Benchmarking analysis of the Facebook usage among higher education institutions

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Abstract

Considering that social networks became a part of everyday life, they also became a part of the academic community. Presence and quality of online presentation of higher education institutions on social networks such as Facebook become a challenging field of research and improvement. According to that, the main authors' motivation was to examine online communication strategies of higher education institutions in the Republic of Serbia, through the content analysis of their Facebook pages, as well as to determine best practices of Facebook usage in the field of higher education.

The overall aim of this study was to collect data of the usage of Facebook, as the biggest social network, by higher education institutions in Serbia. The subject of this research is twofold. In the first phase of this research, benchmarking analysis of secondary data was conducted, as well as the content analysis, by observing the nature and intensity of Facebook usage by 52 registered higher education institutions in the Republic of Serbia. The second phase refers to the primary survey among the students, as the users of higher education and social networks, particularly Facebook, towards the quality of observed online communication. In this phase, as a reference point for comparison in benchmarking analysis, the performance of Facebook activities of the Faculty of Technical Sciences in Novi Sad was observed, which students were also the participants of primary survey.

Through the relevant literature review and empirical based conclusions, the contribution of this research is not only theoretical but also practical – because the results of this study indicate the enablers of more successful performance of higher education institutions on Facebook, as a virtual community for knowledge and experience exchange of current and future students, and other stakeholders of higher education institution.

Key words: *Benchmarking analysis, Facebook page, Higher education institutions, online communication*

1. INTRODUCTION

Higher education institutions are facing with numerous challenges that are mainly created by the technological and consequently social environment. Information and communication technologies (ICT) particularly offer a wide range of opportunities that improve the quality of higher education and affect the way in which higher education institutions operate. Nowadays, higher education institutions have a choice: to resist new market conditions and miss numerous business opportunities or to adapt to them and use opportunities by following new trends [1]. For example, online communication tools provide individuals with the necessary information and necessary interaction, regardless of time and place in which they are located. In addition, social media enables users to communicate and exchange opinions and experiences with a large (and constantly growing) number of people, on various topics and phenomena. Due to the wide coverage, easy access and interactive nature, social media became a notable part of the academic community as well.

As one of the biggest social network used among the students, Facebook has a growing importance in online communication strategy of higher education institutions.

Therefore, the subject of this research is the usage of Facebook as a powerful online ICT tool, for both higher education institutions as business users and students as final consumers. This study aimed to investigate the effectiveness of online communication on Facebook pages of higher education institutions in the Republic of Serbia, by observing their online content and then collecting data about students' perspective. The first part of this paper refers to relevant literature review, after which is described research methodology. In the second part of this paper, empirical results were presented with detailed analysis and constructive discussion, followed by conclusions and implications for the improvement of the social networks usage with the purpose of more effective online communication among higher education institutions.

2. LITERATURE REVIEW

Modern technologies enable and encourage new communication models, which are two-way, interactive and conversational [2]. New generations of education users (the so-called "*net generations*") have better developed Internet application skills, which are the result of their early exposure to these technologies, which changes the way in which they learn, get informed and communicate, in comparison to earlier generations. Since Web 2.0 is individual-centred, interactive, social and flexible, it can serve students as a place where they become active participants in the creation of all aspects of education, rather than passive recipients.

The number of Internet users worldwide is constantly increasing and growing trends of Internet and social media usage for different purposes are also noted in Serbia [3]. The Statistical Office of the Republic of Serbia reports that the share of students as internet users in 2016 is 100%, while in 2015 it was 99.5%. Also, a social network usage (such as Facebook, Twitter, blogs etc.) is third-ranked among the most frequent types of Internet use in private purpose in Serbia [4]. The very important input for this study is also a fact that 90,3% of internet population aged 16 to 24 years have an account on social networks, e.g. Facebook and Twitter [4] – and that is primarily related to students population.

