

How German Students Use Web 2.0 – Results Of An Online-Survey

Bernd Kleimann¹

Higher Education Information System, Gosseriede 9, 30159 Hanover, Germany, kleimann@his.de.

Keywords

e-learning, web 2.0, German universities, empirical survey

1. EXECUTIVE SUMMARY

In the last years web 2.0 has experienced a tremendous raise in awareness and relevance, especially in the corporate and entertainment sector. Universities in Germany as well have been affected by the spreading of social software and user-generated content, but up to now there has been only little and rather exemplary evidence on how students actually use tools and applications of the new web for study purposes. Against this background, two institutions in the higher education sector in Germany that provide services for universities, Multimedia Kontor Hamburg and the Higher Education Information System (HIS), have joined forces to carry out an online survey among German students in order to shed a light on the usage and assessment of web 2.0 from a students' point of view (Kleimann/Özkillic/Göcks, 2008). The survey started in September 2008 and delivered a lot of interesting results that are outlined in this article.

Against the background of the general framework and developmental trends of higher education in Germany, the results of our survey can be summarised as follows.

Firstly, and all in all, the extent of use of web 2.0 tools and applications in German higher education is still marginal. So far, web 2.0 has not taken on colleges and universities (as Thomson 2007 claims), but still remains in an early stage of development where individual staff members and not institutional policies are driving change (Armstrong/Franklin, 2008).

Secondly, there is a gap between the significance of web 2.0 within the academic discourse on innovative learning technologies on the one hand and the actual use of these technologies on the other hand. Whereas the expectations are high—web 2.0 “allowing greater student independence and autonomy, greater collaboration, and increased pedagogic efficiency” (Franklin/vanHarmelen, 2007, p.27)—the level of usage of web 2.0 still is quite low. This confirms the observation that the web 2.0 discourse to date is stronger than practice itself—as it is often the case on the verge of deep changes and innovative processes in higher education.

Thirdly, in contrast to the rather marginal role web 2.0 actually plays in German higher education we suppose that web 2.0 applications have the potential to further spread out and reshape the universities' teaching and learning procedures. Nevertheless, as long as the basic institutions of higher education remain teacher- and institution-centered and as long as the expectations of students and professors answer the traditional models of producing and sharing knowledge (Weller, 2008), web 2.0 will have to overcome a lot of obstacles in order to hold its ground in higher education (Kleimann, 2007).

2. THE SURVEY: INTENTIONS, METHODOLOGY, AND DESIGN

The Survey was designed by Multimedia Kontor Hamburg and HIS as a contribution to the ongoing debate on the relevance and potential of web 2.0 in the higher education context. We wanted to know whether students of public and private universities in Germany actually use web 2.0 tools that are provided by universities, how and to what extent they use these tools and how they assess their experiences. In order to get enough answers for a sound data basis we designed an online questionnaire containing 21 questions on web 2.0 and e-learning in general.

The survey was carried out during four weeks in September and October 2008 as an online questionnaire addressing several thousand students within the HISBUS panel. The HISBUS panel is a "virtual students' village" that has been set up by HIS with financial support from the Federal Ministry of Education and Research (BMBF). It allows for three to four online surveys each year on current higher education issues like internationalisation, academic evaluation, or loans for financing academic studies. Hence, its main purpose is providing information for higher education politics consulting. Due to statistical sampling and weighing methods the sample data match five important features of the basic population (German students). Due to this approach, the results of the survey are representative regarding gender, semester, university location (old and new Länder), academic subjects and type of university. At the end of the survey 4.400 valid responses could be included in the interpretation process. This is the equivalent of a response rate of 40 percent.

3. RESULTS

3.1. Usage of the Internet

Based on the assumption that the internet is a very important medium today we wanted to know how much time students spend surfing through the worldwide web on an average per day. 73 % of all students told us that they spend 1 to 3 hours on the internet, 23 % even 4 to 6 hours. Only 0,3 % use the internet for less than one hour. Even the proportion of those who spend 10 to 12 hours per day on the net is higher: 1,3 %. Hence—and unsurprisingly—, our assumption that the internet plays a major role for the students' information, communication, consumption and entertainment processes has been confirmed.

