

Romana Kolar  
romana.kolar@zgnl.si  
11/2015

**I have been teaching computing at the School for the Deaf in Ljubljana for 5 years. This year our institution celebrates its 115th anniversary. We continuously strive to improve the learning process and introduce innovative approaches in order to make learning easier for the students and students with communication problems. The deaf and hard of hearing students, among other things, face writing difficulties and consequently have problems producing written homework. Therefore, we have tested a system using a video recording. It enables students to do their homework in sign language which is their “mother tongue”. The process and the technologies that were used are described in the next part of the article.**

**For any further information, please, contact me at my email address: [romana.kolar@zgnl.si](mailto:romana.kolar@zgnl.si).**

I am hard of hearing – I would like to use sign language

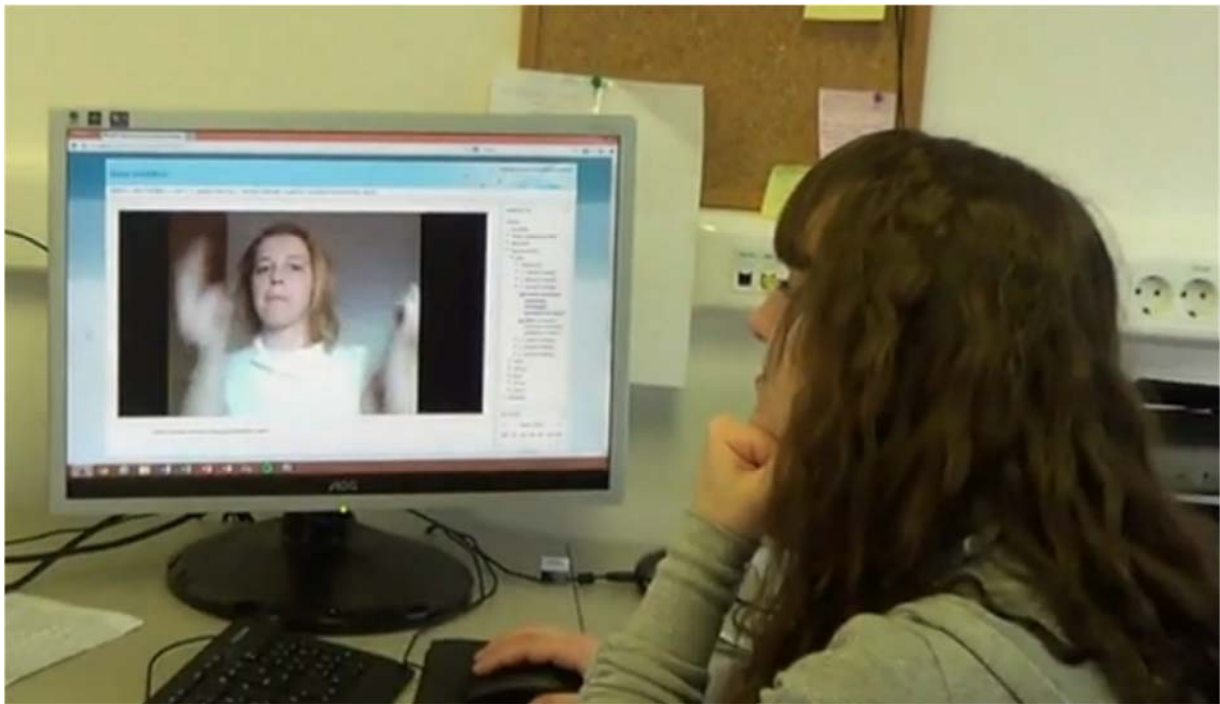
I work for the School for the deaf, Ljubljana where we have stumbled upon several issues during teaching professional courses of computer sciences. Deaf and hard of hearing pupils are entitled to help via interpreting but are often worse off, compared to their peers, due to poor vocabulary and the lack of professional terms in the Slovene Sign Language (SSL), especially when it comes to written tasks, oral exams and homework completion.

By utilizing the flood of new technologies, which are at our disposal nowadays, we strive to improve the quality of communication of deaf and hard of hearing students in their mother tongue, sign language and all other fields of education.

After intense talks we have discovered that the major issues students face are comprehension and homework submission. At School for the deaf, Ljubljana we successfully use the Moodle learning management system ([www.zgnl.si/moodle](http://www.zgnl.si/moodle)). We use this system for uploading homework, knowledge

testing etc. In order to improve the issues deaf and hard of hearing students face, we were forced to find ways of doing so within the Moodle system. Our target group uses Slovene Sign Language that is why we had to find a way of presenting and explaining the homework not only in written form but via SSL on Moodle as well. We decided to introduce video footage of homework. We found the solution quite straightforward and simple which could be quickly embedded into the learning scheme.

Moodle enables the use of video by default, all that was needed was to record the exercises in SSL. Teachers who work for the School for the deaf, Ljubljana are required to complete the third level SSL course which enables them to translate the exercises into SSL on their own. If we are unfamiliar with certain words we may utilize the [Slovenian sign language dictionary](#) available through the Association of Hearing-Impaired Societies of Slovenia website, which our students also use. During teaching of computer sciences we noticed the lack of professional gestures, which is why we decided to create new ones for teaching purposes. In addition, we also published a dictionary of computer terms in SSL online ([www.zgnl.si/slovar](http://www.zgnl.si/slovar)) which can be used by anyone. To reach our goal we had to take into account the hardware needed for this purpose as well. In order to begin our test we installed webcams in the computer sciences classrooms.



For the initial test we chose third-year computer sciences students – during Data Bases class we introduced tasks with instructions in SSL in Moodle. We enabled students to record their answers using any available mobile device or webcam and upload them to Moodle. The class consisted not only of deaf and hard of hearing students but of students with autism as well, that is why we wanted to see how they would react to these types of exercises as well.

Test results have showed that they greeted the new tasks with interest, first results also showed better quality exercises. Furthermore, students who have had difficulties expressing themselves in writing have also adopted this method.

To sum up, helping and enabling deaf and hard of hearing students submit their homework in SSL was aided not only by the use of new technologies which encircle us but a little wit from our side as well.