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## New format for online courses: the open course *Future of Learning*

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**Abstract:** Since 2007 the concept of *open online courses* came up leading to many discussions of this new format in blog posts and articles especially in the US and Canada. 2011, the first German open online course was started addressing the *Future of Learning*. The article discusses the concept of open online courses, the experiences with the first German course, and gives some perspectives on further developments which partly were implemented in a new course that was just started in 2012.

### Background and introduction: the concept of connectivism

The concept of open courses was started by David Wiley who opened a wiki based course named *OpenED Syllabus* covering the topic of open education.<sup>1</sup> Although previous examples exist, the concept became famous through an initiative of George Siemens and Stephen Downes who offered a course called *Connectivism & Connective Knowledge 2008*. In this course that became well known under the label *CCK08* the two Canadians introduced the concept of *connectivism* which at the beginning was treated as a fourth learning theory. Meanwhile this attempt is often attenuated by the two authors but nevertheless it is interesting to have a look at the contribution *connectivism* can make to modern learning theory and the general discussion about web 2.0 technologies in education.

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<sup>1</sup> [http://www.opencontent.org/wiki/index.php?title=Intro\\_Open\\_Ed\\_Syllabus](http://www.opencontent.org/wiki/index.php?title=Intro_Open_Ed_Syllabus)

According to Siemens, “learning [...] is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing.” [Si05] For him, learning does not necessarily take place inside of us but “can reside outside of ourselves” and is “not entirely under the control of the individual” [Si05]. He states that new information is continually growing in networks worldwide at such a fast rate “that the ability to draw distinctions between important and unimportant information is vital.”

Therefore he defined several *Principles of connectivism* [Si05]:

- Learning and knowledge rests in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision.

Critics of this rather new concept state that elaborations on *connectivism* fail to build on any profound review of literature on learning theories published before. Therefore it does not relate to any prior work in this field such as theories of social learning and works such as Wenger’s concept of *communities of practice* in which group members learn from each other through sharing information and experiences within the group [We98]. Although many consider *connectivism* as a new learning theory, Kop and Hill for example point out that it “continues to play an important role in the

development and emergence of new pedagogies, where control is shifting from the tutor to an increasingly more autonomous learner."

## Open Courses

In their first open course, "CCK08", George Siemens and Stephen Downes implemented some of their ideas on *connectivism*: the course was open and available to anyone who was interested in signing up. In particular, this openness is one of the major characteristics of an open online course. Because reference to the self organization competencies of the participants is part of its nature: everybody who participates defines his or her own learning objectives. The form of participation can range from just reading blog postings up to the contribution of posts on their own blogs or in other media tools. Just participants who want to receive official credit points or a certificate might get involved on a more formal base such as providing a certain amount of contributions.

With their first open online course, George Siemens and Stephen Downes attracted around 2,000 participants, a fact that created the expression *massive open course*<sup>4</sup> (MOOC). *MOOC* labels courses with a large number of learners. Meanwhile, many other institutions have offered open online course. For example, the university of Stanford started an open online course on artificial intelligence which attracted 160,000 enrollees out of which 20,000 completed the coursework.<sup>2</sup> But interesting enough: despite or maybe just because of the openness of the course, Stanford refused to formally recognize the achievements of the non-Stanford students. Instead, the students got a letter with their grade and class rank which was signed by the two professors who conducted the course. This fact raised the question around the value of such a certification. Michael Feldstein, a well known blogger on educational technologies, stated in the online magazine *Inside Higher Ed*: "If individual professors can begin to certify student competence, then that begins to unravel the entire fabric of the institution itself."<sup>3</sup> An issue subsequently also raised by *Inside Higher Ed* was the question whether small institutions or start-up companies could ever expect to attract the same level of interest. Looking at open online courses right now, still many stay in the field of technology and education (an overview

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<sup>2</sup> <http://www.ai-class.com> [17.4.2012]

<sup>3</sup> <http://www.insidehighered.com/news/2012/01/24/stanford-open-course-instructors-spin-profit-company> [17.4.2012]

of MOOC examples can be found in Wikipedia<sup>4</sup>). 2011 George Siemens and Stephen Downes started another open course on *Connectivism and Connective Knowledge* which by now is the third repetition of the first one under this title, and further courses such as *LAK11 - Learning and Knowledge Analytics* (Spring 2011)<sup>5</sup>, *PLENK - Personal Learning Environments Networks and Knowledge* (fall 2010)<sup>6</sup>, and *Change: Education, Learning, and Technology!* (Fall 2011)<sup>7</sup>. In his article “How will MOOCs impact the future of college education?” Walsh even lists a whole set of start-ups such as Udemy, Coursera, Udacity which offer MOOCs.<sup>8</sup>

