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ANALYSIS OF THE ACTIVITY OF POLISH UNIVERSITIES ON FACEBOOK

Social media have changed communication for good. Not only private users but also companies and institutions are eager to use them. Today, presence in social media is indispensable, both for private users who communicate and receive information in such a way, and for companies for which it is often the most important communication channel with their clients. Facebook has been the most popular and engaging social networking site in the world for many years. The activity of Polish universities in social media has been studied for only a few years and is a relatively new research area. The main purpose of this article is to present the results of the research on the activities of Polish universities on Facebook. 326 universities (121 public and 205 non-public universities) were qualified for the study and a detailed analysis of the functioning of their fanpages was undertaken. Using the Sotrender tool, necessary data were collected and indicators were calculated in relation to the reach, engagement and content presented by universities on Facebook.

The research showed that universities in Poland see the potential that Facebook offers, but at the same time they do not always use its functions fully. The activity of Polish universities on fanpages is very diverse. There are universities that try to keep up with the emerging trends in communication with the environment, they move perfectly on the most popular social media, but there are also those for whom the activity on Facebook ends with the creation of a fanpage.

Keywords: social media, universities in social media, communication in social media, universities, Facebook.

1. INTRODUCTION

Data from the *Digital in 2018 Global Overview* report² show that in January 2018 there were 7.6 billion people in the world, of which over 4 billion, so more than half of the population, had access to the Internet. It is also worth noting the dynamics in this area – in

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² *Digital in 2018 Global Overview*, accessed on 25.05.2018 at: <https://wearesocial.com/blog/2018/01/global-digital-report-2018>

2018 the number of Internet users grew by 7% compared to the previous year, one quarter billion new users appeared online for the first time. In Poland, the Internet penetration in relation to the total number of inhabitants is 72%, thus giving us the 15th place in the world ranking³.

According to *GlobalWebIndex*⁴, not only the number of people using the Internet is growing, but also the amount of time they spend online - it is about 6 hours a day for an average user⁵. It is due to the fact that over two-thirds of the world's population has a mobile phone, the vast majority with Internet access⁶.

Thanks to widespread access to the Internet and mobile devices, social media are also becoming increasingly popular. According to the above mentioned *Digital in 2018 Global Overview* report, over 3 billion people worldwide now use them, which is 13% more than in 2017 (almost one million people started using social media for the first time in 2017). In the ranking of countries actively using social media, Poland holds the 26th position with 39% of the population⁷. It is expected that these numbers will continue to grow along with the observed increase in the popularity of all mobile devices.

According to *GlobalWebIndex* data, the average social media user spends 2 hours and 19 minutes a day using them⁸. The *We Are Social and Hootsuite* report shows that Poles, in terms of the amount of time spent on social media platforms, occupy the 22nd place in the world. Every day we spend 1 hour and 45 minutes on social media activities, which is slightly less than the calculated global average⁹.

Facebook dominates among the social media in the world, with over 2.1 billion active users (in 2018 an increase of 15% in relation to the previous year)¹⁰. In Poland, it is also by far the most popular social network with a coverage of 82%, nearly 21.5 million people¹¹ use it, and 7 out of 10 users log in to it every day¹².

³ *Ibidem*.

⁴ *The global social media landscape*, accessed on 18.07.2018 at: <https://www.globalwebindex.com/reports/global-social-media>

⁵ *Ibidem*.

⁶ *Digital in 2018 Global Overview...*

⁷ *Ibidem*.

⁸ *The global social media landscape...*

⁹ *Digital in 2018 Global Overview...*

¹⁰ *Ibidem. Most famous social network sites worldwide as of July 2018, ranked by number of active users (in millions)*, accessed on 31.08.2018 at: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users>.

¹¹ M. Kuchta, *Najnowsze dane na temat użytkowników mediów społecznościowych na świecie*, accessed on 15.09.2018 at: <https://socialpress.pl/2018/07/najnowsze-dane-na-temat-uzytownikow-mediow-spolecznościowych-na-swiecie>.

¹² *Dekada Facebooka w Polsce*, accessed on 13.10.2018 at: <http://brief.pl/dekada-facebooku-w-polsce>.

Looking closer at the users of social media, it can be said that they are above all young people (under 34 years old)¹³, while in the case of Facebook, the largest group are people aged 18-24¹⁴.

Social media have changed communication for good. Not only private users but also companies and institutions are eager to use the increasing number of choices they offer. Today, presence in social media is indispensable, both for private users who communicate and receive information mainly in such a way, as well as for companies for which it is often the most important communication channel with their clients. In 2017, the number of companies using the Facebook advertising system in the world reached 5 million¹⁵. In Poland, according to the IAB report "Internet Report 2017/2018: Social Media", the value of the social media market last year was PLN 600 million¹⁶.

