



# World Scientific News

An International Scientific Journal

WSN 93 (2018) 100-106

EISSN 2392-2192

---

---

## Possibilities of using social network as a source of knowledge about nature and forest

**Radosław Lewoń, Joanna Pietrzak-Zawadka\***

Faculty of Forestry in Hajnówka, Białystok University of Technology  
1A Piłsudskiego Str., 17-200 Hajnówka, Poland

\*E-mail address: [j.pietrzak@pb.edu.pl](mailto:j.pietrzak@pb.edu.pl)

### ABSTRACT

Social networks are becoming an inseparable element of spending free time by contemporary society. Few people are aware of the possibilities of using this phenomenon for educational purposes. Based on the results of the research, it was found that the use of this form of education not only increases the level of knowledge of nature, but also motivates for various activities, such as the use of nature-forest tourism or the use of gifts of nature, including in herbal medicine. The development of social networking sites opens up many educational opportunities, thanks to which it can become a good tool to make the society aware of issues related to nature and forest management.

**Keywords:** non-formal education, social media, social network, nature education, forest education

### 1. INTRODUCTION

The main purpose of social networking sites is to provide fast communication. The popularity of this form of spending time has meant that nowadays social media is of great importance in every area of life. The number of users is constantly increasing, which makes it impossible to estimate the exact number of active Internet users. In 2016, according to Sotrender 15.53 million Polish inhabitants were registered on Facebook (<https://www.sotrender.com>).

The constantly improved development of new technologies and new media means that the reality that surrounds us is becoming an increasingly dynamic and fascinating social sphere.

The Internet has revolutionized the modern world, which is also manifested in social networking sites. Facebook, in particular, has contributed to and contributes to a different perspective on the world around us: on ordinary people, 'great' politics or on one's own identity. Communication via Facebook is both global and local, general and at the same time tailored to individual needs, according to ever-changing models. The new world created is a kind of Facebook effect (Abe et al. 2005).

Knowledge about nature as part of non-formal education is mainly disseminated by educational and educational institutions and the State Forests (SF). The purpose of organizing various educational tasks by the units of the SF is to clarify the issues of forest management and natural conditions. Awareness of the natural foundations of functioning of forest management is necessary to build social trust in the work of foresters (Romanov and Nevgi 2008). Currently, classes organized by Forest Inspectorates are directed mainly to students.

Modern technologies allow the use of social media from virtually anywhere on Earth. Popular social networking sites have become such a significant platform for the exchange of information that they should make forest educators interested in this tool. The advantages of social media are not only the convenience of sharing content, but also the possibility of conducting a dialogue with a wide audience (Krause 2005). For several years, the State Forests within the framework of forest education have begun using the Internet as a tool to disseminate knowledge of nature. The effectiveness of these solutions draws the attention of an increasing number of users but to a small extent using Facebook's capabilities. Activity of Forest Districts on social networks can be an excellent way of transferring knowledge to a wide audience (Krause 2005, Yoshimura T 2000).

The most popular social networking site Facebook has the option of creating groups that aim to bring together users interested in a given topic. One of the aims of the research was to check whether Facebook as an educational tool brings the results of combining theoretical and practical knowledge of natural science.

Obtaining knowledge of nature and forest through social groups can be divided in several ways:

- informing about interesting events – placing information on meetings, open lectures, courses and trainings related to nature and forestry,
- posts with questions – answering bothering themes, advises how to behave in given situations, eg how to deal with a nestling found,
- presentation of scientific works – placing links to websites concerning current scientific research and contemporary ecological issues,
- presenting the latest literature – Internet users play an opinion-forming role for guides, textbooks, natural atlases and specific websites,
- sharing photographs - users add pictures of plant species, animals, fungi from outdoor wandering, and the task of other members is to mark species.

Thematic groups dealing with a given field of knowledge operate on the basis of their own regulations, in which the principles of group use and observance of natural ethics are contained. The main principle of the group „Plant Seekers” is „Do not break the plants we do not know!”, which aims to protect against aimless picking and to prevent the unconscious destruction of species threatened with extinction.

Among Internet users, there is no universal consent to the suggestions of ethics leaders and common rules are violated, which may result in a significant number of entries that do not

match the profile of the virtual community. It lowers the scientific potential of the group as well as the departure of the most active users. The main reason for this phenomenon is the lack of activity of group administrators. In The Great Britain Facebook's groups attract real enthusiasts, and the administrators are specialists with considerable experience and scientific achievements. In contrast to Poland, they have a narrower theme and several times fewer users. This is best seen in the „Bryophytes of Britain and Ireland” group, where methods with the use of microscopic techniques and full keys to recognizing individual species of bryophytes appear.

