Digital Curation Training

The nestor Activities by Stefan Strathmann[1] and Achim Oßwald[2]

Abstract
Digital curation3 is currently not very well covered by university curricula in the German speaking countries. Nevertheless there is a strong demand for well-educated staff in this field. As part of the project "nestor", a transnational partnership of academic institutions in Germany, Switzerland, and Austria, a comprehensive qualification program based on e-learning tutorials, schools, seminars, and publications has been established to meet this demand.

Keywords: training, education, digital preservation, digital curation, nestor.

SUB Goettingen FH Koeln

The nestor network
nestor, the Network of Expertise in long-term STOrage of digital Resources in Germany is a cooperative initiative of libraries, archives, museums and other parties interested or involved in digital preservation. From 2003 until 2009 nestor was funded by the German Ministry of Education and Research (BMBF). After 2009 it was transformed from a project into a sustainable membership organization, funded by the partners involved. At the moment (autumn 2013), 14 partner institutions are formal members of the nestor network.

However, the formal members are only the core of the network. Most of the nestor activities are organized and conducted in the open nestor working groups (WG). Currently about 60 institutions are involved in several working groups focusing on topics such as media, cooperative long-term preservation, standardization, policy, cost, etc. These groups are constituted and terminated based on need. Only the WG Qualification[4] is based on a more formal cooperation and therefore organized in a different way than the other WGs (see nestor MoU Group Homepage).

The nestor WG Qualification
The nestor WG Qualification is acting since 2005 and organized around a Memorandum of Understanding (MoU) first signed in 2007 and renewed in 2009. The MoU provides an effective level of commitment but is at the same time less formal than a regular contract. This form was chosen because a formal contract bringing together so many different institutions might have involved too much bureaucracy. The MoU has been signed by 12 partner institutions from the educational sector and one coordinating nestor partner (see table 1). The group is involved in education for libraries, archives, museums, and IT in the German speaking countries (Germany, Austria, Switzerland).
(see table 1 page 15)

The WG's objective is to stimulate and promote qualification in the field of digital preservation. The involved institutions cooperate in the development of course-materials, mutually accept credit points of courses regarding digital preservation and seek to establish a cooperative and distributed master's degree program in digital curation as a long-term objective. Early on, in 2006, the WG's agenda was shaped by the results of a survey on the coverage of digital preservation topics in Bachelor- and Master's programs provided and planned by LIS departments in Germany, Austria, and Switzerland (see Oßwald and Scheffel, 2008). The lecturers from each institution stated that none was able to cover the topic in its entirety or to keep pace with the variety of the current developments in the whole field. Moreover, subject-related needs (e.g. of museums) resulted in a focus on special topics of digital curation in each institution. This initial situation was a good starting point for a cooperation between the different institutions and lecturers.

Project activities
The nestor WG Qualification – hereafter called MoU Group – offers five major lines of activities in digital curation-related qualification to meet existing needs:
- nestor seminars
- nestor schools
- nestor publications
- development of e-learning tutorials
- development of a cooperative curriculum

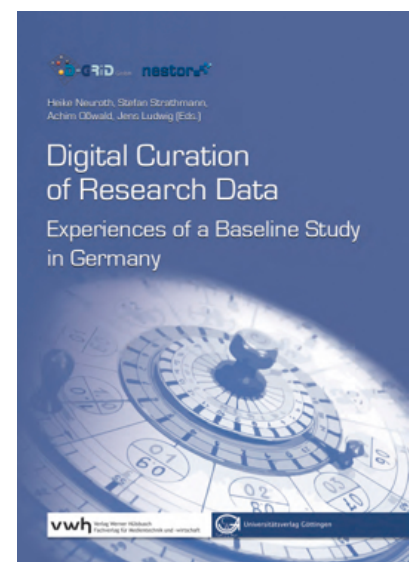**Table 1**: Institutions participating in the nestor MoU group

Partner	Homepage
University of Applied Sciences – Hochschule für Technik und Wirtschaft Berlin	http://www-en.htw-berlin.de
University of Applied Sciences Chur, Switzerland, Information Science	http://www.htwchur.ch/en.html
Cologne University of Applied Sciences, Faculty of Information and Communication Sciences, Institute of Information Science	http://www.fbi.fh-koeln.de/en-index.htm
University of Applied Sciences – Hochschule Darmstadt	http://www.h-da.de
GESIS – Leibniz-Institute for the Social	http://www.gesis.org/en
Georg-August-Universität Göttingen, Göttingen State and University Library (coordinating nestor partner)	http://www.sub.uni-goettingen.de/en
Humboldt-Universität zu Berlin - Faculty of Arts I - Institute of Library and Information	http://www.hu-berlin.de/
Leipzig University of Applied Sciences, Department of Media and Communication	http://www.htwk-leipzig.de/en/
Archives School Marburg - University of Applied Studies for Archival Science	http://www.archivschule.de/
University of Applied Sciences Potsdam, Department of Information Science	http://www.fh-potsdam.de/
Stuttgart State Academy of Art and Design	http://www.abk-stuttgart.de
Stuttgart Media University	http://www.hdm-stuttgart.de/
Vienna University of Technology, Austria, Institute of Software Technology and Interactive Systems, Digital Preservation	http://www.tuwien.ac.at/en/tuwien_home/

