Lidia Bielinis*
Cezary Kurkowski**

LEARNING AND COMMUNICATION MEDIATED BY THE SOCIAL MEDIA – AN ANALYSIS OF EDUCATIONAL NETWORKING SERVICES

Introduction

Current communication processes increasingly take place in the digital space and are mediated by the social media. They allow for the merging of activities and practices of people as well as enable their dialogue. The language used in the Internet represents a specific form of communication (Tanaś 2015, p. 12). It allows simultaneous interactions mediated by texts, sounds, and graphics (Tanaś 2015, p. 13). Nowadays, children and youth employ emoticons, acronyms and other verbally visual forms of communication which testify the existence of different variations of the language (Tanaś 2015, p. 13). Moreover, the last two decades have shown the extremely important role that the emergence of social networks, communicators, and other Internet tools has had. These are, for instance, *Facebook, Twitter, Instagram, Edmodo, Snapchat, YouTube, Mindmeister, GoldenLine, LinkedIn, ResearchGate* and *Academia.edu*. In this text, we pay special attention to a few social networks which may be used for educational purposes. We present the analysis of their educational and communicational functions based on a collaborative research effort undertaken through a desk research.

Some social networks afford the possibility of creating educational-goaled discussion groups, which represent a part of social networks and social media. The relationship between the social media, social networking services, and discussion groups may be depicted as in Figure 1.

The greatest area of the figure is occupied by the social media which we understand as virtual communities, created in the Internet by people, where the sharing of information, knowledge or opinions is possible. Lon Safko and David K. Brake, the authors of The Social Media Bible, turn directly to the readers and explain:

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* **Lidia Bielinis,** MA – University of Warmia and Mazury in Olsztyn, Poland; e-mail: lidia.bielinis@uwm.edu.pl; ORCID: https://orcid.org/0000-0002-7727-6385.

** **Cezary Kurkowski**, PhD – University of Warmia and Mazury in Olsztyn, Poland; e-mail:cezary.kurkowski@uwm.edu.pl; ORCID: https://orcid.org/0000-0001-9634-1480.
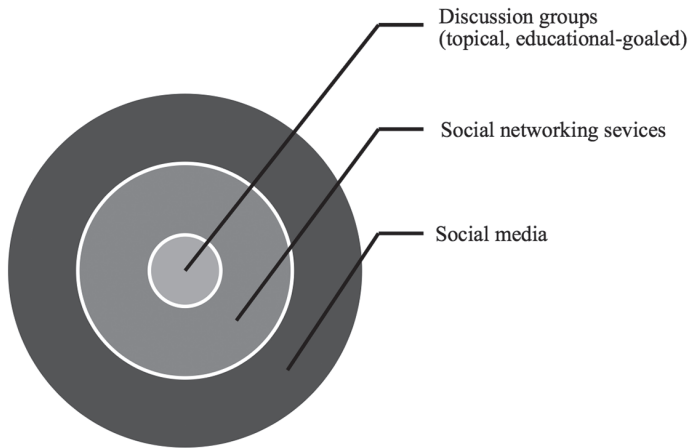
Figure 1. Social media, social networking services, and discussion groups. Source: own elaboration

Most likely you belong to several communities, and if you've ever used your computer or cell phone to read a blog, a YouTube video, listen to a podcast, or send a text message to other members of your group or community, you've already ventured into the social media ecosystem (2009, p. 6).

However, Polish researchers admit that the social media may be represented by different types of services and platforms or communicators, for e.g.: vlogs, blogs, social networks, music, photos or video services (Borkowska & Witkowska 2017, p. 7). This is the reason why we placed social networking services in the middle of Figure 1. They mean virtual communities, e-communities or online groups of people who interact, communicate, and share specific content (texts, photos, videos) for various purposes, e.g. education, work, social issues (Safko & Brake 2009, pp. 46-47). A contradictory position to the matter was presented by Jacek Pyżalski, who argues that – according to some researchers – social networks enable people to create their personalities and present their private, individual experiences (Pyżalski 2012, p. 61) and allows them to be 'always on' (Pyżalski 2012, p. 59). According to Pyżalski – online communities serve another purpose, i.e. they are the place where people who have similar interests and hobbies may meet.

