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**Teaching Digital Literature within a "Research and Teaching Partnership"
in a Transatlantic Blended Learning Environment**

Digital literature is created via programmable media and is usually produced, published, and read (interacted with) in an online environment, so what could be more natural than teaching digital literature online? This paper discusses a course, "Digital Literature and Arts II" (Fall 2007) that took advantage of the Internet to enable an online cooperation between teachers and students within a cooperative transatlantical teaching framework.[2] What follows are the practical experiences and lessons learned from conducting this cross-cultural class between Germany (Siegen University, teachers: Peter Gendolla and Jörgen Schäfer) and the U.S. (Brown University, teacher: Roberto Simanowski).

By discussing the learning activities in a networked environment, this paper will address organizational issues and will highlight the payoffs of cooperative teaching and cooperative learning. In this paper, I want to persuade both teachers of digital literature and students from different universities, cultural, and educational backgrounds to work online within an "Research and Teaching Partnership". The online environment provides a central location for teachers to prepare classes collaboratively. For students who don't have the opportunity to study abroad and thus can't take advantage of studying with students from other educational backgrounds, such a transatlantical course-offer is a welcome experience. The call to online networked learning embodied in this paper is based on the assumption that the world-wide pedagogy of digital literature is conducted within and as part of a wide range of interdisciplinary practices.

This diversity results in a mix of teaching approaches that can produce a collective body of knowledge, which future-researchers can draw on to analyze digital literature. Speaking from a literary studies perspective, we need to ensure a common ground related to the genre of digital literature or a foundation on which to discuss literary precursors to provide a coherent orientation for a debate among students. Once a common ground is found, scholars can turn to content-related questions that a work of digital literature embodies.

Course Description

This section presents the class structure, its organization, and summary of topics and works covered in the course "Digital Literature and Arts II". I will present the considered methodological approach applied in the Blended Learning class and discuss the goals of an online and face-to-face learning environment that turned students into researchers, critics, and self-directed discussion board moderators. The following approach was developed to conduct the class in Germany and the U.S.:

Phase 1: Teachers at both universities conducted face-to-face classes discussing identical topics within six weeks (spatio-temporaly separated) in Germany and the U.S.

Phase 2: Students formed transatlantical groups and prepared class presentations collaboratively by using online communication systems or the discussion board: these presentations were special studies on one assigned work of digital literature. Each group discussed one work in-depth by answering research questions provided by the instructors. Furthermore, students were asked to read assigned academic papers to complete their presentations. These presentations were prepared by the students from both universities collaboratively and presented face-to-face to their class in the same week.

Phase 3: The second phase served as a preparation for a final online-session conducted via a synchronous video-conferencing-system at the end of the seminar. Here, students were asked to adopt what they learned from the face-to face sessions and to apply topics from the online board discussions.

Phase 4: This was a phase of reflection and documentation. The groups prepared final Power-Point presentations which they uploaded to the online class forum. (cf. Schäfer et al. 73)

Teachers

At the time of writing, Peter Gendolla, Professor of Literature, Art, New Media and Technology at the University of Siegen is the Head of the Research Centre "Media Upheavals" and the chair of its sub-project "net literature." Jörgen Schäfer is a Postdoctoral Research Fellow at the Research Centre "Media Upheavals" (sub-project "net literature") at the University of Siegen. Roberto Simanowski (Ph.D.) is an Assistant Professor; Department of German Studies at Brown University, Providence, Rhode Island, USA.

All teachers share the same research interests in digital literature, but approach the subject matter from different points of view. They had already jointly conducted a classroom-based workshop on "Digital Art and Literature I: Close Readings" at Siegen University in October 2006.

As all the teachers prepared for class sessions together in an ongoing critical discussion on works, academic papers and assignments, the workload for all professors involved in preparing course materials was high.

In spite of the heavy workload, this transatlantic cooperative approach produced a wealth of benefits for teachers and students, including more in-depth research questions, insights, and observations.