nestor seminars and schools

The nestor seminars on special topics (or for special audiences) take place occasionally. However, they constitute a strongly limited channel for the distribution of knowledge because of the demands they pose on the lecturers' time and the topics covered, which often address a smaller audience with a higher degree of specialization. The MoU Group tried to expand the coverage and to relieve the lecturers by producing a video DVD with two recorded introductory seminars for self-study. As this approach was not very succsessful, the group decided that producing some essential publications was a more effective way of distributing knowledge (see below).

The series of nestor schools offered by the MoU Group is a success story. Since 2007 seven nestor schools were conducted. For the duration of three to six days attendees and reknowned lecturers come together for an intense exchange of ideas in the privacy of a remote location. The courses are a combination of lectures and practical exercises, augmented with several social activities. The participants, a heterogeneous audience comprised of professionals from libraries, archives, museums, companies, and administration as well as students, are presented a perfect opportunity to build and enlarge their professional networks, to make contacts with colleagues, and to discuss ideas and conceptions. Upon completing the course, attendees receive a certificate equivalent to 2 ECTS credits (European Credit Transfer and Accumulation System). The school

events have been conducted in cooperation with several digital preservation projects (DELOS, DPE, DigCurV) and with some support from industrial partners (PDF/A Competence Center, EMC, Sun microsystems). Throughout, the events received very high evaluation marks from the participants.

nestor publications and tutorials

Because of a lack of course materials and to reach a broader audience compared to the nestor seminars, the nestor MoU Group initiated the production of the nestor handbook (Neuroth, et al., 2010). This German-language "encyclopedia" bundles the recent state of knowledge on digital long-term preservation and its various components. It collects contributions from over 50 authors on more than 630 pages and has been revised and expanded several times. Beside the open access online edition (version 2.3), a printed book (version 2.0) is available. The handbook tries to cover the whole field of digital preservation and contains chapters on topics like: State-of-the art of legal aspects, Preservation Policies, The OAIS (Open Archival Information System) reference model, Trusted digital repositories, Formats, Relevant standards important in digital curation (e.g. PREMIS), Strategies of digital preservation, etc. The handbook is very well accepted as a standard work on digital preservation in the German speaking community and it is used by students as well as by practitioners

In 2012 a comprehensive baseline study on research data management and curation was published (online and print) in German language (Neuroth, et al., 2012). It is the analysis of a structured survey regarding the curation of research data in Germany and holds reports from eleven academic disciplines (medicine, astronomy, humanities, and social sciences among others.). A condensed English-language version, entitled "Digital Curation of Research Data. Experiences of a Baseline Study in Germany" has just been published online and in print (Neuroth, et al., 2013).

Since 2007 digital preservation e-learning modules – based on the e-learning platform Moodle – have been developed within student projects. Created by students for students, these tutorials are mutually exchanged between the nestor MoU partners and used in their university courses. Several tutorials, dealing with topics like 'Introduction to Digital Preservation'; 'The OAIS model'; 'Formats'; 'Digital Preservation of GIS-data' etc. have been maintained and updated regularly. Adhering to the concept "e-learning tutorials by students for students" adopted by the nestor MoU Group means that the modules can only be developed in combination with university courses. This approach has some implications: the development of e-learning tutorials proceeds very slowly and must be integrated in the regular curriculum. The initial input given by the teachers is extremely high. At the same time the acceptance of using these tutorials is high as well. Despite this acceptance it has become apparent, however, that there are issues to secure the quality of the tutorials regarding the content – which needs frequent updating – as well as the didactics, which should respond to various preconditions of students of different levels. Therefore the tutorials are expected to become obsolete very soon. At the moment, the group discusses other ways of organizing the teaching material to keep the time and effort needed reasonable. The new concept is not only a big challenge but also a great chance to cooperate and collaborate!

Towards a shared digital preservation curriculum

As already mentioned none of the partners active in the nestor working group is able to set up a preservation-centered curriculum on its own. Instead, the partners have agreed to realize this on a cooperative basis. Accordingly, as a long-term goal the MoU Group intends to set up a cooperative curriculum. This plan received support by experts and the administration of several universities in the German speaking countries. In the Memorandum of Understanding the thirteen partner institutions declared their intention to cooperate in developing building blocks for a digital preservation curriculum and adjusting modules focusing on selected topics. One first step in the direction of a cooperative curriculum is the agreement that credits earned in digital preservation-related courses can be transferred between the universities involved and are therefore accepted in the local curricula.

