TEACHING CASES

How to Teach Digital Competencies

2020-2023

DC | digital curriculum

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1 TEXTUAL ANALYSIS

ADVANCED GRAMMAR

INFORMATION

Teacher: Marie Møller Jensen

Faculty: Aalborg University, Humanties

Discipline: English

Course: Advanced Grammar

Level of study: BA and MA

Teaching method: Lecture and small class teaching

Number of students: 20

Duration: Short series of activites

MOTIVATION

The aim of the course was to introduce students to empirical methods in linguistics to show them that knowledge of grammar is not a static skill but can be used actively to investigate language in different contexts.

ACADEMIC OBJECTIVE

The academic objective was to increase focus on empirical methods – including digital methods – such as:
- Corpus linguistic methods in the investigation of diachronic language change in English
- Synchronic comparisons between languages
- Quantitative stylistic investigations

USE OF TECHNOLOGY

- Corpora
- AntConc

This technology is freely available, and the teacher knew how to use it properly for this type of activity.

OUTCOME

The students got some outcome of the course as they worked with and actively used digital and empirical methods and materials.

⚒ ACTIVITIES

The students did all activities in class and the time that was spent on the different aspects of the teaching varied from week to week as there were short discussions most weeks. One entire session was dedicated to the students' own corpus explorations.

💡 RESOURCES & SUPPORT

- The students were given academic articles and links to the corpora.
- The students were provided with an introduction on how to use corpora through instructions.
- They were also given feedback in class, and they discussed the results in their groups.

⚠ CHALLENGES & ADVICE

A significant challenge with the course was that some students were a bit afraid of working with numbers and they also found it tricky to extrapolate from patterns found in the corpus and use their knowledge of language in relation to their usefulness.

A good piece of advice for other teachers is to give students the opportunity to explore their own corpus in class.

CLOSE AND DISTANT READING WITH VOYANT

ℹ INFORMATION

Teacher: Jens Lohfert Jørgensen

Faculty: Aalborg University, Humanties

Discipline: Nordic Studies

Course: Contemporary Theories and Methods in Scandanavian Studies

Level of study: MA

Teaching method: Lectures, small class teaching and teaching by students

Number of students: 19

Duration: One session

♡ MOTIVATION

Students are theoretically aware, but not methodological so. Digital methods offer a specifically methodological contribution to literary studies that might even lead to a greater general methodological awareness.

◎ ACADEMIC OBJECTIVE

The academic objective is to introduce the students to distant-reading tools, focusing on how they can be combined with close-reading methods that they are familiar with. The objective is also to make the students aware of the possibilities that such tools offer.

💻 USE OF TECHNOLOGY

* Voyant

Voyant is relatively easy to learn how to use and is well suited to stimulate the students' appetite for experimenting with digital methods. Furthermore, the University of Copenhagen local version of the software contains some pre-formatted corpora that are relevant to students of Scandinavian literature.

🔧 ACTIVITIES

- The students read texts that introduced them to distant reading as a method and to the possibility of combining it with close reading methods before class.
- Based on these texts and additional material, the students are introduced to distant reading as a method in literary studies in class.
- Afterwards, the students are introduced to Voyant Tools and experiment with these, and they are introduced to the group work in class.
- They work in groups on an issue that they have identified in either a pre-formatted corpus or in literary texts that they themselves upload in Voyant, making use of self-chosen digital tools which is presented and discussed in class.
- This leads to a general discussion of the usability of distant reading tools in the students' coming literary projects in class.

💡 RESOURCES & SUPPORT

- The students are given relevant articles, links, examples and references.
- The students are supported through instructions, feedback, discussions and presentations.

☑ OUTCOME

The students achieve a general awareness of distant reading as a method in literary studies and a specific awareness of the possibility of combining distant reading with close reading methods in literary studies. They get hands-on experience when using Voyant and in working on a self-identified issue. Furthermore, they get an awareness of how time-consuming distant reading is, of problems one meets when doing so, and of the heuristic limitations of distant reading.

⚠ CHALLENGES & ADVICE

The number of pedagogically appropriate articles and book chapters on distant reading of Scandinavian literature and on distant reading as a methodological tool in literary studies in Danish is (still) limited.

Good advice for other teachers is to obtain and test access to Voyant in order for the students to be able to use the program at the scheduled time.

COUNT YOUR TEXT: DIGITAL TEXT ANALYSIS

INFORMATION

Teacher: Ulf Dalvad Berthelsen

Faculty: Aarhus University, Humanities

Discipline: Nordic Studies

Course: Elective: Introduction to Digital Text Analysis

Level of study: MA

Teaching method: Small class teaching and supervision

Number of students: 15

Duration: Whole course

MOTIVATION

Digital methods have a great potential in the Nordic research field, where all parts of the subject (language, literature and media) have texts that are central for this type of analysis. By implementing these as an elective, it makes it possible for the teachers to try out different ideas – at least in terms of the content and didactics that relates to the integration of digital methods at Nordic studies.

ACADEMIC OBJECTIVE

The academic objective is to use digital methods in text analysis. The course 'Count Your Text' is meant to introduce the students to research on digital humanities with a focus on the use of digital methods in text analysis. The students are introduced to theoretical approaches and the methodological and scientific questions that are connected to this field of research. This course works with both literary and non-literary texts through case analyses.

USE OF TECHNOLOGY

- Python with a focus on the Pandas & SpaCy modules
- Github (sharing Notebooks and data)
- Jupyter Notebooks (used for group work and the students' own projects)
- Guthenberg Projects (access to public domain-literature)
- YouTube (tutorials)
- The students were asked to download the Anaconda suit – a package that gives them access to all the necessary tools they need during the course (Python, Jupyter, Spyder and Terminal). This part was easy for them and they used Github to easily distribute Notebooks and text data.
- The students were provided with texts, notebooks with assignments and links for other resources on YouTube.

🔧 ACTIVITIES

Preparation for class:
- The students had to read academic texts about digital humanities and case examples, as well as theoretical and scientific issues.
- They watched specific videos on YouTube that introduced them to Python programming, like working with strings, lists, regular expressions or the functionality behind the Spacy module.
- In groups they had to make presentations on case analysis of DigHum projects and a Python script they had made themselves.
- Before the exams, they also had to perform reflection tasks.

During class:
- The teacher made a presentation concerning the texts that the students had to read.
- Each week, a student presentation was performed and discussed (case analysis or Python-script).
- The students worked together in smaller groups with the week's programming assignments, that were prepared in Jupyter Notebooks by the teacher.
- The teacher would walk around the classroom and participate in discussions on codes and the exam.

💡 RESOURCES & SUPPORT

- The students were provided with relevant texts, notebooks with assignments and links to other ressources on YouTube.
- For students to prepare presentations in class they were provided with work questions in Notebooks. Furthermore, they had to give feedback on their presentations and reflection assignments.
- The teacher was accessible during class to help with technical questions and issues.

☑ OUTCOME

Most students were optimistic about the elective and the ones that came the furthest, made it further than expected. At the evaluation, most students expressed that they felt equipped enough to work with this subject on their own, and in general, the students were engaged in the course and concrete text analysis. Therefore, the elective ran above all expectation.

⚠ CHALLENGES & ADVICE

A challenge was getting access to data which could increase the student's enthusiasm. There were many ideas for exam projects; however, it could not be done as the texts were not available to us. Something similar happened to the students that were interested in media texts and social media. It was a matter of legal issues, as it was unclear what was possible or legal in relation to the law on GDPR.

The teacher encourages others to produce a dataset that teachers and students can freely use in relation to the teaching and exams. The development of a course like this is very time consuming, so be patient. It takes a long time to develop new teaching plans and prepare this course, so make sure that it is possible to spend extra time.

COUNT YOUR TEXT V_2

ⓘ INFORMATION

Teacher: Ulf Dalvad Berthelsen

Faculty: Aarhus University, Humanities

Discipline: Nordic Studies

Course: Count Your Text_v_2

Level of study: MA

Teaching method: Small class teaching and supervision

Number of students: 12

Duration: Two sessions

♡ MOTIVATION

Improve the existing course by adding an intermediate module to an intro-level course, as well as improving my own programming skills.

◎ ACADEMIC OBJECTIVE

The students should get a sense of what topic modelling is and how it could be applied to their own data set, as a part of introducing text analysis in Python.

USE OF TECHNOLOGY

- Python (Gensim, SciKit Learn and pyLDAvis-modules)
- Jupyter Notebooks

The course is an intro-level programming course introducing students to text analysis in Python, therefore topic modelling was introduced using Python packages.

☑ OUTCOME

I prepared two modules and treated them as pilot projects. Students were introduced to the subject, but they are probably not ready to apply the methods on own projects based on this limited introduction to the technology.

ACTIVITIES

- Students watched an introduction to topic modelling on Youtube (30 mins, before class)
- The teacher introduced the students to topic modelling as a lecture in class
- Students worked their way through the prepared notebooks containing prepared code examples and Instructions (2 hours)

RESOURCES & SUPPORT

- Data set
- Notebooks
- Youtube-video
- Jupyter notebooks explaining the code examples in manageable sections

CHALLENGES & ADVICE

Firstly, we seem to be reaching the limit for what we can do without addressing statistical issues. This is a challenge since very few of the students have any mathematical background.

Secondly, I am approaching the limits of my own comfort zone. This makes it much more time-consuming to prepare the sessions and also more difficult and timeconsuming to troubleshoot the material.

ONLINE DATA ANALYSIS

ⓘ INFORMATION

Teacher: Thessa Jensen

Faculty: Aalborg University, Humanities and Social Sciences

Discipline: Interactive digital media

Course: Concept development of interactive digital media

Level of study: MA

Teaching method: Lectures and workshops

Number of students: 21

Duration: Two sessions

♡ MOTIVATION

To learn more about the topic myself and to see possibilities and challenges in relation to what big data can be used for and not be used for.

◎ ACADEMIC OBJECTIVE

Introduction to tools for data scraping and preperation of data for analysis.

