

SignWiki Web (SW)

SignWiki Web and Mobile Access to Sign Languages



Published On: 05 June 2014

Organisation: Communication Centre of the Deaf and Hard of Hearing

Country: Iceland

Level of government: Central government

Sector: Education, General public services

Type: Communication, Digital, Public Service

Launched in: 2012

Overall development time:

17 months

Link to the innovation's website

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Description

SignWiki Web (SW) is a collaborative web and mobile platform which enables collection, dissemination and analysis of sign language (SL) resources and knowledge. The platform includes:

- An online, easily accessible dictionary, learning materials, diverse knowledge on SL, informative material in SL, scholarly articles on SL grammar.
- An interactive platform for SL politics.
- Possible linguistic analysis of SL.
- Promotes the standardisation of SLs.
- Supports teachers of the Deaf with resources, supports language acquisition of Deaf children by providing parents and teachers access to materials.
- Access for developing countries.

The methodology and didactics built upon ideas of active participation of the SL community; use the material and contribute with comments, materials and signs. SignWiki can work anywhere, in every language. The system and methodology can be implemented and are open for the Deaf communities and centres in other countries.

Why the innovation was developed

The SignWiki idea materialized in 2011, from discussions about how it would be possible to promote sign language in the developing countries and enhance the access of Deaf people to communication and participation in society by strengthening the respective sign languages through the use of information and communication technologies. It soon appeared during those discussions that there were also the same needs in Iceland. There are difficulties to meet the needs for SL especially in areas where population is sparse, and access to SL speaking individuals and SL is limited. This included difficulty in disseminating sign language; courses, knowledge on Deaf culture and language, interactive materials for kids, support for teachers and parents, and a special need for a SL dictionary. New laws in Iceland, concerning the status of Icelandic and Icelandic sign language took effect in June 2011. The law stated that Icelandic sign language has equal status in communications between people as Icelandic. It is the first language of Deaf people who use it for daily communication and the first language of their children. Everyone in need of Icelandic sign language has the right to learn it as soon as deafness is discovered and the same goes for children of deaf adults and the nearest family. There was therefore an urgent need to develop a tool to disseminate the language.

Objectives

Improve access, Improve effectiveness, Improve service quality, Improve social equity, Improve user satisfaction

The general objectives:

- Make a low cost and easy-to-use collaborative web and mobile platform which could be utilised by organisations involved in Deaf education in different countries and enables collection, dissemination and analysis of sign language resources and knowledge.

Specific objectives:

- Collect signs and document in dictionaries.
 - Make the dictionaries accessible over the internet on computers, and on and offline tablets and smart phones.
 - Make online learning materials in sign language and language courses for distance education.
 - Collect and put together diverse knowledge and informative material on sign language.
 - Create an interactive platform for sign language politics.
 - Promote linguistic analysis and standardisation of sign languages.
 - Promote discussions on Icelandic Sign Language and language policy.
 - Support teachers of the Deaf by giving them the resources to work with.
 - Support language acquisition of Deaf children by providing parents and teachers access to materials about sign language and in sign language.
 - Give developing countries access to SignWiki.
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Main beneficiaries

Families, People with disabilities, Young people

- Sign language users.
- Parents and families of Deaf children.
- Teachers of Deaf children.
- Students learning sign language.
- Staff providing services to sign language users.
- Linguists researching in sign language.

Results

Efficiency

SW has brought forward new solutions on a worldwide scale by combining existing software solutions, which can be used to give people access to sign language in their own country. The cost is minimal with the newfound access to a dictionary and all the knowledge not accessible before, especially when you compare it to the cost of a teacher who, for example, travels across the country to give courses.

The use of SignWiki has improved the overall efficiency for SHH as an organisation in managing and disseminating sign language materials.

Effectiveness

A teacher in primary school wrote to us: "Signwiki makes all the difference. With all its knowledge, guidance, articles and teaching it is revolutionary, absolute breakthrough and such a net of support in my teaching. An exceptionally accessible and helpful site with a lot of possibilities for the future. I have often wondered how I would make it without SW and I use it daily. It simplifies my work. Pure genius."

Service quality

Accessibility:

A car mechanic says: "SW has changed my access to the working place. The workmates can open SW and find translations and show me what they want to say or they can learn from the wiki how to say it. My daughters friend uses SW, before she visits us, to learn how to say to to my wife e.g.: may I have a slice of bread please. SW thus is proving to be a valuable tool for accessibility in society."

All material is online and always accessible, anytime, everywhere. In Iceland there are approximately 250 Deaf sign language users. From January 2013 – October 2013 the site had 7 186 unique visitors and 120 213 page views.

SignWiki is available as an app for iOS, with offline access to sign language dictionary.

Responsiveness:

It is possible for SHH to answer all service requests immediately and add to the web if they are missing.

Reliability:

The software is open-source which enhances reliability and sustainability, we use add-ons from programmers all over the world and everyone can benefit from our work. The open source and the open participation make the site sustainable. The knowledge is not based on selected few employees but access and participation is for all those interested. The site has an editor.

Other:

From a mother of a Deaf child:

"The family uses SW all the time. To help with homework. I can find words/signs in the dictionary and explain them to my child. Often he wants himself to look at how they are presented on the iPad. He uses the SW himself a lot, finds words and explanations. It helps him to learn both Icelandic and Icelandic Sign language. The offline SW app have often helped when we are not at home and need signs to explain something to him. This is a fabulous web, a revolution for everyone that needs to have access to sign language."

