

SOCIAL NETWORKS FOR CUSTOMER RELATIONSHIP MANAGEMENT

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ABSTRACT

Following the global trends and innovations in the communication and information technology, the way of communication between universities and faculties with the students, and among students themselves, became significantly different than a few years ago. The use of social networks and other forms of interactive communication for this type of communication is becoming a trend. The intensity of the communication between the students and the faculties and universities seems to be very intensive during the process of choosing a faculty for enrollment, as well as the short period just before the enrollment starts. In this paper we will make a brief review of the Innovation and Knowledge Management towards eStudent Information System – iKnow, and then present last year's numbers and statistics for the enrollment process at the Faculty of Computer Science and Engineering in Skopje, in the aspect of using the social networks. We will describe the procedures and frequency of answering and managing the frequently asked questions, as well as all of the technical support mechanisms used before and during the enrollment days.

I. INTRODUCTION

As the social networks grew and became very popular among young people, the way of consideration of all the news and information sources has changed. Since the concept of a single dashboard for everything is very user-friendly, people expect to receive all daily news via Facebook and Twitter [1][2], instead of the old fashion way by watching TV or reading a newspaper. In the same way, they expect to pass through all the administration processes and applications online, by filling a form or with drag&drop and copy-paste, whenever possible.

The Faculty of Computer Science and Engineering in Skopje (CSE), for the student enrollment process for the 2011/2012 academic year, used the enrollment module of the iKnow System [3]. It allows the candidates to enter and validate their enrollment data through an electronic system, thus providing a faster data entry, easier data validation, automatic calculation of the average grade and the enrollment points, as well as the ability for editing the data before finalizing it and submitting it.

On the other hand, this process spares a lot of time for the Faculty staff, time otherwise needed for manual data-entry for each of the enrollment candidates (more than 650 for the 2011/2012 academic year). The process provides the staff with faster and automatic ranking of the candidates, as well as an easy transfer of data and information about the enrolled candidates - now students - into other e-services of the Faculty.

The enrollment process was executed in three enrollment periods: on 16th and 17th August, 1st and 2nd September and on 15th September 2011. These dates will be important for the analysis of the social networks activity in the following chapters, where detailed timelines will be presented.

II. SOCIAL NETWORKS

In order to better explain the enrollment process to the potential enrollment candidates, the Faculty of Computer Science and Engineering decided to use the social networks as the main communication channel.

For frequent and daily communication with the candidates, CSE used the Facebook page [4], the Twitter profile [5], the YouTube channel [6], as well as the Faculty website, represented by the FAQ module [7], the contact form [8] and the Facebook live-chat, embedded on the home page.

III. STATISTICS

A. Facebook

Facebook, as a very popular communication and information sharing social network among young people, was used as a sharp peek of the marketing arrow, and the most visited module of all, as described in many books and papers [9]. All the activities are quite related to the enrollment dates, as shown in Figure 1, where Facebook “likes” are presented. Three peeks could be noticed there, placed few days before each of the enrollment days. The decreasing distribution is also obvious on the timeline, which could be explained with the decreasing amount of enrolled students, compared to the maximum number on the first enrollment date. The reason behind this is the enrollment rule which exists at the Ss. Cyril and Methodius University in Skopje (of which CSE is an integral part): the candidates enrolling in the second

enrollment period can only be enrolled at the study programmes which have empty slots after the first enrollment period is over. The same goes for the third enrollment period. This rule makes the candidates, which have already decided they want to study at the Faculty, enroll in the first period. Therefore the second and third enrollment periods are attractive only for candidates which were unable to enroll at another faculty during the first period.



Figure 1: CSE Facebook page popularity.

On the CSE Facebook page we published all of the news and events, but at the same time our students and enrollment candidates were publishing their stories and comments. On Figure 2 we show the average number of stories (posts) per day. It is obvious that peak dates are the same as in Figure 1.



Figure 2: All stories about CSE Facebook page.

However, the most important statistical information from the marketing point of view is the viral reach of the stories, shown in Figure 3. It is a function with a very similar form to the “all stories” function, but multiplied by a factor of around 50. Almost 25.000 people saw the most visited stories, which is a very large number, difficult to reach with any other communication media in a day or two.

When the social network activity is reviewed and presented, listeners are always suspicious to the validity of the information, especially in terms of what has the publisher said, and what actually the clients said. In that direction, the

number of post of others to the Facebook page, shown in Figure 4, is a very important characteristic.



Figure 3: Viral reach of all CSE Facebook page stories.