Students

A total of seventeen students from Siegen University and four students from Brown University participated in the class. Students from Brown University were majoring in a variety of subjects: Chinese, Music Theory, Management, and Digital Aesthetics; Literary Systems; Literature and languages or Computer Science. German participants were mostly students pursuing a Bachelor or a Master of Arts in Literary, Cultural and Media Studies. Their experience with digital literature, art, and new media ranged from competences in programming to theoretical knowledge acquired in classes on interactive literature. They were able to draw enlightening connections that ranged from programming knowledge related to n-grams when discussing Wardrip-Fruin's "News Reader" to discussions of Shklovsky's theory of "defamiliarization" when talking about Camille Utterback's "Text Rain". These inputs and links to external, information and experiences definitely enriched the students discussions held on the discussion board. While discussing asynchronously on the provided discussion forum, students had more time to elaborate on answers and to draw on knowledge they already had and made use of to adopt for the given assignments.

Student Groups

The students were divided into five groups, which usually consisted of one American student and three to four German students. These groups were designed so that participants could draw on their varying backgrounds to contribute their ideas to a pool of collective group knowledge. In the end, each group gathered its collaboratively compiled outcomes from the discussions and provided a Power-Point presentation on the online content management system to document their results. They also used this Power-Point presentation as a basis for presenting their research face-to-face in their classes: each week, an assigned group presented its results to the class.

Logistics

Due to logistical issues, (e.g., the six-hour time difference and different academic schedules—Brown University's Fall term was from September 6th - December and Siegen University's was from October 17th – February 6th) both universities had to adjust sessions to hold parallel courses. We conducted five transatlantic cooperation sessions where a tandem group discussed its results face-to-face in the U.S. and in Germany.

Parallely, an assigned group of students undertook special studies for an appointed work of digital literature by using the discussion board for collaborative work conducted in English. The outcomes were then presented to their groups in the five face-to-face sessions.

Online Learning Environment

We provided a secure, asynchronous discussion board as the central place for online interaction and communication between group members (created in TYPO3). We assumed that students already participate within the Web 2.0 environment and, therefore, shied away from implementing a synchronous communication tool.

Instead, students could provide alternative contact information on their member profile. In fact, 59 percent of the German students used other communication systems (e.g., email, skype, ICQ, messenger) to work together on their assignments. These communication systems were used by German students who couldn't meet face-to-face and who wanted to discuss issues in real-time with online tools that allowed them to ask questions and get answers promptly. Due to the time difference, American students didn't participate in these real-time discussions, they used the discussion board instead.

Seminar Content

Students need to be familiar with a number of divergent works to be able to discuss the varieties of digital literature and to approach new reading and interpreting strategies succesfully (cf. Hayles). The online environment helped to meet that need by providing a discussion board for time permitting in-depth discussions among students. In the face-to-face sessions teachers used their literary and cultural studies perspective to help students develop abilities for testing concepts of "traditional" literary theory critically. Moreover, students were asked to describe as well as to evaluate the structures, forms, aesthetics, and techniques of assigned works of digital literature in respect to their theoretical and methodological competences within assigned research questions (cf. Schäfer et al. 69). In the real-time-sessions, the class discussed intermediality, multilinearity, interactivity, and programming as features of digital literature and art with reference to specific examples.

Students worked collaboratively in groups on their group assignment. They explored the web for related information, read academic papers provided by their instructors, and discussed their findings and observations on a secured online class discussion forum.

As a consequence of the Blended Learning class held transatlantically, this course embodied a workshop character that would have covered its material differently in another formatted class. The German students worked closely in groups and debated on all works of digital literature collaboratively—in class and in their group discussion board. Thus they developed a common ground of knowledge and a certain shared expertise. This in-depth learning wouldn't have developed in an entirely face-to-face class.

Within this environment, students were engaged to develop their own thoughts, views, and insights. The teachers accompanied the process in face-to-face sessions and commented on outcomes by posing questions and giving valuable hints to direct the students towards new perspectives.

In the student evaluations, most of the participants reported that they learned more in this transatlantic blended leaning class.

