal should develop a policy on the safe use of the Internet, which provides:

- content filters;
- availability of antivirus programs and their timely updating;
- use of Internet resources during training sessions under the teacher’s control;
- monitoring the page on social networks for placing unauthorised information on it;

- providing educators and students with training on the safe use of the Internet and the development of end-to-end information and digital competence;
- online culture enhancement of the communication participants of the educational process;
- preservation of personal data of participants of the educational process [5].

4. Challenges that school leaders faced during the pandemic

The COVID-19 crisis has unexpectedly and dramatically changed school leaders' roles. The unprecedented nature of this situation means there is no set direction for them to follow. School leaders are like actors in a play where the story, the script and costumes have all changed mid-performance, and they are on stage improvising to adjust to their new role [30].

The forced mass introduction of distance learning technologies during the pandemic [39] has exacerbated social media use in school management.

From April 8 to 15, 2020, the State Education Quality Service of Ukraine conducted an anonymous online survey of 3.9 thousand school principals, 43.4 thousand teachers, 120.5 thousand parents and 44.1 thousand students of 9-11th grades [2].

From the point of view of our research, we were interested in the results of a survey of principals, who make up more than 25% of school principals in Ukraine. 49.95% of them work in rural areas, 41.98% – in cities and 8.07% – in urban settlements.

Most parents and students in grades 9–11 who participated in the survey confirmed that for the period of quarantine, there is distance learning in all subjects of the invariant component:

- 102,380 parents (85%);
- 36,425 students (83%).

The directors of general secondary educational institutions also assured that 97% of educational institutions for quarantine teach students using distance learning technologies. The preference for distance learning is divided in half:

- 55% of surveyed students (24,087 people) and 50% of parents (60,569 people) were positive;
- 45% of students (20,001 people) and 48% of parents (57,858 people) gave a negative response.

After completing the quarantine, 41% of the surveyed teachers (17,872 people) indicated their desire to use distance learning technologies, including social media, and 54% (23,397 people) would use them partially. Only 5% of teachers (2,096 people) stated they would not turn to distance learning technologies in the future.

The survey results of principals also confirmed that almost 96.9% of general secondary educational institutions (GSEI) students are taught using distance learning technologies during the quarantine period. The majority of leaders (75.9%) noted that the entire teaching staff was involved. However, in almost 20.1% of schools, distance learning is provided only by teachers with computer equipment and Internet access. At the same time, 3.12% of the surveyed (GSEI) leaders stated that their school did not switch to remote work mode.

Under quarantine, educational institutions use different modes of distance learning, programs and digital services. GSEI leaders noted that online learning is mainly used for distance work. The most effective are services with the ability to assess the material's assimilation level – they are used by 44.88%, without the possibility of evaluation – 20.27%. Asynchronous learning with the ability to assess the material's assimilation level is carried out by 20.55%

According to the report, the issue of establishing effective interaction with participants in the educational process is identified as one of the most difficult in the implementation of distance learning along with technical support, methodological training and organisational issues [23].

As noted in the “Global Guide 2020”, in the USA, where available, Facebook, Instagram, and LinkedIn are the dominant social media platforms for education. X and YouTube are also popular social platforms for education. Virtual meeting platforms such as Zoom and Google Meet were used to expand and enhance outreach [12].

We analysed the results of Project Tomorrow, an education nonprofit that runs the ongoing Speak Up Research Project [10]. The latest data gives responses from 110,467 K-12 students, 11,731 teachers and librarians, 1,128 school and district level administrators, 11,749 parents and 1,532 community members collected between March 16 2020 and June 30, 2020 [1].

The situation in which schools were connected with the pandemic opened new opportunities for more students to communicate with their teachers regularly using email. Email communications with teachers and students in middle school, for example, increased 33% during school closures: The percentage of students in grades 3–5 who regularly email their teachers also increased from 8% to 16%. Over three-quarters of students in grades 6–12 (77%) report that personal emails are now a standard mode of communication with their teachers. Students report that this new communications avenue provided more efficient and effective ways for them to get feedback from their teachers and help them solve learning challenges with just-in-time support.