Statistical data testify in favour of the social media power and strength of viral information dissemination, their promotional significance and applicability in various spheres of action. Due to the statistical data, the Internet and social media are being used by a growing number of people in the world, and this applies to Serbia as well, particularly for youngsters, so this segment of online communication at higher education market cannot be neglected.

At the higher education market, the usage of social media is crucial if universities want to maintain connections with their students, as final consumers [5]. For these reasons, many universities have profiles on different social networks with the purpose to facilitate interaction between faculty and students, share resources and express "learner's voice" [3]. Moreover, shared community spaces and inter-group communications present a massive part of what excites young people, i.e. students, and therefore should contribute to their persistence, motivation and educational efficiency [6].

Generations born from 1982 to the present are called "Internet Generations", "Net Generations", "Generation Y" or "Generations of the New Millennium" (in short, *the millennials*) and represent the student population [7]. The academic community is increasingly discussing better-developed Internet application skills that the "net generations" possess – which are the result of their early exposure to these technologies – that changes the way in which they learn and communicate in relation to earlier generations [8]. Therefore, the communication of higher education institutions should respond to the preferences of 21st century students in terms of their digital literacy, experiential learning, interactivity, instantism and immediacy [9].

For instance, Facebook was established as a college-centric focused network. After expanding Facebook to individuals outside the college and university system, the age group experiencing the most growth was 25–34 years old, with an increase of 181%, and the 35 and older group increased 98% [10]. However, despite this growth in older age groups, Facebook remains primarily a college-age and emerging adult phenomenon. As the most popular social network worldwide, in the first quarter of 2017, Facebook had 1.94 billion monthly active users [11]. Facebook is providing a simple interface for individuals to establish and maintain social relationships with their friends and family. It is very useful for dissemination and sharing information rapidly, and the attitudes of Facebook users can be measured by reviewing their "Like", "Comment" and "Share" responses to fan pages, groups, events or photos, which facilitate predictions for future activities by their participation and engagement [3].

The Facebook page or group can be very useful communication channel with its members – in this case with a current and prospective students (and very often graduates as alumni) in order to promote faculty's services, projects and fellowship events. The importance of faculty Facebook pages at the higher education market in the Republic of Serbia is analyzed in continuation.

3. RESEARCH METHODOLOGY

The marketing audit is widely regarded as a valuable diagnostic device in marketing planning [12]. Considering that online communication of higher education institutions is a significant part of marketing activities, it is valuable for them to monitor and measure the effectiveness of this communication.

Benchmarking, as the marketing audit methodology is a way of discovering what is the best performance being achieved – whether in a particular company, by a competitor or by an entirely different industry [13],. This information can then be used to identify gaps in an

organization's processes in order to achieve a competitive advantage. For the purpose of this research, benchmarking analysis was used to indicate the best practice of Facebook usage at the Faculty of Technical Sciences, comparing to the average state of use of this social network among higher education institutions in Serbia.

The research was conducted in two phases. The first phase represents secondary research where the Facebook page usage by higher education institutions in Serbia is analysed. The second phase represents primary research which focuses on the analysis of the importance of online communication elements which should be included in Facebook page strategy by the opinion of the main users of these Facebook pages – students.

3.1 Analysis of quality of Facebook page usage in the field of higher education in Serbia

In this phase, the quality of Facebook page content of higher education institutions in the Republic of Serbia was examined. For this purpose, the secondary research was structured on the basis of a literature review and as a role model to Haigh and Brubaker research, who have created a model in order to examine presented information on companies' Facebook pages [14]. Some segments of this model were used in the original form, some were adjusted and several elements were added to create model applicable for the field of higher education in order to fulfil the main goal of this phase which was to gain insight into the frequency of usage of different elements in Facebook page strategy of the institutions in this field in the Republic of Serbia. This part of the research was realised by the method of observing and analysing Facebook pages on the basis of available data on the Internet which was collected and synthesised in scientific elaborate presented at the conference 'Trends of development: Position of science and higher education in Serbia' 2017 [15]. Model consists of these following sections: (1) presentation of higher education institution which is observed through involvement of these elements: logo, history of institution, mission statement, list of study programmes, website address, links to Twitter and Instagram profiles; (2) information dissemination through types and content of posts used on Facebook page: usage of photographs and videos created by the higher education institution, posting news from official website, usage of press releases, presenting the information about achievements and awards given to institution or its employees, news in field of profession, information about open positions for internships and job opportunities for students, corporate social responsibility actions, promotion of different achievements of students and information about the classes, exam results, etc. (in short, 'Bulletin Board'); (3) involvement of higher education institution through the will to give contact information such as e-mail address, contact phone number and the opportunity to send direct message to administrator of Facebook page; and (4) making the review option available which