Works Discussed

Installations

Session 1/Group 1:
Project: Text Rain (Camille Utterback und Romy Achituv)

Research questions:

o How does Utterback transform Zimroth's poem "Talk, You"?
o Could this poem be replaced by another text?
o What are the main differences between fixed texts and texts in motion?

Session 2/Group 2:
Project: Deep Walls (Scott Snibbe)

Research questions:

o What are the main differences between traditional ("inter-passive") and interactive art?
o How are we to understand the grammar of interaction, the (spatial and temporal) structure and the applied symbols of Deep Walls?

Textual Instruments/Instrumental Texts

Session 3/Group 3:
Project: News Reader (Noah Wardrip-Fruin et al.)

Research questions:
o How does Wardrip-Fruin define "playable media"?
o What are the differences to computer games on the one hand, to literary texts on the other hand?
o How are "instrumental texts" differentiated from "textual instruments"?

Digital Photography

Session 4/Group 4:
Project: Face Codes (Andreas Müller-Pohle)

Research questions:
o What are the roles, features, functions of photography in traditional literature?
o Is the text imprinted on the faces the "genetic" makeup of the image itself or rather the fingerprint of the photographer?

Mapping Art

<u>Session 5/Group 5:</u>
Projects:
>George Legrady: <u>Making Visible the Invisible</u>
>Mark Napier: Black and White
>Josh On and Futuremore
>Golan Levin: <u>The Secret Lives of Numbers</u>
>Martin Wattenberg: Shape of Song
>Greyworld: The Source

Research questions:
o Are there relationships between maps in general, mind maps, concept
maps and mapping art?
o What is the relationship between content and form in mapping art?
o What is the common ground, what the difference between the aesthetics of mapping art
and the aesthetics of ready-mades and photography?

Environmental Influences

Along with the research questions, students were given links to theoretical papers provided in an electronic reader in the online discussion board. These academic readings formed the common theoretical ground for the tandem groups' research and analysis. The discussion board was open for all students to elaborate on the projects and accompanying research questions. Moreover, the face-to-face classes that were held each week while the discussion board was open provided another source of inspiration, insights, and knowledge. Via the online communication system, students shared what they learned in the face to face meetings with their counterparts. This dynamic broadened the classroom facilitated, intercultural collaboration between students from different courses of studies to foster multifocal perspectives.

Each group collaborated on their class presentations, solving problems and discussing ideas brought forward from the research questions and other issues. Teachers did not moderate the discussion board but encouraged the students to work together without their direct intervention. Generally, the discussion board provided space for reflections and discussions while the face-to-face meetings with the teachers served as the place for prompt intermediation.

Cultural Influences

Generally speaking, students from different cultures didn't react differently to the course material itself—only in their approaches to the material. These divergent methodological approaches complemented each other. The overall discussions were enriched by the students' differing views and complementary perspectives that brought a panoply of meaning to the projects and a wide range of perspectives and insights into the research questions.

The board messages of Brown University students demonstrate that the student groups approached the course material differently: Brown University students worked critically with an established hypothesis on digital literature and art that they developed together in class. This hypothesis served as a starting point for all other evaluations and discussions on primary and secondary literature and allowed to prescind the topics on various levels. In contrast, German students used secondary texts mainly as a source to understand the assigned work of digital literature and to apply the terminologies used in an academic paper correctly. Thus, they worked closely with the given academic papers without prescinding from the contents read. Thanks to the collaboration with students from other educational backgrounds, the transatlantically held Blended Learning class helped to experience other approaches for dealing with works of digital literature and its accompanied research papers.

Student Performance

Students were not only free to use their preferred communication system, they were also free to organize their group interactions. In two groups, the entire group participated in the discussion online (Group 3 and 5). The other groups selected a speaker for the German team who communicated with the American tandem partner, while all other group members discussed issues face-to-face or in synchronous meetings within a chat system (Groups 1, 2, and 4). To show some dimensions of the overall online participation, I will present the participation in the online environment in numbers: In total, 13 students participated on the discussion board by contributing at least one post. Within a month (10/23/2007 – 11/23/2007) students wrote 59 posts.