It seems that universities in Poland also see the potential of social media, making attempts to adapt to new communication reality and more often using social media as a key component of communication with their surroundings. They are aware of the fact that the main (though not the only) recipient of content published by them in social media is the so-called Internet generation (according to other sources - Generation Z (C))¹⁷, for whom the Internet is the basic tool for communicating and searching for information. The Internet generation understands social media the best and uses them efficiently. K. Peszko writes that this generation is a great communication challenge because it does not know the time before the era of digitization and treats this environment as something natural and universal¹⁸.

The activity of Polish universities in social media has been studied for several years only and is a relatively new research area. The research results published so far, which the author of this article found, were fragmentary and included either selected universities or selected social media¹⁹. The previous research conducted by the author, covering both the entire

¹³ See: *Raporty Sotrender Trends*, accessed on 02.10.2018 at: <https://www.sotrender.com/resources/pl/reports>; M. Kuchta, *Ilu użytkowników na świecie korzysta z mediów społecznościowych?*, accessed on 02.10.2018 at: <https://socialpress.pl/2017/02/ilu-uzytkownikow-na-swiecie-korzysta-z-mediow-spolecznościowych>

Ł. Dębski, *Aktualny stan social media*, accessed on 02.10.2018 at: <https://www.slideshare.net/lukaszdebski/aktualny-stan-social-media>

¹⁴ M. Kuchta, *Social media w Polsce – kto korzysta z serwisów społecznościowych?*, accessed on 31.08.2018 at: <https://socialpress.pl/2018/06/social-media-w-polsce-kto-korzysta-z-serwisow-spolecznościowych>

M. Kuchta, *Ilu użytkowników na świecie korzysta z mediów społecznościowych?...*

¹⁵ *Dekada Facebooka w Polsce...*

¹⁶ *Raport Internet 2017/2018: Social Media*, accessed on 15.09.2018 at: <https://iab.org.pl/aktualnosci/raport-social-media>.

¹⁷ More information on the topic in: K. Bodzioch, *Pokolenie C. Nowa odłona pokolenia Y?*, accessed on 22.09.2018 at: <http://hrstandard.pl/2012/01/04/pokolenie-c-nowa-odslona-pokolenia-y>; M. Kosztembar-Wiklik, *Media społecznościowe w zarządzaniu komunikacją uczelni ze studentami*, „Kultura-Media-Teologia” 2015 No. 21, p. 11–13; D. Tapscott, *Cyfrowa dorosłość. Jak pokolenie sieci zmienia nasz świat*, Warszawa 2010, p. 53–61.

¹⁸ K. Peszko, *Popularność mediów społecznościowych wśród różnych generacji*, „Marketing i Zarządzanie” No. 4(45) 2016, p. 361.

¹⁹ The results of the research conducted so far in this field, which the author of the article searched out, can be found in the following publications: D. Buchnowska, *Polskie uczelnie wyższe w ser-*

population of higher education institutions and all *social media* channels, confirmed that the majority of Polish universities are present in social media²⁰, and the most popular amongst them is definitely Facebook²¹.

The research presented in the further part of the article attempts to look at the presence of Polish universities on Facebook through a detailed analysis of their university fanpages.

2. METHODOLOGY

The methodological assumptions made were that only official, university Facebook profiles will be taken into account, the activity of individual departments, institutes, chairs, self-governments, libraries, scientific circles, committees organizing conferences, etc. were not analysed. It has also been assumed that references to these profiles as official communication channels of the university with the environment should be on the university's main website. According to the collected data, 353 higher education institutions had a link to their fanpage on Facebook on their website during the period analysed (November 1–30, 2016) (123 public universities, 230 non-public universities). As a result of the preliminary analysis, 27 universities were eliminated at this stage for the following reasons:

wisach społecznościowych, Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług No. 88/2012, p. 147–155; D. Buchnowska, *Aktywność najlepszych polskich uczelni wyższych w serwisie społecznościowym Facebook*, Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne problemy Usług No. 105/2013, p. 605–614; D. Buchnowska, *Wykorzystanie mediów społecznościowych przez uczelnie wyższe i studentów w świetle badań własnych*, „Nauki o Zarządzaniu. Management Sciences” No. 2(15)/2013, p. 36–49; D. Buchnowska, M. Woźniak, *The role and use of social media by universities – ranking of universities in social media*, in: M. Kaczmarczyk, D. Rott (ed.), *Problemy Konwergencji Mediów v.2*, Verbum, Sosnowiec-Praga 2013, p. 319–330; A. Chwiałkowska, *Uczelnie w mediach społecznościowych – oczekiwania adresatów a publikowane treści*, „Marketing Instytucji Naukowych i Badawczych” No. 13 (3)/2014, p. 66–82; A. Chwiałkowska, *Polskie publiczne uczelnie akademickie w mediach społecznościowych*, „Marketing Instytucji Naukowych i Badawczych”, No. 4 (10)/2013, p. 3–21; E. Kulczycki, *Raport: Uczelnie wyższe w mediach społecznościowych*, *Warsztat badacza komunikacji*, accessed on 30.10.2017 at: http://ekulczycki.pl/teoria_komunikacji/social_media; E. Kulczycki, *Wykorzystanie mediów społecznościowych przez akademickie uczelnie wyższe w Polsce. Badania w formule otwartego notatnika*, in: E. Kulczycki, M. Wendland (ed.), *Komunikologia. Teoria i praktyka komunikacji*, Wydawnictwo Naukowe Instytutu Filozofii UAM, Poznań 2012, p. 89–109; E. Kulczycki, *Uczelnie wyższe na Twitterze. Raport 2014, Warsztat badacza komunikacji*, accessed on 30.10.2017 at: <http://dx.doi.org/10.6084/m9.figshare.899816>; *Uczelnie w social media – badanie 2014*, accessed on 24.09.2017 at: <https://socjomania.pl/uczelnie-w-social-media-badanie-2014>; M. Koszembar-Wiklik, *Media społecznościowe w zarządzaniu komunikacją uczelni ze studentami*, „Kultura-Media-Teologia” 2015 No. 21, p. 9–12; M. Koszembar-Wiklik, *Media społecznościowe w komunikacji i kreowaniu wizerunku uczelni publicznych*, Sosnowiec 2016; H. Hall, K. Peszko, *Social media as a relationship marketing tool of modern university*, „Marketing i Zarządzanie” No. 5 (46) 2016, p. 41–56.

