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Regional Development And Web 2.0- Applications

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Regional Development And Web 2.0- Applications

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Abstract

The region Walgau is located in the Austrian Federal State of Vorarlberg. The 21 municipalities started a three years development programme to develop common goals and to enhance the inter-communal cooperation. The region is characterized by a dispersed structure of settlement and differences between the more agricultural oriented mountainside and the more industrialized bottom of the valley. For this one of the main goals of process is to establish a regional learning process about different requirements and living conditions.

The increasing meaning of the Web 2.0 (social web) is discussed in different fields of politics and society but less in regional development activities. The Web 2.0 means the interactive part of the Internet in which users generate their own environments and issues by communicating, sharing, collecting and co-working in social network sites (SNS).

At a first glance it seems promising to use such platforms to enhance the group of activists and to promote and discuss the issues of a regional development process. But the experiment also can fail if the target group of such kind of web activities strongly differ from the actors interested in such processes. In this case we have to state that the instrument and the issue fall apart. In the regional development process 'Im Walgau' a regional Wiki started in February 2010 as an experiment of a public discourse on regional development issues.

The paper starts with a general introduction into the issue. Section 1 gives a short theoretical overview on the specific quality of web 2.0- applications concerning concepts, users, target groups, culture, and inherent rationality. Section 2 introduces the methodological design and the concept of communication of the regional development process Walgau and the role of web 2.0 applications. It provides first empirical results of the internet participation. Section 3 formulates some first considerations on the issue.

Introduction

With respect to regional development knowledge can be characterized as the non-material infrastructure of a region depending on creative individuals and groups with their location preferences (Johansson and Karlsson 2009). Capello (2008) calls the question how people actually learn the most crucial aspect of the innovation process which needs further investigation of cognitive processes in a regional context (Capello and Nijkamp 2009, see also Cappellin 2009).

The meaning of 'learning' is continuously to adapt a system to its changing environment. In this selective and subjective process the individual actor transforms information into personal experiences and hence constructs knowledge. It creates his/her personal view of the world and patterns of interpretation which in turn determinate the choice, acceptance, and processing of new information which results in an individually constructed portfolio of knowledge (Dohmen 2001). Learning can be described as the activity of processing environmental stimuli using different filters (for a delineation between the terms data, information, knowledge, and skills see Nonaka and Takeuchi 1995, Setzer 2001, and Willke 2004).

Therefore to foster regional development processes instruments are needed to enable a learning process. We want to see how the web 2.0 tools also meet the challenges of learning with respect to regional development processes.

1. Web 2.0: information and interaction in social networks

Definition and specific quality of the web 2.0

Web 2.0 (or social web) can be defined as the sum of new internet- tools and applications using the web as a platform for data which are created and controlled by the users collectively (see O'Reilly 2005). The concept of the web 2.0 deeply influences our society because technological change causes social change. Due to the internet and a lot of new tools we've become intensely connected to one another during the last ten years. And attendant on it new kinds of group- forming, of sharing, of collaboration and of collective action arose. A new culture of participation begins to establish because new technological possibilities are given which formerly had been restricted to experts and professionals - and activities mostly take place outside the framework of traditional institutions and organisations (Shirky 2009, see also the "rise or return of amateurs", OECD 2007: 64). The most important tools are the so-called social network sites SNS.

A SNS is "a web-based service that allows 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." (Boyd, Ellison 2007: 2) Today the variety of SNS ranges from business exchange (Xing) to the exchange about hobbies and special interest (myspace, dogster), travellers (couchsurfing), photosharing (Flickr), videosharing (YouTube), to personal exchange (Facebook).

A group's complexity grows faster than its size in terms of the number of connections between the group members which also rapidly enhances transaction costs within a group or organization. Important problem of large organizations are how to discover and valuate options for action and how to come to an agreement? Starting from this problem Coase (1937) analysed the value of an hierarchical organisation to get the operating expense of management under control. With the new tools of the 'social web' a new type of organizing grew up which enables large-scale coordination without an institutional direction. Sharing becomes an efficient way to organize groups (Shirky 2009).

