

## Analiza uspešnosti šolske spletne strani na platformi Joomla

## Analyzing Success of Joomla as School's Web Page

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### Povzetek

*V članku smo se osredotočili na Joomla, ki predstavlja orodje Web 2.0. Na podlagi študije primera šolske spletne strani smo analizirali tako implementacijo kot uporabo. Uporabnike spletne strani smo anketirali in intervjuirali ter na podlagi rezultatov prišli do pomembnega sklepa: izobraževanje uporabnikov je zelo pomembno pri doseganju visokega nivoja uporabe. Naše priporočilo je, da vrhnji menedžment pripravi dva tipa izobraževanj za uporabnike in sicer pred in po implementaciji; oboje za namen višje verjetnosti intenzivne uporabe.*

**Ključne besede:** Joomla, Web 2.0, implementacija, uporaba, izobraževanje

### Abstract

*The paper focuses on a tool of Web 2.0 called Joomla and highlights challenges of implementation and use. We have conducted a case study of a primary school which implemented Joomla as a school's web page. With the answers from a survey and interviews we show the utmost importance of training of the users for the success of the use. Our recommendations are that higher managers should provide two types of training: before and after the implementation; both done for the purpose of greater likelihood of intensive use.*

**Keywords:** Joomla, Web 2.0, implementation, use, training

## 1 Introduction

Web 2.0 tools which facilitate participatory information sharing, interoperability and user-centered design are becoming increasingly popular [1]. Examples include social networking sites, blogs, wikis, video sharing sites, hosted services, web applications etc. One of the open source web applications is Joomla. Joomla is a dynamic portal engine and content management system and as such suitable as a web page platform [2]. It offers a platform

which enables relatively simple implementation of a web page with a set of prewritten functionalities.

Web 2.0 tools are also increasingly popular in education [3]. Many of the schools have adopted web pages [4] however they did not effectively address issues of design, structure, and content in their efforts to provide a resource for a variety of stakeholders in the educational process [5]. In our paper we offer a valuable analysis of a school's Joomla based web page.

The focus of the paper is to gain richer insights about what was done wrong during implementation and use of a Web 2.0 tool. The contribution of the paper is a scientifically analyzed case study of a Joomla implementation and use. We use a case study to show that formal training of users should be organized before and after the implementations with different highlights.

The structure of the paper: after a brief presentation of Joomla as one of the Web 2.0 tools, we present a case study of a Slovenian primary school. Key findings from the survey and the interviews performed nine months after web page implementation are reported.

## **2 Challenges of web 2.0 tools in organizations**

Social media are a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content [6]. Web 2.0 has attracted unprecedented attention with professional press is full with the hype of the benefits. Intel, Motorola, Sony are claimed to be among the companies using Web-collaboration tools to promote products and foster teamwork among employees [7]. Yet, beyond this hype, real-life experiences have shown that Web 2.0 applications within the company usually stay under-utilized toy. Coming from that, the research of Trkman and Trkman [8] reflects the following key remarks on Web 2.0:

- any company intending to introduce a Web 2.0 solution should clearly identify previously used tools, their scope and consequently properly delineate the purpose of the new tool;
- the critical mass of active users (editors) has to be stimulated by company's leaders and by domain administrators;
- formal training of the users is important;
- management should consider rewarding active users who contribute the most either with praise-based or financial benefits;
- the new source of information supported by Web 2.0 tool must be prompt and credible so it can gain and keep trust of all users (active editors and passive readers);
- Web 2.0 tool in artificial environments (such as those in formal organizations) has the same potential difficulties as open source systems [9].

Our paper analyzes whether the above points apply to Joomla implementation as well.

## **3 Methodology**

An interpretative case study was used as a research approach because a complex interaction between individuals, groups and information systems leading to adoption and successful use can be best analyzed with the case study. Case study research is particularly appropriate for

the study of information systems development, implementation and use within organizations [10].