²⁰ See: I. Wojciechowska, *Skala wykorzystania social mediów przez szkoły wyższe w Polsce*, „Modern Management Review”, No. 25 (1/2018), p. 169–182.

²¹ Popularity is defined here as the frequency of occurrence and was measured by the number of logos of social networks placed on the main university websites, so the most popular means the most common.

- on the website there was only a logo, but it was inactive or there was only a possibility of clicking *like* (according to the assumptions the lack of a working link eliminated the unit from further research) (5 universities),
- after clicking on the logo, the user was redirected to the profile of a different entity than the university (e.g. self-government, library, other university, etc.) (4 universities),
- after clicking on the logo, information that this page on Facebook is not available appeared (7 universities),
- the list of schools consisted of universities associated in a federation of 8 universities, of which 7 had a shared website and a Facebook profile. It was considered that these units should be eliminated from further research, because otherwise it could have a significant impact on credibility of the obtained results (7 universities); only one of them had its own profile and it was included in further analyses,
- in the list of schools there were 7 universities operating in partnership with each other, of which 3 had a common website and a link to the Facebook profile (additionally, clicking on the logo displayed information that this site is not available). In addition, 1 university had its own website, but there was no link to Facebook, and the next one was not included in the list of currently operating universities. Due to the above, these universities were eliminated from further research. Only 2 out of the 7 institutions had their own websites and working links to the Facebook profile, so they found their place in the research.

To sum up, 326 universities (121 public and 205 non-public universities) were finally qualified for the research, and a detailed analysis of the functioning of their university fanpages on Facebook in the period from 1 to 30 November 2016 was undertaken. Thanks to the use of the Sotrender²² tool, necessary data from each profile were collected and indicators were calculated in the most important areas related to the reach, engagement and content presented by universities on Facebook.

The following is a description of individual indicators, divided into the areas they concern:

I. Reach

- 1) **The number of fans** is the number of people who liked the profile on Facebook²³.
- 2) **Increase (dynamics) of the number of fans**, which shows the absolute and percentage change in the number of fans in the analysed period.

II. Engagement

- 1) **Engaged users** – an indicator that shows the intensity of the response to brand communication, it is given in two versions - as the number of the engaged or percentage (the percentage of engaged users in the total number of fans of the fanpage).

Engaged users are defined as those who interacted with the profile, doing activities visible to others: they reacted to the post, commented on something, shared a post or posted their own one.

²² Sotrender is a professional tool used to analyse and report on activities in social media (Facebook, Twitter, Instagram, YouTube), details: <https://www.sotrender.com/pl>.

²³ Total number at the beginning and at the end of the research.

- 2) **Types of user engagement** – indicator showing the number of individual activities:
- number of reactions²⁴,
 - number of users' comments,
 - number of fanpage posts shared by users on their profiles or other fanpages.

It's worth noting here that Facebook users can engage on the brand's profile in a different way, and their activity is also visible to their friends, thanks to which the "viral" reach of the published content increases.

- 3) **Interactivity Index (InI)** – this is a total, weighted indicator of all activity on the profile (both fans' and administrator's), which shows the intensity of response to brand communication; it takes into account different types of activity and the fact that one user can perform many activities. The reaction, comment, post and sharing of the content have, in turn, higher and higher weights, in accordance with their increasing visibility for others and less frequent occurrence (reaction = 1, comment = 4, text status = 8, multimedia status (photo, link to YouTube, etc.) = 12, sharing = 16).

Interactivity Index of the Users (InI Fan) – this is an indicator calculated in a similar way to the previous one (InI), however, it only considers fan activity on the profile (no administrator activity).