The SNS- tools allow to depart from consuming content and move towards activities in the sense of 'user generated' (or even 'created') content which is a kind of group phenomenon. Shirky (2009) defines user generated content as a matter of media relations rather than a matter of individual creative capacity because the content is frequently reworked in a process of sharing, filtering, and commenting. Creativity gets enhanced with the possibility to reach a global audience with nearly no costs, to use a technical infrastructure which enables the access to a huge amount of content as 'raw material' to work with and the technical tools to communicate with other people sharing the same interest. The 'internet natives' (young people which frequently are used to work with SNS) develop a culture of 'rip, mix, and burn' (Apple-Slogan) and feel as part of different virtual communities interpreting reality for themselves (Palfrey, Gasser 2008).

In this way a new participatory culture grows which is predicted to have a major impact on markets and democracies if a growing number of people participate in the societal definition of meaning and significance. (Palfrey, Gasser 2008). Examples from the economic sphere are the startups ('garage companies') in software development as well as the increasing economic impact of freeware and open source contents. Examples from the political sphere are blogs, twitters, and photo networks as source for journalists and the public opinion which

increasingly influences politics as it could be seen with the London transport bombings 2005, the military cup in Thailand 2006, or the Iran riots in 2009 (for more examples see Shirky 2009, Kruse 2010).

Group intelligence and the wisdom of the crowds

The specific quality of the web 2.0 arise from the collective activities of sharing, cooperating and collectively acting. But what is the specific quality of collective action? Group intelligence or symbiotic intelligence (Johnson et al. 1998) can be observed with fishes swimming in shoals and collectively and rather quickly reacting on threats using simple rules (for example 'swim as fast as your neighbor fish in the same direction and maintain the same interspace'). In human behavior we similarly know intuitive strategies of behavior which orient on the behavior of majorities (see Gigerenzer 2007). The velocity of group acting can be seen with the internet- lexicon Wikipedia which makes important events available online often within a few minutes.

Another specific quality of group activities is the ability of decision- making under conditions of uncertainty using effects of positive feedback (see Vester 1980). The ability of populations of bees or ants to forage for food using the sum of individual decisions to receive an optimal result has been economically used to improve logistics or to solve other complex problems (see for example Weber 2004). Also the ability of groups to judge something as 'right' or 'wrong' is an example of the specific quality of group activities. If individuals using an heuristic of recognition are able to easily and quickly link their individual judgments the group's judgment will show a high quality (see Surowiecki 2004, Gigerenzer 2007).

The ability of self-organized systems to solve essential problems and to create innovative improvements using 'emergent knowledge' (Johnson et al. 1998) leads to the strategy of 'crowdsourcing' (Howe 2006). Crowdsourcing means to use the ability and commitment of the broad public to create content or solve problems on internet platforms. Wikipedia showed that this kind of co-working creates comprehensive results in terms of quantity and quality (see Giles 2005).

This way of working breaks the existing patterns of professional filtering the information before publication. No authorities decide on the quality and whether an information can be judged as sound and useful but the accumulated weight of attention of a mass of users creates meaning. Shirky (2009:66) argues that the definition of news has changed: "from news as an institutional prerogative to news as part of a communications ecosystem."

Who is using web 2.0?

In 2005 about 29% of all internet users within the EU 25 posted messages to chatrooms, newsgroups or forums, about 15% used peer-to-peer file sharing, and about 14% created an own webpage. Looking at the internet users aged between 16 and 24 years the percentage can be doubled. In the United States 2006 about 8% of all internet users created their own blogs or journals and about 35% participated actively in SNS creating and sharing own contents (OECD 2007: 20ff.). User analyses show that users of different social networks have an average age between 25 and 35 years and represent a generation which weekly is represented in local and regional participation processes.

Participation patterns in social media usually shows a great imbalance according to a power law distribution (Shirky 2009). The graph below shows an example for this kind of distribution.