More astounding are the answers to the question which websites (of a choice of websites we had picked out) students use most frequently. The chart shows that wikipedia is the most popular one, followed by social communities like StudiVZ, FaceBook, MySpace or Xing. More than a third of all students communicate via chat and instant messaging, 16 % use video communities like youtube and 15 % wikis. Other web applications like online games, weblogs, video- and audiopodcasts, foto-communities like flickr, commercial music download sites, rss-feeds, or social bookmarking are only accessed by small minorities of students. Second life—the recently intensely discussed 3D-environment—does hardly play a role: 79 % of all students say that they have never entered the multiverse.

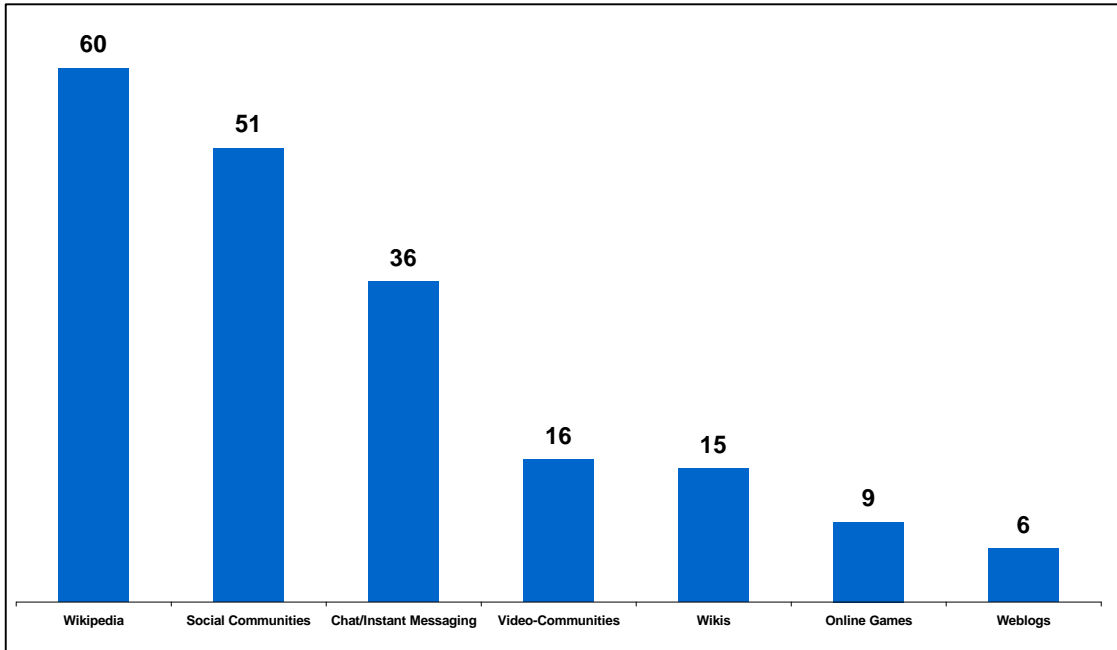


Figure 1 Use of websites students do like most ("very often" + "often"; in percent)

3.2. Social Communities

Why do students take part in social communities? The main purpose is communication with their friends (72 %) and the retrieval of former friends on the net (52 %), whereas only 10 % try to get to know new friends.

