Christian Hoiß
Universität zu Köln, Köln

Uta Hauck-Thum
Ludwig-Maximilians-Universität, München

Newsletter WP 2
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The learning scenarios – CNL for schools Finalizing WP 2

Summary

The newsletter summarises the work on the CNL learning scenarios and the creation of the digital CNL platform, the most important task of the second work package (WP 2), from a final perspective.

Anthropocene competence, transformation, cultural sustainability, digitality, learning scenarios

The CNL project gives an innovative impulse to pedagogical education by developing the concept of Anthropocene competence together with a theory-practice transfer as a guiding thread. The aim is to establish this term as a cultural value in order to focus attention on sustainability and social co-responsibility: All teachers and learners, whether at schools or universities, should have the opportunity to acquire Anthropocene competence in the form of *CultureNature Literacy*. The path to this goal is crucial, and the learning scenarios on the digital CNL platform are a continuation of the successful strategic partnership between the participating institutions at European level. After one and a half years of intensive work, another result is now available, the digital CNL platform with over 75 learning scenarios in various languages (German, English, Estonian, Slovenian, Hungarian), edited by Christian Hoiß and Uta Hauck-Thum, with the collaboration of Ioana Capatu and Maria Legenstein.

The CNL platform brings together all the learning scenarios created under the heading CNL for the classroom and makes them available to teachers at schools and universities free of charge and in digital and printable PDF format in order to support the development of *Cul-tureNature Literacy* as a key competence for shaping the future in the Anthropocene. The teaching and learning materials are based on the CNL handbook and refer to the conceptual and methodological-didactic principles presented there. The platform and learning scenarios were also tested by teachers and trialled in the classroom before going online.

The requirements for Work Package 2 according to the application

The central requirement for Work Package 2 is to create a digital platform that contains more than 50 learning scenarios. In addition, a relevant Green Event was to be organised as the third project meeting at LMU Munich. The CNL learning scenarios are concrete instructions for teachers at schools and universities on how to organise lessons and teaching in such a way that Anthropocene competence can be promoted among learners as *CultureNature Literacy*. The learning scenarios are available in several languages, are aimed at different disciplines and school subjects and are often interdisciplinary or transdisciplinary. The results from the first work package (WP 1) serve as an orientation and binding framework to enable the joint development of teaching-learning concepts and their digital provision (also in WP 3). Specifically, each CNL learning scenario refers to at least one chapter from the CNL handbook from WP 1. The principles and instructions for teacher training, which the collaborating researchers have presented using their broad expertise and prepared for practical use, follow previously agreed criteria:

Binding criteria for the digital CNL platform to meet the requirements of the project and to enable theory-practice transfer in the further course:

- The digital CNL platform was conceptualised, designed and set up on time.
- The CNL platform is freely accessible (open-access) and has either a German or English interface.
- The CNL platform offers a conducive learning environment that takes into account the building blocks of inclusive didactics.
- The CNL platform offers download options for all learning scenarios.
- The CNL platform has a user-friendly and accessible interface designed according to current usability principles.
- ▪The qualitative-empirical accompanying research (evaluation of the usability of the CNL platform and the next-practice examples in the test phase) was carried out by the University of Siegen and the LMU Munich.

Binding criteria for the learning scenarios in order to meet the requirements of the project and to enable theory-practice transfer in the further course:

- Over 50 exemplary teaching/learning materials as next-practice examples can be found as CNL learning scenarios on the CNL platform

- Each partner provided at least 5 learning scenarios (except EKUZ and Vorarlberg).

- The pilot test phase was carried out by EKUZ and BD Vorarlberg.

- The qualitative-empirical accompanying research (evaluation of the usability of the CNL platform and the next-practice examples in the test phase) was carried out by the University of Siegen and the LMU Munich. The accompanying research was subject to the quality criteria of qualitative empirical research.