- 4) **Relative Interactivity (RI)** – this is a total, weighted indicator of all activity on the profile; similarly to the previous InI indicator, it speaks of the intensity of reaction to brand communication. However, it additionally takes into account the size of the fanpage, which allows comparison of profiles with a diverse number of fans (otherwise it is InI in relation to the number of profile fans).

III. Content

- 1) **Types of posts** – an indicator determining the number of particular types of posts that appeared on the fanpage (links, photos, statuses (text only) and video).

3. RESEARCH QUESTIONS

The following research questions were asked:

- 1) What was the initial status and the change in the number of fans in the period analysed?
- 2) Which universities have undergone the biggest change in the number of fans on Facebook?
- 3) What was the change in the number of engaged users on Facebook?
- 4) Which universities had the largest number / largest percentage of engaged Facebook users?
- 5) What types of user engagement on Facebook were the most / least frequent?
 - reactions,
 - comments,
 - sharing posts.

²⁴ All types of reactions to the post on Facebook are taken into consideration here, that is *like*, *super*, *wow*, *ha,ha*, *I'm sorry*, *wrr*.

- 6) Which universities had the biggest number of particular types of engagement on Facebook?
- 7) Which universities had the highest activity rate on the InI profile (InI total and InI Fan)?
- 8) Which universities had the highest profile activity rate in relation to the number of fans (RI)?
- 9) What types of posts most often / rarely appeared on profiles?
 - posts with links,
 - posts with photos,
 - posts with text only,
 - posts with videos.
- 10) Which universities had the biggest number of particular types of posts on Facebook?

The analysis was performed in all universities jointly and the results were compared in public and non-public higher education institutions.

4. RESEARCH RESULTS

In the period analysed Facebook in Poland had 12.4 million users, 6.46 million were women, 5.94 million were men. Most users were between 19 and 25 years old²⁵.

The number of fans

Table 1. Fans at all universities

	Fans	
	01.11.2016.	30.11.2016
Average number	5631	5759
The number of universities above average	86	87
The number of universities below average	240	239

Source: the author's own study.

Both at the beginning and at the end of the research period, the following universities had the biggest number of fans²⁶:

- SWPS – at the beginning 67 143, at the end 82 412 fans (an increase of 15 269 fans),

²⁵ *Fanpage Trends listopad 2016 r.* report, accessed on 18.04.2017 at: <https://www.sotrender.com/blog/pl/2016/12/fanpage-trends-listopad-2016>.

²⁶ In the article the abbreviated names of some universities will be used: SWPS for SWPS Uniwersytet Humanistycznospołeczny w Warszawie (SWPS University of Social Sciences and Humanities), UJ for Uniwersytet Jagielloński w Krakowie (Jagiellonian University in Kraków), AGH for Akademia Górniczo-Hutnicza w Krakowie (AGH University of Science and Technology in Kraków), UW for Uniwersytet Warszawski (University of Warsaw), KUL for Katolicki Uniwersytet Lubelski w Lublinie (The John Paul II Catholic University in Lublin), PWSFTviT for Państwowa Wyższa Szkoła Filmowa, Telewizyjna i Teatralna w Łodzi (Polish National Film School in Łódź), SGGW for Szkoła Główna Gospodarstwa Wiejskiego w Warszawie (Warsaw University of Life Sciences), PWSZ for Państwowa Wyższa Szkoła Zawodowa (State Higher Vocational School).

- UJ – at the beginning 60 873, at the end 61 111 fans (an increase of 238 fans),
- AGH – at the beginning 56 455, at the end 56 774 fans (an increase of 319 fans),
- UW – at the beginning 54 404, at the end 55 224 fans (an increase of 820 fans).

The average number of fans at the beginning of the research period was 5 631, 86 universities had the number of fans above average, 240 below average. At the end of the research period the average number of fans increased slightly to 5 759, the number of universities above and below average remained at a similar level.

273 universities in the analysed period recorded an increase in the number of fans, 42 universities recorded a decrease (the biggest in ViaModa Szkoła Wyższa in Warsaw (ViaModa University) – 72), and at 11 universities the number of fans remained unchanged.

The largest increase in the number of fans could be observed in the following universities:

- SWPS – 15 269 (an increase of 23%),
- KUL – 1398 (an increase of 4%),
- Wyższa Szkoła Społeczno-Ekonomiczna in Gdańsk – 961 (an increase of 19%)
- UW – 820 (an increase of 2%),

The largest percentage increase was recorded at Wyższa Szkoła Mazowiecka in Warsaw – 50% (Mazowiecka Uczelnia Medyczna).

Table 2. Fans at public and non-public universities

	Fans			
	01.11.2016		30.11.2016	
	Public universities	Non-public universities	Public universities	Non-public universities
Average number	9847	3142	10 013	3248
The percentage of universities above average	32%	23%	32%	23%
The percentage of universities below average	68%	77%	68%	77%

Source: the author's own study.