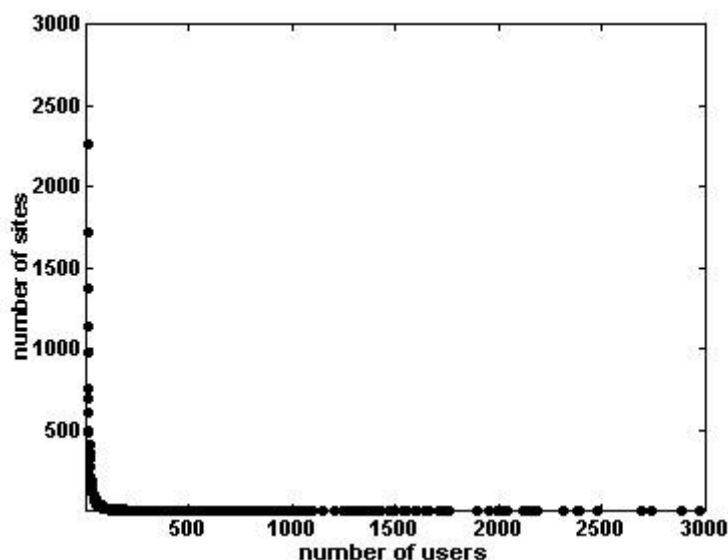


Figure 1: power law distribution of internet users.

The figure shows the distribution of AOL users' visits to various sites on a December day in 1997. It is to observe that a few sites get upward of 2000 visitors, whereas most sites got only a few visits (70,000 sites received only a single visit). The distribution is so extreme that if the full range was shown on the axes, the curve would be a perfect L shape. (Source: Adamic n.d.)

Frequently using the social web 2.0 strategies of desensitizing become routine such like the share of time used for a specific information, 'chunking' and 'tagging' to deal with a huge amount of information or even to avoid information (Palfrey, Gasser 2009 quoting the psychologist Stanley Milgram). The use of personal systems to structure information with tags in combination with mutual recommendations can lead to an evolutionary system of categorizing which is based on semantic commons rather than on expert's knowledge (Palfrey, Gasser 2009: 245).

A new mode for (regional) governance?

The discussion on (regional) governance is a discussion on the cooperation of different actors in (regional) decision making. A governance structure includes different types of actors with specific logics and a specific 'modus operandi': the public actors with a hierarchical logic using law and incentives, the economical actors with a management logic using market principles, and the civil society with a logic of trust and reciprocity using face to face-contacts (see for example Fürst 2004).

Self organization on the basis of trust within the civil society for a long time has been bounded on a physical space, on proximity and personal connections. With the new tools of the social web this pillar of a governance structure also is able to act in a new spatial and social dimension which also can change the influence of the civil society's activities on public and economic actors. Important factors to enhance networking within the civil society are (Kruse 2010):

- the number of nodes and connections (high density of linkages)
- the degree of spontaneous activity of the nodes (strong 'background noise')
- the existence of excitement circling around for a while (dynamic engrams)

Wikis as web 2.0 tools

One possibility the web 2.0 offers for the self-organization of knowledge is a so-called Wiki which is used in our case-study (as described in the next section). " A wiki is a website that allows users to add, remove and otherwise edit and change content (usually text). Users can change the content of pages and format them with a very simple tagging language. Initial authors of articles allow other users to edit “their” content. The fundamental idea behind wikis is that a large number of users read and edit the content, potentially enriching it and correcting mistakes." (OECD 2007: 37. There are said to be some important reasons to use a wiki for companies (Tapscott, Williams 2008) which partly can be transferred to regional development processes:

- A wiki can create a pool of talents from different fields of interest independent from distance and personal relations integrating different viewpoints.
- A wiki offers the opportunity for unanticipated actors to participate and contribute. Discussions may go beyond the border of subject matter experts and help to overcome the inherent barriers between insiders and outsiders.

- A wiki workspace can improve participation because it enables flexible time management for participants.
- A wiki can improve transparency in decision-making in terms of presenting ideas and alternatives as well as collecting data and viewpoints in a short time span (given a baseline level of cooperation exists).