USE OF TECHNOLOGY

- Online free programmes like Youtube's API and Voyant
These are easily accessible and easy to learn

☑ OUTCOME

Several students used data collection and analysis in their projects afterwards. Increased awareness of which programs are freely accessible online, as well as increased awareness of the possibilities of data collection and data usage among colleagues.

🔧 ACTIVITIES

- Lecture - about 45 minutes
- Introduction to tool, work with tool - about 90 minutes
- Discussion on how the tool works and what it can be used for – about 45 minutes

💡 RESOURCES & SUPPORT

The students were given:
- Online programmes and a dataset
- Possibility to ask questions after the lectures via moodle
- Instructions and help during the workshop
- Preparation of individual datasets, which relate to their project

⚠ CHALLENGES & ADVICE

Much more needs to be learned to make this an easy tool for project writing. Additionally, the entire GDPR area and data ethics pose a great challenge.

DATA SCRAPING FROM REDDIT

ⓘ INFORMATION

Teacher: Line Nybro Petersen & Mogens Olesen

Faculty: University of Copenhagen, Humanities

Discipline: Nordic Studies and Linguistics (Media Studies)

Course: Media Culture and Media Use: The Mediatization of Culture + Media and Sports

Level of study: BA & MA

Teaching method: Lectures and group work

Number of students: 50

Duration: Short series of activities

♡ MOTIVATION

Increasingly media studies is oriented towards digital data collection methods as supplement to qualitative methods and digital ethnography.

◉ ACADEMIC OBJECTIVE

Introducing the students to quantitative data collection methods when researching the internet, especially social media platforms.

⌨ USE OF TECHNOLOGY

- 4CAT (for data scraping reddit)
- Voyant (for sentiment analysis and visualizations)

Initially we wanted to use the Twitter API, but as a consequence of change in ownership on Twitter and the following complications around access to the API, we decided to focus on reddit and 4CAT. As it turns out 4CAT was a much simpler tool for collecting the data. We used Voyant for processing the data since it is open access and there are lots of online tutorials for students to consult.

☑ OUTCOME

Each group conducted a pilot study based on their data set and the affordances in Voyant. Emphasis was on their experiences with the digital methodologies more so than a focus on the content they analyzed. It was clear that some groups had taken on the challenge of playing around with Voyant more to heart than other groups. Many groups did see lots of potential in using these digital methods in their studies going forward.

🔧 ACTIVITIES

- The students were divided into groups and had to decide on a topic and how to limit the data they wanted to collect (subreddit, dates, keywords etc.)
- We helped each group with downloading one or two datasets from 4CAT.
- They worked with their dataset for two weeks using Voyant.
- Each group presented their findings and gave reflections on the process at a joint symposium for the two courses involved.

💡 RESOURCES & SUPPORT

The students were given:
- Two methodological texts
- Link to a Voyant tutorial on YouTube
- Some students attended the Open Lab at campus for more assistance with their data sets.

The students further recieved:
- An introduction to 4CAT and Voyant at the opening joint seminar (by SC DataLab)
- Feedback during group work sessions in class
- Feedback on group presentations

⚠️ CHALLENGES & ADVICE

We should have spent more time introducing the students to the different features in Voyant and have guided them more closely in their group work.

We suspect that Voyant and Reddit are not an ideal match, as Voyant seemingly cannot reflect the organisational structure on Reddit. Or perhaps it is simply that we do not know how to make Voyant show Reddit features such as timestamps, discussion threads and metadata like numbers of upvotes and downvotes.

This project could easily extend for more lessons and especially getting familiarity with Voyant is something that takes time and needs more hands-on experience before the students can fully utilize it in their analysis. Also, as a teacher, make sure to have a fairly good idea of specific ways that Voyant can be used to examine the datasets.

DIGITAL DRAMA ANALYSIS

ⓘ INFORMATION

Teacher: Ulla Kallenbach & Annelis Kuhlmann

Faculty: Aarhus University, Humanities

Discipline: Dramaturgy

Course: Theatre History I

Level of study: BA

Teaching method: Lectures and workshops

Number of students: 50

Duration: Short series of activities

♡ MOTIVATION

To explore the applicability and relevance of digital drama analysis to theatre history and dramaturgical practice.

◎ ACADEMIC OBJECTIVE

The objective was to develop and employ digital tools for drama analysis. As part of the digital curriculum, we have been finishing a pilot project that has developed a series of digital tools of analysing drama and we have introduced students to existing digital tools and corpora.

⌨ USE OF TECHNOLOGY

- Voyant
- AntConc
- RStudio

Voyant and AntConc are relatively simple and readily available tools and easy for students to get a taste of how digital analysis of drama can inform their inquiries. RStudio allows for more advanced analysis but is also challenging to use in class.

☑ OUTCOME

We developed a new set of digital tools in RStudio, which will be available online and presented in a series of tutorials.
The students got an awareness of using digital methods to analyse drama texts and understand these as theatre historical sources. Students later applied digital methods in exams.

🔧 ACTIVITIES

- The students were given an in-class demonstration of a range of digital tools.
- They then worked with the tools in class in follow-along sessions.
- Finally, they worked independently in tutor-led workshops.

💡 RESOURCES & SUPPORT

- The students were given links to Voyant's website and for downloading AntConc prior to class.
- They were also given the relevant test corpora and lists of stop words.
- The students received written instructions as well as links to online tutorials.
- The student's had sessions with the instructor to install programmes and download corpora in preparation for class.
- The classes featured teacher-led demonstrations.

⚠️ CHALLENGES & ADVICE

Some students find digital methods immediately compelling, but others have both scholarly and technical difficulties engaging with them. Working with digital tools can be time-consuming. Dramatic corpora in Danish are scarce, especially TEI-encoded drama. There can also be a didactical challenge in adapting new methods into the conventional curriculum with more traditional learning outcomes.

Good advice is to frame the inclusion of digital tools and methods to highlight the necessity and relevance for their inclusion. Highlight how digital analysis can complement traditional inquiry and answer new research questions.

FANTASTIC SCANDALS AND HOW TO RESEARCH THEM

ⓘ INFORMATION

Teacher: Manuel Menke

Faculty: University of Copenhagen, Humanities

Discipline: Media Studies

Course: Research Design and Empirical Methods

Level of study: MA

Teaching method: Small class teaching; practical exercises

Number of students: 26

Duration: Short series of activities

♡ MOTIVATION

Our students have to learn how to work with social media and online data. This is not only relevant for what we study in media studies but is also what they might work with and be competent to analyse/ understand in their future jobs.

◎ ACADEMIC OBJECTIVE

The overall ILO was for students to be able to: 1) Critically assess the potential of digital methods, 2) Assess the impact of digital methods on the field of media and communication, 3) To understand the particular ethical, technical, and epistemological challenges that come with using certain digital tools, 4) To be able to use the digital tool practically in an empirical study.

☑ OUTCOME

Overall, the students learned to navigate through the research process with large social media data sets to answer their research questions. They gained knowledge about digital data collection and analysis that will allow them to critically assess the potential of digital methods and equipped them with the skills to apply (some) them in their own research.

▭ USE OF TECHNOLOGY

- Voyant tools
- Twitter developer accounts for API access for each student
- Google chrome Jupyter notebooks
- Instant data scraper
- Excel to save, edit, and manage data

Students were supposed to learn about different paths of data collection (API and web-scraping). Voyant is a digital tool that allows for data mining (distant reading) of large text corpora, yet without having any programming knowledge.

🔧 ACTIVITIES

- In the first part, we did what I coined a "deep dive session" into the methodological challenges of researching digital communication.
- The second and third parts concerned the problematic conditions of online research, data privacy, and ethics in digital methods research.
- The fourth and fifth sessions were about learning practical skills to retrieve data. This meant to acquire an understanding of how the data scientists at KU wrote a script and collected the data as well as learning to use a web-scraping tool. Students used the Google Jupyter notebook with a prewritten script to collect some basic Twitter data. The code was explained in class and students ran it in different exercises. In the fifth session, students used the web-scraping tool "Instant data scraper" (Chrome extension) to collect data from Reddit.
- In the sixth and seventh session, the goal was for the students to understand the possibilities and limits of text mining aka, distant readings of data. Learning how to prepare data and use it with Voyant tools for exploring and visualizing large textual corpora.
  - The teacher introduced different tools within Voyant and the Voyant Wiki.
  - Students were then handed a large data set with Reddit comments.
  - They then prepared the data set in Excel, uploaded it to Voyant, and analyzed the data using the available tools. In the last session, we focused on visualization and the export of graphs.

💡 RESOURCES & SUPPORT

The students were given:
- Texts concerning digital methods, "Digital revolution in the social sciences", APIs and social media, Cambridge Analytica, and ethical issues
- Data sets with Twitter and Reddit data
- Voyant Wiki

Further support:
- Padlet for collecting points on ethical issues
- Walkthrough of Google notebook script
- Walkthrough of Voyant Tools

⚠️ CHALLENGES & ADVICE

It costs time and requires individual solutions to collect the data. This resulted in a lot of coordination with the data scientists from KU who invested (too) much time to code for the APIs and collect data. The students also saw little use in working with the Google Jupyter Notebooks because they knew that they would not be able to replicate the coding the data scientists prepared.

An advice is to try to work with data from one platform to be able to use a one-size-fits-all solution for data collection. Reddit (so far) is the easiest platform to gain access both over API and with web-scraping tools.

SCALABLE READING IN VOYANT

ⓘ INFORMATION

Teacher: Helle Strandgaard Jensen

Faculty: Aarhus University, Humanties

Discipline: History

Course: Introduction to Archives and Digital Methods

Level of study: BA

Teaching method: Lecture and supervision

Number of students: 20

Duration: Whole course

♡ MOTIVATION

Making a connection between the methods that the students already know (close reading) from their past studies and the course, and new digital methods they don't yet know (computer-assisted distant reading).

◎ ACADEMIC OBJECTIVE

The academic objective was to teach students how to do distant reading with Voyant and how to combine it with close reading.

⌨ USE OF TECHNOLOGY

- Voyant
- Spreadsheets

Voyant is a multi-purpose tool that can also do spatial analysis. It is easy to teach and to understand for students who have no experience with computer assisted analysis. The program gets the students interested without it being too complicated.