Discussion groups represent the smallest area in Figure 1. These are topical or different-goaled (e.g. educational) groups established in the frame of a specific community (fans, learners, students) within social networks. In our opinion, they allow their members to participate equally in community matters. We assume they are worth noticing due to the fact of their recent, dynamic development and possibilities they deliver to education.

Crossing the Internet sphere – methodological aspects of research

Our main aim in this research was to study social networking services and to identify their functions, especially those related to educational and communicational aspects. We focused on several problematic areas, however, we were mostly interested in finding answers to the two following questions: Which social networks serve mostly for educational, didactic and communication purposes? What kind of didactic uses do these services offer to teachers and academics?

To collect empirical material we decided to analyze a dozen social networking services, platforms and communicators available in the Internet as well as works of researchers interested in this field. We were interested in comparing and contrasting the services as well as finding that which might be applicable in education or for didactic purposes. This type of exploration is called desk research and means analyzing data derived from existing sources, describing them and drawing conclusions based on these analyses (Rubacha 2008, p. 158). During desk research, a researcher uses all kinds of documents that were created and stored by the culture (Konarzewski 2000, p. 128). Krzysztof Rubacha enumerated exemplifications of sources that may be considered as documents, analysed in desk research. These are (among others): movies, musical compositions, statistical data, Internet content, names of visited websites, school books, newspapers etc. (Rubacha 2008, p. 158). He also pinpointed that these types of data 'always say something' (Rubacha 2008, p. 158). According to him, the socio-cultural world may be perceived as a text and analyzed by social researchers (Rubacha 2008, p. 158). Today, desk research may be conducted in the Internet space. This was mentioned by Magdalena Szpunar who claimed that the Internet represents a big source of data for social analyses (Szpunar 2009, p. 139). She argues that these data should be called 'secondary data' and stresses that it is 'information from already existing sources which does not require researchers to conduct the process of initial data gathering and research' (Szpunar 2009, p. 139).

In the process of conducting research, we observed and analysed 12 social networks, platforms or communicators. These were: *Facebook, Edmodo, nk.pl, Twitter, Instagram, Snapchat, GoldenLine, LinkedIn, Academia.edu, ResearchGate, Mindmeister* and *YouTube*.

The next step was to compare and contrast them as well as divide them by functions they fulfil. In the final step, we presented all of them and described seven selected educational networking services in detail. Such a procedure allowed us to find answers to the questions mentioned above and to indicate some of their potential didactic, educational, and communicational applications.

Services worth noting for different purposes

The conducted analysis and selection process allowed us to bracket together and share social networks in five thematic ranks that represent their particular functions. We named these five ranks as follows: scientific services, professional services, services related to entertainment, informational and communicational services, and finally, educational services, tools, micro blogs and communicators. It emerged that some of them serve a few functions and may be assigned to several ranks. The figure presented below shows our proposal of thematic rank division (Figure 2).

Scientific services	Professional services	Services related to entertainment	Informational and communicational services	Educational services
•ResearchGate •Academia.edu	•LinkedIn •GoldenLine	•nk.pl •Snapchat •Instagram •YouTube	•nk.pl •Snapchat •Twitter •YouTube •Facebook	•Edmodo •Facebook •Mindmeister •YouTube •Snapchat •Instagram •Twitter

Figure 2. Social networks thematic ranks. Division for functions they fulfil.
          Source: own elaboration

The first rank involves two services associated with promoting research results, they are especially dedicated for scientists. *ResearchGate* and *Academia.edu* both enable researchers to create an individual account and communicate with other scientists around the world. Their main function is to share all types of publications, such as: articles, books, papers, manuscripts, studies, and projects. Both offer participation in thematic groups and discussions. Moreover, they enable following ratings and statistics of individual researchers related to their citation index (e.g. Hirsh citation index). However, Emanuel Kulczycki emphasizes that since 2016 the *Academia.edu* service facilitates these analytical functions payably[1].

