GEM – Courses

General Concept for the GEM-Courses:
Stories of Environmental Impact and Digital Solutions

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Sophie Tummescheit, Filmuniversität Babelsberg KONRAD WOLF, Germany

Premises

The high-level GEM course concept was designed during the application phase. The structure is based on experiences gained in previous international partnerships, such as "EMEX" and "OnCreate". The blended mobility approach, in which the student groups get to know each other in preparatory online courses, conduct joint research and learn the basics before creating tangible results together in an intensive workshop week, has proven to be successful.

Goals

Overarching goals

In the design curricula of recent years, it has been taught that for successful designs, knowledge of- and empathy with the stakeholders needs to be gained first, as the process steps of Human Centred Design, Participative Design or Design Thinking intend.
This is still common practice, yet usually "stakeholders" refer only to human beings and their needs.
Facing climate change, loss of biodiversity and other severe environmental matters, it is now time to change the course of action and pivot to "Nature Centric Design" in future-oriented curricula of media design and production. Nature shall be established as a stakeholder for creative projects of students. To do so students need to know what kind of impact their actions, their products and the use and consumption of which have, as well as developing a feel and empathy for nature.

The courses implemented by GEM shall shed light on how to offer solutions for curricular integration of sustainability according to the individual needs of the partner institutions. The detailed evaluation of feedback from students and tutors on the courses will be a key building block for developing recommendations for curricula integration.

Concrete learning goals

The courses vary in their concrete themes and framing, but share common overarching objectives are:
- Help each other out with challenges, learning how to co-create
- Using diversity as an inspiration for problem solving
- Identify specific ecological and climate problems
- Research existing knowledge for problem solving
- Train decision-making methods that factor in sustainability goals
- Co-creating new types of sustainable development opportunities
- Incorporate interdisciplinary knowledge as a source for design requirements and also artistic inspiration
- Generate knowledge that stimulates change
- Disseminate generated knowledge

- Be aware of the ecological and climate impact of developed designs and productions
- Learn how to work in international teams
- Knowledge, skills and attitudes statements out of the GreenComp The European sustainability competence framework

Challenges

One of the first challenges is to find suitable dates in a large and international consortium for the courses in which all partner universities can participate. In order to achieve this, we determined the availabilities for the first full year of the project in the first consortium meeting directly after the start of the project. For the following years, this should happen with the corresponding lead time. Once the deadlines are set, the following challenges remain to be addressed:

- Get numerous students interested, despite full study plans
- Reach goals in fairly small-time windows (Find solutions in just or even less than one week during the onsite courses)
- Create courses with tasks that appeal equally to the different disciplines of the partner universities
- Conduct courses with very different levels of knowledge, due to the different disciplines

Approach

The number of challenges is manifold when designing a new course, as the implementation of a course inevitably will reveal new aspects and potential for improvement, in addition to problems not foreseen in the planning phase.

Thus, we chose a research-based learning approach that embraces the principles of Action Research at the heart of our courses.

To set the stage and explore the relation between digital and physical learning spaces, we initiated a course very early on in the project, which gave us first insights into how students react to nature as a learning environment and its translation into digital worlds. This pilot course gave insights on how to plan the core courses for the GEM project.

PILOT RESEARCH
Pilot Course: Alternative Learning

ACTION PLANNING
Discussion of alternative approaches for problem solving
Concept Workshops

DIAGNOSIS
Narrowing down the problem
Identify key-improvements of the course design

ACTION IMPLEMENTATION
Selection of a course of action Learning Activity

SPECIFICATION OF INSIGHTS
Identify Conclusions
Evaluation of collected Feedback

EVALUATION
Impact of the course of action
Collecting Feedback from students and tutors

Action Research Cycle, added by own data
Based on: Susman/Evered 1978 cited in: Järvinen 2007

Scientific background

There are two predecessor projects that have tested the pedagogical approach of blended mobility for creative processes. Both projects EMEX and OnCreate have achieved good results with this approach.

While EMEX and OnCreate took place either online or on university premises, GEM wants to move away from traditional learning environments and take workshops out into nature. The environment is to act as a 'third teacher', as already described in the Reggio Emilia Approach (Duffy, n.d.)[1]. According to (A. Garden, 2022[2]), the outdoor environment allows students to connect more deeply with nature and develop a sense of responsibility while increasing their collaboration and creativity.
The project-based short term mobility courses that will be organised in different european countries with students and teachers with different academic background promise to be very fruitful. "[...] these course designs can also foster students' engagement with the actual (social, economic, natural, political) environment and the development of life-long learning habits. (Purg et al., 2018[3])"

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[1] https://fomcore.com/environment-as-the-third-teacher-an-introduction-to-the-reggio-emilia-approach/
[2] https://www.tandfonline.com/doi/full/10.1080/03004279.2023.2280720#d1e344
[3] https://onlinelibrary.wiley.com/doi/full/10.1111/jade.12101

Courses

Three different courses are planned. All courses aim to experiment with storytelling, new media and nature. Each of the courses will use a different angle to explore "Stories of Environmental Impact and Digital Solutions".

Planed Course Phases

Each course consists of three course phases: an online preparatory course, an intensive course of more or less a week, where all students are supposed to meet and at last a debriefing in which feedback is given to and by the participants.

1. **The preparatory online course**
   Students learn the basics, primarily in order to reach the same level of knowledge before the Onsite Course. In this phase the participants get to know each other and eventually do research together. They learn about common interests and they identify problems as well as methods to tackle those problems
2. **Onsite course / Workshop**
   This is planned to be a very practical course, in which students work hands-on. However, short inspirational theoretical Insight Talks from experts might be integrated to spark inspiration and to keep students aware of ecological problems to solve.
3. **Discussion of the results and feedback from experts**
   Feedback should be incorporated into on-site courses as often as possible. However, a final feedback session is essential, in which workshop participants receive feedback from the media as well as sustainability experts.

If there is a need to elaborate on the results, the tutors of the course will try to put the participants in contact with potential partners.

Planned Courses

1. **Year 1 - Arts for Future (2023 - Germany)**
   The workshop aims at developing convincing utopian-based narratives and collages by drawing on the three core principles of co-creation, interdisciplinary collaboration, and learning about artistic interventions and scientific innovations.

2. **Year 2 - Data Storytelling (2024 - Finland)**
   The data storytelling course will focus on the food and land use of the future. In this area, scientific data provides insights into the future that would otherwise remain elusive. This course aims to provide the student with essentials on information visualisation and how different visualisation techniques can be used to deliver narratives in an effective and easily understandable way.

3. **Year 3 - Digital Nature Challenge (2025 - Greece)**
   The Digital Nature Challenge will investigate methods, practices and techniques for creating new media narratives and experiences on global water resources and biodiversity, that (where possible) will be respectfully embedded within natural environments.