☑ OUTCOME

From earlier experience, the teachers knew that students had problems getting adjusted to doing distant reading/computer-assisted analysis. Therefore, a lot of time was spent on re-formulating the questions and obtaining a new dataset with newspapers from a time period that were better suited for this kind of distant reading which students can do without any prior experience.

⚙ ACTIVITIES

- The students were divided into groups and were asked to analyse casefiles that come from a parish in Aarhus during the Occupation by using close reading.
- Hereafter, the students were introduced to Voyant for distant reading.
- The students then used Voyant to do experimental analysis of three large datasets: on parish council meetings, city council meetings and newspaper articles from the same period.
- On the basis of the experimental analysis the students were asked to explore their case (close reading) in a broader context and come up with new and interesting questions.
- The students were asked to hand-in the group assignment using a video-production software of their own choice.

💡 RESOURCES & SUPPORT

The students were given:
- Background literature on distant reading and digital history
- Lectures that focus on context (Aarhus during the Occupation)
- Three datasets: newspapers, parish- and city council meetings. Data was accessed on a shared drive

The students further received:
- Instructions on how to use the program and what the group assignment is based on (concrete examples).
- Help from student assistants and teachers, through formative feedback and supervision
- A helpdesk for technical issues is also made available.

⚠ CHALLENGES & ADVICE

Finding the resources and handling copy rights and rights to use datasets was a challenge. Further, there are great differences in how interested the students are which can affect the teaching.

Good advice is to be prepared to spend an extensive amount of time and resources on coming up with data that makes the students combine close and distant reading. Be prepared to do lots of testing of both the content and the technical setup. Seek out others who have tried to do this before. Employ student assistants to help students in class. Set up a helpdesk for students who have problems with the technical requirements.

2 NATURAL LANGUAGE PROCESSING

DATA ANALYTICS IN PYTHON

ⓘ INFORMATION

Teacher: Pernille Smith and Michela Beretta

Faculty: Aarhus University, Social Sciences

Discipline: Innovation

Course: Managing Innovation

Level of study: MSc

Teaching method: Lectures

Number of students: 44

Duration: Short series of activites

♡ MOTIVATION

Digital competencies will be important for innovation management students in relation to their career start and development. Many innovation-related jobs will require students to understand basic and essential computational techniques and how to use them in order to make sense of and evaluate volumes of data. These jobs also require the ability of students to effectively communicate and collaborate with people from many disciplines and with more technical backgrounds, such as data scientists.

◎ ACADEMIC OBJECTIVE

The academic objective is for students to learn some basic principles of data analytics through working on the database of a company's ideation platform. Using computational methods, students are introduced to how to analyse large amounts of qualitative data efficiently and smartly and they learn how to collaborate in interdisciplinary teams with data scientists.

⌨ USE OF TECHNOLOGY

•   Python for data analysis
•   UCloud

The students were introduced to Python to make sense of and analyse larger amounts of data. The software was suggested by Center for Humanities Computing as the most appropriate for this type of activity.

☑ OUTCOME

The students that participated were interested in the topic, and their assignments and presentations were generally good. Some groups made some very sophisticated analyses, showing good mastery of the techniques they had learned, and the ability to adapt them to their dataset. More iterations back and forth between the students and the data scientists would have increased the learning outcome, however, it would also be more timeconsuming and therefore at the expense of other topics and activities in the course. There were some comments from the students that were positive, especially were the students excited about collaborating with data scientists.

ACTIVITIES

- The students worked on an activity where they would get acquainted with data analysis techniques for analysing large amounts of qualitative data from an idea platform.
- They collaborated with a group of data scientists. From the collaboration, they learned computational methods and how to collaborate across disciplines.
- The students were introduced to innovation management theory to get an overview of the research and insights to benefits and challenges of using idea management platforms.
- The students were introduced to the most common techniques to make sense of and analyse data.
- The students had a lecture by a researcher in Humanities Computing elaborating on the different techniques.
- Students worked in groups and sent the requirements of the dataset to the data scientists by email describing what types of analyses they want to do and why.
- A supervision session took place, where each group met with the assigned data scientist and discussed the requirements they had previously sent and whether adjustments were needed. Based on the feedback from the data scientists the students readjusted their first requirements.
- The students could then run the analyses and reflect on the obtained results.
- The students presented their project – explaining which criteria and techniques they had defined for analysing the data and explain and reflect on the results obtained.
- The students also reflected on the process of collaborating with the data scientists.

RESOURCES & SUPPORT

- The students were given texts that were relevant to the course, slides, access to the Python code packages and supervision from data scientists.
- The students got instructions, both oral and written, supervision from data scientists and feedback from the instructors.

CHALLENGES & ADVICE

Access to the necessary resources was a challenge, as the course draws on the expertise of data scientists who can help with the coding and the supervision in the time period that the activity is running. Without their help the activity would not be possible unless the teachers are able to code at this level. Another challenge was the fact that the database was a bit too small to make interesting analysis. It would have been better with a bigger and more detailed dataset. For non-technology students, it is important to focus on activities that reflect something they might end up using in their future jobs. This is important to spark their motivation for the task. The teacher created a specific description for the students of what they could add to their CV after participating in the activity (the skills they developed based on the course).

DIGITAL METHODS 4 ALL: DIGITAL ANALYSIS IN BUSINESS

ⓘ INFORMATION

Teacher: Helle Alsted Søndergaard, Arthur Hjorth and Michela Beretta
Faculty: Aarhus University, Social Sciences
Discipline: Business
Course: Research Methods
Level of study: MA
Teaching method: Lectures, advisory meetings and exercises
Number of students: 17
Duration: Series of activities

♡ MOTIVATION

We believe that business students should have practical experience using computational methods. While reading studies or watching demonstrations of computational methods can provide students with a good idea of what they can be used for, getting hands-on experience and having to consider all the nitty-gritty details gives them a more realistic understanding of the uses and limitations of these methods. Most business students do not have the coding competencies necessary to do computational methods on their own. To address this, we built an online system that we call ComputationalMethods4All (CM4A), so that they can participate in computational methods without having to code.

◎ ACADEMIC OBJECTIVE

The academic objective of this pilot was to teach computational/digital analysis methods to business students as part of a traditional qualitative/quantitative methods course. For this course, we focused on NLP-related methods, like descriptive statistics of text, sentiment analysis, classification and topic modelling.

💻 USE OF TECHNOLOGY

• Computational Methods 4 All.

We plan to release the source code under an open source license and are working on approval from lawyers so that others can use it too.

We felt that we had to build our own system because most other analysis systems either hide too much, making it difficult for students to understand how the computational methods work, or too little, requiring too high-level technical skills from students.

☑ OUTCOME

Students completed 4 different projects based on their own definition of research questions using preidentified data sets from Amazon, Yelp and Twitter.

🔧 ACTIVITIES

1. Students participated in lectures (in class) on how digital methods are used in research and industry (2 hours)
2. Students participated in lectures (in class) on more in-depth introductions to the methods included in our system. The lecture was part live-coding and part-presentation, and switched between large-picture "what is the method and how do we use it" and "what does it look like, how does it work, and what do all the parameters mean?" (6 hours)
   - Descriptive statistics
   - Sentiment analysis
   - Classification (naïve bayesian)
   - Word embeddings for similarity measures
   - Topic modelling
3. Students were introduced to CM4A and its interface
4. Students chose a prepared dataset to work with:
   - Amazon reviews
   - Yelp reviews
   - Tweets (students had to choose which Twitter accounts to use)
5. Based on their interest in the dataset, students first did a preliminary exploration of the data

Each of the following steps were accompanied by an advisory meeting (5 meetings total):
6. Based on their immediate findings, students articulated a research question
7. Students refined their research question through a more focused exploration of data and chose a specific set of methods to answer their research question
8. Students conducted the first analyses of data with their chosen methods, presented findings and revised their approach or research question
9. Students conducted a more focused analyses based on feedback from advisors
10. Students conducted potentially missing analyses and then structured their report and writing process.

💡 RESOURCES & SUPPORT

- Software: CM4A
- Lecture slides for referencing how methods work
- Instruction through steps 1-5 above
- Advisory meetings through steps 6-10

⚠️ CHALLENGES & ADVICE

It was a challenge to figure out the timing of introductory lectures and introduction to the more technical aspects of the pilot, in relation to the subject matter of the existing course.

Pilot testing on a small sample of students provides good insight to both possibilities and challenges of integrating new digital/computational methods into existing courses.

DIGITAL METHODS 4 ALL:
DIGITAL METHODS IN MANAGEMENT

ⓘ INFORMATION

Teacher: Michela Beretta, Arthur Hjort, Helle Alsted Søndergaard
Faculty: Aarhus University, Social Sciences
Discipline: Management
Course: Management Research Methods
Level of study: MA
Teaching method: Lectures, small class teaching/instruction and tutorials
Number of students: 300
Duration: Short series of activities

♡ MOTIVATION

Ensure that our students are up to date on relevant methods for the social sciences.

◎ ACADEMIC OBJECTIVE

To teach management students to understand and use digital/computation methods in social science research.

⌨ USE OF TECHNOLOGY

• Digital Methods 4 All

We built our own web-based server app to assist students in using digital methods for their projects. The app provided a variety of standard NLP-methods but without requiring coding experience.

As this was a methods course, we had two requirements for the technology: 1. Students should be able to use digital methods and NLP without having to learn how to code first. 2. To be able to reason about methodology and methods choices, students should know exactly how the methods work. The first requirement is relatively easy to meet as there are a variety of different visual NLP-methods apps out there. However, most of them are black-boxed, hiding important information about exactly how methods are implemented. This would make it impossible for students to reason to a sufficient degree about their choice of methods. Based on this reasoning, we decided to build our own web app in Flaks and host it locally.

☑ OUTCOME

We ran two years of pilots which gave a lot of learning. We had 12 groups of students through the pilot, all except one were happy they opted into our pilot.