The average number of posts per student was 5; in total, 15,936 words were written (average number of words: 270), the longest post by an American student contained 2,118 words. The longest post by a German student was about 1,696 words, but note that the online discussions were held in English. These dimensions show how thorough students were when discussing works of digital literature and how intensively they worked on their group presentation via the discussion board.

Asynchronous communication systems such as the discussion board allow the time for thoughtful discussions and preparations, moreover, these discussions are permanent and able to be reviewed. Such detailed examinations of the classes subjects couldn't have been conducted on synchronous face-to-face communication channels as words are ephemeral and cursory with unclear conversation threads. Further, German students wouldn't have had enough language skills to react spontaneously and adequately to an American student's comments. We observed these phenomena in the final session that was held via an online video-conferencing system in real-time. Here, German students had difficulties organizing their ideas and reacting promptly to the American students. Unfortunately, it was the first and also the last session that was held altogether synchronously. All participants, the teachers included, weren't trained in conducting a joint session simultaneously. Implementing the asynchronous discussion board proved to be the most effective way for students to research collaboratively.

The online discussion board provided opportunities to consider the matters discussed in the face-to-face environment, and the depth of the student responses reflected this. The students' learning activity was analyzed for a master's thesis (Tomaszek). To analyze message content in computer supported collaborative communication systems in depth, a special coding scheme was applied to observe cognitive, metacognitive, and affective learning activities performed in the discussion board.

According to the author Anna Veldhuis-Diermanse, researcher on computer-supported collaborative learning, cognitive activities can be described as "the thinking activities students use to process the learning content and to attain their learning goals. Types of information presented in learning contents are, for example, facts, concepts, formulas, reasoning, arguments, definitions, theories, visions and conclusions." Metacognitive activities are grounded on these cognitive activities; the process of metacognition deals "with the knowledge and skills the learners bring to bear on the overall cognitive activity: managing and controlling their cognitive learning activities." Affective learning activities are not related to the content of the subject matter but they are considered to be important in the learning process. Vermunt states that feelings occurring during a learning interaction can lead to a state of mind influencing the learning process positively or negatively (cf. Veldhuis-Diermanse).

A content analysis of the posts revealed that 53 percent of the discussions were related to a cognitive learning activity, 24 percent was meta-cognitive and 23 percent were within an affective activity.

While discussing digital literature and art in the online based environment collaboratively, students expressed the following cognitive activities: agreement/disagreement (25%), they referred directly to a student's contribution (51%), asked content directed questions (33%), presented a solution, problem or idea (47%), referred to external information (59%) or external experiences (15%), and evaluated all incoming external information (59%). On the meta-cognitive level, students presented or asked for approaches to carry out tasks (24% and 5%), explained the approach they already adopted in 22% of the 59 posts and explained information in answering questions in 31 posts. The results show that using an asynchronous discussion board in courses on digital literature and art may be a good starting point to promote discussion among students and to turn them into researchers and critics of digital literature.

**Benefits of a Research and Teaching Partnership
in a Blended Learning Environment**

Blended learning environments within a teaching partnership can facilitate learning to broaden classrooms across the world and bring together students with diverse backgrounds to study and to discuss digital literature. Online communities bring both the strength of asynchronous and synchronous environments.

As there may be language issues, discussion boards provide the chance for nonnative speakers to translate materials and to elaborate on the discussion topics.

In the presented class, the asynchronous online environment allowed students time to ponder questions posed and craft well thought out responses to each other's posts.

Face-to-face communities provide a social context and participants can discuss events in real time and reply to each other. However, a solely face-to-face environment can not overcome the logistical difficulties to bring students from two universities together.

Digital literature is still a young research field and thus demands a wide range of backgrounds to develop new theories, approaches, and interpretive techniques needed to address its multiple facets.

Researchers from diverse backgrounds and cultures can work collaboratively online within an "Research and Teaching Partnership" to form this collective body of knowledge. Using a blended learning environment, diverse cultural groups from interdisciplinary backgrounds can cross countries to do class readings and come to terms with new theories online. This course is a successful example of such courses, and this is only the beginning.

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