The case of web page development at a primary school was chosen. The school has 21 employees and 141 pupils and is located in a rural area of Slovenia. Several data collection methods such as interviews and a survey were used to collect, triangulate and validate the data. Interviews with the headmaster and the computer assistant were tape recorded and later transcribed and entered in the case database. A survey among teachers included 16 employees, 15 female and one male. One of the respondents is aged between 21 and 30, 9 of them between 31 and 40, 5 of them between 41 and 50, 1 of them is above 51 years old. 50% of respondents have been employed by the school for more than 10 years.

### **3.1 Background**

The school's headmaster believes that "the role of a school web site is to inform parents and general public of the school events, and to promote the school's good reputation." The main goals of the developed web pages are similar to the usual goals of schools' web pages namely to serve as information systems for site visitors and to act as intermediaries between the numerous stakeholders in the educational process [5].

Previously the school had a Microsoft FrontPage built web page with basic information and links to other web-pages. Most of the content was out-of-date. The computer assistant was a part-time web page administrator and the only employee with administrative permission. Headmaster detected his disinterest about his role as a computer assistant as he did not want to attend any computer-related training courses. Furthermore, the whole collective was unhappy with his service: »Our computer assistant is basically uninterested and unprepared to learn new things.»

The school's headmaster wanted to change previous school's web site for the following reasons:

- Some parents complained about school's bad presentation on the web page and out-of-date content.
- Taking to account school's computer assistant's complaints about being overload with the work on current school's web page.
- Teachers wanted to have a better school's web page by providing timely and comprehensive content which would be managed easily.

The first attempt to change the existing non-satisfactory state was made with the creation of the team consisting of the computer assistant and two teachers. They as a team were not effective. Each of them had their own idea how school's web page should look like and function. As a result, further meetings were being postponed and no progress was made. Computer assistant was anxious for some change but he was not prepared to do everything on his own.

At that point the headmaster considered an idea from one of the teachers to hire an external development team. Systems on the market can be deployed in a predetermined manner, but also customized to the specific business processes and practices of the organization and/or the preferences of the users [11]. Joomla was selected as a server application for the school's web page and the development team was hired to implement and customize it for the school. The implementation was done during the summer holidays in 2009.

Firstly, development team prepared a pilot web page by August 2009 based on the content teachers handed them previously. The teachers were asked to evaluate the presentation of the content of the pilot web page. In general, teachers did not feel competent to assess the new web page, because they were not familiar with the available functions or design capabilities of Joomla.

After the suggestions were considered, the development team presented basic Joomla's functionalities to the headmaster. In addition, they also presented some advanced options such as wikis, forums, blogs and e-learning. While the headmaster was enthusiastic about all the possibilities she did not decide for them at that time. After the headmaster presented the new web page to all teachers and to a School Council in one meeting, no formal training was organized. Most teachers were computer literate - they were asked to assess their tendency towards computers and they did it with grade 6,5 (1- "I do not like to interact with computers", 7 - "I love using computer"). It was deemed that the use of Joomla is no harder than the use of e.g. Microsoft Office: "for the use of Joomla you do not need lots of skills ... it is similar to Word." The development team was obliged to provide help to school's employees until November 2009, and have done it very actively even later the end of the contract.

## 3.2 Findings

A detailed analysis of implementation showed how seamless development and implementation offers no guarantee for the success in a phase of use. All stakeholders were more than happy about the implementation: "It looks great." What the computer assistant particularly liked was that the responsibility for the content contribution and design shifted mainly to the end-users. In addition, administration of Joomla was outsourced.

The quality of the content was analyzed after nine months of use. Log files showed a low activity of the teachers (editors) resulting in out-of-date information. The new web page seemed to be in a state of regression because the critical mass of editors was not reached. The analysis showed the following reasons:

- A few of the teachers participate in creation of new web page by providing existing information from the old web page. They were not informed about the Joomla's functionalities. Therefore, they could not make quality proposals for the structure, the content presentations etc.
- After the headmaster approved the pilot version of the new web page she also demonstrated the use of Joomla's platform at one meeting with a few teachers. Formal training on how Joomla works was never provided to the future editors (teachers) because of the money issues and available free online documentation. After nine months of usage 93.75% of respondents expressed the willingness to learn more about Joomla: "I do not know how to make a gallery." Currently they ask for help to their colleagues, relatives and friends.
- In general teachers were happy with the state of implementation itself. Still, there was an individual saying: "I think our new web page looks great, but I really miss some more activity of my colleagues to provide some essential content to it. Doing that the web page would be more alive. Currently, I have a feeling that all the same people are active over and over again, therefore, the articles have narrow (and specific) topics and consequently less readers."