gives users the opportunity to express their opinion and makes the (dis)satisfaction with the page transparent.

This section of analysis includes 52 institutions of higher education: 21 public faculties, 15 private faculties and 16 higher education schools of professional studies. The institutions offer study programmes in the following fields: mechanical engineering, civil engineering, traffic engineering, environmental engineering and safety at work, industrial engineering and engineering management, thus the research results were comparable then unified in the second column of Table 1.

3.2 Analysis of the importance of inclusion of different information in Facebook page strategy

For the primary research of this paper, the same identified parameters were used as in the first phase of analysis. The main goal of this phase was to get insight into the importance of different elements which should be included in Facebook page strategy of the higher education institutions measured through perception and opinion of main users of this communication tool – the students. For this purpose online questionnaire was created as a survey instrument. A 28-question survey was divided into 4 sections. The first section evaluated students` opinion about which social network tool (Facebook page, Instagram, Twitter) is necessary to be used by institutions of higher education. The second section focused on students` opinion which elements should be included in Facebook page strategy by these institutions. These elements are the same as in the first phase of this paper and they were measured by a five-point Likert scale. The third section consists of four questions which examine what kind of content respondents mostly like, share, comment and send as direct message. Lastly, respondents were asked to provide general demographic information, such as gender and year of study.

The survey was conducted at the Faculty of Technical Sciences in Novi Sad as the largest faculty in the Republic of Serbia with students from all over the country and region. The sample comprised 172 students: 71 (41.3%) men and 101 (58.7%) women. Students who chose to participate in the survey were predominantly undergraduates (91,9%). Among them, there were 68 (39.5%) first-year students, 38 (22.1%) second-year students, 30 (17.4%) third-year students and 22 (12.8%) final year students. Also, 11 (6.4%) master students and 3 (1.7%) doctoral students participated in the survey.

4. RESULTS AND DISCCUSION

Of the 172 respondents, almost all (99.4%) agreed that higher education institution should have a Facebook page. However, the situation about two other social networks is different: 26.2% think that Instagram is important as a communication tool for this kind of institutions and just 9.3% agreed that Twitter should be included. It could be concluded that students expect to

find Facebook page of faculties and higher education schools so it is imperative for all the institutions to have active Facebook page. When it comes to the higher education market in Serbia, several observed institutions have Facebook group instead of Facebook page and some of them have pages that are not active anymore so they are not taken into consideration in the research. From public faculties, 18 (86%) have a Facebook page. Private faculties have tendency to exist on this social network through university page which gathers information about every faculty that is a member of - that is not unusual because they have the same policy. Taking this into account, from 15 observed private faculties, 11 of them (74%) have a presence within 9 Facebook pages. From higher education schools of professional studies, 10 of them (62.5%) have created an active page. So, it is concluded that from 52 institutions 75% have the presentation on this social network so one-quarter should immediately start thinking about engaging the resources in this direction. In total, 37 Facebook pages in the Republic of Serbia were analysed through presented criteria.

The results from both parts of research, secondary and primary, are presented through comparative analysis in Table 1. The first analysis is given in total for all three types of higher education institutions. At the second analysis answers: *4 – important* and *5 – very important* are summarized and observed as important for this study.