By now, several authors have discussed the intention and structure of open courses – a discussion which mainly takes place in blogs or within open online courses themselves. John S.F. Mark recently has differentiated several types of open online courses:<sup>9</sup>

- As an example for an *instructivist approach* which is mainly driven by knowledge acquisition he refers to the above mentioned course at Stanford on artificial intelligence.<sup>10</sup>
- The *EduMOOC*<sup>11</sup> he gives also as an example for knowledge acquisition but with the intention for deeper understanding of concepts. This he calls a *cognitivist approach*.
- In terms of knowledge growth and development (pattern recognition), and as a concept for learning, participation and reflection he names the course *mobiMOOC*<sup>12</sup> as an example for a more *constructivist approach*. A *social constructivist* concept would even more rely on the exchange and sharing in social contexts (but is maybe difficult to distinguish in detail from the next category, the *connectivist approach*).

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<sup>4</sup> [http://en.wikipedia.org/wiki/Massive\\_open\\_online\\_course#Examples\\_of\\_MOOCs](http://en.wikipedia.org/wiki/Massive_open_online_course#Examples_of_MOOCs) [17.4.2012]

<sup>5</sup> <http://www.learninganalytics.net/?p=28> [17.4.2012]

<sup>6</sup> <http://connect.downes.ca/> [17.4.2012]

<sup>7</sup> <http://change.mooc.ca/> [17.4.2012]

<sup>8</sup> <http://www.emergingedtech.com/2012/04/how-will-moocs-impact-the-future-of-college-education/> [25.04.2012]

<sup>9</sup> <http://sui fajohnmak.wordpress.com/2012/04/01/change11-cck12-what-are-the-main-differences-among-those-moocs/> [17.4.2012]

<sup>10</sup> <https://www.ai-class.com/> [17.4.2012]

<sup>11</sup> <https://sites.google.com/site/edumooc/> [17.4.2012]

<sup>12</sup> <http://mobimooc.wikispaces.com/a+MobiMOOC+hello%21> [17.4.2012]

- As examples for an even more *connectivist approach* he mentioned the above listed courses *CCKs*, *PLENK2010*, *Change11*, and *MobileMOOC 11*.

Discussion of this differentiation in blogs and courses rather led to disagreement or confusion, as not everybody could share Mark's classification<sup>13</sup>. Nevertheless, each open online course seems to have an instructional design concept which expresses itself in its openness, and mainly in how much participants can define their learning outcomes on their own or how much these are predefined – especially if they can achieve some type of certificate – and how much participants are guided through the course. This leads us to the question of the role of the course facilitators – an issue which Mark<sup>9</sup> also discussed in his article mentioned above. Under the question “Should we manage or lead in a MOOC?” he states: “If the content of the course is based on the connection of the agents and entities (i.e. networked learning), whereas the agents interacting among the networks would play an important role in shaping, charting and developing the course and its content, then leading the course is more important than the mere managing of the course, by the agents.” The role of the facilitator was also one of the issues, the organizers of the course *Future of Learning* had to define.

### **The open course *Future of Learning***

The open course *Future of Learning* was organized by Claudia Bremer, Detlef Kroemker and David Weiss of the e-learning center at the University of Frankfurt, *studiumdigitale*<sup>14</sup>, and Jochen Robes, an e-learning expert and well known blogger<sup>15</sup>. Referring to the categories described above, it could be located somewhere in the category of the *social constructivist* or *connectivist approach*, since the categorization is not totally defined up to now and maybe never will. Definitely, participants were asked to define their own learning objectives and material was provided only through list of links and a one hour talk in a video conferencing tool each week. The course was ran over 14 weeks, starting in May 2011. Each week at new

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<sup>13</sup> <http://www.hsw-learningblog.de/2012/04/opco12-trends-im-e-teaching-der-horizon-report-unter-der-lupe/> [17.4.2012]

<sup>14</sup> <http://www.studiumdigitale.de> [17.4.2012]

<sup>15</sup> <http://weiterbildungsblog.de> [17.4.2012]

topic was addressed, ranging from mobile learning, game based learning, micro blogging, up to media competencies, and learning in social networks.

Each Monday, the topic was opened by a blog post by one of the organizers, introducing the topic of the week. Intentionally the video session with the experts was held on a Wednesday evening, so the participants could start to discuss the topics without input from an expert. Since open courses are built on the contribution of the participants, this setting was chosen intentionally. Additionally to the blog posts, literature and links were provided to each topic. Blog posts of participants were collected through a tool called *aggregator* which copied especially marked posts on participants' blogs into the main open course blog (in the main course blog participants could not post contributions manually except for comments). Additionally, they provided audio messages, created online newspapers, contributed twitter tweets (which turned out to become one of the mainly used media tools), and used etherpads. Wednesday evenings, a live video session was provided where experts discussed in a moderated online event with participants and/or held a speech or presentation. Often presentation and discussion were combined in this one hour session and sometimes two experts discussed a topic or provided two different perspectives on one issue. The video sessions were recorded and provided in an ustream channel. At the end of the week, a summarizing blog post was sent out as a newsletter to the enrolled participants which closed the weekly session - nevertheless discussions on topics could go on the participants' blogs, comments and other media formats.