The new environment has also accelerated the adoption of text messaging between students and teachers as a communication modality. In 2015, only 14% of teachers said that they were using texting to communicate with students. Though teachers regularly report using text messages and other forms of social media to communicate with colleagues (57%) and parents (28%), their adoption of this tool to communicate directly with students, individually or as a class, has not increased in the past five years.

Relative to teacher communications, middle school students are united in their preference for three types of digital tools: personal emails (56%), text messages (55%) and auto phone messages (49%).

The sudden shift to digital learning due to the pandemic-induced school closures required many school and district leaders to think differently about the purpose of school, new modalities for instruction, and how to effectively harness a wide range of digital tools to support learning continuity. In some cases, administrators relaxed district rules about using personal devices, mobile apps and social media accounts to help facilitate efficiency and effectiveness in this unprecedented time. For example, while most districts did not encourage teachers to text message students before the school closures, texting increased significantly during the school closure period as both students and teachers (as well as parents) found the usage to be highly effective. Given both the value of those enhanced communications channels and the continued uncertainty in school formats during a pandemic, it is likely that more digital tools, even

including new social media platforms, will emerge to support student-teacher communications.

District technology leaders (54%) say they understand the importance of putting in place safeguards to protect student data when instituting a new digital initiative or adopting new technologies to support instruction. However, only 17% of school districts use a risk dashboard to identify students in trouble or need adult intervention based on their communications messages over the school network.

This issue of communications over the school or district network versus a student or teacher using a personal smartphone and their own data plan to transmit messages is also an important consideration. Efficiency of communications was a chief concern during the school closures. Thus, as documented, many students and teachers gravitated quickly to their accounts to help facilitate those interactions. However, 52% of district technology leaders say they encourage teachers and students not to mix personal and school accounts and applications in their communications.

The school principals say they would like new teachers to learn to effectively leverage social media tools for student engagement and communications within their teacher preparation programs. With a new mindset about the value of technology to support enhanced student-teacher communications, the opportunity for effectively leveraging new tools in the classroom, whether an online classroom facilitated through Google or the physics lab on the second floor, appears promising.

For the dissemination of school information American school principals use such social media: 58% – Instagram, 58% – YouTube videos, 53% – Snapchat, 58% – X, 47% – Text messages [1].

In another survey, “2019 Social Media Trends in Education Report” [15] developed by Class Intercom, we observe that 95% of schools use social media to communicate during the pandemic. 85% of schools report using photos to share virtual, in-person, and hybrid learning. Another 79% use video to share what is happening in their schools and district. 37% of schools are allowing students to contribute to their social content. 40% of districts have up to 10 users with administrator access to social accounts. Nearly 20% of schools are investing in paid social.

However, school and district leaders must be cognizant of protecting student data and student safety when using these new online tools for communication with peers and teachers. Additionally, as these tools become more pervasive, districts will want to fully understand their legal obligations in terms of retaining messages and their responsibility and accountability for staff usage of these tools.

5. Ways to prepare school leaders for using of social media in school management in a pandemic

According to a survey conducted by the State Education Inspectorate of Ukraine, parents’ lack of support and understanding of the situation is recognised as a problem by 28.2% of respondents from 3.9 thousand school principals [23].

The things that can contribute to this:

- 1. Professional training of school leaders in the master’s degree “Management of the educational institution” and “Educational Administration”**

Training of future managers of educational institutions is carried out according to the educational-professional program “Management of educational institution” speciality 073 “Management” in the field of knowledge 07 “Management and Administration”, approved by the Academic Council of the University of Educational Management of the NAES of Ukraine taking into account the Standard of Higher Education for the second (master’s) level of higher education [27].

This program aims to train new education managers who can identify and solve complex, specialised, practical problems in managing educational institutions, their units, and subsystems to meet the educational needs of the state, society, educational institutions and students.

The normative content of training of higher education, formulated in terms of learning outcomes in higher education in the field 073 “Management” for the second (master’s) level of higher education specified in the disciplines of general training and free choice of curriculum for candidates educational program “Management of educational institution” of the second (master’s) level of higher education [27].

