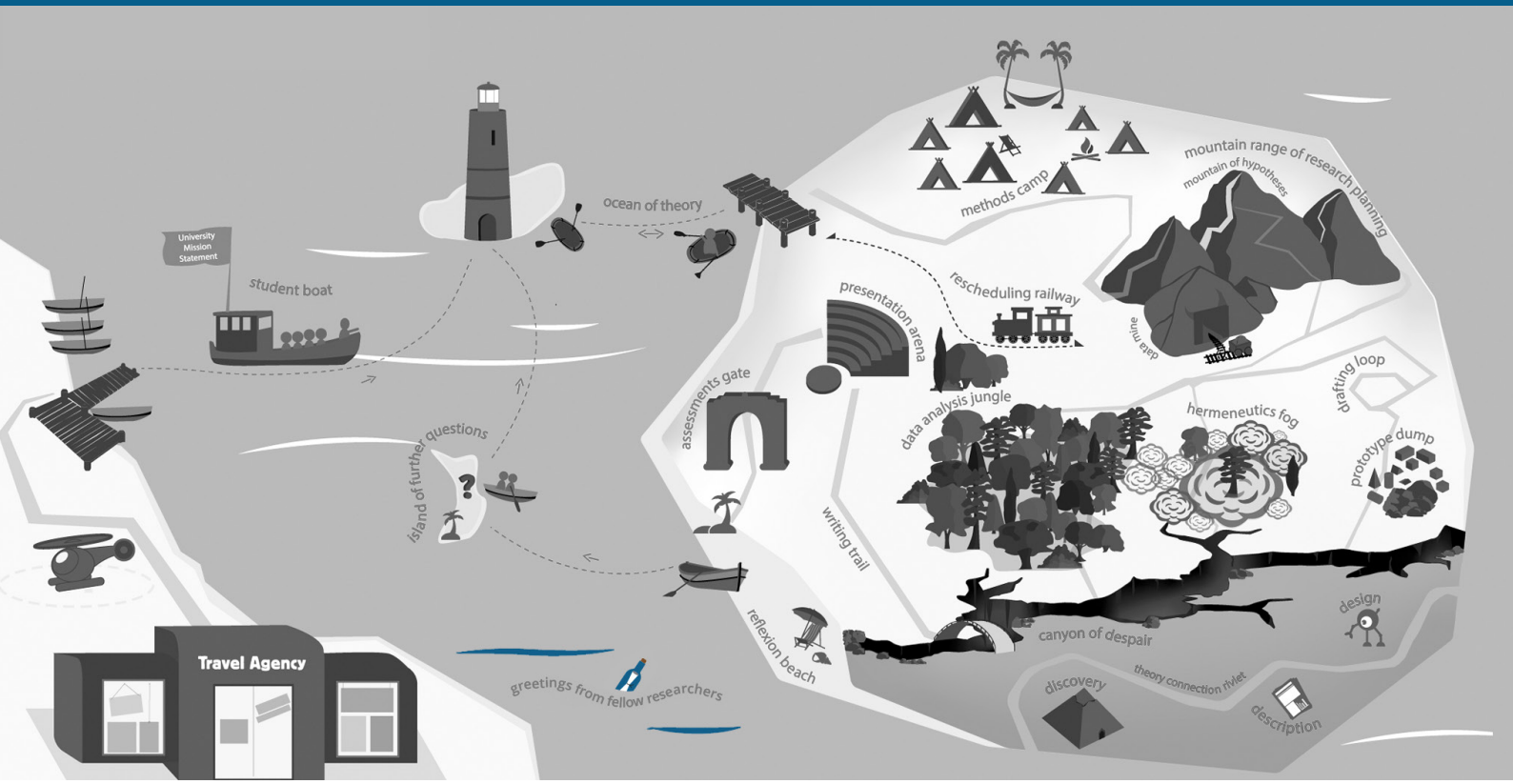
Examples & Good Practices

Chatbots and design thinking as topics for student research



KEYWORDS:

DIGITAL JOURNALISM, CHATBOTS, DESIGN THINKING, INTRODUCTORY PHASE OF STUDIES

Kaiser, Markus (2024). Chatbots and design thinking as topics for student research. Island of Research: Example & Good Practices. https://doi.org/10.25592/uhhfdm.17265

Metadata

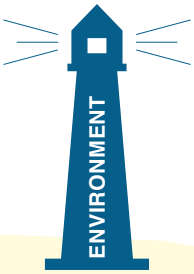
Name: Prof. Markus Kaiser

University: Technical University Nuremberg

Subject: Digital Journalism

Abstract: The research-based learning provision presented here is aimed at first-year students of technical journalism/technical PR and gives students the opportunity to research chatbots and get to know the Design Thinking Method.

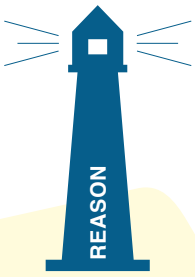
Special feature: Practical cooperation, Design Thinking Methods, Chatbots-Product



- TH Nuremberg
- Journalism
- Bachelor students (2nd semester)
- Implementation: 1 time
- 6 CP & 6 SWS
- Number of students: 20

ENVIRONMENT:

The research-based learning provision took place in the 2018 summer semester at Nuremberg Institute of Technology as part of the Digital Journalism seminar. It comprised six semester hours per week and was aimed at around 20 second-semester Bachelor's degree students. The examination was based on active participation, which was not graded. Thanks to the Teaching Research - Research-based Learning funding programme at Nuremberg Institute of Technology, I had the opportunity to combine this mandatory module with the teaching format of research-based learning and thus teach students the basics of scientific work right at the beginning of their studies. It was helpful that the students also attended the course on the introduction to academic work in the second semester, so that the seminar content could be linked easily and I no longer had to address some basic topics or methodological approaches in my seminar. In terms of content, the course dealt with the design of chatbots and the creation of initial dialogs.