Factors of success are usability and user-friendliness, authenticity and reputation. There must be a visible reason for communication and collaboration. Also useful is a clear definition of tasks and roles and rules (for a detailed overview on factors of success for social software systems see Reisberger, Smolnik 2008: 574).

2. The example of the regional development process Walgau

The federal state Vorarlberg and the mayors of the 21 municipalities of the Walgau micro-region including the cities Feldkirch and Bludenz (around 75.000 inhabitants, most of them living in small towns in the Ill valley, but also in Alpine villages) decided to initiate a regional development process over three years.

The mayors decided to start the process with concrete projects to quickly demonstrating the usefulness of cooperation within small-scale local structures. Further goals are to develop an overall regional development concept and a so-called “Walgau Atlas” containing the main findings of the territorial diagnosis and the strategic priorities. The process started in January 2009 und should integrate the participation of the broad public.

The working structure of the regional development process derives from the Viable System Model (Beer 1979) which allows to describe the minimum requirements (units and cybernetic loops) of each system - whether it is a biologist or social system - to keep it viable. The functions described with the model easily can be translated into an organizational structure and into requests for information and communication. The model served as a simple scheme in order not to forget essential components while building up an organizational structure for the regional development process Walgau. According to Beer (1979) it is the basic “skeleton” from which no part can be removed without negative consequences for the whole system. It can be further developed and differentiated.