An interesting example of a community that dealt with the problem of behavior and compliance with the subject is the British group „British Mycological Society”. Each candidate applying for joining a group must undergo recruitment, i.e. fill in the questionnaire, which verifies the proximity of interests with the profile of the community. Then he receives a message with the rules in force. Failure to comply with the rules results in removal of the post or exclusion from the community. Added photos often have information about the author and location.

American groups are characterized by a narrow thematic scope and local range. Such a solution allows for easier communication and organization of events by surrounding organizations dealing with nature. And the mentors of groups are local naturalists. There are virtual places abroad where enthusiasts can meet and effectively develop their knowledge under the supervision of specialists. The formation of such groups in Poland should be addressed to natural educators, as current informal education should not be left without substantive care.

The functions that meet social networking sites are still not researched. This is because the scientific staff does not belong to the social media generation and rarely uses such portals. Young people who want to take up such a topic in diploma theses often do not get approval from the supervisor, because in such a work one should use professional methods and available literature in a given field. So far, the fanpage of forest districts and websites of various education institutions have been studied. The creation of virtual social groups of people interested in a given subject is a new phenomenon that should be taken into consideration.

## **2. MATERIALS AND METHODS**

A survey was conducted using the Google form. The survey is available only to members of the surveyed groups, it was placed on the pages of social groups „Plant searchers” (Poszukiwacze roślin) and „Mushrooms, mushroom pickers, mushroom pickers” („Grzyby, grzybiarze, grzybobranie”). An anonymous survey of 26 questions was filled out by 257 people.

The main goal of the research was to examine social networking sites in the dissemination and deepening of natural and forest knowledge. The survey was written in order to primarily check the effectiveness of informal education by this type of media and determine the possibilities of using this form of dissemination of knowledge about nature and forest areas.

## **3. RESULT**

The study involved 214 women and 43 men. The age of the respondents was varied, but the majority were relatively young – 47% of the respondents were under 40 years old, of which about 12% were persons under the age of 25. A significant share of this age group results from

the fact that social networks are the most popular among young people. 24.1% of respondents were aged 41 to 55, and the remaining 15.9% were over 55 years old. The respondents had a relatively high level of education, 61.1% of them graduating from university. Users of the group „Mushrooms, mushroom pickers, mushrooming” accounted for 36.1% of the surveyed, „Plant seekers” – 50.2%, and users of both groups – 13.6%.

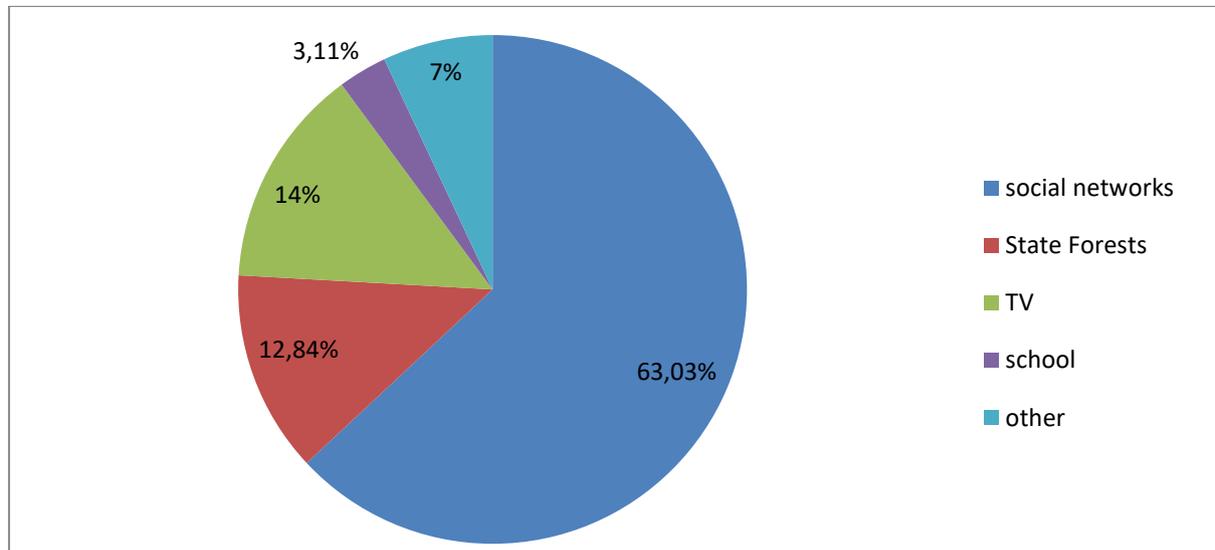
Forest areas were quite often visited by the respondents, mainly for tourism purposes. Before joining the nature group, about 30% of those surveyed visited forest areas several times a week. After joining the group, this percentage increased to over 40%. A similar percentage of respondents visited forest areas once a week (around 20%). The most common purpose of this activity was recreation in forest areas, implementation of own hobby - collection of forest undergrowth (36.0%) and knowledge of plant and fungi species (22.0%). Members of both groups rated social media as a reliable source of knowledge on natural topics (59.5%). They also recognized that natural social media motivate them to various recreational activities in forest areas, including sports in the forest and collection of forest undergrowth (86.7%).