Public universities

Among the public universities, both at the beginning and at the end of the analysed period, the following universities had the biggest number of fans:

- UJ – at the beginning 60 873, at the end 61 111 (an increase of 238),
- AGH – at the beginning 56 455, at the end 56 774 (an increase of 319),
- UW – at the beginning 54 404, at the end 55 224 (an increase of 820),
- KUL – at the beginning 37 129, at the end 38 527 (an increase of 1398).

114 universities recorded an increase in the number of fans in the analysed period, while 7 universities recorded a decrease (the biggest in Akademia Techniczno-Humanistyczna in Bielsko-Biała (University of Bielsko-Biała) – 3).

The largest increase in the number of fans could be observed in the following universities:

- KUL – 1398 (an increase of 4%),
- UW – 820 (an increase of 2%),

- Politechnika Warszawska (Warsaw University of Technology) – 551 (an increase of 2%),
- PWSFTviT in Łódź – 544 (an increase of 4%).

The largest percentage increase – 5% was recorded at: Politechnika Białostocka (Białystok University of Technology) and PWSZ in Wałbrzych.

Non-public universities

Among the non-public universities, both at the beginning and at the end of the analysed period, the following universities had the biggest number of fans:

- SWPS – at the beginning 67 143, at the end 82 412 (an increase of 15 269),
- ViaModa Szkoła Wyższa in Warsaw – at the beginning 31 718, at the end 31 646 (a decrease of 72),
- Europejska Wyższa Szkoła Prawa i Administracji (European University of Law and Administration) in Warsaw – at the beginning 21 744, at the end 22 033 (an increase of 289),
- Akademia L. Koźmińskiego (Kozminski University) in Warsaw – at the beginning 19 499, at the end 19 714 (an increase of 215).

161 universities recorded an increase in the number of fans in the analysed period, while 33 universities recorded a decrease, (the biggest in ViaModa Szkoła Wyższa in Warsaw – 72), and at 11 universities the number of fans remained unchanged.

The largest increase in the number of fans could be observed in the following universities:

- SWPS – 15 269 (an increase of 23%),
- Wyższa Szkoła Społeczno-Ekonomiczna in Gdańsk – 961 (an increase of 19%),
- Uczelnia Łazarskiego (Lazarski University) in Warsaw – 688 (an increase of 6%),
- Wyższa Szkoła Bankowa (WSB University) in Poznań – 511 (an increase of 5%).

The largest percentage increase – 50% was recorded at: Wyższa Szkoła Mazowiecka in Warsaw.

The average number of fans, both in public and non-public universities, in the analysed period increased, however, in public universities the increase was larger. The percentage of public universities that reached the results above average at the beginning and at the end of the research in the analysed period was the same – 32%, similarly to non-public universities – 23%.

Engaged users

Table 3. Engaged users at all universities

	Engaged users
Average number	357
Maximum number	11 246 (SWPS)
The number of universities above average	69
The number of universities below average	257

Source: the author's own study.

The average number of engaged users in the period analysed was 357, the maximum number in SWPS (almost 11.000 users more than the average). 69 of the surveyed universities in this category were above the average.

The following universities had the largest percentage of engaged users in the analysed period:

- PWSZ in Ciechanów – 27%,
- Gdański Uniwersytet Medyczny (Medical University of Gdańsk) – 24%,
- Uniwersytet Medyczny im. Piastów Śląskich in Wrocław (Wrocław Medical University) – 23%,
- Akademia Marynarki Wojennej (Polish Naval Academy) in Gdynia – 22%.

Table 4. Engaged users at public and non-public universities

	Engaged users	
	Public universities	Non-public universities
Average number	758	121
Maximum number	8479 (AGH)	11 246 (SWPS)
The percentage of universities above average	24%	16%
The percentage of universities below average	76%	84%

Source: the author's own study.

Public universities

The largest percentage of engaged users in the analysed period had the following universities:

- PWSZ in Ciechanów – 27%,
- Gdański Uniwersytet Medyczny – 24%,
- Uniwersytet Medyczny im. Piastów Śląskich in Wrocław – 23%,
- Akademia Marynarki Wojennej in Gdynia – 22%.

Non-public universities

The largest percentage of engaged users in the analysed period had the following universities:

- Powiślańska Szkoła Wyższa (Powiślański College) in Kwidzyn – 15%
- SWPS – 14%
- Wyższa Szkoła Inżynierii i Zdrowia (Higher School of Engineering and Health) in Warsaw – 12%
- Wyższa Szkoła Inżynieryjno-Ekonomiczna (Rzeszów School of Engineering and Economics) in Rzeszów – 11%
- Uni-Terra Wyższa Szkoła in Poznań – 11%

The average number of engaged users in public universities in the period analysed was 758, in non-public universities it was almost six times less (121). The maximum number of engaged users in public universities was reached by AGH (8479), in non-public ones by SWPS (11 246 – the difference in favour of non-public universities).

24% of public universities and only 16% of non-public universities were above the average in this category.