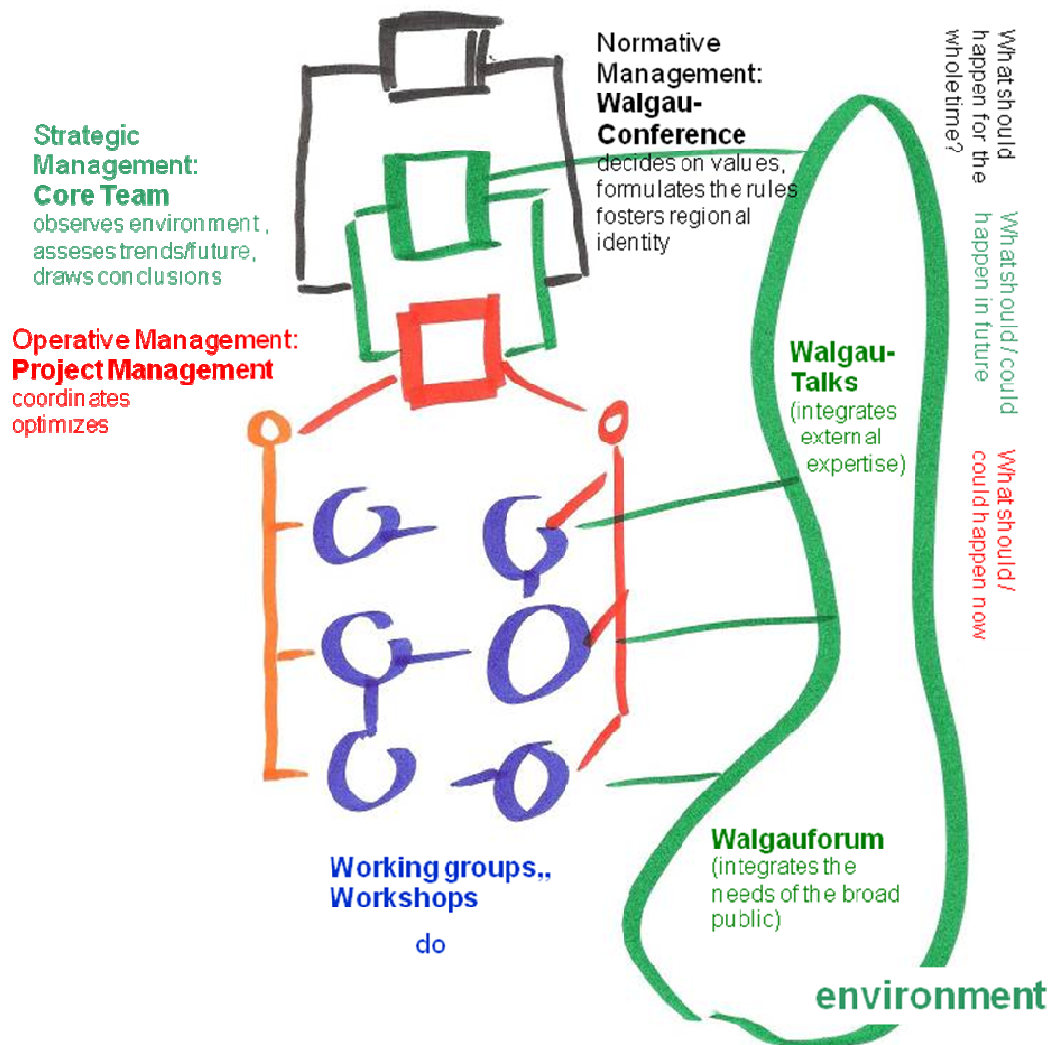


Figure 2: the organizational structure of the regional development process Walgau

The use of web 2.0 applications to foster the regional development process Walgau is an ongoing experiment. Core element is a regional Wiki (<http://wiki.imwalgau.at>) which allows interested people easily to access and to write and rework the contents. The design and programming of the website is taken from Wikipedia to make the use easy for experienced 'Wikipedians'. But also people with less experience very easily can take part in the website. The 'WalgauWiki' complements the more traditional media of communication (printed press, radio, tv).

Starting point for the concept was the question how to use the huge amount of processed information from workshops, one-on-one interviews, and readings which should not be restricted on a few actors. But the effort is high to put a large amount of information into writing and it only is worthwhile if a regional value added can be reached. The expectation connected with the use of a wiki is to generate such value added by

- increasing the amount of information in the sense of a 'learning document' which can be part of a regional information management;
- increasing the quality of the information by reworking as well as by collective judgment which for example allows to see whether an issue is conflicting or motivates towards participation;
- motivating regional actor's individual knowledge generation by discussing pros and cons of development issues.

For this the WalgauWiki was constructed slightly different compared to Wikipedia. Also different layers for each issue exist but whereas Wikipedia uses the layer 'discussion' for a discussion on the article (whether it is complete, lexicon-styled and so on) the WalgauWiki uses this layer for discussions on goals, assessments and conflicting viewpoints connected with this regional issue.

Until now the use of this tool shows the following figures:

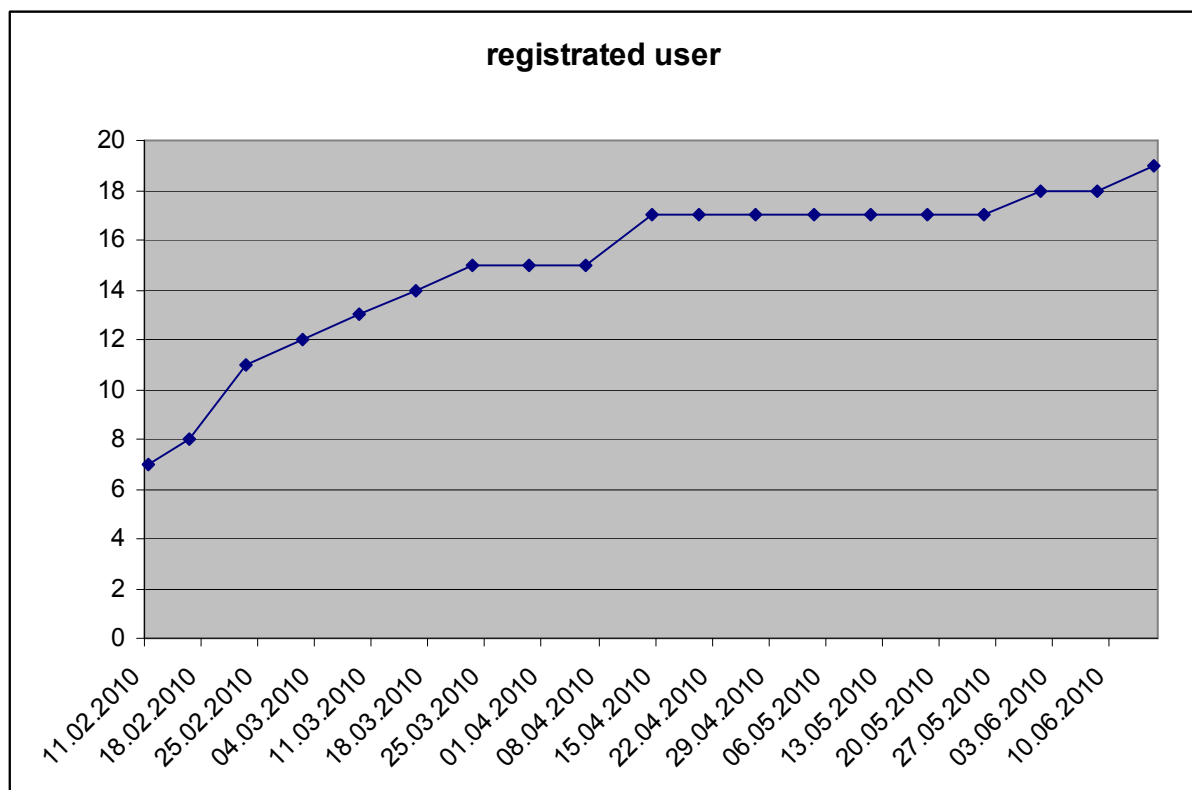


Figure 3: Number of registered users (users who has subscribed to collaborate) of the Walgau Wiki from Feb. - June 2010