User satisfaction

As indicated above the user satisfaction is high. The students at the university, the staff at the centre and other service providers have expressed their satisfaction and cannot imagine how they could get by without SignWiki.

Development

Design

The SW idea materialised from mid 2011, in discussions between the director of the Communication Centre of the Deaf and Hard of Hearing (SHH) and a project manager in development cooperation. They had been working together in a development project in Namibia on deaf education. The discussions were about how it would be possible to promote sign language in developing countries and enhance the access of Deaf people to communication and participation in society by strengthening the respective sign languages through the use of information and communication technologies. It soon appeared during those discussions that in Iceland there were same needs; difficulty in disseminating Sign language (SL), the need of a dictionary, courses, knowledge on Deaf culture and language, interactive materials for kids, support for teachers and parents etc. It was decided to start developing a user friendly system, at as low a cost as possible building on open source software. After having done all the ground work and developing within Iceland, it should be possible to adapt the system and the methodology to Deaf communities and institutions around the world. A variety of uses and functionality further developed during development and in-staff discussions as well as in consultation with users.

Design time: 8 months

Testing

As soon as the system and its potential took shape it was introduced to the employees of SHH and its future users.

- December 1st 2011 the system was introduced to parents of Deaf children.
- These introductions and discussions with the participants had a direct impact on subsequent developments.
- A serious amount of work and dedication was put into encouraging the community to participate, e.g. The Deaf Association, university students and teachers.
- The conceptual work, programming and communicating with the sign language community has been constantly maintained right from the beginning, and all parties have been active in the process.

Testing time: 3 months

Implementation

Tools used:

Open source software was chosen for financial reasons and for open access to sign language resources. Everything on SignWiki is open and under common creative license. Descriptive pictures are from the Wiki community for teachers and other content creators to copy and use for their own purposes in teaching. The general premises of the work was to develop a program which was:

- Based on open source software (Mediawiki) and allowed participation of the sign language community a "wiki" approach.
- Accessible on computers, smart phones and tablets.
- Can be used in developing countries and is user friendly.

The tools chosen are MediaWiki and jQuery Mobile. They created a basis for open social media where the Deaf community would take an active part as well as anyone who had an interest in sign language. Participants could easily provide signs and teaching material. Build up a pool of information and specialised knowledge of sign language. Create an opportunity to deliver online sign language courses for smart phones and tablets.

Resources used:

The total cost of developing SignWiki was EUR 35 200, consisting of salaries of two employees and subcontract for the programmer.

The project recieved three grants. Total of EUR 9 930.

The collecting of information and signs is an ongoing process in delivering services. This is a "wiki".

Implementation time: 6 months

Diffusion

A pool of information and specialised knowledge on sign language is, as far as we know, quite unique in the world and has caught the attention of people working with sign language outside of Iceland. One of the objectives of the project was to develop a program which could be used for other sign languages.

International cooperation was active from the beginning and in June 2012 SignWiki was launched in Tanzania, in cooperation with the University in Oslo and the University in Dar Es Salaam as can be seen on <http://tz.signwiki.org>.

The Deaf Association in Finland has been working on a project in Namibia which incorporates building up a dictionary for Deaf people in Namibian sign language. SHH joined that project and established in cooperation with The Communication Centre for The Deaf and Hard of Hearing in Namibia, SignWiki for Namibian sign language at the end of August 2012 as can be seen on <http://na.signwiki.org>.

Teachers from SHH visited Tanzania and Namibia to train participants in how to use SW and to customise it to these new areas. SHH has been contacted by other interested countries and now there is a Finnish SW and a Faroe Islandic SW: [Finl.signwiki.org](http://finl.signwiki.org); [Finssl.signwiki.org](http://finssl.signwiki.org); [Fo.signwiki.org](http://fo.signwiki.org)

Diffusion time: on-going

Challenges and solutions

Problems that have come up in connection with the open source software have been dealt with by seeking knowledge and solutions, which people around the world have encountered. During the time this work has been in progress, new ideas have constantly been coming up in connection with material and presentation, and they have been implemented continuously.

Lessons Learned

Lessons Learned

Open source development saves enormous programming otherwise needed. Participation of the language community and those interested in SL is important for language politics, collection of signs and standardisation. The open source and the open participation make the site sustainable. The knowledge is not based on a selected few employees but participation is for all those interested. SL is available all over the country to the language community and all people working with the community or interested in learning SL. Using open source software and adjusting it to the SL community's needs and ideas is very practical in the financial surroundings institutions have to deal with. SW is easy to adapt to other countries both developing and developed. The active language politics which has been created in the language community is astounding. It will help strengthen the Icelandic sign language, promote its standardisation as well as other sign languages using this web interface, create knowledge on the languages and respect among its speakers. The service is delivered both from us and to us, with direct involvement of the society. Very low cost of sustainability. The service delivery costs are very low, the domain cost is low and the videos are hosted on YouTube.

Conditions for success

SignWiki is a pool of information and specialised knowledge which is here to stay and grow in the future. Using social media more effectively, interactions among people in which they create, share, and exchange information and ideas in virtual communities and networks. Social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. On sustainability, the software is open-source which enhances sustainability, we use add-ons from programmers all over the world, and everyone can benefit from our work.

Other information

In the fall of 2012 the project was awarded the Innovation Awards of the Public Sector in Iceland. The number of signs in the dictionary will increase year by year, adding 2-3000 signs annually in the near future. Educational articles, based on grammatical research, will increase due to funding from research funds. There is a continuum of programming as the site evolves and new ideas come up to support the site. The on-going work on an app for Android software for mobile phones is under development, as well as a new upgrade for Apple (iOs) software.