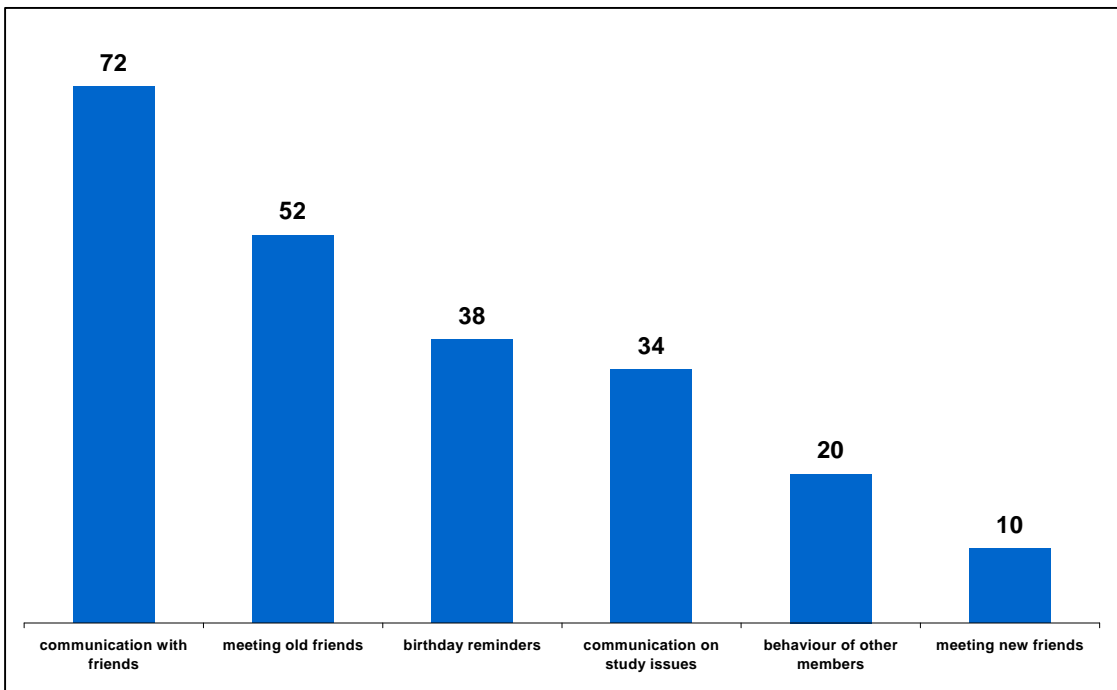


Figure 2 Purposes for using social communities (in percent)

38 % appreciate birthday reminders to cultivate their interpersonal relationships, and 20 % are interested in the behaviour of other community members. Surprisingly, at least a third of all

students use social communities to communicate about study issues—supposedly as a part of their communication with friends and fellow students. This supposition was confirmed when we looked exclusively at the answers of those students using social communities for study-related communication. 66 % enter social communities very often or often in order to get in contact with fellow students or to cultivate their relationships to fellow students. At the same time 59% try to get answers on questions that arise during their self-study, 55 % are looking for support while preparing their exams, 49% exchange documents and literature, and 46 % are looking for practical hints from others concerning housing, job opportunities etc.

3.3. Knowledge Platforms: The Use of Wikipedia

Among different knowledge platforms that are well-established in Germany (Microsoft Encarta, Meyers, Lexikon online, Wissen.de, Spiegel Wissen, Zeit Online) the online encyclopedia Wikipedia is the undisputed number one for German students. 52 % consider the information of Wikipedia as very reliable or reliable, and only less than one percent of the students concede that they are not able to assess its reliability properly. This indicates that web 2.0 knowledge platforms like Wikipedia or the online vocabulary www.leo.org enjoy confidence among German students. But what do students use Wikipedia for? As we had expected, gathering and consuming information is the main focus. 80 % say that they frequently (“very often” + “often”) read articles, whereas 85% never have written a new article, 77 % never have even revised an article, and 83 % never have participated in discussing articles. This rather passive kind of usage is mirrored by the data on engagement in the Wikipedia community: only 11 % have ever taken part in the community.