We also distinguished two services which definitely refer to professional purposes. These were: *LinkedIn* and *GoldenLine*. The first one has got an international reach whereas the other was established in Poland. *GoldenLine* supports the process of job searching, enables posting an individual Curriculum Vitae which makes it easier to find the right person for a specific position or to receive suitable job offers. It also supports the process of employer branding[2]. *LinkedIn* works similarly, however, beyond supporting processes of searching for the right candidates and employer branding, it

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[1] See more: http://ekulczycki.pl/warsztat_badacza/platna-wersja-academia-edu-czy-warto-placic/
[2] See more: https://www.goldenline.pl.

also promotes business through advertising, strengthens companies' sales, and offers e-learning platforms for various stakeholders (e.g. business representatives, higher education participants, librarians etc.)[3].

The third identified rank was related to entertaining purposes. As a result of an in-depth analysis, we decided to indicate four services that serve these functions. These were: *nk.pl*, *Snapchat*, *Instagram*, and *YouTube*. Additionally, it is worth noticing that we also identified different functionalities of some of them. For instance, we also selected *Snapchat*, *Instagram*, and *YouTube* for educational services (a detailed analysis of their educational functions is presented below). Additionally, we discovered some informational and communicational functions of: *nk.pl*, *Snapchat*, and *YouTube*. Nevertheless, herein, we pinpoint several characteristics that allowed us to classify these four services as having entertaining purposes. *Nk.pl* was established by four Polish men in 2006. It used to help with finding former classmates, teachers, and students as well as joining specific classes or schools. It offered the possibility to create four types of accounts: real, official (for public figures), sponsored (dedicated for non-governmental organizations), and fictitious (for fans of TV series or movie characters). The interesting area, related to ludic purposes pursued in *nk.pl*, was presented by Hanna Krauze-Sikorska and Michał Klichowski (2013). Klichowski observed some fictitious accounts in the *nk.pl* service, which were created by fans of *Prison Break* and the *Beverly Hills 90210* TV series. According to him, today we are able to experiment with several identities created in the Internet and that is why those users were acting like characters of TV series, e.g. they married another user who was pretending to be the TV show partner of a person, or they organised baptisms of characters' children etc. (Krauze-Sikorska & Klichowski 2013, pp. 122-129). Furthermore, in 2010 the service introduced an option called "Games", which definitely situates it among services related to entertaining purposes.

Snapchat and *Instagram* enable their users to share short movies and publish pictures that may be edited by their owners (they can change the brightness and contrast of a picture, leave a short comment on the photo etc.). We decided to select these two services as entertaining ones for two reasons. First of all, they are very popular amongst children and youth who love entertainment and having fun through the use of social media. This new generation of children is being increasingly defined as: Digital Natives (Prensky 2001), Generation Z (Cantelmi 2015), App Generation (Gardner & Davis 2013) or Net Generation (Tapscott 2009)[4]. Secondly, sending, posting, as well as publishing pictures

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[3] See more: https://business.linkedin.com.
[4] All of the terms were defined by referred authors who describe the new generation of people (born at the end of the 20th or at the beginning of the 21st century) deeply immersed in a digital world. Generally, their characteristics are (amongst others): strong usage of technology, familiarity with

and short movies are definitely attributed to entertainment purposes. The difference between these two services is visible only in one area. This refers to publishing content. *Snapchat's* pictures, movies or messages disappear in a few seconds after the other user opens it and sees the content. He or she is not able to watch the content again.

YouTube is characteristic for publishing, streaming, and watching different types of movies. Viewers are able to comment and assess the materials as well as subscribe to them. Nowadays, video blogs, short movies and amateur content are published very often by authors representing various areas, e.g. public figures, individuals, companies, organisations and institutions. It is free for all people who are interested in watching the content. Without hesitation, we decided to select this service as an entertaining one.