**Table 1.** Activity of respondents in the field of recreation in forest areas.

Group	Activity of forest areas	
	Before joining the group [%]	After joining the group [%]
„Mushrooms, mushroom pickers, mushrooming”		
a few times a week,	37,6	46,2
I did not prefer this form of activity.	1,1	2,2
every two weeks,	12,9	9,7
once a month,	10,8	6,5
once a week,	21,5	21,5
less than once a month	16,1	14,0
„Plant seekers”		
a few times a week,	34,9	41,9
I did not prefer this form of activity.	2,3	1,6
every two weeks,	10,9	15,5
once a month,	15,5	11,6
once a week,	23,3	20,2
less than once a month	13,2	9,3

Source: own study

Thanks to social networking sites, they gained knowledge not only about the environment, but also about current problems in the field of environmental protection and nature (90.6%) and biological threats to the forest environment (Fig. 1).



**Figure 1.** Social networks as a potential source of knowledge of biological threats for users of the thematic groups

Source: own study

Over half of all respondents assessed that their general knowledge about native species of Polish flora and fauna and their life requirements increased. 11.7% assessed that they obtained a very good and good knowledge of their knowledge from the aforementioned scope. The virtual world, which is considered a time absorber, has become a place where a given community motivates to seek knowledge, use forest tourism and promotes a healthy lifestyle. The user begins to go for walks to the valuable natural areas to take pictures of the most unknown plants, animals and fungi found along the way. Internet users with great satisfaction help him to recognize the species encountered, thanks to which he combines theoretical and practical knowledge. Discussions and discussions on the group as well as information exchange favors the search of substantive knowledge outside the virtual zone. Over  $\frac{3}{4}$  of respondents were interested in deepening their knowledge of nature and searching for information in specialized textbooks, atlases. They also declared their will to develop their knowledge about nature.

Almost half of the respondents (48.7%) kept up to date information posted on the portal several times during the day. Over  $\frac{1}{4}$  of them looked at the group at least once a day, looking for interesting information, which may indicate interesting topics in the group. The information posted for the purpose of discussion or various types of inquiries was assessed as good. Groups, as users declare, enabled members to meet people with similar interests (86.1%). Most of the respondents (82.1%) declared participation in eventual nature-related events if they were organized by members of the social group to which they belong. Group users indicated the group as one of the sources of obtaining information about nature and forest (26.6%).

Other sources of information indicated by group users are: literature (37.7%) and school (10,5%). The portals were easy to use for the vast majority of users (98.0%).

#### **4. CONCLUSIONS**

Social networking sites are beginning to play an important role in the dissemination and deepening of natural and forest knowledge. One of the important functions of these portals seems to be the ability to communicate and conduct discussions on interesting issues. This activity allows you to share often copyrighted content (Chu et al. 2012, Krause 2005). Almost all those surveyed considered the credibility of the information presented on the group. Therefore, it should be assumed that trust in content posted there is quite large. The most interesting information is disseminated and posted by users on other websites or their own websites or blogs. In this way, it is possible to reach a wider group of Internet users with information. The „virtual world”, which is considered a time absorber, has become a place where a given community motivates to seek knowledge, use forest tourism and promotes a healthy lifestyle. The user begins to go for walks to the valuable natural areas to take pictures of the most unknown plants, animals and fungi found along the way. Internauts with great satisfaction help to recognize the species encountered, thanks to which they combine theoretical and practical knowledge.