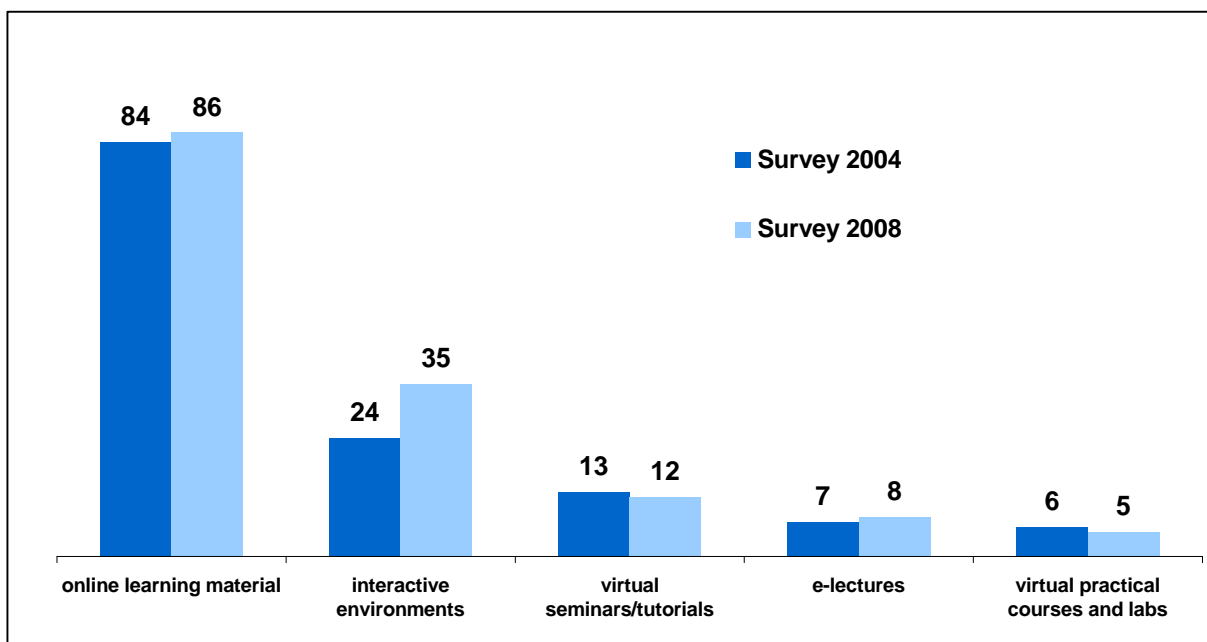


Figure 3 Extent of e-learning at universities according to students' statements (knowledge about e-learning in one's own field of study, in percent)

3.4. E-Learning

Furthermore, resuming questions we had asked earlier in a HISBUS-study in 2004, we took on the knowledge and usage of e-learning from the students' point of view with regard to five types of e-learning: non-interactive online learning material, interactive environments, virtual seminars and tutorials, e-lectures (live broadcasting to a remote location), and virtual practical courses and laboratories. Firstly, we asked whether the students know about existing types of e-learning in their field of study (figures from 2004 added in brackets). The results show that 86 % know about the existence of online learning material (+2 %), 35 % about interactive environments (+11 %; an increase that may be caused by the recent development of self-assessment platforms and online tests), 12 % about virtual seminars (-1 %), 8 % about remote e-lectures (-1 %) and 5 % about virtual laboratories (-

1 %). Accordingly, during the last four years the extent of e-learning has grown significantly only in the realm of interactive environments.

Secondly and naturally, we were highly interested in answers on how intensely students use the different types of learning they encounter at their institution or at other universities. Regarding the use of existing learning applications, we partially found remarkable increases that probably can be attributed to a spreading of e-learning within universities or to quality improvements motivating more students to learn online. While 2004 68 % of all students had declared that they use online material coming from their university and 48% material from other universities, today the figures are 93 % and 39 %, respectively. The use of interactive environments from one's own university has increased as well—from 16 % to 22 %—whereas environments from other universities are used to the same extent as in 2004 (13 %). The reason for this may be the students' experience that only „home-made“-e-learning provided by their own institution and professors is relevant to their exams and, hence, a key to their study success. With regard to the other types of e-learning there are no significant changes; still less than 5 % of students make use of virtual seminars/tutorials, remote e-lectures, and virtual practical courses/laboratories.