In the context of our study, the educational program provides for the acquisition of general competencies, including the ability to think abstractly, analyse, synthesise and establish relationships between phenomena and processes (general competence 1); the ability to communicate with representatives of various professional groups and in the international context (general competence 3); skills of using information and communication technologies for search, processing, analysis of information from various sources and decision making (general competence 4) and acquisition of professional (special-professional) competencies of the speciality (professional competence 6), including the ability to create and organise effective communications in the management process) [18].

In the United States, future school principals are trained in the Master in Educational Administration program because to become a high school principal, one must have a master’s degree in school administration and become certified as a school administrator or principal. In the learning process, future education managers train educators to become school principals and administrators, focusing on serving diverse educational communities and fostering student achievement [4]. A school administrator or principal must be certified. For example, The Principals’ Training Center for Practicing and Aspiring Principals in International Schools offers a course “Technology Leadership”; in the process of studying, students should know how a principal juggles the demands of digital communication, social media and digital environments in a school setting, how can digital tools and environments be utilised to create sustainable and vibrant learning communities etc. [4].

2. Introduction of school principals with the topics and opportunities of massive open online courses (MOOC)

The opportunity to study at a convenient time, free access to the latest information, teaching materials, modern technologies and practical cases, and the opportunity to learn from the best universities and teachers in the world have led to the widespread popularity of MOOC among its students.

Among the proposed MOOC, we have selected courses in three areas that contribute to school principals’ readiness in the United States and Ukraine to use social media in school management.

These include media literacy and critical thinking, cybersecurity, and establishing effective online communications.

Critical thinking and the educational process built on its foundations have become the basis of educational reforms in the world's leading countries over the last ten years [28, 32, 37]. The World Economic Forum in Davos regularly lists the skills needed for a successful career. In recent years, critical thinking has risen in ranking these skills from fourth place (skills for 2015) to second place (skills that will be important in 2020s). The ability to think critically ensures scientific, technological and social progress and is the key to democracy, and education plays a crucial role in its development. Critical thinking provides independent and responsible action and self-improvement (table 3).

Table 3

MOOCs, represented at English and Ukrainian platforms, aimed at developing media literacy and critical thinking for school principals.

The results of monitoring of Ukraine	The results of monitoring of the USA
(1) "Critical Thinking for Educators" on the platform Prometheus	(1) Media LIT: Overcoming Information Overload (Arizona State University) on edX
(2) "Educational tools of critical thinking" on the platform Prometheus	(2) Sorting Truth From Fiction: Civic Online Reasoning (Massachusetts Institute of Technology) on edX
(3) "The science of everyday thinking" on the platform Prometheus	(3) Making Sense of News (University of Hong Kong) on edX
(4) "English for media literacy" on the platform Prometheus	(4) Fake News, Facts, and Alternative Facts (The University of Michigan) on edX
(5) "Media literacy" on the platform Prometheus	(5) Fake News (Davidson College) on edX
(6) "Media literacy: practical skills" on the platform Prometheus	(6) Critical Thinking: Fundamentals of Good Reasoning (IsraelX) on edX
(7) "Factcheck: trust-check" on the platform EdEra	(7) Problem Solving and Critical Thinking Skills (Fullbridge) on edX
(8) "Internet Verification" by VUM online	(8) Global Media, War, and Technology (The University of Queensland) on edX
(9) "Media Literacy for Citizens" from IREX in partnership with the Academy of Ukrainian Press and StopFake	(9) Understanding Media: Introduction to Media Literacy and Representation (The University of Newcastle Australia) on FutureLearn
(10) "News Literacy" by Media Detector	(10) Disinformation, Misinformation, and Fake News Teach-Out (University of Michigan) on FutureLearn
(11) "Very Verified: an online media literacy course" on the platform EdEra	(11) Developing Literacy: A Journey from Still Image to Film (Into Film) on FutureLearn
	(12) Making Sense of Data in the Media (The University of Sheffield) on FutureLearn
	(13) Making Sense of the News: News Literacy Lessons for Digital Citizens by Coursera

Information and its timely access provide the maximum competitive advantages. However, it is equally essential to be able to protect this information. Our MOOC content analysis

showed several courses aimed at learning exactly how and why a person can be attacked in the information space and how to improve their information security, which will further develop an effective program to protect personal information resources (table 4).