Types of engagement

Table 5. Types of engagement at all universities

	Types of engagement		
	Reactions	Comments	Shares
Average number	552	25	46
Maximum number	15 666 (SWPS)	1280 (SWPS)	3305 (SWPS)
The number of universities above average	68	62	70
The number of universities below average	258	264	256

Source: the author's own study.

Among the types of engagement reactions were dominant – 552 on average, then shares – 46 and comments – 25. In all three categories of engagement about 70 universities reached the results above average, SWPS had a maximum result.

Table 6. Reactions at public and non-public universities

	Reactions	
	Public universities	Non-public universities
Average number	1174	186
Maximum number	13 949 (AGH)	15 666 (SWPS)
The percentage of universities above average	25%	17%
The percentage of universities below average	75%	83%

Source: the author's own study.

Table 7. Comments at public and non-public universities

	Comments	
	Public universities	Non-public universities
Average number	44	14
Maximum number	463 (UW)	1280 (SWPS)
The percentage of universities above average	24%	13%
The percentage of universities below average	76%	87%

Source: the author's own study.

Table 8. Shares at public and non-public universities

	Shares	
	Public universities	Non-public universities
Average number	73	30
Maximum number	1060 (UW)	3305 (SWPS)
The percentage of universities above average	25%	14%
The percentage of universities below average	75%	86%

Source: the author's own study.

Among the various types of engagement, reactions dominated, with a large disparity between public universities (on average 1174) and non-public universities (on average 186), followed by shares and comments - there were also disproportions in favour of public universities. However, in all three categories of engagement, the maximum value has been reached by non-public university – SWPS (advantage over public universities: AGH in the category of reaction and UW in comments and sharing).

If we excluded the absolute leader in the reactions category – SWPS (15 666), the average results of other non-public universities would be very low, because the next university in ranking – Wyższa Szkoła Informatyki i Zarządzania (University of Information Technology and Management) in Rzeszów had 1002 reactions, then Wyższa Szkoła Bankowa in Gdańsk – 988. Other non-public universities mostly achieved results below 100 (often single-digit ones).

In the category of comments non-public universities following SWPS (1 280 comments) were again Wyższa Szkoła Informatyki i Zarządzania in Rzeszów (171 comments) and Wyższa Szkoła Bankowa in Wrocław (153 comments), the remaining non-public universities mostly achieved results below 50.

In the category of shares non-public universities following the leader were Wyższa Szkoła Zarządzania i Przedsiębiorczości in Wałbrzych (311 shares; almost 3000 less than SWPS) i Dolnośląska Szkoła Wyższa (University of Lower Silesia) in Wrocław (143 shares), other non-public universities mostly achieved results below 100.

In the period analysed in 39 non-public universities there were no reactions, in 86 there was not a single comment, and in 64 shares did not appear either. This shows that among 205 non-public universities surveyed there were only a dozen or so which managed to engage their fans, the vast majority were not very effective here.

In case of public universities, the distribution of individual types of engagement was different. The difference between AGH – the leader in the reaction category and subsequent universities was not so big (UW – 11.338 reactions, UJ – 10.105 reactions, SGGW – 7370 reactions). A similar situation was observed in the case of comments - the leader was UW (463 comments), the following public universities were AGH - 403 comments, Politechnika Warszawska – 326 comments, Uniwersytet Ekonomiczny in Poznań (Poznan University of Economics) – 269 comments.

In the shares category UW had a maximum result of 1060, the next was PWSZ in Ciechanów – almost 50% less – 535 shares, UJ – 392 shares.

In the period analysed, out of 121 public universities only in two there was no single reaction, in 8 had no comments, and in 3 there were no shares.

Interactivity Index

Table 9. Interactivity Index (InI) at all universities

	Interactivity Index	
	Total InI	InI Fan
Average number	1604	1390
Maximum number	74 370 (SWPS)	72 781 (SWPS)
The number of universities above average	77	73
The number of universities below average	249	253

Source: the author's own study.

The average Interactivity Index value was: total InI 1 604, InI Fan 1390. The values above the average were respectively recorded at 77 and 73 universities, in both categories the maximum value was reached by SWPS.

Table 10. Interactivity Index (InI) at public and non-public universities

	Interactivity Index	
	Public universities	Non-public universities
Average number	2870	857
Maximum number	30 538 (UW)	74 370 (SWPS)
The percentage of universities above average	28%	17%
The percentage of universities below average	72%	83%

Source: the author's own study.

In case of the average Interactivity Index value, there was again a significant difference between public and non-public universities (values of 2870 and 857 respectively). However, the maximum value of InI was almost two and a half times higher in the non-public university – SWPS (72 781) than in the public UW (29 909). This shows once again how strongly the results in SWPS stood out from other universities and how uneven was the distribution of results among non-public universities (the next in turn are Wyższa Szkoła Zarządzania i Przedsiębiorczości in Wałbrzych – 5331, Wyższa Szkoła Informatyki i Zarządzania in Rzeszów – 3502, Akademia L. Koźmińskiego – 3969).