Respondents find website link (97%) and study programmes description (95%) in section Presentation of higher education institution the most important elements in Facebook page strategy. The situation on the market doesn't completely follow these expectations because just 32% of higher education institutions have described their study programmes on the Facebook page. The students think that logo is an important element (73%), followed by the history of institution and mission statement with 63%, but only 46% of Facebook pages of higher education institutions have history institution public and 35% have a mission statement, while a logo is commonly used as a profile picture (92%). This part of the online presentation is important for visual identity and professional communication with all stakeholders, not just with students. In addition, for students, the less important is a Twitter link (23%) and Instagram link (31%) on Facebook pages, and these are also not frequently used elements by the observed institutions.

Table 1. Results of Facebook page quality analysis of higher education institutions

Elements	Frequency of usage by higher education institutions	Importance of the element by respondents
Presentation of higher education institution		
Logo	34 (92%)	126 (73%)
History of institution	17 (46%)	108 (63%)
Mission statement	13 (35%)	108 (63%)
Study programs	12 (32%)	163 (95%)
Website link	36 (97%)	167 (97%)
Twitter link	1 (3%)	39 (23%)
Instagram link	1 (3%)	53 (31%)
Information dissemination		
Posting photographs	33 (89%)	125 (73%)
Posting video files	18 (49%)	124 (72%)
Posting news from webpage	31 (84%)	158 (92%)
Press releases	20 (54%)	128 (74%)
Achievements and awards of institution and staff	19 (51%)	130 (76%)
News from field of occupation	16(43%)	150 (87%)
Internships and job opportunities	14 (38%)	160 (93%)
Corporate social responsibility	12 (32%)	144 (84%)
Promotion of students	22 (59%)	144 (84%)
Bulletin board	29 (78%)	156 (91%)
Involvement		
E-mail address	32 (86%)	158 (92%)
Phone number	30 (81%)	142 (83%)
Direct message option	27 (73%)	144 (84%)
Additional information		
Review option	19 (51%)	104 (60%)

From section *information dissemination* students think that most important elements are information about *internships* and job opportunities (93%) as well as news from the webpage of the institution (92%) and service information – "bulletin board" (91%). But the most institutions do not include news about job opportunities for students (only 38%). When it comes to posting news from webpage, 84% use this element to inform the audience and 78% post service information. All other elements have great importance for students and all of them should be integrated into communication strategy plan. Except photographs, other elements are not so frequently used by higher education institutions and they should reconsider the missing elements as well as the opportunities for enhancing their visual online communication.

When it comes to involvement the situation is a little bit better. All three elements are important for students and there is a consciousness about the inclusion of this kind of information: E-mail address (86%), phone number (81%) and direct message option (73%).

The 60% of respondents think the review option should be available and 51% of institutions made this reviews transparent so here the situation on the market matches the expectations on some level.

In the third section the respondents were asked to specify three most attractive types of content for them to like (Fig 1.), comment (Fig 2.), share (Fig 3.) and send as direct message (Fig 4.). For all of these actions the results indicate that service information, photographs and news from webpage are information of main interest, which raise the engagement in an online communication.
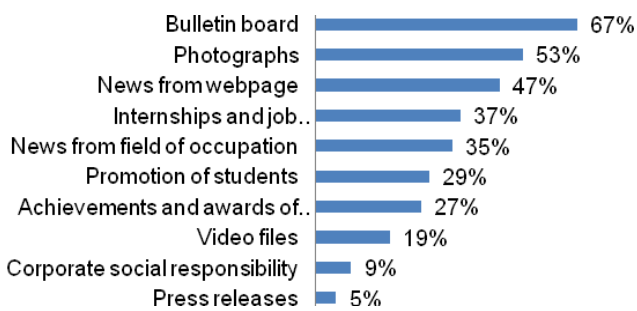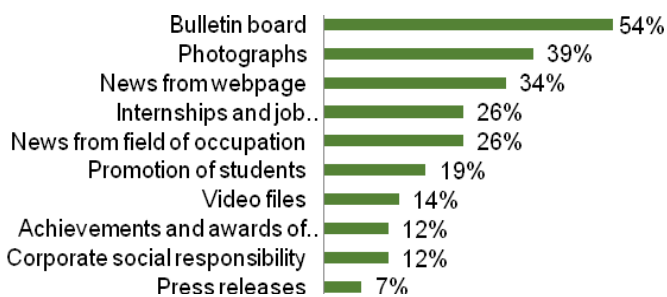