🔧 ACTIVITIES

Students:
- Participated in four introductory lectures on digital methods and NLP alongside starting up their group projects.
- Chose a dataset that they were interested in working on.
- Articulated an overall guiding question for their course project.
- Over time explored the data, articulated a set of 1-3 refined Research Questions based on their overall guiding questions and their data exploration.
- Completed a two-step project (one focusing on qualitative data coding, and one focusing on larger-scale analysis, where they conducted analyses such as topic modeling and sentiment analysis).

💡 RESOURCES & SUPPORT

- Digital Methods 4 All (our web-based app)
- Powerpoint slides from lectures to remind the students how analysis methods are implemented
- A book and one published paper on NLP
- Five supervision meetings over a 7-week period
- For each supervision meeting, students were asked to prepare a presentation based on their work in the prior week. We discussed their findings, provided feedback, and articulated next steps for them together.

⚠️ CHALLENGES & ADVICE

The pilot was part of a large research methods course, where there are many actors and different levels of interests in digital methods.

On the student-side, it was difficult for students to understand how digital methods are different from other methods. E.g., students struggled articulating good research questions with big data. We believe this is due to a generally low level of methodological understanding, and this might be a general challenge for introducing digital methods.

If the change involves more people, it might meet resistance. So try to ensure top-level support of long-term goals as soon as possible, potentially before starting a project like this.

Students really want to do this, employers are requesting these skills. So keep trying, even in the face of resistance.

MACHINE LEARNING APPLIED TO SOCIAL MEDIA NARRATIVES

ⓘ INFORMATION

Teacher: Jaume Castan Pinos
Faculty: University of Southern Denmark, Business and Social Sciences
Discipline: Politics
Course: International Politics
Level of study: BA
Teaching method: Lecture
Number of students: 30
Duration: Single activity

♡ MOTIVATION

The discipline of International Politics can greatly benefit from machine learning. Such an instrument can help us understand both technical aspects (how algorithms operate on social media) but, most importantly, how machine learning can shed light on foreign policy narratives.

◎ ACADEMIC OBJECTIVE

Apply machine learning tools (NLP4All) to analyse foreign policy narratives from big global players - USA, People's Republic of China (PRC), Russian Federation (RF) - on Twitter.

💻 USE OF TECHNOLOGY

• NLP4All

It is the most suitable technology to analyse narratives on Twitter.

☑ OUTCOME

Students engaged very enthusiastically with the exercise; it managed to attract their attention and motivation. The discussion concerning their answers – combining machine learning with International Politics narratives – was particularly fruitful and illuminating. In general, it also encouraged them to think about the importance of machine learning applied to politics in general. At the end of the class, several of them mentioned their interest in investigating the uses of machine learning.

ACTIVITIES

Prior to the exercises, the students were introduced to the concept of machine learning and its applications to understand social phenomena (30 minutes). Throughout the course, students had gained knowledge of the concept of 'political narratives' as well as foreign policy.

In parallel, a 'pool' with nearly 40,000 tweets from the three foreign affairs ministries' Twitter accounts was created for analysis.

- In the first activity, students had to guess (classify) which tweet - they had been anonymised and randomised by the programme - belonged to which great power (USA, PRC, and RF) using their knowledge and intuition (45 minutes).
- In the second activity, students had to identify which concept was best associated with each foreign ministry's narrative. The most relevant concepts would obtain higher coefficients.

RESOURCES & SUPPORT

- NLP4All
- Twitter
- Instructions by guest lecturer
- Discussion about their choices and answers, involving both machine learning and IP
- Mutual Feedback

CHALLENGES & ADVICE

Students were so invested in the exercises that we did not have sufficient time to complete the second task. Perhaps additional time should have been allocated (3 hours instead of 2). Additionally, I would have liked to have/gain more knowledge myself on machine learning as well as the programme used so that I could run the exercise myself. The exercise was a success and students learned a great deal, but my role was totally passive.

A piece of advice for other teachers is to gain in-depth knowledge of the technology that you will use so that you can have an active role during the exercise, rather than passive.

SOCIAL MEDIA ANALYTICS AND SENTIMENT ANALYSIS ON REDDIT

ⓘ INFORMATION

Teacher: Steven Breunig

Faculty: University of Southern Denmark, Humanities

Discipline: International Business Communication (English)

Course: Strategic Writing and Communication

Level of study: MA

Teaching method: Small class teaching

Number of students: 25

Duration: Short series of activities

♡ MOTIVATION

To operate in a social media mediated world as a strategic communication practitioner for an organisation or cause, students cannot only rely on competencies related to writing and analysing texts. They also need technological skills in relation to social media messaging and management, e.g. doing analytics, in order to connect with their audiences.

◎ ACADEMIC OBJECTIVE

The academic objective is to give the students an introduction to the practical and technological aspects of being a language worker or communication practitioner in an organisation.

⌨ USE OF TECHNOLOGY

- Vader (used for analysis on social media)
- UCloud

Vader was chosen as the technological tool because this program is good for doing sentiment analysis. Vader was made available for students through UCloud.

☑ OUTCOME

The students were pleased with the outcome of the sessions, and they were able to see the relevance of digital computational skills/methods, especially for their future work as communication practitioners using social media and having to manage social media.

ACTIVITIES

Session one in class (with guest lecturer):
- Introduction to Sentiment analysis
- Introduction to Vader through UCloud
- Sentiment analysis demonstration
- Introduction to Voyant

Session two in class (with teacher):
- The students went through the same steps as in session one – supported by the teacher. We went through the material slowly, and a hand-out based on the guest lecturer's introduction to Vader analysis from the previous week was prepared for the students

RESOURCES & SUPPORT

- UCloud was made available for all the students to access and use Vader
- A hand-out was provided for the second session
- Having a second session just for the students and teacher to walk through the steps in a slow pace helped the students understand the topic more thoroughly.

CHALLENGES & ADVICE

The biggest challenge was that both the students and the teacher lack experience with digital computational methods and the needed skills to collect data digitally, prepare it and then use the software.

A piece of advice for teachers is to brush up on or take some courses to develop digital/computational skills. Lower ambitions for the students and make time for opportunities to practice. A long time ago, new university students had to take a course in word processing using computers – maybe it is time to introduce a new type of course for introducing "basics" of digital and computational methods to support their other academic competencies and learning.

3 QUALITATIVE DATA COLLECTION AND ANALYSIS

DIGITAL ANTHROPOLOGY - A FIELD STUDY, A TOOL KIT

ⓘ INFORMATION

Teacher: Nanna Schneidermann

Faculty: Aarhus University, Humanities

Discipline: Anthropology

Course: Ethnographic Methodology and Fieldwork Preparation

Level of study: MA

Teaching method: Lecture, small class teaching, supervision

Number of students: 25

Duration: Two sessions

◎ ACADEMIC OBJECTIVE

The intervention took place within the master program research design course, where students develop their individual master research projects. The aim was that students become aware of digital anthropology as a field of studies, and of digital tools for ethnographic data collection, data management and analysis. The students gain experience with using digital tools for data collection and are able to assess, discuss and choose relevant data generation strategies for their individual master thesis fieldwork / internship research project designs.

🖥 USE OF TECHNOLOGY

- Website recording, screen recording on a smartphone and downloading social media data
- Youtube Data Tools for downloading and organising youtube comments in an excel sheet

The tools are free and accessible and support the generation, analysis and management of ethnographic data. It was important that the class example challenged the students to use new tools but also did not put them off because it was too difficult or irrelevant to their discipline.

☑ OUTCOME

The students were generally excited about the theme, and some found useful new tools and perspectives. The most important outcome was "awareness" both about how digital media and technologies are part of all ethnographic studies today, and about challenges and possibilities of working with these phenomena as ethnographic data.

🔧 ACTIVITIES

- The students prepared by reading an article about digital anthropology as a field of study within our discipline.
- I conducted a lecture on "digital anthropology" with the Digital as an object of study, part of the context of what we study, a means of gathering data, as a means of analysis and communication of research giving examples.
- Supported by an in-class tutorial, the students tested out the youtube data tool and discussed the usefulness for this and other tools for their own projects.
- The students chose one of the approaches to test as a "pilot" for their own fieldwork project.
- The students presented their methodological homework for fellow students and teachers, and discussed their relevance and usefulness for their own fieldwork project design, as well as how each project may approach "the digital" as part of doing fieldwork.
- The students had an increased awareness of how digital media and technologies may show up and usefully become ethnographic data during the course of fieldwork and incorporated digital tools in their methodological considerations in their project proposal.

💡 RESOURCES & SUPPORT

The students were given:
- An article on digital anthropology
- A tutorial on how to use the youtube data tool
- Introduction to further resources and tutorials at Center for Digital Methods and Media

The students further recieved:
- In class workshop wih supervision
- Peer-feedback on home exercises
- Optional teacher supervision on research design

⚠️ CHALLENGES & ADVICE

Initially our idea had been to mainstream digital competencies/methods through the whole course, but there wasn't time and resources for that, so it became just two classes. It felt crammed and the students disengaged a bit, because of that. The specific tools – the website recording and the youtube comment tool – were a bit hard to "sell", also because I didn't know the tools well enough. But the students were able to discuss and assess based on their academic discipline, why these tools were good for generating contextual data but hardly would constitute central tools for generating data. Other tools like the screen recorder or "digital diaries" were more easily understood as useful, as they can be used in interview situations or in more participatory data generation.

If we teach students new digital skills, teachers and supervisors need to also learn them or at least be aware/see the usefulness, otherwise students have limited support to develop their competencies.

DIGITAL METHODS TO SUPPORT ETHNOGRAPHIC DATA COLLECTION AND CODING

ℹ️ INFORMATION

Teacher: Maja Hojer Bruun

Faculty: Aarhus University, Humanities

Discipline: Educational Anthropology

Course: Ethnographic Methods

Level of study: MA

Teaching method: Lectures and workshops

Number of students: 41

Duration: 4 weeks course

🤍 MOTIVATION

DiCu has provided me with the opportunity to work with tools that I had heard of and had a basic knowledge of, as well as exploring their possibilities and limitations in an educational context.

