Future of FLOSSE: Interview with George Siemens

Sunday 06 March 2005 - Teemu Arina

"We often have a myopic view when we talk about technology. We always seem to think about how does technology influence learning. Sometimes these roles actually have to be reversed. We have to think about how learning influeces technology because there are greater changes occuring in our society and not just within technology"

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This time we bring a great interview with George Siemens for your listening pleasure.

George Siemens works as an instructor at Red River College in Winnipeg, Manitoba. The main theme is common trade and the program functions as a laptop program. Through this work he has played around with a wide range of emerging technologies. George is also a regular blogger and a writer at his elearnspace.org website for about 3 years already. His writings focus on elearning, technology, knowledge management and social trends.

George emphasizes personalized learning and networked activity within that. Recently he wrote about a new learning theory of the digital age called connectivism and also released a new website focused on that topic. Learning is strongly a networked process where a learner aggregates external contents into a holistic representation. Previous theories of learning were created during a time when learning was not influenced by technology. Connectivism is a learning theory that takes into account the way how learning is influenced by the digital age. For a better overview of connectivism, see his article about it [Connectivism: A Learning Theory for the Digital Age, George Siemens, December 12, 2004].

There is also a lot of interesting details about decentralizing interaction and how the profile of a learner has changed: the average learner is older and many are switching careers multiple times during a life-time. This requires a very dynamic approach to learning. New methods are required to deliver evidence of the knowledge one possesses.

The half-life of knowledge is shrinking and is affecting many of these issues. Informality of learning is breaking down the barriers of traditional learning. Learning is now a continuous process. We can't only offer a four year learning experience but we have to support learning that lasts for the rest of the life-time. Learners aren't just empty vessels to fill.

George considers open content less important compared to Open Source software (the pipe) as it doesn't directly provide us with means to keep our knowledge current. If the content becomes part of the pipe and gets combined with the added-value of the pipe, it sure becomes very important.

Some questions asked in the interview:

- Who are you?
- Online presence?
- Is learning technology industry simply transfering traditional concepts to digital environments?
- Connectivism?
- Small-world networks in learning?
- Social software in education?
- ePortfolios?
- Open Source software?
- Open content?
- Open Source stacks for education?

"The pipe (connection) is more important than what goes inside the pipe"

"Read more" to see the extracted future events and analysis.

Future events

Here is a list of fictional future events extracted from the interview with George Siemens. If you want to comment or have additional future events to present based on the interview, please do so.

Disclaimer: The future events were constructed from the ideas presented in the interview and do not represent the ideas of the interviewee. No crystal ball or time machines were used in the construction of these events. Bear in mind, it's the future and everything is possible.

Year 2005

Educators demand a move to basics

Usability and simplicity are the new focus areas of technology development in the field of education. This is the result of the widening gap between innovators and less tech-savvy users. There is demand on both edges: new innovations in the first and simple practical solutions in the latter. Technologically mainstream educators focus more on finding and implementing little changes that bring good benefits instead of moving to a completely new working environment.

Year 2006

Blogs and wikis capture informal learning

A notable research journal featured an article just recently about the ability of blogs and wikis to capture informal learning experiences more effectively than LMS provided by their educational institutions. This is because they have access to these systems for as long as they want their selves and also because these systems build on top of informal conversations of their daily experiences. Social software is now also called as informal media in contrary to LMS which is described as formal media.

Education struggles to support informal learning

The need to support students' informal learning as a continual process has been noticed as one of the highest priorities but educational institutions still lack the resources and methods to support these needs. Informal learning consists of 80% of all learning and is still far from the context and influence of formal education.

Year 2007

Learning approached from the complexity point of view

As many natural sciences have tried to understand the world by first atomizing a task into small pieces and then trying to understand it as a whole, learning theorists have now noticed that the same approach to understand learning as a process doesn't work. Learning is simply just too complex to cut into pieces and make any sense out of that later on. Learning has to be approached from some point of view that brings order into chaos. They have found interesting new things about learning by using network theories as a basis to understand the complex nature of learning.

Learners bring connections

Previously LMS systems were very centralized and closed. Now their functionality is more open. As a result, teachers have noticed that learners bring important and meaningful connections to a learning environment when it supports interaction in an open environment. Simple closed chat and forum discussions aren't enough. We have realized that the process of interaction cannot be centralized.

Connectiveness a core competency

Latest research found that those who spend most of their time on focusing on what they know today are lacking behind in learning results compared to those who actively build connections to make sure that they stay up-to-date in their own field. Knowledge becomes obsolete faster than before and results in requirements to focus more on meta-cognitive skills of searching, analyzing and evaluating the available information-mass.