The curriculum development activities led to the engagement of the MoU Group in the context of the Digital Curator Vocational Education Europe project (DigCurV; http://www.digcur-education. org/). The MoU Group was a founding partner of the project and contributed in various ways to the development of the DigCurV Curriculum Framework (see DigCurV, 2013).

The cooperation between nestor and the educational institutions in the MoU Group results in several synergies. The nestor MoU Group has stimulated reflections and awareness of digital curation even in those universities where the topic has been part of courses or programs for years. As a consequence results of the nestor network have influenced the content and the quality of lessons and courses provided. Not by intention but as a secondary effect the nestor MoU Group has initiated intra- and cross-sectoral cooperation where competition seemed to dominate. On the national level the nestor network in Germany has gained insights and created links to universities and qualification bodies. This has improved the awareness and understanding of issues related to qualification for preservation and curation activities. Initiatives, promotional programs (e.g. by the German Research Foundation) and activities now address qualification issues regularly.

Summing up

Since 2007 the MoU Group – comprising of 13 Higher Education Institutions in the German speaking countries Germany, Austria, and Switzerland – has initiated and contributed to the awareness of the importance of qualification issues in the field of digital preservation and curation in the countries involved. Members of the MoU Group and their universities have provided curriculum-based courses, a variety of qualification events like, for example, the nestor School events, and publications such as the nestor handbook, a state of the art publication on issues, methods and best practice solutions in the field of digital preservation and curation. They are still involved in improving the curriculum-based qualification as well as further collaborative education activities in the field. As a side effect of the MoU Group´s activities, qualification in the field of digital preservation and curation have become a regular topic of related programs and activities in and beyond the nestor context.

References

Digital Curator Vocational Education Europe (DigCurV), 2010. Homepage – DigCur. [online] Available at: <http://www.digcur-education.org/> [Accessed 8 January 2014]

DigCurV, 2013. Resources/Curriculum Framework. [online] Available at: <http://www.digcur-education.org/eng/Resources> [Accessed 8 January 2014]

Neuroth, H., Oßwald, A., Scheffel, R., Strathmann, S., and Huth, K. eds., 2010. nestor-Handbuch: Eine kleine Enzyklopädie der digitalen Langzeitarchivierung. Version 2.3. [online] Available at: <http://www.nestor.sub.uni-goettingen.de/handbuch/index.php> [Accessed 8 January 2014]

Neuroth, H., Strathmann, S., Oßwald, A., Scheffel, R., Klump, J., and Ludwig, J. eds., 2012. Langzeitarchivierung von Forschungsdaten: Eine Bestandsaufnahme. [online] Available at: <http://www.nestor.sub.uni-goettingen.de/bestandsaufnahme/index.php> [Accessed 8 January 2014]

Neuroth, H., Strathmann, S., Oßwald, A. and Ludwig, J. eds. 2013. Digital Curation of Research Data: Experiences of a Baseline Study in Germany. [online] Available at: <http://nestor.sub.uni-goettingen.de/bestandsaufnahme/index.php?lang=en> [Accessed 8 January 2014]

nestor MoU Group, n.d. Homepage. [online] Available at: <http://nestor.sub.uni-goettingen.de/education/index.php?lang=en> [Accessed 8 January 2014]

Oßwald, A. and Scheffel, R., 2008. Lernen und weitergeben - Aus- und Weiterbildungsangebote zur Langzeitarchivierung. In: Neuroth, H., Oßwald, A., Scheffel, R., Strathmann, S., and Huth, K. eds., 2008. nestor - Handbuch - Eine kleine Enzyklopädie der digitalen Langzeitarchivierung: Version 1.2. [online] Available at: <http://nestor.sub.uni-goettingen.de/handbuch/artikel/nestor_handbuch_artikel_141.pdf> [Accessed 8 January 2014]

NOTES

1. Stefan Strathmann is Head of the Competence Center on Digital Preservation and Research Data at the Research and Development Department of the Göttingen State and University Library. He is one of the representatives of the nestor MoU Group on qualification in digital preservation. He can be reached by email: strathmann@sub.uni-goettingen.de.

2. Achim Oßwald is Professor at the Institute of Information Science, Cologne University of Applied Sciences. His focus of research and teaching is IT applications in the LIS field including digital curation issues. He is one of the representatives of the nestor MoU Group on qualification in digital preservation. He can be reached by email: achim.osswald@fh-koeln.de

3. In the context of this article we will use the terms 'digital preservation' and 'digital curation' synonymously.