◎ ACADEMIC OBJECTIVE

The teaching case had three elements where the students should achieve: 1) Experience with digital technology regarding interviews, specifically the use of transcription software, 2) Experience with NVivo as a tool for working with ethnographic data, as well as learning how to reflect on technologies and being critical of one's own practice, 3) Knowledge of apps for collecting data.

💻 USE OF TECHNOLOGY

- OpenAI-Whisper, speech-to-text-model from Center for Humanities Computing
- NVivo
- MyInsights app (presented by guest lecturer)

Nvivo is a known and widely used tool. The students can sign for a 14 days free license once. MyInsights is used for projects at the Alexandra Institute and is a relatively affordable and simple app.

☑️ OUTCOME

The students found it useful to become acquainted with NVivo and automatic transcription, as well as learning about the possibility of working with mobile probes through a mobile app. Several are considering using the programs for their upcoming fieldwork, but even if they choose not to, it is important to be familiar with the software and the development in digital technologies.

🔧 ACTIVITIES

4 weeks course
- Teaching on interviews and interview techniques, instruction, and handing out interview exercise.
- The studens conduct an ethnographic interview individually and send the soundfile to Center for Humanities Computing for automatic transcription.
- Introduction to NVivo. The students code their interviews in groups.
- Introduction to Webnography and digital methods. The students attend a presentation by a guest lecturer who has used MyInsights for data collection in her research project. Afterwards, the students discuss their experiences using Nvivo and reflect on the influence of technologies in their work

💡 RESOURCES & SUPPORT

The students were given:
- A guide for transcription and an instruction for the excersice
- Help from Center for Humanities Computing
- NVivo, 14 days free trial

The students further recieved:
- Instructions, presentations and messages

⚠️ CHALLENGES & ADVICE

The course has required a lot of planning over an extended period, but I would say it succeeded. The timing was good in terms of allowing students to complete the exercises. However, there were a few who would have liked it more clearly marked that the exercise aimed to teach both ethnographic interviewing and the use of digital methods. These two sub-goals could be explicitly clarified and separated.

It was difficult learning to use all the functions in NVivo and took a lot of planning due to the students only having a 14 days free trial. Neither did the students have the opportunity to work with MyInsights due to Aarhus University not having license for students.

Four hours of NVivo instruction instead of just two are necessary for the students to have the opportunity to work with the software. It is really helpful that I, as the academic lecturer, supported the NVivo instructors with subject-specific comments.

I find there is a risk of objectifying ethnographic material when using NVivo. Therefore, discussions about Nvivo and other software could help to address the methodological challenges that are always present. It is crucial to work with different ways of adding context to notes in NVivo, such as the context of conducted interviews.

NVIVO FOR QUALITATIVE ANALYSIS

ⓘ INFORMATION

Teacher: Mia Rasmussen and Lise-Lotte Holmgreen
Faculty: Aalborg University, Humanities and Social Sciences
Discipline: Business Communication
Course: NVivo workshop
Level of study: BA and MA
Teaching method: Demonstrations and group work
Duration: Full-day workshop

♡ MOTIVATION

As a university, AAU has a problem-based teaching approach where students work with projects on almost all semesters. Therefore, it is important to qualify students' competencies throught small and large projects based on qualitative data and give them tools for data compilation and treatment in relation to subsequent work tasks.

◎ ACADEMIC OBJECTIVE

In order to qualify their work with small and large projects based on qualitative data, as well as data compilation and treatment in relation to subsequent work tasks, students should:
- Be familiar with NVivo (software for qualitative data analysis)
- Have a basic understanding of how NVivo can support their analytic work (through the various possibilities for harvesting, importing and treating data, and visualizing analysis and results)

▭ USE OF TECHNOLOGY

- NVivo
- NCapture
- GoFullPage (Chrome extension)

NVivo is a software for qualitative data analysis and AAU already has a licence so that all faculty and students can download and use the programme. NCapture is an NVivo extension. Occasionally, it fails to produce good results when capturing data online, so we introduced GoFullPage as an alternative.

🔧 ACTIVITIES

Before the workshop the students were advised to download and install Nvivo, so that it would be ready when the workshop began.

The 6 hour workshop was divided into three parts. Each part included an introduction from the teacher and the opportunity for the students to try out practice for themselves:

- The students were presented with the programme of the day and the intended learning objectives, and then given an overall introduction to Nvivo.
- The students were introduced to tools working with collecting data (Ncapture and GoFullPage), but were also supplied with premade data sets from the technical support team, and were then supposed to import data into Nvivo. The workshop focused on data from the web, interviews and social media.
- Finally, the students were introduced to tools for treating data, including coding, analysing and visualising data in Nvivo.
- The workshop ended with a recap and a Q&A-session.

💡 RESOURCES & SUPPORT

- Students can download NVivo with the AAU software licence
- Slides from lectures
- Links to NVivo help pages
- Data set examples (website, Twitter, interview transcription)
- Presentation (introductory)
- Instructions
- 1:1 support during student exercises

☑ OUTCOME

The students got a basic introduction to the software and its features and can now continue exploring it further in their own time.

⚠ CHALLENGES & ADVICE

- Our own (lack of) familiarity with some functions of the software.
- Differences in layout and names of functions as regards operating system differences in PC vs. Mac. Be sure to familiarize yourself with these differences before the course.
- A one-day course/workshop only allows for a very general introduction to the programme.

4 VISUAL AND SPATIAL ANALYSIS

CINEMETRICS AND MOVIE ANALYSIS

(i) INFORMATION

Teacher: Steen Ledet Christiansen

Faculty: Aalborg University, Humanities

Discipline: English

Course: Visual Culture Elective

Level of study: BA and MA

Teaching method: Lecture

Number of students: 35

Duration: One session

♡ MOTIVATION

This session shows students the difference between qualitative and quantitative analysis, including how quantitative results may aid qualitative analysis. It facilitates a discussion of film history and received wisdom versus actual analysis. The variation in shot length provides an especially good starting point for film tradition and genre analysis.

◎ ACADEMIC OBJECTIVE

The academic objective of this case is for the students to be able to compare formally definable features of movies across film history, specifically average shot length, shot scale, and camera movement.

⌨ USE OF TECHNOLOGY

- Spreadsheet
- A watch

Spreadsheets are used by all cinemetrics scholars. There is cinemetrics software that can provide results without having to count; however, that would require 1) universities to obtain access to it and 2) necessary time to learn how to use this software in class.

⚒ ACTIVITIES

- The students were divided into groups of five and were asked to watch a short movie.
- They were to count the number of cuts and divide it by the duration in order to get the average shot length. They should also count the instances of each shot scales.
- Afterwards, they picked one movie from the decades: 50s, 60s, 70s, 80s and 90s, from the cinemetric database.
- They were asked to compare their results to the first movie they watched in order for them to analyse and compare definable features of movies across film history.
- Lastly, the students took part in a class discussion about the short movie and their chosen movies.

💡 RESOURCES & SUPPORT

- The students got Barry Salt's early article on cinemetrics and they were asked to use the website cinemetrics.tv in class.
- The students received clear instructions on how to execute the task and go through the activities in order to make sure that the students understood what they were to do.
- They were presented to the cinemetrics database and where to get the right numbers. The teacher should be available during the group work.

☑ OUTCOME

Generally, the session went well and the students participated across the different groups. Every group seemed to have at least one person comfortable enough with Excel that doing the exercise was not a challenge. The results did provide some interesting and unexpected deviations in the analysis of a few movies that ultimately led to good class discussions about genre. The fast and easy average shot length (count and multiply, instead of tracking each shot) led to a discussion about average versus median results, and the advantages and disadvantages with this method.

⚠ CHALLENGES & ADVICE

Some students were less comfortable with numbers and struggled to see the relevance. This is to be expected and it was not a problem. However, the students had some issues with defining the shot scale but most of the students had productive projects. The biggest issue with this sort of teaching case is having to find short movies to analyse. In general, these movies might not be representative of feature films; however, it would be impractical to have the students count the shot length and shot scale during the two-hour activity. When executing this type of case, teachers should consider what is gained as it would be likely that this sort of session can have different outcomes and run differently from class to class. Additional advice is to find manageable works to analyse in class.

COMPUTATIONAL METHODS FOR ARCHAEOLOGICAL FIELDWORK

ⓘ INFORMATION

Teacher: Tom Brughmans

Faculty: Aarhus University, Humanities

Discipline: Classical Archaeology

Course: Fieldwork

Level of study: BA

Teaching method: Small class teaching

Number of students: 10

Duration: Short series of activities

♡ MOTIVATION

Knowledge of computational methods is a basic requirement for professional archaeologists, but it is missing from the curriculum. The teacher aimed to make strategic and small additions and changes to the existing curriculum to give students more exposure to computational methods and resources and some practical experience with a few methods that will become relevant to their fieldwork. Experience with these computational methods will also enhance their employability.

◎ ACADEMIC OBJECTIVE

The academic objective of this course is to obtain an overview of relevant computational methods, including their strengths and challenges. Furthermore, for the students to gain basic practical competencies in geographical information systems (GIS), reflectance transformation imaging (RTI) and photogrammetry.

⌷ USE OF TECHNOLOGY

- Geographical information systems (GIS): Software QGIS
- Reflectance Transformation Imaging (RTI): Software RTIbuilder and RTIviewer
- Photogrammetry software: Metashape

These are all computational methods that can be applied directly in the archaeological fieldwork, and the basics of the approach can be taught in just a few hours with the student creating a tangible output, such as a map, an RTI-file or a 3D-model.

☑ OUTCOME

The majority of the students agreed that they had gained new computational skills that can have relevance in different professional environments. Some students enjoyed the diversity that these classes brought to their curriculum. All the students are now aware of the range of computational tools that exist and have access to resources they can draw on when the tools become relevant.

