

USING FACEBOOK FOR QUALITY CONTROL OF IKNOW SYSTEM

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ABSTRACT

The general objective of this paper is explore the possibilities to perform quality control of the iKnow system using social networks like Facebook and how to improve student's processes with their own help. In this paper we describe the methods we are planning to use and also the starting results from the already settled platform.

I. INTRODUCTION

Social networks became one of the most pervasive trends today. They are part of our everyday life. We use them for a lot of reasons: friends, family, colleagues, events information... But we also use them when we seek answers for various problems. This is the idea behind this paper: how to use social networks to improve and assure quality of software – the iKnow university system.

The iKnow project aims to modernize the capacity, management and governance of higher education institutions. This project sets the student to be the center of the education system and its goal is to develop design for new eStudent system - University management and services for students.

Specific objectives of the iKnow system are to develop design and enable conditions for realization of eStudent Information System for

- enrolment process,
- identity management, with authorisation and access control,
- management of university services and resources usage (accounting),
- administration of europassCV, ECTS, diploma supplement and other certification issuing
- administration of student activities,
- administration of registration and schedules of classes and assignments,
- administration of academic results, including course, exam and study results.

In the following sections we will describe he influence that social networks and media have, how the students use them and how to ensure quality control. We will also give overview of our usage of Facebook as a quality control tool for the iKnow system and the starting results we obtained.

II. SOCIAL NETWORKS IMPACT

Social networks are increasing their power of impact and play important role in a lot of social and political spheres [1].

Social network sites are defined “as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others

within the system. The nature and nomenclature of these connections may vary from site to site.” [2].

Social networks have impact on knowledge management: they can help locate expertise, seed new communities of practice, and develop cross functional knowledge-sharing. [3]. Also they have impact in information processing and organizational learning literatures [4]. Social networks enable social support, collaborative information sharing, content creation, and knowledge aggregation [5]. They are widely used by the students [6] and what is more interesting fact - social networks users mostly are good students [7].

A. The Facebook phenomenon

Facebook is one of the biggest with 835,525,280 users in March 2012 [8]. It is one of the global social communities with the highest growth rate in the recent years. Facebook was launched in February 2004 and the number of user started to increase actively in 2008. It has higher connectivity and it takes the second place in Alexa traffic rank [9]. Facebook enables internal communities to connect with external network communities and to achieve the purpose of integrating the community network society [11].

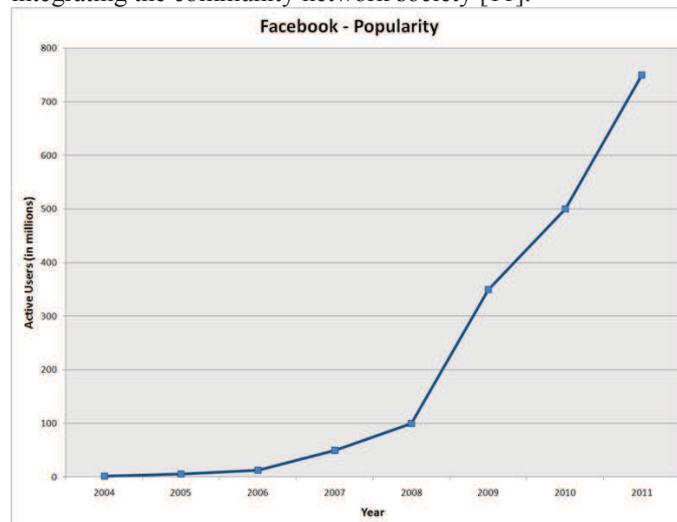


Figure 1: The growth of Facebook popularity [10]

It has been show that Facebook can be used as a learning tool; it has simple, convenient, easy, and user friendly environment for academic discussions [12]. Students are comfortable in this environment and different Facebook features like Facebook Groups or Chat that could be useful in courses [13].

III. SOFTWARE QUALITY CONTROL

“Software Quality Assurance rocesses provide assurance that the software products and processes in the project life

cycle conform to their specified requirements by planning, enacting, and performing a set of activities to provide adequate confidence that quality is being built into the software.” [15]. One of the key features for developing high-quality software is measuring quality and this activity is continuing work in software development life-cycle. [16]

Three distinct components of quality can be identified [17]:

- an objectively assessable component,
- a subjectively assessable component
- and a non-assessable component.

IV. IKNOW QUALITY CONTROL ROADMAP

Quality assurance is very important part of developing the iKnow system. In order to meet the prerequisites a quality control plan is created and it consists of three deliveries, corresponding to the components of quality.

The first milestone is development of quality plan with methodology and identification of key performance indicators. This methodology defines how the achievement and project deliveries are measured in an objective, quantifiable and qualitative way. It also defines how timings about reaching deadlines can be interpreted. The main goal is to define adjustment mechanisms, if obstacles occur and provoke delays, or if achieved quality differs from expectations.

The first delivery concerns monitoring of activities by a number of progress indicators: quality of deliveries, quality of dissemination and sustainability strategies and action plans, evaluation of feedback.