- The school never made a good promotion of their new web page for their target public. The list of media the school used to publish relevant information staid the same. The new web page for now just doubles the information which exists on other media. One of the teachers said: “When I see a new message on the school’s billboard I rewrite it to the web page.” The parents had no push to change the habits of gaining information.

On the other hand, most of the respondents were still happy after nine months of usage: teachers were proud of the design of Joomla (“It looks great”), a headmaster appreciated all the basic functionalities of Joomla (“It is so easy to use.”), and the computer assistant was satisfied to not to have anything with the content and design of school’s web page: (“I do not have to do anything now with the new web page, thank God. Teachers can add everything themselves. The only important thing is that it works”).

87.5% of respondents consider themselves as active editors. When the headmaster was asked, how active she thinks the teachers as editors are, she said: “Almost everybody published at least something”. Moreover, when she was asked about her feeling how many parents visits he web page, she said: “I think that 50% of the parents regularly visits the web-page”. The analysis of the log files on the number of edits and visits proved differently: they were both poor. Furthermore, Joomla's tool records an edit each time the minor thing in text changes such as bolding the text. Therefore, even the modest numbers in log files are exaggerated.

We have asked our survey respondents how often do they think that parents and pupils look for the information on the school’s web page. On a scale from 1 (never) to 7 (often) they put an average grade for parents 4.31 and for pupils 4.03. The reasons for such grade were supposed to be low accessibility to the computer outside the school, in general computer illiteracy and in accessibility (duplication) of web side’s information on other media as well.

Although the headmaster personally asks at least once a month to update the information she feels is neglected the teachers do not always obey. The teachers have written down a few reasons why they do not participate (more):

- “I still wait for my password.”
- “I would like to have an art gallery and do things differently.”
- “I like it as it is.”
- “I need some more knowledge about editing with Joomla.”
- “I do not want to be the only one editing the content. I wish that my colleagues would get more active. Only we as a whole can make the web page more alive.”

## 4 Conclusion

A detailed analysis of Web 2.0 implementation showed that even a seamless development and implementation is no guarantee for high level of use. An organization implemented a Joomla based content management system. All stakeholders were more than happy about the implementation. The computer assistant particularly liked the fact that the responsibility for the content contribution and design shifted mainly to the end-users. Teachers along with headmaster were happy with the new web page since the old one was so dissatisfying.

The use was not as successful though. Even though all stakeholders were still happy with their web page nine months of usage did not have much impact on the quality of the content. Log files witnessed a falling trend in both visits to the site and the number of new articles published. Judging from the answers in the survey the reason largely lays in the lack of knowledge about using the tool not just about its editing capabilities it in a phase of use, but also in a phase of implementation when they did not feel competent to give quality suggestions/ideas. The headmaster encouraged her employees to learn about using Joomla's functionalities from online (free) documents and afterwards to share knowledge with colleagues. Instead, she should have organized formal training to highlight the importance of the project even before the pilot version of organization's new web page was developed. In that way teachers would feel competent to give suggestions about the initial structure, design and content. If employees can impact the implementation, the possibility of taking the results seriously is increased. Furthermore, it is a good promotion for the following active usage when taking into consideration that new tools can easily be ignored.

From this we can conclude that it is wise to consider having formal training for the users at the beginning of the implementation. If the users would put some of their effort in building their web page from the start, they might not take it for granted when it is delivered. Therefore, seamless implementation can lead the users to neglect the active use. Since there were no "problems" during (successful) implementation of Joomla as a school's web page, nobody was bothered with the quality of the content. In a state of enthusiasm only a few focused on the content.

Promotion is greatly important for the managers and employees: to clarify why we need a new thing. Some resistance to the new tool may actually be beneficial. We should prefer user resistance to apathy at the start of the project; lack of resistance may just mean that the users are confident that nothing will change anyway.

## Literature

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