If a comparison is made, then the factor of 1:4 between the “all stories” and “other’s posts” will be derived, which is a good ratio, claiming that candidates also were active on the CSE Facebook page, besides the stories published by the CSE team. These posts and activities by the candidates included questions for the Faculty, as well as answers to other candidates’ questions.

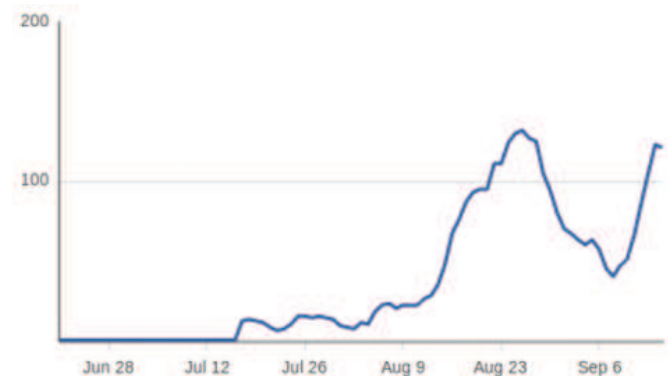


Figure 4: Other's posts on the CSE Facebook page.

The viral reach of posts by others has the same frequency, with a small delay, and a different scaling factor, obvious from Figure 5.

B. Twitter

The CSE Twitter profile was also used to publish news and important information for the enrollment process. Up to the moment of the enrollment periods, the CSE Twitter profile reached 399 tweets, 864 followed users and 882 followers.

During the enrollment periods, we received 105 questions via Twitter: 62 through mentions and 43 through direct private messages.



Figure 5: Viral reach of other's posts from the CSE Facebook page.

C. YouTube

All the multimedia materials for the enrollment were published to the CSE YouTube channel. There were a few ads and an instruction video for the iKnow enrollment process. The enrollment instruction video was viewed 803 times, with a frequency function containing a large peek just before the first and small peeks before the second and third enrollment periods. These numbers are strongly connected with the number of enrolled candidates, which reached 650 after the three enrollment periods. The timeline of views is shown in Figure 6.

The strong relation between the number of views and the number of candidates could be considered as a very objective and reliable prediction for the total number of enrolled candidates in future.



Figure 6: Total views of the enrollment tutorial video.

It is also important to notice that the iKnow portal promotion has also increased the social networks activity, as shown in all previous timelines. The new form of the online enrollment process promotion significantly enlarged the number of interactions with the potential candidates via all communication channels, and prompted many discussions on topics related to the Faculty.

D. FAQ

The Frequently Asked Question (FAQ) form was also a very important communication gateway with the enrollment candidates. The timeline of the received question frequency was similar to all the previous timelines, with peeks just before the enrollment days. In the enrollment periods, an average number of 10 - 15 questions per day were received, with a registered maximum of 40 questions in one day. With a response time of average 2 days and maximum of 7 days, we answered ~900 questions via the FAQ module, and published 180 of them. The unpublished questions were duplicates.

E. Contact

Despite the FAQ form, where question and answer are published along with the personal information (first and second name) of the candidate, many enrollment candidates chose to ask via the Contact form, since questions asked on this module were not published to the website. We received 160 different questions via the Contact form, with an average rate of 3 per day, and answered them with an average delay of 2 days (7 days at most).

F. Live-chat sessions

The last week before the first enrollment period, CSE organized 5 live-chat sessions with the candidates, in the period from 9th – 13th August 2011. Each session lasted 60 minutes and the number of questions asked during a session was decreasing. The reason behind this is that after each session, we published the most frequent question on the CSE website, so that every candidate could see them. From day to day, the possible questions for the enrollment process were decreasing.

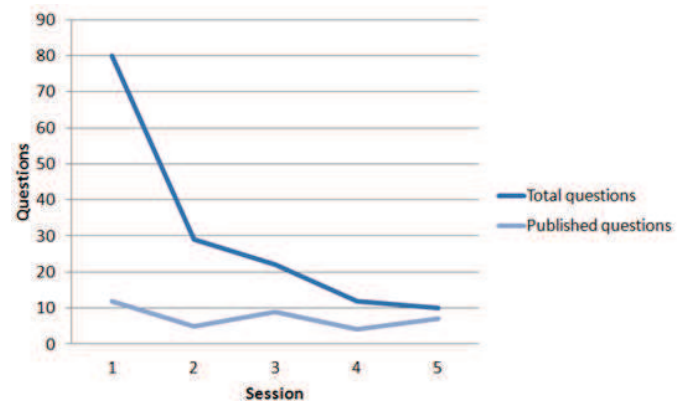


Figure 7: Frequency of questions during the live-chat sessions.