The content is made available, very often viewed and disseminated, thanks to which knowledge is regularly repeated and absorbed, which allows you to master some elements of knowledge, eg recognition of common species. It can be said that the thematic group has become a platform for informal education. Thematic groups will ensure a fairly rapid flow of information, thanks to which they have become an effective tool in perceiving biological threats. Knowledge about how to protect against ticks is at a different level. Therefore, new activities are recommended to disseminate knowledge and skills regarding protection against threats.

Social networking services enable active discussion, as a result of which the community influences the views of the society related to the issues of forest management. Low ecological awareness or lack of knowledge about the forestry business activity may result in a misleading image of the State Forests as excessive explorers of forest areas (Contreras-Hermosilla 2003). Users of groups indicated a small knowledge of fanpage's surrounding forest districts and low attendance at events organized by them. The reason for this phenomenon is probably the low activity of such portals, and their content often messages too general. Current education of adults is most often addressed to foresters or other people working in institutions dealing with activities in natural areas or nature education (Dresner 2002). It is worth noting that over 80% of respondents showed interest in events organized by social networks. This is a signal that there is a need for events in line with the expectations of adults. Nature and forest education should be carried out at every stage of human life (Romanov and Nevgi 2008, Yoshimura 2000). At present, it is a guarantee of continuous improvement and understanding of current problems related to activities in nature-valuable areas.

Social media have an increasing potential, although undervalued, in raising public awareness, as most users have no education or profession related to nature. This phenomenon should be the object of interest of institutions responsible for ecological education of adults,

because nowadays society negatively perceives the activities of institutions dealing with the development of natural valuable areas (Ashihara et al. 2003, Okada et al. 2001).

The biggest problem of Polish thematic groups is the lack of substantive administrators as mentors of a given community and people responsible for compliance with the regulations. As shown by prosperous groups abroad, the success is also narrowing the thematic scope. There are many posts in the wide-ranging communities that are not related to the group profile, which can cause users to outflow or disrupt the functioning of groups. The State Forests and other institutions dealing with natural science could be responsible for running such virtual communities. Such a solution would allow first of all for the conscious creation of their image as well as increase the credibility of information, organization of events, public awareness and education of adults. It is important that the organizations responsible for a given group, if possible, limit their interference in the activities of the community, because the freedom of dialogue is the reason for the effectiveness of this educational tool. Local groups could be created whose scientific potential could in the future be used in various tasks for nature conservation and monitoring of invasive or endangered species.

## **References**

- [1] Abe M., Yoshimura T., Koizumi T., Hasegawa N., Osaki T., Yasukawa N., Koba K., Moriya K., Sakai T., Virtual forest: design and evaluation of a walk-through system for forest education. *Journal Forestry Research* (2005) 10, 189-197.
- [2] Ashihara S, Matsumoto M, Noshita H, Matsuno Y, Inoue S, Inokura Y (2003). Field education program for children in the university forest: an example of a forest classroom for elementary school. *Trans Meet Jpn For Soc* 114: 216.
- [3] Chu S. K. W., Chan C. K. K., Tiwari A. F. Y. (2012). Using blogs to support learning during internship. *Computers & Education*, 58(3), 989-1000.
- [4] Contreras-Hermosilla A., Vargas Ríos M. T. (2002). Social, Environmental and Economic Dimensions of Forest Policy Reforms in Bolivia, Forest Trends and CIFOR, Washington, DC. ISBN: 0-9713606-5-0
- [5] Dresner M. (2002). Teachers in the woods: monitoring forest biodiversity. *The Journal of Environmental Education*, 34(1): 26–31.
- [6] Krause S. D., (2005). Blogs as a Tool for Teaching, The Chronicle of Higher Education. Engineering Society, Tokyo, pp. 11–29.
- [7] Okada M., Tarumi H., Yoshimura T., Moriya K. (2001). Collaborative environmental education using distributed virtual environment accessible from real and virtual worlds. *Applied Spectroscopy Reviews*, 9: 15–21.
- [8] Romanov, K., Nevgi A. (2008). Student Activity and Learning Outcomes in a Virtual Learning Environment, *Learning Environment Research*, 11: 153-162. <http://dx.doi.org/10.1007/s10984-008-9038-3>.
- [9] Yoshimura T. (2000). Strategy of forest engineering study for the 21st century. In: Minematsu H. (ed) The ideas and prospects of forest engineering study in the 21st century (in Japanese). Japan Forest.