## **Results**

The open course *Future of Learning* attracted around 900 participants who registered for the newsletter. Around 40 – 60 participated in the video sessions synchronously. About the same number of participants contributed blog posts on a regular base, left comments or twitter tweets. At the end of the course, a questionnaire was provided which was previously developed with the participants in an etherpad. Out of the 65 participants who answered the questionnaire 50.8% were women, 49,2% men. The age groups added up as the following figure shows:

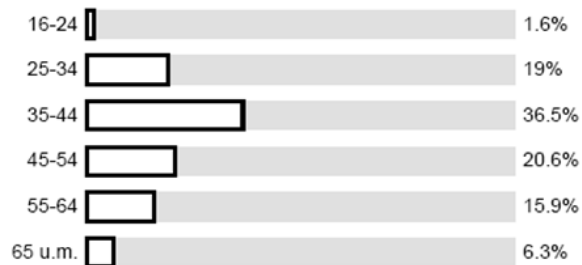


Figure 1: Age of participants

49,2% of the participants who filled out the questionnaire did not have any children – a fact that was anticipated by the organizers during the course when observing the hours of contributions. Being asked about their motivation for participation in the course 84,4% named interest as the major factor (50% “I agreed completely”, 34,4 % “I agree” - multiple options were possible) while they were mainly interested in the format not the topics. Also the weekly topics were not the driving force for participation.<sup>16</sup> If we look at the comments at the end of the course many stated that the exchange with other participants was very motivating as well as the exploration of new technical tools. Being asked how much time the participants spend per week or day on the open course, they answered as shown in figure 2:

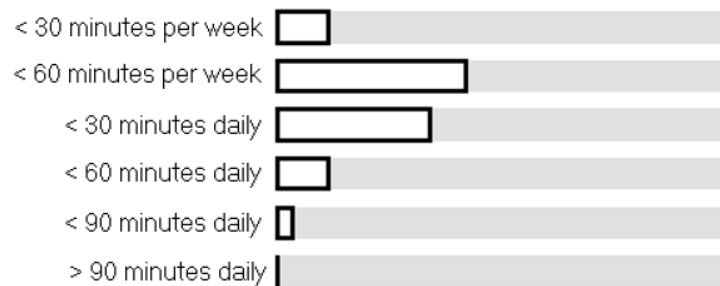


Figure 2: Hours spent on the open course in average

Upon the question, which media tool was most important for their participation, twitter turned out to be the main tool beside the course blog:

<sup>16</sup> [http://blog.studiumdigitale.uni-frankfurt.de/opco11/files/2011/09/Folien\\_OPKO\\_GMW2011.pdf](http://blog.studiumdigitale.uni-frankfurt.de/opco11/files/2011/09/Folien_OPKO_GMW2011.pdf)

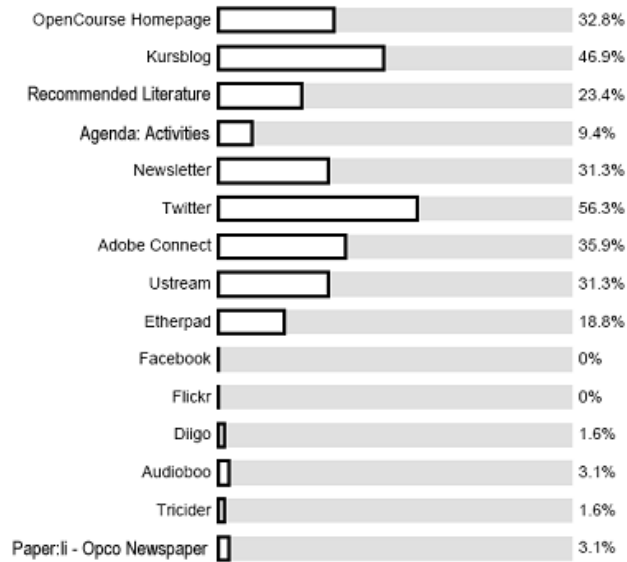


Figure 3: Importance of tools for participation

Further considerations were applied upon the development of engagement and participation over the fourteen weeks, the roles and behavior of different target groups during the course, and the role and function of organizers and facilitators. Figure 4 shows the involvement of different target groups:

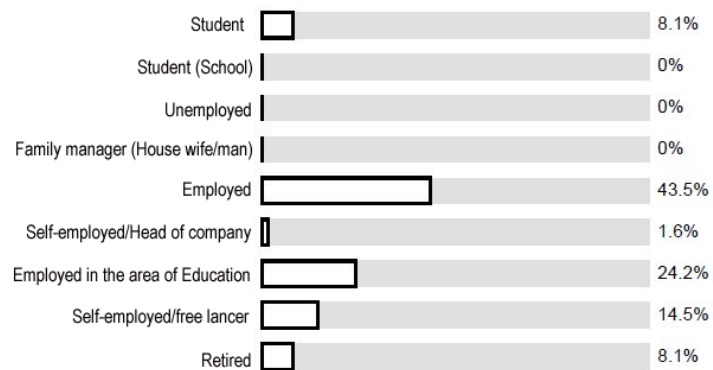
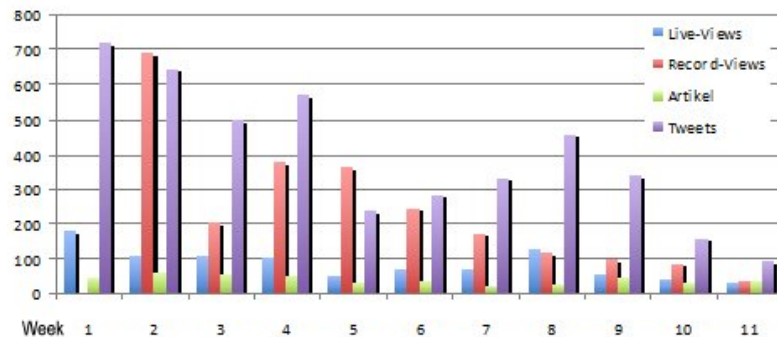


Figure 4: Involvement of different target groups



Looking at the specific participation pattern of different target groups it turned out that self employed and employed trainers in adult education seemed to be a very self confident group with high rates of blog posts while school teachers turned out to be more reluctant to post comments actively and stayed rather observant.

In general, active participants posted around four blog posts, the individual number ranging from 1 to 49 posts per active participant.<sup>17</sup> The overall participation shows a declining interest, although a very interactive live session in week 8 caused a short peak in week 8 and 9 as a reaction.



## Lessons learned and future perspectives

One conclusion of the discussions and observations is that open online course of the type as *Future of Learning* are mainly appropriate for learners who are intrinsically motivated and can organize themselves well. Also they need a certain degree of media competencies in order to participate actively. And observation which is confirmed in other online courses as well.<sup>18</sup>

Out of these considerations and experiences, a new open course was just started 2012<sup>19</sup> in which the organizers seize some of the ideas for improvement which came up with the results around the open course in 2011. One decision was to provide longer periods of time per topic, so these

<sup>17</sup> Slide number 17, [http://blog.studiumdigitale.uni-frankfurt.de/opco11/files/2011/09/Folien\\_OPKO\\_GMW2011.pdf](http://blog.studiumdigitale.uni-frankfurt.de/opco11/files/2011/09/Folien_OPKO_GMW2011.pdf) [17.4.2012]

<sup>18</sup> [http://www.aldinhe.ac.uk/ojs/index.php?journal=jldhe&page=article&op=view&path\[\]=159&path\[\]=108](http://www.aldinhe.ac.uk/ojs/index.php?journal=jldhe&page=article&op=view&path[]=159&path[]=108) [17.4.2012]

<sup>19</sup> <http://www.opco12.de> [17.4.2012]

were raised up to two weeks per session. Also the blog posts of participants became categorized so more structure is provided. The very new option is that participants can receive a certificate if they show a certain level of participation. Due to a high rate of interest in this certificate the facilitators had to face the challenge how to manage this. So for the first time in the German speaking educational community the concept of online badges was taken up in order to offer more structured modes of participation. Also a more active moderation and more content driven summaries of the weekly events were desired and taken up by the facilitators.

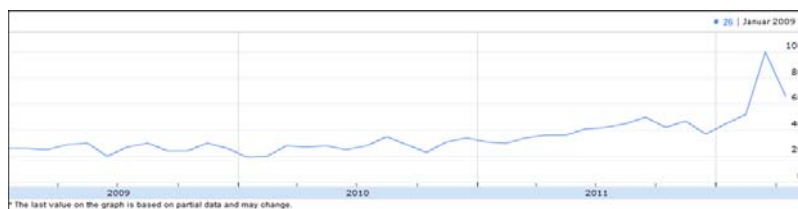


Figure 6: Google search insights graph on online open Courses

As the Google Search Insights graph (Figure 6) shows there is a growing and clear interest in open online courses just recently.<sup>20</sup> So since open courses are just started to be explored as a new concept there still seems to be enough potential for further discussion and clarification.

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<sup>20</sup> <http://www.emergingedtech.com/2012/04/how-will-moocs-impact-the-future-of-college-education/> [25.04.2012]