Figure 1. Most liked content
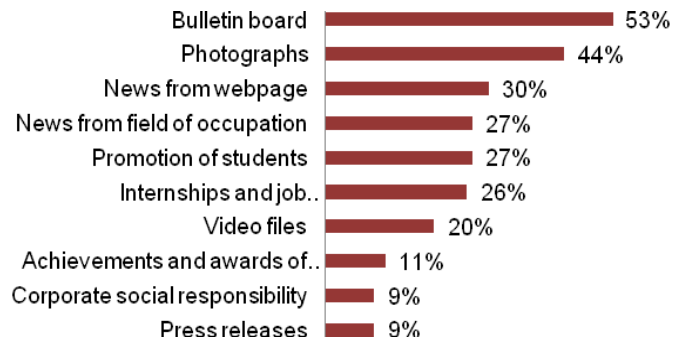

Figure 2. Most commented content

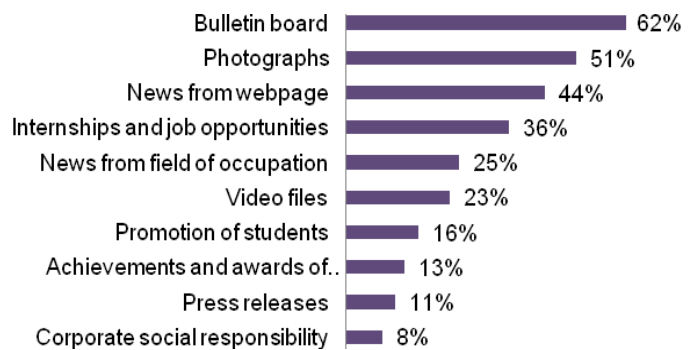**Figure 3.** Most shared content

Figure 4. Most sent content through direct message

5. CONCLUSION

Modern communication technologies enable more efficient performance of business processes. The higher education market did not remain immune to these trends, thus researches in this area have the growing importance both for theoreticians and practitioners.

Social networking sites, such as Facebook, allow students to easily find similar attitudes and to proactively organize the exchange of knowledge, outside amphitheatres and classrooms. Understanding why students use online social networking sites is crucial for the academic community, as this new communication platform has an important influence on students' educational efficiency and academic communication in general [3]. Even before they enter faculties and engage in the education process, they have an opportunity to inquire and hear the opinions of their elder peers.

The overall aim of this study was to collect data of the usage of Facebook, as the biggest social network, by higher education institutions in Serbia. The benchmarking analysis was used in the first phase in order to identify the institution that uses the largest number of analyzed parameters of the effective Facebook usage. In this paper, the aggregate data for the whole higher education market was presented (Table 1, column 2). After that, in the second phase the students of the Faculty of Technical Sciences were interviewed, as the users of benchmark subject, in order

to verify the user's perspective as well (the responses are given in Table 1, column 3).

Generally, it can be concluded that the higher education market is poorly using the potentials and possibilities of social networks. On the other hand, for students, as representatives of the "net generation", the online transparency and availability of all information, as well as the quality and speed of online communication with the chosen faculty are crucial. According to that, the research results have shown that Faculty of Technical Sciences can provide a best practice for other higher education institutions in this field of online communication. In this regard, a mentioned faculty can serve as a benchmark in a future analysis among higher education institutions, in order to improve their effectiveness of social network usage, particularly Facebook.

ACKNOWLEDGMENT

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