ACTIVITIES

- The students listened to a lecture giving an overview of relevant computational methods, their strengths and some challenges (in class)
- The students were then introduced to a step-by-step tutorial on how to fulfil a task with a specific software (in class)
- The students began completing the task with the specific software following the tutorial and with the opportunity to ask questions to the teacher (in class)
- The students completed the tutorial after the class at home and performed additional tasks
- The results were emailed to the lecturer before the next class.
- The students received feedback in the next lesson
- The series of activities was repeated for each tool/method (geographical information systems (GIS), reflectance transformation imaging (RTI) and photogrammetry).

RESOURCES & SUPPORT

- The students are given lecture slides and step-by-step tutorials including a detailed guide on how to install the different software they have to use.
- Students have access to teacher for questions and technical support in relation to problems with the software.
- Furthermore, students are given a list of additional tutorials, test datasets and literature.
- Students get feedback on submitted tasks in class.

CHALLENGES & ADVICE

Not all students perform and submit non-mandatory out-of-class tasks, limiting the benefits of the asynchronous parts of the teaching. Few students had computational experience, so a lot of basic things needed to be introduced.

A piece of advice is to use step-by-step handout tutorials as they are very helpful. They allow for multiple in-class teaching techniques: "follow the teacher's demonstration or work at your own pace". The guides not only help the students but also the teachers. Another advice is to have a document that describes how to overcome basic technical issues, from which you can just copy-paste when an issue comes up. Make sure to flag up what software that needs to be installed and what requirements are weeks ahead of the class in question and repeat it every single class.

GEOSPATIAL DATA VISUALISATION

ⓘ INFORMATION

Teacher: Mikkel Høghøj & Mikkel Thelle

Faculty: Aarhus University, Humanities

Discipline: History

Course: Cultural Historic Subject

Level of study: MA

Teaching method: Small class teaching

Number of students: 12

Duration: One session

♡ MOTIVATION

This course aimed to explore the cultural history of nature in the modern city. Digital and spatial methods offer unique opportunities in relation to mapping, visualising and understanding various cultural and political dynamics shaping the modern city. Those interested in pursuing the perspective further in their individual projects and exam papers could do so with guidance from employees at Center for Digital History Aarhus (CEDHAR).

◎ ACADEMIC OBJECTIVE

The academic objective is to obtain an introductory overview to spatial methods and geospatial data visualisation.

▭ USE OF TECHNOLOGY

- Google Maps
- Leaflet in R

These programs provided the necessary tools for the students to use spatial methods.

☑ OUTCOME

Most of the students expressed an interest in acquiring computational skills on a more advanced level than the general introduction provided in this lesson, yet none of them ultimately decided to employ digital methods in their exam papers, perhaps due to the fact that digital methods was introduced in the latter half of the course and they needed more time to feel comfortable using the methods individually.

ACTIVITIES

- Digital approaches, on a general level, were discussed in class by the students, facilitated by the teacher.
- The students then listened to a lecture given by a guest lecturer, in class online.
- The students afterwards reflected on a specific exercise concerning water usage in 19th century Copenhagen.
- The students were offered further mentoring if they would pursue using historical data in their assignments.

RESOURCES & SUPPORT

- The students were given the guest lecturer's slides with links to additional tutorials and literature.
- The students were given material to aid the exercise in class.
- For the students that were interested in pursuing the perspective further, technical supervision from digital experts was made available.

CHALLENGES & ADVICE

The students had no previous training in digital methods. In retrospect, it would have been ideal if the students had had more than one lesson dedicated to digital methods and introducing the topic. This module was introduced in the seventh lesson; however, it should have been introduced earlier in the course allowing the interested students to develop their exam projects.

If the goal is to make the students apply digital methods in their exam papers, the methods should be introduced in the early phase of the course.

SPATIAL ANALYTICS

ⓘ INFORMATION

Teacher: Adéla Sobotkova

Faculty: Aarhus University, Humanities

Discipline: History

Course: Spatial Analytics

Level of study: BA

Teaching method: Small class teaching and supervision

Number of students: 30

Duration: Whole course

♡ MOTIVATION

Motivation was found in an interest to teach spatial analysis and wanting to develop a course that use OS and free toolkit (R) entirely.

◎ ACADEMIC OBJECTIVE

This course is intended to give students an understanding of spatial data, their types, origin, processing, analysing and stewardship in a transparent and reproducible manner, using an open-source toolkit. This knowledge is intended to be useful whenever students encounter geospatial data in their education and career.

USE OF TECHNOLOGY

- R
- UCloud
- Github

The programmes were free, open-sourced, versatile, had a reasonable learning curve and facilitated collaboration between the students.

☑ OUTCOME

Students met the basic goals of the course by getting an idea of the challenges and opportunities in spatial analysis, understanding spatial data and its transformations. The weekly hands-on homework was essential for students to practice in R and apply the concepts they had learned in lectures. The students praised peer-review as a learning device for coding (evaluation of fellow-students' work every week).

⚙ ACTIVITIES

- The students listened to lectures on the central concepts (in class).
- The students afterwards followed hands-on exercises and discussed application of concepts (in class).
- After class, the students applied lessons from the lectures and hands-on exercises in homework supported by material from the teacher.
- Each student had to read, test and evaluate the homework of their peers.
- Lastly, the students read background readings and prepared environment by installing packages.
- At the end of the course the students make a final project.

💡 RESOURCES & SUPPORT

For each week the students were provided with:

- Readings
- Lecture slides
- Exercises with detailed instructions and solutions and/or examples of spatial analysis
- Homework templates

The teacher further provided:

- Instructions in class
- Annotated exercises and solutions
- Facilitation of in-class discussions
- Facilitation of peer-feedback on final projects
- Individual/group feedback on final project

⚠ CHALLENGES & ADVICE

A challenge was moving from basic knowledge to the application of appropriate methods given the large amount of computing that was required before students could successfully solve problems. The inability to spar with someone regarding the scope and delivery of content and creating appropriate datasets was a challenge. Furthermore, pedagogic help in designing a flipped coding course from scratch would have been useful. Assistants were hired; however, they were not technically strong enough. Furthermore, there were no examinors who were specialised in spatial analysis.

Acquire a sparring partner to co-teach as much as possible. Start by researching examinors and assistants. Make realistic goals if you are on your own or else: ask for more preparation hours.

5 DIGITAL CONTENT CREATION

BLOGGING AS A DIGITAL TOOL FOR BRANDING AND COMMUNICATION

ⓘ INFORMATION

Teacher: Anja Vesterager and Helle Dam Jensen
Faculty: Aarhus University, Humanities
Discipline: International Business Communication in Spanish
Course: Branding in a Communicative Perspective
Level of study: MA
Teaching method: Workshops, group work and written exercises
Number of students: 14
Duration: Series of activities

♡ MOTIVATION

To update an existing course in order to improve students' employability by increasing relevant and in-demand competencies, as well as increasing the course focus on turning theory into practice.

◎ ACADEMIC OBJECTIVE

Integration of central digital tools that are used by the industry in connection with branding activities.

💻 USE OF TECHNOLOGY

We worked with the following three (interrelated) types of technology:
- Branded apps
- Gamification
- Blogging

We introduced the theoretical and practical basis for using all three digital tools, but only worked with software for designing blogs in practise (company blogs). As we did not have access to software for designing prototypes for branded apps and gamification, we only worked with the design principles and ideas behind the digital tools in the cases that focused on those. In the case of blogging, we used the free software version of Figma for prototyping.

We would have liked to work in WordPress, but as we do not have a licence, we had to opt for a different tool. We learned about Figma and chose this because it can be used for prototyping and it includes a free version.

☑ OUTCOME

The students seemed to find it inspiring and relevant to work with the digital tools that we introduced. From a teacher perspective, it seemed that the tools contributed to connecting theory and practice. In this way, they complemented the lectures (which emphasise the theoretical perspective of branding) on which our seminars are based.

🔧 ACTIVITIES

The work with the digital tools was based on case studies. In this connection,

1. the students had to read the case before class (out-of-class)
2. the students had to read the suggested research articles before class and study the suggested websites (out-of-class)
3. the students had to do the initial idea generation with regard to strategies and design (out-of-class)
4. in group work, the students decided on and motivated their decisions of tool type on the basis of step 1 and 2 (in-class)
5. in the case of blogging, they also had to come up with an idea for a layout (in-class)

The same methodological approach was applied to the written exercises:

1. Study of theory
2. Decision-making with regard to strategies and principles
3. Write descriptive and argumentative text based on step 1 and 2
4. Adaptation of prototype in Figma when working with blogging

💡 RESOURCES & SUPPORT

- Research articles
- Websites
- Software (Figma)
- Cases
- Instructions
- Feedback
- Presentations with peer feedback (in small groups)

⚠️ CHALLENGES & ADVICE

The students found it time consuming to turn theory about blogging into practice. In the case of the practical implementation of blogging, they found that they spend a lot of time figuring out how the programme worked and discussing strategies and principles for the layout. It is also noteworthy that not all students had the same level of technological expertise. Group work is therefore a good choice so they can support and learn from one another.

We would have liked to work in WordPress, as it is a widely known blogging tool, but Aarhus University does not have a license. In this connection, we would also have liked to work with software for branded apps and gamification, but due to a lack of time, we did not find out whether there are free tools available to this.

In some cases, the structure will have to be revised, while in other cases we will have to give the students more time to work with the cases as working with design is time consuming.

Working with Figma offers great potential for students to practice how theory can be turned into practice. As mentioned above, it is a good idea to let students work in groups since their technological competencies are not equally developed and because it enhances idea generation.

BRANDING-ORIENTED PADLETS AS COMMUNICATION AND PLANNING TOOLS FOR BRANDING CAMPAIGNS

INFORMATION

Teacher: Patrick Leroyer
Faculty: Aarhus University, Humanities
Discipline: Business Language and Communication in French
Course: Branding in a communicative perspective
Level of study: MA
Teaching method: Lectures, workshops
Number of students: 2
Duration: Whole course

MOTIVATION

To increase an understanding of how to bridge theory and practice within the educational program in order to develop further job competencies and improve students' employability. Also, for students to develop writing methods as well as analytical and planning tools specific to communication skills.

ACADEMIC OBJECTIVE

Demonstrate the capacity of customized Padlets to bridge theory and practice and to demonstrate their operational value for developing branding campaigns.