- Over 20 CNL learning scenarios have been translated into English or are offered in multiple languages (in the languages of the partner countries).

- A collaboratively designed form served as the basis for the learning scenarios.

- The CNL learning scenarios are inclusive, differentiated and multilingual, the target groups were involved in their creation in a participatory setting; they were also designed for different school levels and/or teacher training.

- The 17 UN Sustainable Development Goals were always taken into account and covered.

- The use of the CNL learning scenarios can be cross-curricular, they also allow the focus to be set for a school project and can be used for school development.

- The CNL learning scenarios refer to at least one chapter of the CNL manual Part 1.

- Examples from the CNL learning scenarios can be integrated into the CNL MOOC in work package 3.

- The CNL learning scenarios take into account digital learning environments and can be used in blended learning; digital learning content structured according to media didactic principles is available.

- The Next Practice examples are geared towards the target group in terms of content, language and form.

- A non-blind peer review was carried out during the creation of the learning scenarios.

Key steps towards realising the digital CNL platform

The representatives of LMU Munich and the University College of Teacher Education Lower Austria (Ioana Capatu, Christian Hoiß, Carmen Sippl, Johann Trimmel) developed a structure for the digital CNL platform in an intensive collaborative exchange with all project partners, which was based on the subject areas and didactic competences of all project participants as well as the criteria. In addition, the CNL learning scenarios developed were assigned to categories (diversity, ethics, cycles, art, literature, media, language, knowledge, future). The nine categories to which the CNL learning scenarios are assigned name the central aspects of *CultureNature Literacy*. In addition, the learning scenarios have been assigned keywords so that they can be filtered by users according to relevant parameters. These include the target group (primary level, lower and upper secondary level, higher education, university teaching, school management), the individual school subjects and different languages (German, English, Estonian, Slovenian, Hungarian). The technical implementation (Johann Trimmel) and the feeding of the CNL learning scenarios into the digital CNL platform (Maria Legenstein, Ioana Capatu) was carried out by the University College of Teacher Education Lower Austria. The functionality of the CNL platform was tested by school teachers and university lecturers before going online and the feedback was taken into account when finalising the CNL platform. To this end, the implementation of the CNL learning scenarios in five classes at five schools in Vorarlberg/Austria (one primary school, four secondary schools) was analysed with the help of participant observation in order to contribute to the further development of evidence-based teaching and learning settings accompanying the project. Participant observation as a qualitative method of social research was used to investigate the actions, behaviour and impact of the actions and behaviour of the teacher and their class during the implementation of the CNL learning scenarios. The researcher, in this case a student assistant from the Chair of Primary School Pedagogy and Didactics at LMU Munich, participated directly in the interactions of the people involved. The results will be published in 2024.

Key steps for realising the learning scenarios

All project partners committed (to varying degrees) to the creation and translation of CNL learning scenarios, which were uploaded to the digital CNL platform once the documents had been finalised. The quality of the CNL learning scenarios was ensured through multiple review processes. Firstly, each CNL learning scenario underwent a double open review process by the project partners, which was coordinated by Christian Hoiß. In addition, the editorial team (Christian Hoiß, Uta Hauck-Thum [LMU] as well as Maria Legenstein and Ioana Capatu [PH NÖ]) carried out multiple feedback loops. All CNL learning scenarios were available on the CNL platform on time.

The process of realising the learning scenarios also includes finding a consensus on the structure and content of the learning scenarios. This has already been discussed at the online project meeting organised by Siegen. The learning scenarios cover a wide range of topics. They often deal with

the relationships between humans, nature and the environment, which have changed fundamentally in the Anthropocene and continue to do so. Forests, landscapes, animals, plants, stones and other parts of what we traditionally attribute to nature are reflected on using language, literature and media, among other things. There are also learning scenarios that take up technologies and technological developments, for example, and show that nature and culture cannot be viewed separately, but are interwoven in many ways. Other learning scenarios focus more on a specific methodological approach, for example by placing the openness of futures or dealing with future-oriented uncertainty at the centre or using diaries to discover gardens or food. All CNL learning scenarios are based on the CNL handbook, contain corresponding references to specific chapters in it (e.g. CNL & Anthropocene) and make statements about cross-links to the areas of sustainability (SDGs), digitality and inclusion.