Next to last, is the informational and communicational rank where we identified five services. These are the following: *nk.pl*, *Snapchat*, *YouTube*, *Twitter*, and *Facebook*. The first three were described above, however, we did not indicate their informational and communicational functions there. They are of significant importance and worthy of consideration, taking into account the overall discussion presented in the article. All of them allow users to communicate and share information. *Snapchat* enables sending snap-action photos or movies that inform others what we are doing at the exact time or what we are focused on at the moment. It also enables users to chat. *Instagram* allows documenting events and publishing content that may spark a debate between people who are apart. *YouTube* represents an extraordinary possibility of informing all people (not only those who we have made friends with) about world news, interests, thematic events etc. Special comment should be given to *Twitter* and *Facebook's* services. These were not previously mentioned. Their educational practicalities are analysed in the last part of the text. However, they absolutely match the rank named by us as informational and communicational services. *Twitter* is mostly used by public figures, such as: politicians, celebrities, actors and actresses, journalists etc. It allows for blogging short messages, which are called 'tweets' and following people or institutions we are interested in. Two distinct sources inform that these 'tweets' may be 140 (Borkowska & Witkowska 2017, p. 45) or 280[5] signs long. *Facebook* offers many options to its users. Actually, we are quite sure that it is possible to ascribe this service to all of the mentioned ranks. However, its communicational and informational functions serve a leading role. We detected many of them. First of all, users are able to add friends, create networks and groups, share information, pictures and movies as well as send longer messages to one, chosen user or to many of them. It also supports business and organizational activities. This is due to the possibility of creating Fan Pages, which may be a good 'business card'

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using all new devices, such as: tablets, smartphones etc., employing ICT tools for all communication processes (in learning, work, and social environment), and finally task-switching.

[5]　See more: https://pl.wikipedia.org/wiki/Twitter.

for a company, institution or organisation. The service makes it possible for users to share 'events' that promote concerts, political meetings, festivals, and other interesting events that take place worldwide. *Facebook* users are invited to attend different happenings tailored to them. A new functionality of the service enables creating discussion groups. These are clusters of people who participate equally in building a community and at the same time may feel that they are authentically co-creating it.

Services worth noting for educational and didactic purposes

Our biggest concern during desk research was to identify services that may be utilised for educational, communicational and didactic purposes. We have discovered that seven of them (*Facebook*, *Edmodo*, *Mindmeister*, *YouTube*, *Instagram*, *Snapchat*, and *Twitter*) are suitable when we consider using them in both primary education or higher education. We present detailed analyses of their possible uses below.

The first social network that deserves attention for its educational uses is *Facebook*. We enumerated some of its functionalities above. Here, we focus on those dedicated especially to education. In 2017, the originator of the service – Mark Zuckerberg – published a post, in which he extensively described the idea of creating communities in the frame of discussion groups. He emphasised there that the new challenge for *Facebook* is to create an infrastructure associated with safety, social engagement, social inclusion as well as informational issues. Further, he indicated objectives that are significant from the perspective of the *Facebook* team. These were:

– building supportive communities (broadening traditional communities such as: sports fans, religion, school or class communities for groups that may interact online),
– building safe communities (preventing terrorism, natural disasters, illnesses etc.),
– creating civically-engaged communities (engaging people in political issues and participating in decision making processes),
– forming inclusive communities (co-deciding and negotiating common values and standards in the community people belong to),
– creating informed communities (where people cooperate in the process of building knowledge based on facts and where they can avoid believing in so-called 'fake news')[6].