USE OF TECHNOLOGY

- Brightspace
- Padlets
- Tutorial videos online

All were easy to use and fully accessible through AU licence.

OUTCOME

In the students' evaluations it was assessed that the method was effective to quite closely achieve the stated learning objectives, and the students also gained a good understanding that the software can be very useful not only in class but also in the workplace.

Padlet-based activities were also found to be highly motivating and increased the involvement of students in all 4 types of activities – reflecting, analysing and planning as well as producing campaigns and key-branding messages in selected cases.

⚙ ACTIVITIES

- The students read articles and book chapters (out-of-class)
- Followingly, the students followed instructions on the use of a range of different Padlet designs and select and adapt a solution suited to a range of company cases (out-of-class)
- The students made notes with their reflections, analysis, key messages and planning for each single case (both in and out-of-class)
- The students organized Padlet elements and provided conceptual relations between them to solve the case presented by the teacher (both in and out-of class)
- The students presented their work in class
- Based on the feedback obtained, students finalised the Padlet design and content for each case (both in and out of class)

💡 RESOURCES & SUPPORT

- Research articles and book chapters
- Company websites
- Padlet software on Brightspace platform
- Branding communication cases
- Instructions and tutorials
- Online and in class presentations
- Feedforward and feedback

⚠ CHALLENGES & ADVICE

Padlets are good for didactic and planning purposes, but do not provide an operational branding platform as such. More writing software would be needed, for instance AI text generators, to support both texts and pictures. Access to website technology is also needed.

Advice for others is to try to get access to a website editor (for instance Wordpress) in order to transform Padlet planning elements and key messages into proper website communication (pages, blog, etc.).

TRANSMEDIA STORYTELLING IN EAST ASIA AND GAME JAM ON "THE JOURNEY TO THE WEST"

INFORMATION

Teacher: Barbara Wall
Faculty: University of Copenhagen, Humanities
Discipline: Korean Studies
Course: Nordic Korean Studies Days
Level of study: Mixed
Teaching method: Lectures, group work, supervision, feedback
Number of students: 26
Duration: 7 day course

MOTIVATION

Part of the bashing of humanities is the constant critique that knowledge gained in the humanities is not applicable, that humanities don't create anything tangible. By creating computer games, students learned how to apply their theoretical knowledge on transmedia storytelling with the help of digital tools. They produced a product they could share with the world and that boosted their self-confidence.

ACADEMIC OBJECTIVE

By the end of the game jam the students will not only be able to describe what transmedia storytelling is but will also be able to actually do transmedia storytelling by creating an interactive story adventure game by using scripting languages such as Twine or Ink.

USE OF TECHNOLOGY

- Twine
- The individual teams of students used many more digital tools they were familiar with.

Twine is user-friendly and not too overwhelming when new to the field.

OUTCOME

You can find examples of the games here: https://www.kstudiesonline.com/text-adventures

I would especially recommend "The Ugly Piglet".

🔧 ACTIVITIES

- Preparation of reading theoretical texts on transmedia storytelling,
- Reading and watching primary sources, meaning translations and adaptations of The Journey to the West.
- Introductory lecture on transmedia storytelling and the circulation of The Journey to the West
- Introduction to Games Studies, the scripting language Twine, and the basics of how to create a story.
- Game jam in mixed groups of students with individual sessions with instructors. The task was to create a game by using the integral actants of The Journey to the West and adapt the story to the context they liked.
- Presentation of the game in class.

💡 RESOURCES & SUPPORT

- Readings on transmedia storytelling
- Translations and adaptations of The Journey to the West
- Introductory lectures
- 1:1 feedback
- Presentations

⚠️ CHALLENGES & ADVICE

The game jam was part of a very intensive 7-day program, so many students used their nights to work on the games. I think it would be a good idea to organize game jams as separate events to give students more time for the project.

Advice for other teachers would be to team up with other instructors. Rather than trying to become an expert on digital tools, start working together with an expert, to both make the burden of implementing digital methods in teaching much lighter, and to gradually improve your own skills. While a basic understanding is of course necessary, it seems to be more efficient to combine different expertise rather than trying to become an expert in many different fields from the start.

USING GOOGLE ADS IN DIGITAL MARKETING

INFORMATION

Teacher: Søren Vigild Poulsen
Faculty: University of Southern Denmark, Humanities
Discipline: Digital market communication and English
Course: Media and Culture 2
Level of study: BA
Teaching method: Lectures
Number of students: 75
Duration: Single activity

MOTIVATION

I wanted the students to get hands-on experience with software that is used for creating ads on the Google search network.

ACADEMIC OBJECTIVE

The objective of the class was to learn how Google Ads works and to use it for creating a search ad (in contrast to organic search ads and SEO).

USE OF TECHNOLOGY

- Google Ads

It is standard software in the marketing business

OUTCOME

The students got the intended working experience with Google Ads and were able to create a campaign. They also learned how to produce realistic ads.

CHALLENGES & ADVICE

I had to learn to operate the software on my own, which was time-consuming. YouTube tutorials were a great asset in understanding the details of the software and to prepare for teaching it to others.

Also, to get the full experience of the Google Ads system, one needs a functional demo website and a budget, this was unfortunately not possible to incorporate in this class assignment. Additionally, it is important to be aware that to be able to create an account in the Google Ads system, students had to use their own credit card, which might preferably be avoided.

A piece of advice is to familiarize yourself thoroughly with the software and make test runs before teaching it to students.

⚒ ACTIVITIES

- Before class, the students read a chapter in our textbook on Google Ads
- In the beginning of the class, the students were given a short presentation in order to walk them through each step of the process
- The students were given the assignment to create a search campaign for an open day event at SDU Slagelse and use the software to create two search ads to the target audience (young adults aged 18 to 22)
- Selected students presented their solutions to the class and got feedback on their suggestions

💡 RESOURCES & SUPPORT

Students had both relevant textbook and software available, and also:
- Demonstrations of how the software worked
- Teacher available for support during the activity
- Teacher feedback on student presentations

6 DIGITALISATION: IMPACT AND ETHICS

ARCHIVING AND ANALYSING DIGITAL MATERIAL

ⓘ INFORMATION

Teacher: Elisabeth Muth Andersen
Faculty: University of Southern Denmark, Humanities
Discipline: Nordic Studies
Course: Media and Culture 2
Level of study: BA
Teaching method: Lectures
Number of students: 75
Duration: Whole course

♡ MOTIVATION

The use of digital media to accomplish social, practical and institutional activities is part of our culture and technologies and practices keep developing. Many students have an interest in digital and social media. Therefore, this course offers an opportunity to learn how to understand, collect and analyse data from digital media. The students are not introduced to statistics or issues related to programming or technologies and therefore, this needs to be reconsidered.

◎ ACADEMIC OBJECTIVE

The academic objective was for students to obtain knowledge about ethical and legal issues concerning archiving and the use of digital material in relation to distribution and publication.

▭ USE OF TECHNOLOGY

- The Internet Archive
- Twitter
- YouTube Data Tool
- Conifer, Video download helper

These tools were easy to use and some of the tools were introduced to the students during a lecture.

☑ OUTCOME

The students learned something new, but most of the students continued to use basic tools and methods that they already knew by taking screenshots of the data of interest.

ACTIVITIES

- For each lesson throughout the entire course, the students collected digital data with help from the teacher.
- For every session, the students presented their data and the teacher helped the students use the right tools in order to analyse their digital data.
- The students received feedback from Netlab course manager on their assignments throughout the course.
- The students were prepared to do so by an introductory lecture:
    - Firstly, the students were introduced to tools for archiving digital material available via Netlab.
    - The students were also introduced to ethical issues related to collecting and presenting digital and online data. Afterwards, they discussed the ethical issues there might be with the case examples presented.

RESOURCES & SUPPORT

The students received following links to access tutorials and the information on ethical issues:

- https://www.netlab.dk/services/tools-and-tutorials/
- https://www.forskningsetikk.no/en/guidelines/social-sciences-humanities-law-and-theology/a-guide-to-internet-research-ethics Further, the students were offered:

Students also received feedback from Netlab course manager on their assignments

CHALLENGES & ADVICE

Students were encouraged to do exercises after class and hand them in to get written feedback. Most of the students did not choose to do this and the assignments and feedback were not very successful. The students' skills in digital tools are limited, and the written format makes it difficult to communicate about it. Ethical issues related to collection and presentation of digital data are to some extend unresolved and very complex. The latter issue is important; however, it is also difficult to navigate as a teacher and student.

A piece of advice based on this experience is to show the students why the use of methods and tools is helpful in order to increase their motivation. If collaborating with experts, then it is a good idea to remember to make both goals, expectations and the student level very clear to the experts - that way they can help in the best and most succesful way.

A DIGITAL MINDSET FOR LAWYERS

ⓘ INFORMATION

Teacher: Per Andersen & Bettina Lemann Kristiansen
Faculty: Aarhus University, Social Sciences
Discipline: Law
Course: The Lawyer's Task in a Digitalised Society - Law, Technology and Ethics
Level of study: MA
Teaching method: Lectures and exercises
Number of students: 23
Duration: Whole course

♡ MOTIVATION

In recent years, Danish employers have increasingly demanded lawyers who have insight into and understanding of the digital agenda. Often, however, the employers have not been particularly clear about what they are looking for, and therefore it has been difficult for the Danish universities to equip students with the skills and competencies that an increasingly digitised labour market is looking for.

Based on discussions and interviews as well as observations of other professions' desires, we designed a course for the law programme at Aarhus University that aims to build the foundation for a digital legal mindset for the lawyers of the future.

◎ ACADEMIC OBJECTIVE

To lay down the first bricks of a digital mindset in order to be able to work with law in digital ways and to be able to identify challenges towards rule of law and due processes under the influence of digitalisation.

⌨ USE OF TECHNOLOGY

- Examples shown of different programming languages
- Twitter
- Microsoft Office Excel

The aim was to establish a foundation of a digital mindset based on a fundamental understanding of how computers work, data quality etc., not to teach specific technologies.