The second delivery is about internal evaluation of packages. Five stakeholder levels realize internal review: administration, professors, university management, Ministry of education, and students. This will ensure high quality of the realized system.

The last delivery concerns external quality audit, including referee reports surveys with user satisfaction and feedback analysis. Besides external evaluators we plan to realize surveys addressing student focus groups by sophisticated innovative approach – social media and other knowledge management techniques that include investigation of public opinion and opinion of government representatives.

V. USAGE OF FACEBOOK FOR IKNOW QUALITY CONTROL

One of the reasons we choose Facebook out of the social networks spectrum for our purpose is the fact that Facebook is widely used in Europe, and especially in Macedonia. According to Internet World Stats [18] on Dec 31/11 Macedonia had 879,540 Facebook users, but Macedonia have population of 2,077,328, which means that 42.3% of the population of Macedonia is using Facebook. That gives us the assumption that most of the students (that will use the iKnow system) at our University already have Facebook accounts.

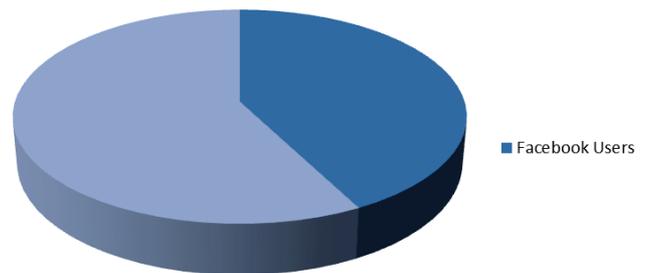


Figure 2: Facebook usage in Macedonia

Other reasons why we chose Facebook for this activity are following:

- Natural environment to post feedbacks – Facebook already represents an appropriate environment to share opinion and post feedback on some activity
- Students spend a lot of time on FB – judging on the numerous times we have seen our students to use Facebook in the faculty labs, groups that students have and exchange information we can conclude that most of the students are using their accounts on everyday basis
- Previous experience (ours & student’s) – during the beginning phases and implementation of this project at the Faculty of Computer Science and Engineering Facebook have been used for Q&A and as an opinion gathering tools. The results of this usage are show effective and resulting.
- Statistics – Facebook offers statistics reports [19] about page views, posts and post’s influence, user’s gender and age statistics etc...

The first step of the process was to create a page on Facebook for the iKnow system. After that we published an announcement about the page on three 1st year courses at the Faculty of Computer Science and Engineering and we watched for the results:

- 5 minutes later - 5 users joined the page
- 10 minutes later - 10 users joined the page
- 24 hours later – 55 users joined the page

A week later we exported the statistics of the page. Figure 3, 4, 5 and 6 show the statistics about the first week. Figure 3 shows the statistics about the number of people sharing stories about the page. Figure 4 shows the statistics about the number of people who have seen any content associated with our page. Figure 5 shows the statistics about the number of people who saw the page or one of its posts. Figure 6 shows the statistics about the number of impressions seen of any content associated with the page.

Weekly People Talking About This

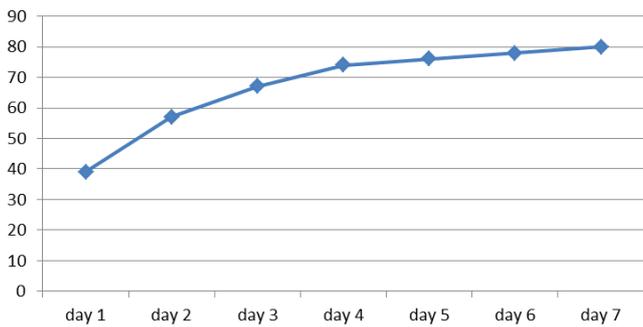


Figure 3: Weekly - The number of people sharing stories about the page

Weekly Total Impressions

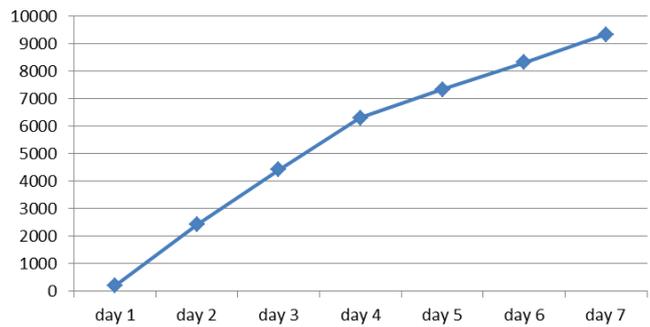


Figure 6: Weekly - The number of impressions seen of any content associated with the page

Weekly Total Reach

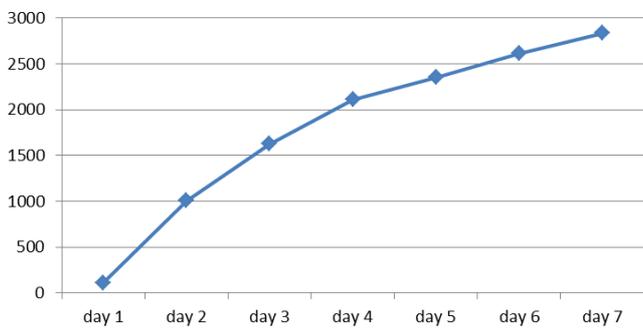


Figure 4: Weekly - The number of people who have seen any content associated with the page