Relatively few universities have achieved above average results in this category – slightly over ¼ of public universities and only 17% of non-public universities.

Table 11. Interactivity Index Fan (InI Fan) at public and non-public universities

	Interactivity Index Fan	
	Public universities	Non-public universities
Average number	2526	719
Maximum number	29 909 (UW)	72 781 (SWPS)
The percentage of universities above average	27%	14%
The percentage of universities below average	73%	86%

Source: the author's own study.

The results for InI Fan were similar to those for total InI, both in terms of value (slightly smaller than total InI), the percentage of universities above and below the average as well as maximum values – here again UW and SWPS dominated.

Relative Interactivity

Table 12. Relative Interactivity (RI) at all universities

	Relative Interactivity (RI)
Average number	217
Maximum number	10 175 (PWSZ in Ciechanów)
The number of universities above average	86
The number of universities below average	240

Source: the author's own study.

The average Relative Interactivity (RI) value was 217. Values above the average were recorded at 86 universities, the maximum value was reached by PWSZ in Ciechanów (10 175).

Table 13. Relative Interactivity (RI) at public and non-public universities

	Relative Interactivity	
	Public universities	Non-public universities
Average number	338	146
Maximum number	10 175 (PWSZ in Ciechanów)	2183 (Wyższa Szkoła Zarządzania i Przedsiębiorczości in Wałbrzych)
The percentage of universities above average	25%	32%
The percentage of universities below average	75%	68%

Source: the author's own study.

The average Relative Interactivity (RI) value was 338 at public and 146 at non-public universities. The values above the average were recorded by 25% of public universities and 32% of non-public universities (one of the few categories where the percentage of universities above the average was higher in non-public universities than in public universities). The maximum RI value was achieved by PWSZ in Ciechanów (10 175) and Wyższa Szkoła Zarządzania i Przedsiębiorczości in Wałbrzych (2,183).

Types of posts

Table 14. Types of posts at all universities

	Posts			
	with links	with photos	with text only	with videos
Average number	6	12	1	2
Maximum number	46 (Collegium Civitas)	66 (PWSZ in Nysa)	53 (Wyższa Szkoła Rehabilitacji in Warsaw)	18 (PWSFTviT in Łódź)
The number of universities above average	105	112	92	109
The number of universities below average	221	214	234	217

Source: the author's own study.

Among the particular types of posts dominated the posts with photos (12 on average), then posts with links, the least frequent were posts with videos and posts with text only (statuses). In all post categories, about 1/3 of the universities achieved results above the average, while the maximum values many times exceeded the calculated averages. Interestingly, none of the universities that had the biggest number of posts in the analysed period were included in the group of the most engaging universities, which may suggest that a large number of posts does not necessarily mean more user engagement.

Table 15. Posts with links at public and non-public universities

	Posts with links	
	Public universities	Non-public universities
Average number	9	4
Maximum number	37 (Białystok University)	46 (Collegium Civitas)
The percentage of universities above average	32%	28%
The percentage of universities below average	68%	72%

Source: the author's own study.

Table 16. Posts with photos at public and non-public universities

	Posts with photos	
	Public universities	Non-public universities
Average number	18	8
Maximum number	66 (PWSZ in Nysa)	41 (Wyższa Szkoła Administracji Publicznej in Szczecin)
The percentage of universities above average	45%	27%
The percentage of universities below average	55%	73%

Source: the author's own study.

Table 17. Posts with text only (statuses) at public and non-public universities

	Posts with text only (statuses)	
	Public universities	Non-public universities
Average number	1	1
Maximum number	10 (Akademia im. J. Długosza in Częstochowa)	53 (Wyższa Szkoła Rehabilitacji in Warsaw)
The percentage of universities above average	28%	28%
The percentage of universities below average	72%	72%

Source: the author's own study.

Table 18. Posts with videos at public and non-public universities

	Posts with videos	
	Public universities	Non-public universities
Average number	3	1
Maximum number	18 (PWSFTviT in Łódź)	13 (SWPS)
The percentage of universities above average	36%	28%
The percentage of universities below average	64%	72%

Source: the author's own study.

Both among public and non-public universities, in the analysed period, the posts with photos were the most frequent at fanpages (respectively: 18 and 8 posts on average), half the less popular were posts with links (respectively: 9 posts and 4 posts on average), then posts with videos (respectively on average 3 posts and 1 post) and posts with text only (statuses) (on average 1 in public and 1 in non-public universities).

In case of posts with links, posts with photos and posts with videos, the percentage of universities that achieved above average results was greater for public universities, in case of posts with text only, both public and non-public universities recorded the same value here – 28%.

In non-public universities, superiority in terms of the maximum number of posts with links and posts with text only could be observed, in the remaining ones (posts with photos and posts with videos), public universities dominated.

5. CONCLUSIONS

Facebook has been invariably the most popular and the most engaging social network in the world for many years. Despite the competition from other platforms and unfavourable forecasts appearing from time to time, the number of its users is systematically growing. This is probably due to the fact that by taking over new functions from various tools and areas, Facebook offers its users the opportunity to do many things on one platform.