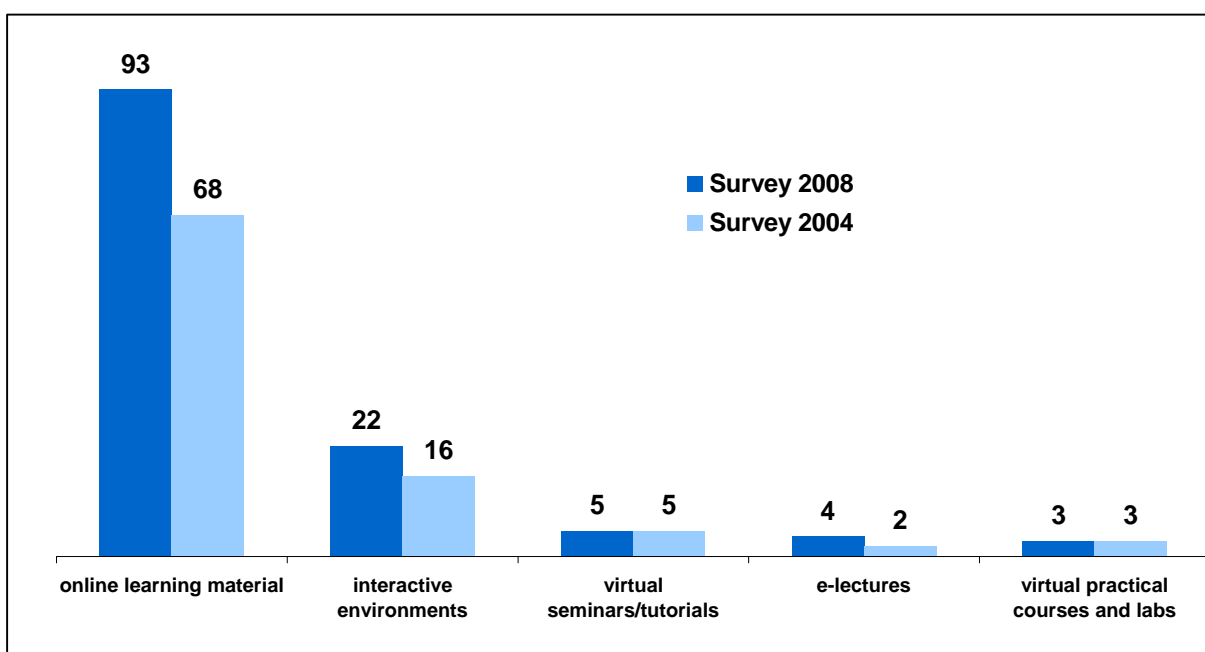


Figure 4 Students' use of e-learning environments coming from their university, in percent)

3.5. E-Learning 2.0

Against this background we eventually asked about the students experiences with new forms of technology-based learning and with web 2.0 applications (i.e. e-“learning 2.0”). This part of the questionnaire was subdivided into two parts: one part regarding the utility, another one the use of these tools. Firstly we wanted to know which applications do students see as helpful for their study purposes—and to which extent? Interestingly, 58 % told us that electronically recorded courses and vodcasts (combined with additional learning material) are “very useful” or “useful”. This is in line with the students interest in repeating relevant information from their courses for the preparation of exams. 52 % found online tests and exercises useful (due to their relevance to earning credits), 46% wikis (which probably mirrors the impact of wikipedia), 45 % web-based trainings and 39 % audiopodcasts (supposedly as suitable training platforms). About a quarter of the respondents held the opinion that e-portfolios, online exams, and online seminars substituting face-to-face-courses are beneficial for study success. Blogs brought up the rear (17 %) which can be put down to the fact that up to now they are rather extraordinary elements in educational settings (accordingly, 29 % of students convey that they cannot judge the utility of blogs).

Table 1 Students' statements regarding utility of e-learning applications ("very useful" + "useful", in percent)

| E-learning tool | "very useful + useful" (in percent) |
|----------------------------|--|
| vodcasts | 58 |
| online tests and exercises | 52 |
| wikis | 46 |
| web-based trainings | 45 |
| audiopodcasts | 39 |
| online exams | 24 |
| online courses | 23 |
| e-portfolios | 23 |
| blogs | 17 |

In general, it is obvious that students are not too enthusiastic about some of the new learning environments brought up by web 2.0. This applies especially to applications that do not fit easily into the familiar framework of academic studies (like online courses, e-portfolios, or blogs) or that are unloved elements of university life like (online) exams.

