ELIXIR UK building on Data and Software Carpentry to address the challenges in computational training for life scientists

Aleksandra Pawlik[1], Aleksandra Nenadić[1], Susanna-Assunta Sansone[2], Alejandra Gonzalez-Beltran[2], Carole Goble[1]

[1] University of Manchester, UK; [2] University of Oxford, UK
Email: aleksandra.pawlik@manchester.ac.uk
Project Website: http://elixir-uk.org/

Within life sciences training in lab skills for scientific computing and data manipulation faces several challenges. The discoverability of training material is often poor. High assumptions about prior knowledge render it effectively unusable. As a result, many scientists do not even attempt to use them. Others use training material for self-teaching without support or guidance from experienced instructors.

To address these challenges ELIXIR UK leveraged the work of the existing Software Carpentry and Data Carpentry initiatives and launched them for ELIXIR Europe in order to train researchers in core computational and data manipulation skills. ELIXIR UK is one of the nodes constituting pan-European ELIXIR project for supporting and developing a sustainable infrastructure for life science research, and its translation outside of academia. Software and Data Carpentry provide training materials and workshop for computational skills in science.

The main goals of the of ELIXIR UK working with Software and Data Carpentry are:

- Adopt the training model of Data and Software Carpentry to suit the needs of the life science research communities within ELIXIR,
- Collaboratively develop new and extend existing training materials tailoring them to the various life sciences areas,
- Build the self-sustained ELIXIR-wide network of certified instructors though "train the trainer" programme and workshops,
- Expand the training network of organisations within ELIXIR able to run independently Software and Data Carpentry workshops.

To support an effective kick-off of these activities ELIXIR granted funding for a pilot project "Working up and building the foundation for Data Carpentry and Software Carpentry within ELIXIR". The pilot consists of three events: a collocated training materials development hackathon and a Data Carpentry workshop (the first one took place in March 2015, hosted by the Finnish node, and the second one will be in June, hosted by the Dutch node) and a "train the trainer" workshop to be hosted in early 2016 by the Swiss node. The attendance at the events of the representatives of as many nodes as possible helped with the outreach and scaling up the whole project. The hackathons provided an excellent opportunity for introducing in depth the node representatives to the Carpentries' teaching model, approach and training materials. The events were run by two experienced Software and Data Carpentry certified instructors (one of them is also a member of the Steering Committees for both initiatives). This helped in discussions at the events, clarifying and answering all questions that the node representatives had. The points made by the ELIXIR participants were fed back to the leads of Software and Data Carpentry leads. This two-way communication was an opportunity to understand better how the Carpentry model can be used beyond the original workshops and serve the life sciences research community.