The conducted research has shown that universities in Poland mostly see the potential that Facebook offers (all universities present in social media have their fanpage on Facebook²⁷), but at the same time they do not always use its functions fully. The activity of Polish universities on fanpages is very diverse. There are universities that try to keep up with the emerging trends in communication with the environment, they move perfectly in the most popular social media, but there are also those for whom the activity on Facebook ends with the creation of a fanpage. The results showed that many universities analysed in the research period did not take any activities on their fanpage or they were occasional, often accidental.

It is worth noting that public universities are generally more active on Facebook, although at the same time in many categories the non-public university – SWPS – dominated. Among non-public universities, stratification is even more visible, because only SWPS is actually leading, the indicator values of other universities are many times lower, often incomparable at all. Among the leading public universities, there are several with equal engagement.

Observing communication of the most active universities on Facebook, which achieve high rates, one can assume that they have well-thought-out and well-developed communication strategies with the use of social media, and the activities on their fanpages are dealt with by professionally prepared people who are up to fast changing trends in this area. It probably involves taking into account higher expenses. On the other hand, universities that are not very active, perhaps to save money, outsource their activities on Facebook to incidental people as part of their additional duties, which probably affects the quality and effectiveness of their actions.

However, it is worth realizing that the analysis of social media and the ability to properly use analytical tools by fanpage administrators can provide universities with valuable information about the needs and behaviors of both current and potential students. In the era of the strong impact of social media on life, the not adjusting the message to the recipient may have serious negative consequences. Today, there is no way to ignore social media because they have not only changed the way we communicate, but also the way we obtain information that is important to us. The research shows that university candidates use social networking sites to review offers and ultimately choose universities²⁸. Therefore, active and

²⁷ See: I. Wojciechowska, *Skala wykorzystania social mediów...*

²⁸ In Great Britain 83% of prospective students use social media channels to gain information on universities, before they make any choice. See: J. Cooper, *How International Students Use Social*

engaging Facebook presence can largely affect the effectiveness of recruitment, and even be the most important tool in this area²⁹.

The author realizes that the research carried out covers an area that is subject to constant changes. Therefore, it would be advisable to look at the phenomenon again and analyse the activity of Polish universities on Facebook on a current basis to see what changes have occurred, and perhaps to observe some significant trends in this area.

In further research, it would also be worthwhile to analyse in detail the activities of universities that engage their users on fanpages the most (so-called leaders) to get more information on what really engages users, what content encourages them to interact and perhaps on this basis, an attempt to develop a model method of using Facebook for effective communication with the environment could be taken.

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ANALIZA AKTYWNOŚCI POLSKICH UCZELNI NA FACEBOOKU

Media społecznościowe na dobre zmieniły oblicze komunikacji. Z ich coraz większych możliwości chętnie korzystają nie tylko użytkownicy prywatni, ale także firmy i instytucje. Dzisiaj obecność w mediach społecznościowych jest czymś nieodzownym, zarówno dla użytkowników, którzy w taki sposób głównie się komunikują i czerpią informacje, jak i dla marek, dla których jest to często najważniejszy kanał komunikacji z klientami. Najpopularniejszym i najbardziej angażującym serwisem społecznościowym na świecie niezmiennie od wielu lat jest Facebook. Działalność polskich uczelni w mediach społecznościowych, w tym również na Facebooku, jest badana zaledwie od kilku lat i stanowi stosunkowo nowy obszar badawczy. Głównym celem niniejszego artykułu jest zaprezentowanie wyników badań własnych dotyczących aktywności podejmowanych przez polskie uczelnie właśnie w tym serwisie. Do badań zakwalifikowano 326 uczelni (121 uczelni publicznych i 205 niepublicznych) i podjęto się szczegółowej analizy funkcjonowania ich uczelnianych fanpage'ów. Dzięki wykorzystaniu narzędzia Sotrender zebrano niezbędne dane i obliczono wskaźniki w najważniejszych obszarach związanych z zasięgiem, zaangażowaniem oraz prezentowanymi przez uczelnie treściami na Facebooku.

Przeprowadzone badania pokazały, że uczelnie w Polsce w większości dostrzegają potencjał, jaki daje Facebook (wszystkie uczelnie obecne w social mediach mają założony swój fanpage na Facebooku), ale jednocześnie nie zawsze w pełni umiejętnie wykorzystują jego możliwości. Aktywność polskich szkół wyższych na fanpage'ach jest mocno zróżnicowana. Są uczelnie, które starają się nadążać za pojawiającymi się trendami w komunikacji z otoczeniem, doskonale poruszają się po najpopularniejszym z social mediów, ale są również i takie, dla których działalność na Facebooku kończy się na założeniu fanpage'a.

Słowa kluczowe: media społecznościowe, uczelnie w mediach społecznościowych, komunikacja w mediach społecznościowych, szkoły wyższe, Facebook.

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