Secondly, we wanted to learn more about the frequency of using the e-learning tools named above. Here we only got very few answers due to the fact that only a minority of universities provide such tools and only a small group of students actively use them. Hence, the results were unsuitable for analysing the frequency in a differentiated, tool-specific way, so we had to restrict our interpretation to the general extent of use.

As table 2 shows, the most frequently used tools are wikis and online tests/exercises followed by web-based trainings, online exams, and vodcasts.

Table 2 Students using e-learning tools (of all students having access to these tools at their university; in percent)

| E-learning tool | Students using the tool (in percent) |
|----------------------------|--|
| wikis | 30 |
| online tests and exercises | 29 |
| web-based trainings | 19 |
| online exams | 18 |
| vodcasts | 18 |
| blogs | 15 |
| audiopodcasts | 14 |
| online courses | 13 |
| e-portfolios | 11 |

Subsequently, we asked for which academic purposes the students use these tools. Regardless of quantitative differences in detail we found out that audiopodcasts and vodcasts, wikis, web-based trainings, and e-portfolios are especially used for preparation or post processing of courses and for preparing oneself for examinations. Online courses—of course—are a kind of academic course of their own, blogs are being used along with regular face-to-face courses, and online tests and exercises serve as testbeds for improving the students' academic performance.

Eventually, in view of integrating e-learning into the curriculum and considering its adaptation to study regulations, we asked the students using these online learning tools whether the use was compulsory (that is: a precondition for getting credits). With regard to online computer-based exams, 56 % of the respondents answered in the affirmative. Online courses completely or partially replacing regular face-to-face meetings are obligatory for 30 %, online tests and exercises are binding for a quarter of all students. In contrast to these results, e-learning environments that serve as complementary elements to face-to-face teaching are compulsory only for a minority of students: 13 % have to attend web-based trainings, 12 % are obliged to keep an e-portfolio, 8 % are supposed to make use of a wiki, 6 % have to use vodcasts and blogs, and only 3 % are obliged to listen to audiopodcasts.

4. REFERENCES

Armstrong, J., Franklin, T. (2008). A Review of Current and Developing International Practice in the Use of Social Networking (Web 2.0) in Higher Education. September 2008. Report for the Committee of Inquiry into the Changing Learner Experience [<http://www.franklin-consulting.co.uk/LinkedDocuments/the%20use%20of%20social%20networking%20in%20HE.pdf>].

Franklin, T., Van Harmelen, M. (2007). Web 2.0 for Content for Learning and Teaching in Higher Education. 28 May 2007. Report for the Joint Information Systems Committee [<http://www.jisc.ac.uk/media/-documents/-programmes/-digitalrepositories/web2-content-learning-and-teaching.pdf>].

Kleimann, B. (2007). eLearning 2.0 an deutschen Hochschulen. In: Studieren neu erfinden - Hochschule neu denken. Ed. by Marianne Merkt, Kerstin Mayrberger, Rolf Schulmeister, Angela Sommer, Ivo van den Berg. Münster / New York / München et al. (pp. 149-158).

Kleimann, B., Özkilic, M., Göcks, M. (2008): Studieren im Web 2.0. Studienbezogene Web- und E-Learning-Dienste. HISBUS-Kurzinformation Nr. 21. November 2008 [<https://hisbus.his.de/hisbus/docs/hisbus21.pdf>].

Thomson, J. (2007). Web 2.0 takes on colleges and universities: The Dawn of Education 2.0. [http://www.master-new-media.org/~news/2007/04/20/web_20_takes_on_colleges.htm]. (First published in Innovate. Journal of Online Education. Vol. 3, Issue 4, 2007, under the title: Is Education 1.0 Ready for Web 2.0 Students?).

Weller, M. (2008). SocialLearn. Bridging the Gap Between Web 2.0 and Higher Education. June 16. [<http://mfeldstein.com/sociallearn-bridging-the-gap-between-web-20-and-higher-education/>].