Table 4

MOOCs, represented on English and Ukrainian platforms, aimed at developing cybersecurity for school principals.

The results of monitoring of Ukraine	The results of monitoring of the USA
(1) "Digital Security and Online Communications" by VUM online	(1) Introduction to Cybersecurity (University of Washington) on edX
(2) "Information security in the digital world" by VUM online	(2) Information Security - Introduction to Information Security (New York University) on edX
(3) "Media literacy for educators" by Prometheus	(3) Introduction to Cyber Security (The Open University)

During the pandemic, the issues of fast and consistent information reporting about the peculiarities of the educational process through various media became especially relevant. The principals must be ready to convey information accurately, focus on the main thing, and focus on the simplicity and accessibility of messages through social media that are most adequate to the audience. A number of MOOCs are dedicated to this topic (table 5).

Table 5

MOOCs, represented on English and Ukrainian platforms, aimed at establishing effective online communication among school principals.

The results of monitoring of Ukraine	The results of monitoring of the USA
(1) "Communication tools for reputation building" by Prometheus	(1) From Digital Technologies to Social Media (Curtin University) on edX
(2) "Digital communications in the global space" by Prometheus	(2) Understanding Media: Introduction to Media Literacy and Representation (The University of Newcastle Australia) on FutureLearn
(3) "How to understand social networks. Course for journalists" by VUM online	(3) Developing Literacy: A Journey from Still Image to Film (Into Film) on FutureLearn
(4) "Effective communications for educational managers" by EdEra	(4) Respecting Our Differences Online (Samsung) on FutureLearn
(5) "Media literacy for educators" by Prometheus	(5) Smart Media Communication by XuetaangX
	(6) Ethical Social Media by Coursera

3. Certification training of school principals according to the relevant programs

In particular, some media literacy training programs developed by the Academy of Ukrainian Press are actively implemented by the Institutes of Professional Development of Teachers, including school principals [20].

In addition, 11 special courses for training school principals to work in the digital society, aimed at establishing effective online and Cybersecurity communications, have been developed

since the beginning of the pandemic by the Ukrainian Open University of Postgraduate Education [35].

The duration of such courses is 1 ECTS credit / 30 hours. Based on the training results, a certificate is issued under the University of Education Management license.

Media Management and Leadership are offered in higher education institutions in the United States. The course is designed for 3 ECTS credits (90 hours). This course aims to give students a survey of some of the latest management and leadership theories, including those encouraging a new sense of social responsibility. It also allows students to apply these theories to a number of different competitive, structural, motivational, strategic, and organisational issues in the media world by writing original case studies and solving problems in existing case studies [7].

6. Conclusions

This comparative analysis reveals several key findings regarding social media usage in school management in Ukraine and the United States:

- Facebook, YouTube, Instagram and X have emerged as the most widely used platforms in both countries. Snapchat, WhatsApp and Viber also have significant usage.
- The main goals are communicating with stakeholders, showcasing school activities and achievements, building relationships and facilitating collaboration. During the pandemic, social media became essential for virtual education and outreach.
- Challenges include privacy concerns, security risks, digital literacy gaps, and spreading misinformation. The pandemic exacerbated these issues with rapid virtual transitions.
- Training programs via master's degrees, MOOCs, and professional development aim to build competencies around media literacy, critical thinking, cybersecurity, and strategic communication. More development is needed, especially for new virtual contexts.
- While adoption is more advanced in the US, Ukraine rapidly increased social media use for education during the pandemic. This catalyst role suggests it will become further embedded in both systems.

Social media has transitioned from an optional novelty to an indispensable communications ecosystem in school management. Leaders must continuously evaluate risks and opportunities while building competencies to use these technologies most effectively. More research should investigate the long-term strategic integration of social media to fully leverage its advantages for advancing educational aims in diverse contexts.

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