The exact number of questions asked during each live-chat session is graphically presented in Figure 7.

During the sessions, 153 questions were answered, with an average of 30,6 questions per session. There were duplicates, but 37 total questions with answers were selected and published to the website as a very important.

IV. COMPARISON AND CONCLUSION

The first enrollment process at the Faculty of Computer Science and Engineering was very well rated, which is apparent from the high interest, represented through the large number of questions, as well as because CSE presented an open approach for communication with the *customers* – the enrollment candidates and students [10][11].

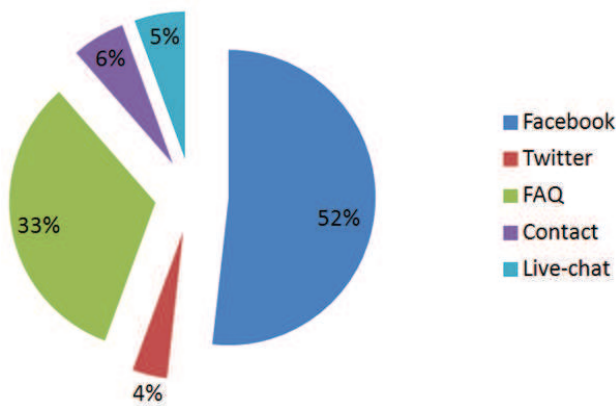


Figure 8: Total number of questions by communication channel.

During the enrollment periods, a large number of questions were answered, with an average delay of 2 days. The leading communication channel was Facebook with 1.415 questions, but the other means of communication were also important: Twitter with 105, the website FAQ form with around 900, the website contact form with 160 and the live-chat sessions with 153 questions (Figure 8).

A brief analysis of the pie diagram from Figure 8 shows that the social networks hold a very important part of the customer relationship management process, especially when young population, such as enrollment candidates and students, is a target group for the business of interest. The social networks activity comes out as more than a half, or exactly 61%, of all communications through electronic media.

The concept of a single dashboard seems to be very popular among people and they prefer to get all the information from Facebook or other social networks, instead

of visiting different web portals for each activity [12][13]. Thus creating a Facebook page, with lots of posts, info, instruction videos, events and similar activities, is a perfect way of making your costumers think about a given topic you advertise and makes it part of their everyday life. These ways of communication may certainly lead to a large success for a company which depends a lot on its CRM processes and activities [14].

REFERENCES

- [1] T. A. Pempek, Y. A. Yermolayeva and S. L. Calvert, "College students' social networking experiences on Facebook", *Journal of Applied Developmental Psychology*, vol. 30, issue 3, pp. 227-238, May-June 2009.
- [2] B. C. McKinney, L. Kelly and R. L. Duran, "Narcissism or Openness?: College Students' Use of Facebook and Twitter", *Communication Research Reports*, vol. 29, issue 2, 2012.
- [3] Innovation and Knowledge Management towards eStudent Information System - iKnow, <https://www.iknow.ukim.edu.mk/>
- [4] The CSE Facebook page, <http://www.facebook.com/FINKI.ukim.mk>.
- [5] The CSE Twitter profile, <http://twitter.com/FINKIedu>.
- [6] The CSE YouTube channel, <http://www.youtube.com/user/FINKIedu>.
- [7] The CSE FAQ form, <http://www.finki.ukim.mk/mk/frequently-asked-questions>.
- [8] The CSE Contact form, <http://www.finki.ukim.mk/mk/contact>.
- [9] C. Shih, "The Facebook era", *Prentice Hall Direct*, 2009.
- [10] "Social Media and Customer Relationship Management: The Tipping Point is Just Around the Corner", *Competitive Futures white paper*, 2011.
- [11] P. Greenberg, "Social CRM comes of Age", white paper, 2009.
- [12] P. Greenberg and P. Sullivan. "CRM at the Speed of Light: Capturing and Keeping Customers in Internet Real Time", *McGraw-Hill Professional*, 2001.
- [13] R. King, "Social Networks: Execs Use Them Too", *Business Week*, 2006.
- [14] Á. García-Crespo, R. Colomo-Palacios, J. M. Gómez-Berbis and B. Ruiz-Mezcua, "SEMO: a framework for customer social networks analysis based on semantics", *Journal of Information Technology*, vol. 25, pp. 178-188, 2010.