ASP service businesses use FLOSS

Application Service Providers who offer software as a service have started to offer a wide variety of Open Source solutions and software with value-added services. They are not necessarily distributing the source code used in their internal ASP service servers - a set of features remain closed to provide a competitive advantage. These new services

are especially important in regional development and speed up the adoption of Open Source as providers start to offer such solutions to their customers.

Year 2008

New boom of companies offering Open Source stacks

Educational institutions are receiving offerings from various new service businesses which are offering complete Open Source stacks. These companies deliver a certain stack of an information infrastructure in a customized manner. This saves a lot of time from institutions in their process of gathering knowledge and plans on how to effectively deploy Open Source software. As a result Open Source has become more financially driven through the diversity of different kind of service businesses.

Learners mad at losing access to past learning experiences

Students are furious and demand life-time access to knowledge they have worked with, constructed and gathered in a centralized LMS. Losing access to their LMS account is like losing access to knowledge they say. After you have taken a course online and after you passed, you can't get in anymore. Disposing previous learning experiences as if they were some kind of throwaway items is not accepted. As a result educational institutions demand better export features into their LMS solutions so that their students can move their learning history into a publicly available service.

Survey finds that people trust unknown online experts

A recent survey found that 85% of people trust certain online experts they read in their decision to buy a product or a service. Trust in online experts is highest in customer communities where people can read third-party and independent commentary or issues and use Social Reputation Systems (SRS) to sort out the most trusted experts. Least trust was given to companies who present their ideas in a traditional third-person sales pitch. More trust was given to companies which had employees blogging and writing in first person about their daily work and products.

Year 2009

Teachers and students get tired of new technologies

The complexity of the LMS system has grown during the years. These systems are growing in number of different tools and features on a constant basis. Those who have used these tools right from the beginning are able to handle the constant flood of new features. Others feel alienated and just want something that does a certain job very well. The demand for very focused and easy to use tools that are easy to connect together in a customized fashion goes up.

Half-life of knowledge is shrinking even faster

Researchers have noticed that the knowledge you need in your daily operations become obsolete more quickly than previously. This is nothing new but they have compared the

results of today to 5 years earlier and it seems that the trend is not slowing down. As a result people are getting more into informal learning and rely on expert communities, where they can learn faster from those who know their topic very well and are open in sharing their wisdom. Capturing their tacit knowledge becomes important.

Connectivism as a method to develop learning environments

People have noticed the importance of networks and are reflecting on a learning theory that makes more sense in a networked world. Connectivism which views learning as more like a nervous system where learning is a sequence of inputs and the network itself learns through building better pipes, relations and connections to high-priority resources proves to be interesting to many. This reflects on the latest trend where the pipe is seen as more important than what is going inside the pipe.

85% of online people rely of search engines

Most people with internet connections report search engines as their core tools for filtering for information they happen to need at a certain moment. The idea that such a pipe is not available at times makes people feel uncomfortable and disabled – as if part of their knowledge had disappeared. Many have dropped the personal requirement to remember long and complex issues they come across because they are able to access that information when they need it through their intelligent data mining systems. Instead they focus on building new connections.

ePortfolios focusing on capturing informal learning appear

ePortfolios were previously offered by their distinct organizations in which the learner didn't have the control and customization power of their own ePortfolio. Open source software, cheap hosting and free user-driven services provide new ways for learners to build their personalized ePortfolio systems where they can put evidence of their knowledge for everyone to see. Some people use more focused tools; others are satisfied with a simple blog.

Year 2010

Real-time data used for decision making

Top CIOs of various companies have almost real-time access to information about their organization and markets. Instead of receiving quarterly reports from various departments, they are able to follow remotely in real time the work being done from customer satisfaction surveys to closed sales. Real-time financial data proves to be especially useful. Many organizations use aggregators that gather information from various fields. There are service companies filtering and providing the required information feeds.

Social software enters education

Centralized feature-driven collaboration products that use a lock-in strategy start losing the game to more open social relationship-driven systems. In these systems the building

of social relationships is more important than the technical efficiency-driven features. A new mindset that focuses on developing parts of interaction brings more value to tools being used.

Mobile devices provide access from everywhere

Smart mobile devices help learners to access their collaborative networks from everywhere. For example, a set of students may walk in the nature taking pictures and describing the environment while in the same time another team sits in a room connected to the internet providing deeper analysis on the reportage received from the field. Multimedia capabilities, location awareness and improved two-way communication interfaces enable a range of new possibilities.

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