All of the aims mentioned above are closely related to many educational purposes. However, everyday uses of the service in education should be stated separately. The ways *Facebook* is used for didactic purposes was described in detail by Polish research-

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[6] See more: https://www.facebook.com/notes/mark-zuckerberg/building-global-community/10154544292806634/

ers – Anna Borkowska and Marta Witkowska (2017). They indicated its several, possible uses in the class: creating a class Fanpage; informing students about absences, school events and schedule changes; creating closed educational-goaled discussion groups in the frame of conducted subject, where students may share information and subject-matter materials; as well as learning critical thinking and giving feedback to classmates' comments or papers published there (Borkowska & Witkowska 2017, pp. 42-43). Krzysztof Flasiński presented aspects that may encourage students to co-operate mediately through *Facebook* (2017, pp. 35-37). Also Lidia Bielinis argued that *Facebook*'s educational-goaled discussion groups might enhance the cooperation and processes of sharing knowledge between University students. She also emphasised that the surveyed students highly valued the didactic materials sent to them electronically through the discussion group on *Facebook* (2017).

The second service is the platform named *Edmodo*, which is dedicated specifically for educational and didactic purposes. *Edmodo* allows creating class groups with the teacher who at the same time becomes its moderator. It works similarly to *Facebook* – members are enabled to create a library of didactic materials, discuss on the main wall, while others may respond to the posts of different users. Due to the fact that *Edmodo* was established mainly for educational purposes, it offers some functionalities that are not available on *Facebook*. These are, for instance: assignment tab (dedicated for preparing homework for students) or quiz tab (where a teacher may publish a review for learners). Additionally, users signing up to the platform can choose specific roles, which are: teacher, student or parent. The platform enables communication with parents with no time or space limits. The only difficulty with using it is the fact that it is prepared and presented in English. Some users may not be able to employ *Edmodo* because of unfamiliarity with the language[7].

Also an application called *Mindmeister* was selected by us as a social networking service. It is more likely a tool for creating electronic mind maps collaboratively, however, it fulfils several functions that allowed for classifying it as an educational service. The following arguments confirm our thesis:
– it allows for creating an electronic mind map collaboratively, which may be shared with other members of the class / group (teachers or students),
– the work on the map takes place in real time, hence all the active users see map's modifications on an on-going basis (similarly to comments displayed on *Facebook*, *Edmodo* etc.),

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[7] See more: https://www.edunews.pl/nowoczesna-edukacja/e-learning/3657-edmodo-jak-obsl-ugiwac-i-korzystac-z-platformy.

– it offers using a communicator that makes it possible to chat with one or several users in a private conversation (it is similar to Messenger offered for *Facebook* users),

– the platform has many options related to communication issues, for instance: users are able to post a reflective comment on the map and others may respond to a comment (like it or not),

– it also enables users to share links (with interesting movies, lectures etc.), pictures or PDF files with specific content related to issues entered into the map (this functionality has a special meaning for learners who can use collaboratively collected materials for further study).

The practicalities mentioned above helped us to position this platform among other educational services, tools or communicators. It definitely has got socio-educational implications. Experiences related to using the *Mindmeister* platform for learning purposes at University were described by L. Bielinis (2018).

In the literature, we also found some possible uses of *Twitter*, *Snapchat*, *Instagram*, and *YouTube* services for educational, communicational, and didactic purposes.

The authors of the book titled 'Social media at school' – A. Borkowska and M. Witkowska argue that *Twitter* enables following prominent scientists or publicists if their tweets refer to a class subject. Also a teacher may have a *Twitter* account and publish tweets related to subject-matter knowledge. Learners may comment upon these tweets. It is also valuable for establishing cooperation between other national or international schools (Borkowska & Witkowska 2017, pp. 46-47).

Snapchat lets teachers and students send thematic snaps before and after a specific class. These can be, for instance: Internet memes adverting things that happened during the class or discussed subjects and persons. It also allows for sending pictures related to meteorological and natural phenomena (biology, geography, and physics classes) or pictures of paintings and artworks (in the frame of arts classes). Additionally, it enables preparing an outdoor game and sending some clues or guides (Borkowska & Witkowska 2017, p. 54).

Instagram also allows for sending pictures related to topics discussed during classes. However, it more often helps with documenting school events and producing school e-newsletters (Borkowska & Witkowska 2017, pp. 49-50).