- A deficit or a conflict
- A personal professional concern
- An impulse from my environment

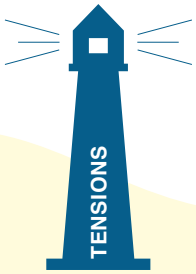
REASON:

There were several reasons why I decided to implement research-based learning in this course. One formal reason is the funding programme of Nuremberg Tech: Through this programme, teachers who want to promote research-based learning among Bachelor students receive financial support which helps to reduce the associated workload. However, a much more important reason for me is my personal interest in new teaching formats that move away from the traditional lecture and ensure that students engage with topics in a deeper and more sustainable way. Research-based learning offers a great opportunity to link practice and theory early in the programme and to encourage students to adopt a research-based approach right from the start of their studies. In addition, as a lecturer I can deal with interesting topics and learn new things in this way - research-based learning is therefore great fun for me too.

- 1 semester
- Embedded in a course
- Curricular & mandatory
- Research process: systematically guided
- Feedback: peers, instructors, external persons
- Research results: public

IMPLEMENTATION:

The structure of the seminar can be outlined in three phases, which of course merge seamlessly in reality and cannot be clearly distinguished from one another.
In the first phase, students were given an insight into the theoretical and methodological foundations of the seminar. The focus was on analyzing existing chatbots. On the one hand, the current state of science on chatbots was examined from a technical and psychological perspective. On the other hand, the basics of the creative method Design Thinking were also explained in this phase. The following research questions arose in this context: What are the advantages of using design thinking in the development of chatbots? How do agile innovation methods affect user acceptance? What leads to a chatbot that is accepted by users? How specific or general do use cases for chatbots need to be?
The second phase was then about the actual research work: the students split into groups of four and I supported them with active team building. The students then embarked on a design thinking process, designed chatbots based on the theoretical principles and simulated dialogues. This resulted, for example, in the chatbot Schorsch, which could help prospective students at Nuremberg Institute of Technology to find suitable degree courses. A special feature of this phase was the external support from representatives of Virtual Identity, who provided the students with advice and assistance and thus created a practical link to the topic of chatbots. The third phase then involved linking theory and practice: the students presented the research results in their groups and discussed the extent to which their own experiences matched or contradicted the current state of research.
Due to the design thinking approach and the fact that the students were only in their second semester, the research was repeatedly reflected on together throughout the entire process and the individual groups received feedback from their fellow students, the external practice partners and me.



Tensions betweeen demands for...
- Professional and interdisciplinary skills development
- Workload and resources available to instructors
- Changed instructor role and existing teaching tradition

TENSIONS AND CONTRADICTIONS:

A fundamental tension of research-based learning for me is that this type of seminar design is very instructive for the students and I enjoy it a lot, but it also consumes an incredible amount of resources on my part and means a lot of work. Although the workload can be minimized in one place or another, e.g. through the financial support of Nuremberg Tech or through cooperation with practice partners who you already know well and therefore have to make fewer agreements, research-based learning always involves a lot of effort. On the one hand, I try to resolve this tension by usually only choosing one course per semester to implement research-based learning. On the other hand, I also have to accept that good teaching has something to do with passion and can sometimes take more time.

There were also tensions and contradictions among the students in the cohort. Some students were enthusiastic right from the start and found this type of learning very fruitful, while others were unable to adopt the research-based mind-set. Precisely because the students were still in their second semester, it can happen that some drop out of the course or seminar. This is a particularly bad starting point for group work and topic identification processes if a team member drops out during the research. To prevent this problem, I focused on the theoretical and methodological discussion in the first part and only formed the teams after a few weeks. This gave the students a little more time at the beginning of the seminar to decide whether they wanted to continue with the seminar without this having a negative impact on the teams.

Another challenge is a contradiction within the university. On the one hand, there is an increasing demand to deal with digital and current topics (such as chatbots). On the other hand, there is often a lack of good infrastructure at the university, which makes these demands more difficult to meet. For example, we often had problems with Wi-Fi at the university during our seminars or there was a lack of power sockets, which meant that students were unable to work well on their projects. These are minor problems in comparison, of course, but they get in the way of work and take up space and time that would be better used for content-related discussions.

OBJECTIVES & VALUES

- Developing and acting on scientific curiosity
- Dealing with mistakes and failure
- Acquiring methodological knowledge
- Collaborating with external project partners

EFFECTS:

One of my intended effects was for the students to become active researchers early on in their studies as a result of the format. I wanted them to experience the research process independently, develop critical thinking skills and understand that errors and new beginnings are fundamental to their own research. The last two points in particular are often associated with frustration and disappointment. To counteract this, there was no grading for the teaching research project in this seminar. This helped the students to accept feedback differently and to focus on the content aspects of the research project. The course also had some unexpected effects. For example, the group formation I supervised led to the students mixing and networking in a completely different way. That was my hope, but I would never have thought that the group members would interact so harmoniously with each other and stay in contact beyond the seminar. The seminar also had an impact on me as a teacher. I made new contacts with lecturers from other faculties who are also interested in the topic of chatbots, which led to a rich exchange of perspectives. In addition, the seminar was an inspiration for my research, which led me to publish a scientific article about the seminar.

Further and in-depth considerations on this topic, which were published in the publication Journalistic Practice: Chatbots, can be viewed here.

Link: link.springer.com/book/10.1007/978-3-658-25494-0