This is followed by the didactic analysis and implementation. This begins with a brief introduction to the didactic objectives of the learning scenario and continues with the definition of the target group and possible cooperation partners. The following section explains why the respective topic is relevant for *CultureNature Literacy*. Subject-specific learning areas are taken into account here as well as sustainability-oriented ones (in particular the *GreenComp* according to Bianchi, Pisiotis & Cabrera 2022, 14 f.). The time period in which the learning scenario should take place is then clarified.

The following section „HOW to proceed" represents the core of each learning scenario. The individual phases in the implementation of the CNL learning scenario are described step by step and supplemented with important information and references. Finally, there is a description of the materials and equipment required („WHAT will be used?") as well as information on where the learning scenario can take place. Each CNL learning scenario ends with a list of primary and secondary materials used.

The third project meeting of the CNL project team in Munich

The project's implementation regulations oblige the partners to meet twice a year, with the spring meeting always taking place online and the autumn meeting taking place in person or hybrid. Following the project meetings in Mallnitz (face-to-face) and Siegen (online), the third project meeting was organised by LMU Munich (Uta Hauck-Thum, Christian Hoiß). As a green event, the particular challenge was to offer an appropriate supporting programme that met the guidelines of green events (vegetarian catering, thematic focus, etc.). The event was entitled „CultureNatureLiteracy: Key school skills for shaping the future in the Anthropocene" and brought together experts from schools and universities. In addition to keynote speeches (Reinhold Leinfelder, Micha Pallesche), workshops and sustainability-oriented city walks were offered to connect the topic with the event location of Munich and the LMU Munich as a place of remembrance.

The work process

Regular online meetings (via Zoom) were held in parallel to the processes outlined above. These

were used for internal communication when working on the various task areas in Work package 2. The meeting in Munich also served to reach an agreement on the final design of the CNL learning scenarios and the digital CNL platform. There was an outlook on the current status, including a presentation of learning scenarios that have already been finalised. This provided the opportunity to clarify questions directly regarding the finalisation of work package 2, as well as to precisely co-ordinate the schedule and ensure the final distribution of tasks. The review process and the final feedback loops for the editorial revision usually took place by email or telephone.

The result

Work package 2 has achieved all its goals. The third project meeting was successfully held at LMU Munich in October 2023. A digital CNL platform has been created, which to date contains over 75 learning scenarios in 5 languages. The functionality of the CNL platform was tested by teachers and the CNL learning scenarios were trialled in the classroom. Qualitative empirical accompanying re-search was carried out in the form of participant observation as a qualitative method of social re-search.

Authors

Christian Hoiß, Mag. Dr. phil.,
is a Senior Academic Councillor at the Institute for German Language and Literature II at the Univer-sity of Cologne. He was at the LMU at the start of the project until 08/2023 and then moved to the University of Cologne during the course of the project. He continues to contribute his expertise to the project. His research focuses on cultural studies approaches in language and literature teach-ing, media-didactic implications of digital change and subject-didactic ESD research.
Contact: christian.hoiss@uni-koeln.de

Uta Hauck-Thum, Mag. Univ.-Prof. Dr.,
is a professor of primary school education and didactics at Ludwig-Maximilians-Universität in Mu-nich. She teaches and researches topics in the context of sustainability and digitality. She is cur-rently leading the Digital Equal Opportunities, BesserLesen and Poetik digital projects funded by the Federal Ministry of Education and Research. She is also a scientific advisor to the SchulTransform and Lernen:digital projects.
Contact: uta.hauck-thum@lmu.de