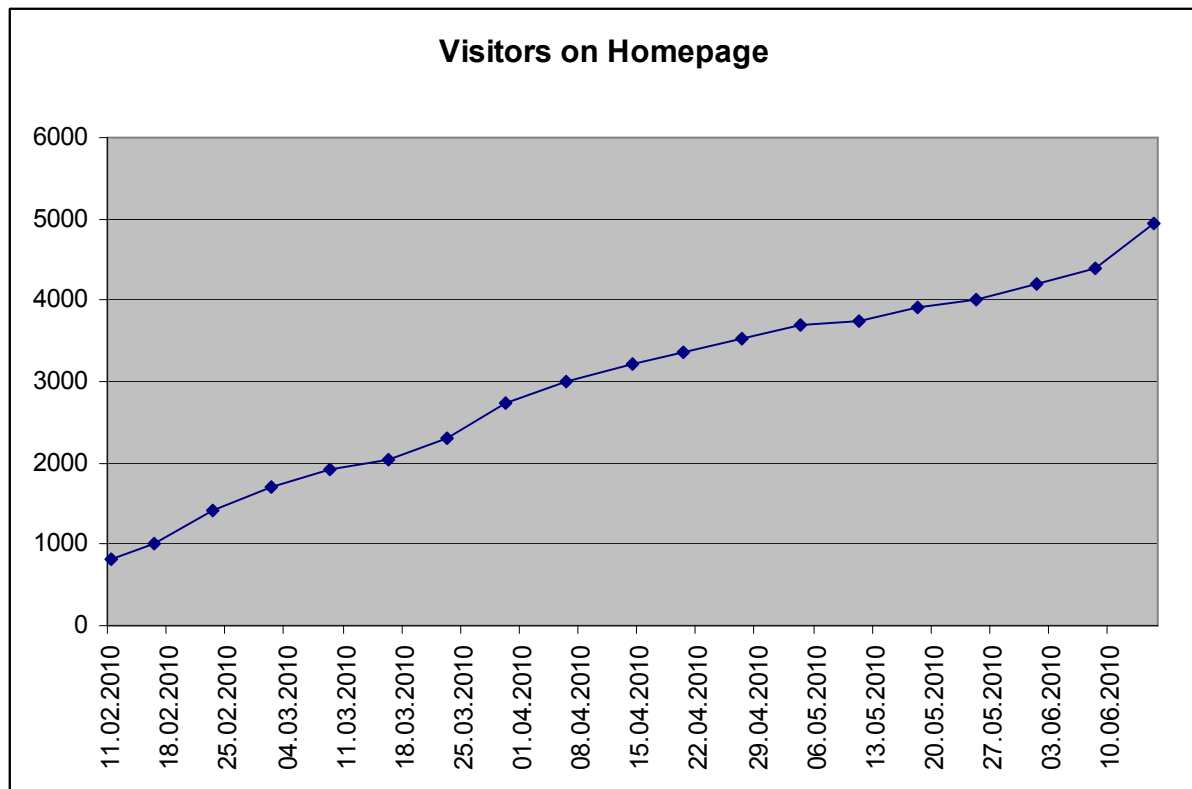


Figure 4: Total number of visitors of the Walgau Wiki from Feb. - June 2010

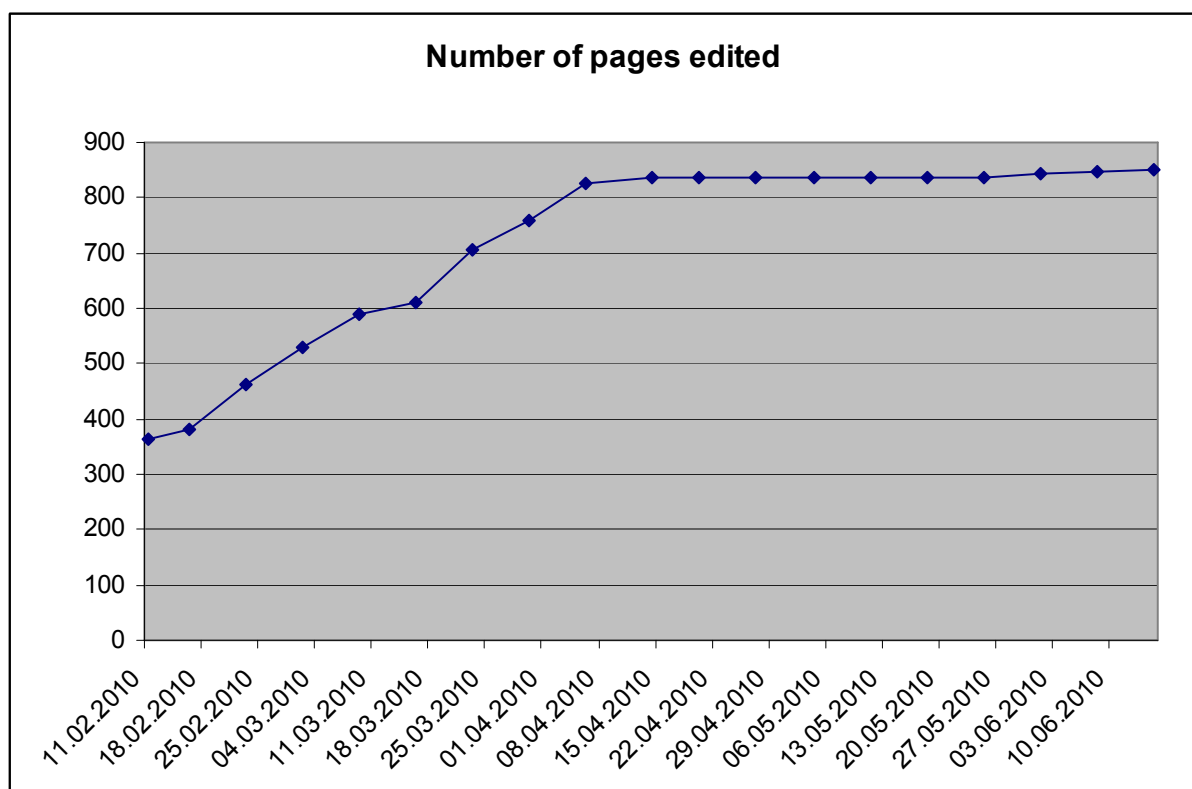


Figure 5: Total number of pages edited within the Walgau Wiki from Feb. - June 2010

Looking at the work different users have done we clearly can show the power law distribution because most of the edited pages has been done by one single user.