Visual and audio attributes of the *YouTube* service may be also employed during school or University classes. Learners may follow and watch channels of many cultural and educational institutions all over the world. Furthermore, there are both no limits in finding lectures of famous scientists, journalists or publicists (currently, they are more often available with Polish subtitles or translation) as well as no limits in recording and

sharing one's own movies related to the topics discussed during classes (Borkowska & Witkowska 2017, pp. 58-59). An interesting area, within the *YouTube* service, is also an opportunity of watching TED conference speakers, who often refer to topics related to subject-matter knowledge[8].

Benefits accrued from the social media for education – conclusions and limitations of the research

As a result of the undertaken explorations, we identified seven social networking services, functioning in the frame of the social media area that may or should be used in widely comprehended education. These were: *Facebook*, *Edmodo*, *Mindmeister*, *YouTube*, *Twitter*, *Instagram*, and *Snapchat*. All of them, without hesitation, represent a group of social networks intended for educational purposes. We also indicated their possible didactic applications, which are extremely important due the fact of the existence of social networking services in the everyday life of the contemporary young generation (Digital Natives). These didactic uses may support both subject-matter knowledge aims as well as information and communication processes at school and beyond it.

We are aware of limitations arising from exploring only twelve social networking services. We are also aware of other social networks that exist in a digital space. Many of them are disposed for establishing discussion groups associated with educational and didactic purposes. The analysed area needs further investigations due to the dynamic changes that occur in the area of social media. Social networking services appear, gain popularity, lose it, regain it, and finally (sometimes) they disappear from the social space of interest. There are many new social networks that replace them. Our main objective was to analyse a dozen of them, which – in our opinion – seemed quite popular and available in Polish conditions (generally for free) for all users.

The desk research we carried out had an exploratory character as well. It turned out that it is a difficult task to characterise social networking services in terms of the criterion of functions fulfilled. Many of the social networking services represent different features that deliver grounds for using them in education, however, they may also be classified into informational and communicational, professional, scientific or ludic purposes. On the grounds of the above analyses, we decided to present the original proposal of the division of social networking services.

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[8] See more: https://www.ted.com.

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**LEARNING AND COMMUNICATION MEDIATED BY THE SOCIAL MEDIA –
AN ANALYSIS OF EDUCATIONAL NETWORKING SERVICES**

SUMMARY: The last two decades have shown the extremely significant role of the development of social media. This article summarises our explorations of the applicability of social media in education. The study involved an analysis associated with dividing social networking services and selecting twelve that were then subjected to an in-depth desk research analysis. As a result of this study, we were able to select seven social networking services which potentially may be useful for educational and didactic purposes. We also pointed out several other functions of all the analysed social networking services and described those practicalities in detail.

KEYWORDS: communication, educational-goaled discussion groups, learning, social media, social networks.

**UCZENIE SIĘ I KOMUNIKACJA ZA POŚREDNICTWEM SOCIAL MEDIA –
ANALIZA EDUKACYJNYCH PORTALI SPOŁECZNOŚCIOWYCH**

Streszczenie: W ostatnich dwóch dekadach, wraz z ekspansją internetu, nastąpił dynamiczny rozwój mediów społecznościowych. W niniejszej pracy prezentujemy wyniki badania eksploracyjnego, w którym analizowano aplikacyjność tych mediów dla edukacji. Badanie obejmowało analizę kilkunastu portali społecznościowych, w jego efekcie wyselekcjonowano dwanaście z nich, stały się one przedmiotem pogłębionych analiz źródeł zastanych (*desk research*). W następnym etapie wyselekcjonowano siedem portali społecznościowych potencjalnie użytecznych dla celów edukacyjnych i dydaktycznych. Wskazano także na inne istotne funkcje wszystkich analizowanych portali oraz szczegółowo opisano możliwości ich praktycznego zastosowania.

Słowa kluczowe: komunikacja, grupy edukacyjno-dyskusyjne, uczenie się, media społecznościowe, portale społecznościowe.