Weekly Viral Reach

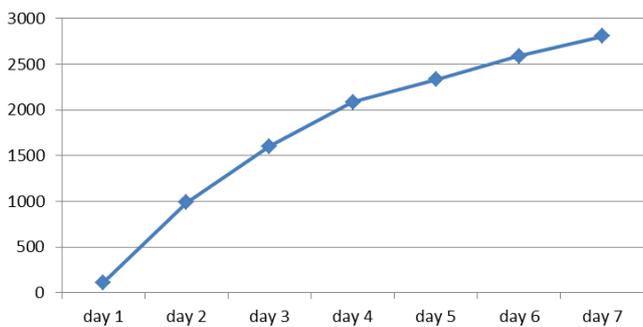


Figure 5: Weekly - The number of people who saw the page or one of its posts

The idea is to use this page for several purposes:

- Inform students about any changes
- Answer student questions
- Receive feedback on old and new functionalities
- Inform students about upcoming events

VI. CONCLUSION

Our experience and previous surveys have shown that Facebook is widely used by the students and it is starting to become a natural environment for seeking opinion and feedback, which can be used for software quality control.

The statistics from the first week of the Facebook page showed high activity by the students, which encourage us to believe that they will be willing to actively participate and communicate. In that way the final deliverable of the quality control plan will be finish.

VII. FUTURE WORK

Till now the iKnow project was in the beginning phase and it was used only by few faculties. Starting the next semester the system will be used by all of the faculties of the St. Cyril and Methodius University. We anticipate considerable increase of activity on the Facebook page and finishing the finale quality control deliverable.

We are also considering usage of data mining techniques for text processing of the posts and extract knowledge about the students experience with the system and most comment features.

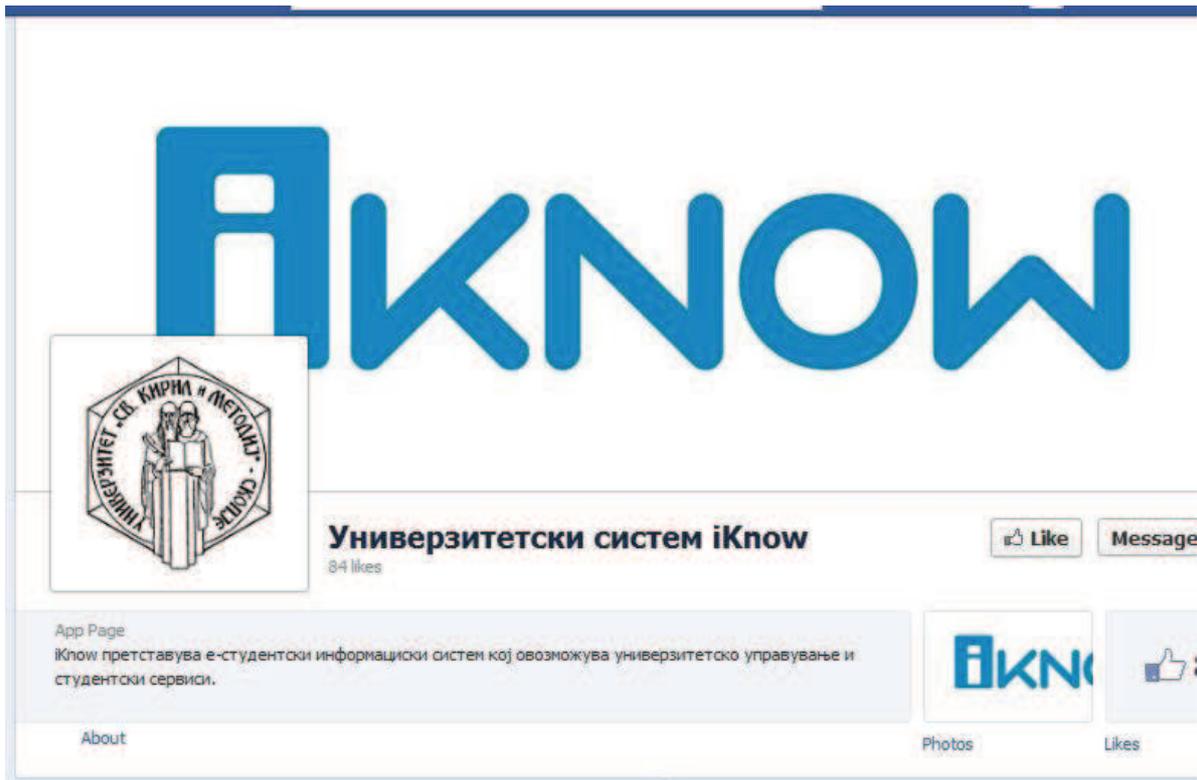


Figure 7: iKnow Facebook page

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