3. Conclusions

By now we know a few web 2.0 applications connected with processes of local or regional development. In the German speaking countries we have for example the Regioblog Südhessen (www.regioblog.de), the 'Pottblog' of the Ruhr area (www.pottblog.de), or the Viamala-Blog in the Swiss canton Grisons (www.viamalablog.ch). Also Wikis exist like the 'Dorfwiki' for the development of small villages (www.dorfwiki.org) or the 'Stadtwiki' of the city of Karlsruhe (ka.stadtwiki.net). But mostly we have locally or regionally oriented blogs from political actors. But up to now we know very little about the effects of using such tools. Also the Walgau Wiki is at the beginning. For this the conclusions are restricted on insights from the introduction phase and reflect some first observations from the five months of its existence.

Learning a new culture

The broad interaction connected with a wiki causes some specific effects: Information can be communicated less purposeful, expertise partly becomes replaced by the 'wisdom of the crowds' and communication can be managed less hierarchically (but it is not impossible as the actual discussion on the BP oil spill and the expensive BP web marketing shows). The style and way of communication has profound consequences for participation and governance patterns.

The process of starting the wiki showed that actors may have problems with the web-rationality (everyone can change everything, no completed final result and so on). For example the inherent rationality of public administrations mostly includes to strictly control the information management. For this simple and clear rules for participation are helpful as well as hints how to write and comment (see for example the 'community portal' of Wikipedia).

Choosing the right tool

Different web 2.0 tools serve for different intentions and the carefully choice of the appropriate kind of tool is a precondition for success. A wiki may represent a kind of 'regional memory' as well as a platform for co-operation. It allows to commonly work on a task while keeping the whole development process.

Other web 2.0 tools serve for other purposes. SNS like Blogs and Twitter can be compared slightly with traditional communication media where professionals filter the information and chose the news to be presented to the broad public. But print media and TV mostly practice

this in a kind of 'one way- communication' whereas SNS additionally enable and demand discussing, commenting, and linking. But the main focus to use such tools is to report from a project or process.

A third category of tools like chat rooms or social networks like Facebook concentrate on personal contacts and interaction. They are used rather individually and may serve as medium to transport messages - if a message gains attention it will be forwarded. But the communities meeting on such platforms are more mobile and change the platform if other tools better meet their needs. By contrast a wiki is much more persistent if the users assess the content as beneficial.

Creating the appropriate space

Until now a lot of scientific as well as experimental knowledge on the origin of virtual communities is missing. It can be compared with urban spaces where specific groups (elderly people, youth, ethnic and social groups) frequent specific places. In the same way communities within the web vary and each community has its own attitude and mode. Some of them are the counterpart of groups in real life (for example communities of practice COP - see Shirky 2009:100 quoting the sociologist Etienne Wenger), others remain virtual and use - intentionally or not - their own criteria for delimitation.

To influence the virtual space with respect to the kind of community using the space two strategies seems to be promising. The one is the design of the tool: respectable or eccentric, objective or visionary, with a specific spelling style and a specific profoundness of argumentation. Largely it is in the authority of the initiator to allow this style of conversation which means to demonstrate the example and to carefully moderate the dialogue. The other strategy is the marketing of the new tool. It draw a distinction whether announcing the tool in a regional newspaper or spread the information on Facebook (which needs to be part of a Facebook community to have this possibility).

Some support for regional development processes

A characteristic of the web 2.0 tools which may support regional development activities is a matter of resources: the tools represent a less expensive way to start a process and therefore enable a lot of actors to take active part in regional development issues. Sharing awareness also allows uncoordinated groups to begin to work together more quickly and effectively (see Shirky 2009: 163). But in the long run sharing, collaborating and collective acting may change our culture of regional decision making.

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