⚒ ACTIVITIES

The teaching model was based on Leonardi & Neely's The Digital Mindset (2022), which works with three focal points in the form of three Cs:

- Collaboration, i.e. understand what computers can and cannot do;
- Computation, i.e. understand what data is;
- Change, which is identifying options in relation to security issues, bias etc.

In addition to Leonardi & Neely, three legal subject-specific focal points were added that centred around three Us:

- Understand the legal-normative framework for digitalisation;
- Understand the organisational framework for lawyers' work with digitalisation;
- Understand the legal-ethical challenges of digitising the legal field.

The students got a fundamental understanding of these focal points through:

- the theoretical and practice focused syllabus
- presentations by external guests/legal practitioners working with digitalisation
- quasi coding
- minor data exercises

☑ OUTCOME

According to Leonardi & Neely, you need only to understand 30% of each of the three Cs to have a digital mindset in order to contribute to the work of the digital transformation. Though we may have only reached 10% with this course, the feedback from the students indicates that we have succeeded in laying the first foundation for a subject specific digital mindset. In addition to an understanding of the technical digital Cs, the students attending the course seem to have achieved an understanding of the mental, professional-social and professional context that is part of the digitisation within the field of law. Furthermore, they have achieved an understanding of the principles behind data protection, but also how these challenge the digital opportunities. As a bonus, the students themselves also indicate that they have gained a fundamentally better understanding of the rule of law due to the discussions about effective digitisation versus rule of law and due process. Thus, they feel better prepared to be able to assess advantages, disadvantages, and the tension between efficiency and legal certainty.

⚠ CHALLENGES & ADVICE

In developing a digital mindset, the Leonardi & Neely model takes away the pressure of thinking that you should know everything and it instead establishes a frame of expectation for realistic goal-setting.

EVALUATING DIGITAL METHODS FOR ACADEMIC CASES IN BUSINESS AND POLICY

ℹ️ INFORMATION

Teacher: Martin Klatt
Faculty: University of Southern Denmark, Social Sciences
Discipline: Business
Course: International Descriptive Economics
Level of study: BA
Teaching method: Lecture
Number of students: 40
Duration: One session

🤍 MOTIVATION

To broaden the students' perspective on how digitalisation matters and on how to integrate it into an academic project.

◎ ACADEMIC OBJECTIVE

The students do a group project on a specific case in which they develop a research question relevant to compare aspects of Danish and German society in a cross-border perspective. The project must have business and policy relevance. For this session, the students looked at specific aspects of how digitalisation affects their specific case study.

💻 USE OF TECHNOLOGY

No specific technology used.

☑️ OUTCOME

The session opened the students' eyes to the challenges and opportunities in using digitalisation. This depended very much on cases. It was discussed that Denmark as a leading society concerning digitalisation in Europe had developed an effective public service, compared to Germany/Schleswig-Holstein, where digitalisation of public service was just in its beginning phases.

ACTIVITIES

- The students were asked to find and read a scientific article on digitalisation relevant for their project (before class)
- The students were asked to prepare a short presentation (5-10 min) on the relevance of digitalisation for their individual projects (before class)
- The students presented their case (in class)
- We discussed challenges and opportunities of digitalisation, here especially in a cross-border context.

RESOURCES & SUPPORT

- SDU library resources to research scientific articles
- Instructions on how to research the library resources
- Instructions on how to present their case

CHALLENGES & ADVICE

One session was not enough to go in-depth with digitalisation challenges and opportunities. The course is a two-semester course, so the topic should be introduced already in the fall term. For some groups it was also challenging to find relevant scientific articles.

A piece of advice it to start including digitalisation early into planning your course.

MEDIA TECHNOLOGY AND DIGITISATION

ℹ️ INFORMATION

Teacher: Kim Toft Hansen

Faculty: Aarhus University, Humanities

Discipline: Nordic Studies

Course: Media Studies II

Level of study: BA

Teaching method: Lectures

Number of students: 55

Duration: Whole course

🤍 MOTIVATION

Motivation was based on enhancing the students' digital literacy and ability to critically evaluate media in the digital era.

◎ ACADEMIC OBJECTIVE

The academic objective of this course is to give the students insight into the socio-cultural impact of media technology and digitisation.

💻 USE OF TECHNOLOGY

- Google search (introducing a specific method for locating online material: desktop production studies)
- Statsbibliotekets Mediestream (translation: The media streaming service of the Danish Royal Library, empirical material)
- Online video material and web content (empirical material)

☑️ OUTCOME

The students showed critical awareness of digital media throughout the course and in their final assignment, which was one of the teaching goals.

ACTIVITIES

- Before class, the students had to read academic texts on media technology and digitization. Readings for each week took approximately 4 hours.
- The students had to watch/read/evaluate material available through Mediestream, i.e. TV-series, This should take 1-2 hours per lecture.
- Furthermore, the students searched Google for information on media producers in class and this took 30 minutes including discussion.
- Outside of class, the students also had to employ methods for the collective project work.
- Lastly, the students worked individually on a set assignment, critically evaluating and analysing a digital media phenomenon over a period of four days.

RESOURCES & SUPPORT

The students were given:

- Books, academic and non-academic articles
- Links to different media platforms (such as YouTube)
- Teachers' own video production

Teacher provided for or each lecture:

- Abstract and open study questions for the materials
- Reading instructions
- Feedback on the collaboration and collaborative interpretations of academic and empirical material

CHALLENGES & ADVICE

The teachers realised that there were no obvious technological resources or digital methods to be used as part of the course – there was too little time and no direct necessity in regards to the design of the final exam.

This course was developed to supply first year students with digital literacy, i.e., competencies in critical scrutiny of media in the digital era. Although the course appears to be home-safe turf for including digital methods and other technological material, the first-year students need schooling in understanding digital media before they are able to use digital methods for harvesting empirical data, etc.

WORKING WITH DIGITAL PERSONNEL FILES, NETWORK & VISUALISATIONS

(i) INFORMATION

Teacher: Haakon A. Ikonomou
Faculty: University of Copenhagen, Humanities
Discipline: History
Course: The League of Nations: International Organisation, International Politics and Internationalism, 1850s - 1950s
Level of study: MA
Teaching method: Small class teaching
Number of students: 15
Duration: Short series of activities

♡ MOTIVATION

The main question that directed and motivated the project was to investigate how a research-based course can be designed in which the students will become active participants in an on-going pilot study in digital history whilst learning how to find and interpret primary sources.

◎ ACADEMIC OBJECTIVE

The intent was to use digitised personnel files of the League of Nations Secretariat and collectively locate key biodata. In combination with a prosopographical database and in collaboration with computer scientists, the aim was to use this source material to co-create a visualisation of how the League of Nations Secretariat evolved between 1919 and 1939. After taking the course, the students should be able to search personnel files for content in relation to digital network and organisational analysis, match personnel files and prosopographical data, collaborate with computer scientists, determine how various source-types and bottom-up/top-down approaches provide different layers of understanding, and experience and reflect upon the complexity and limitations of personal/institutional sources.

⌨ USE OF TECHNOLOGY

• Digital personnel files (PDF's)
• Prosopographical Database (Excel)
• LONSEA Online Prosopographical search engine (Web)
• Tableau Version of digital research tool (Tableau)

The project aimed to use a prosopographical database that is a collection of biographical data on all employees of the League of Nations Secretariat. This is turned into a digital research tool, where scholars can search on nationality, gender, age, position and year- span to find groups of personnel. The technologies were used because they facilitated the students' engagement with the pilot study.

ACTIVITIES

- The students participated in lectures and did various exercises based on readings and their own research/analysis.
- They had to discuss and familiarize themselves with personnel files.
- This led to a full day workshop, where the students were asked to collect key data, structure the information, and make strategic choices in terms of how to create visualisation of it.
- After the workshop, the students were asked to do a presentation and evaluate their work on the visualisation and use it in their exam papers.

RESOURCES & SUPPORT

- The students received texts, links and examples before class.
- Furthermore, they received digital research tools, primary sources and A/V material.
- The students were instructed by the teacher throughout the course and had access to the teacher for questions
- Furthermore, the students were divided into groups for peer support on group exercises and mentoring of each other during the process.

OUTCOME

The students were more or less able to meet the goals that were set for the course except for their ability to search personnel files for content in relation to digital network and organisational analysis, and the ability to collaborate with computer scientists in creating a visualisation of the organisation and network.

CHALLENGES & ADVICE

The challenges were 1) balancing the students' engagement with the research project in a way that was relevant for learning objectives, 2) that students were properly introduced to the materials, rationale and intentions of the project, and 3) that these two factors did not 'steal' too much time from other important elements of the course. Furthermore, a great challenge was time. It was also difficult to 'insert' the students in the actual creation of the digital visualisation; however, the students did in fact use the digital research tool to write their exams.

A piece of advice for other teachers is to make a careful plan in order to ensure that the digital tools, methodologies, etc. are complementary to the overall goal of the course. Create a careful scaffolding to invite students into the process and to prepare them for the active part, as they will be able to make digital tools and methodologies a natural part of their toolkit, rather than something artificially plastered on top of the course.

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DIGITAL CURRICULUM

TEACHING CASES: HOW TO TEACH DIGITAL COMPETENCIES

This collection is a result of the efforts and contributions of participants in the Digital Curriculum project.

ABOUT THE PROJECT

The Digital Curriculum project is a national educational project supported by the Danish Ministry of Higher Education and Science. The project runs from 2020-2024.

The aim of the project is to integrate digital competencies in teaching based on faculty driven curriculum analysis. Participants from across Danish higher education institutions examine and discuss new conditions and opportunities due to digitalisation within the academic disciplines. This forms the basis of experimenting and developing new teaching practices.

The project is organised by Aarhus University.

Nine faculties from five Danish universities take part in the project:
- Faculty of Arts, Aarhus University
- Faculty of Business and Social Sciences, Aarhus University
- Faculty of Humanities, Aalborg University*
- Faculty of Social Sciences, Aalborg University*
- Copenhagen Business School
- Faculty of Humanities, University of Copenhagen
- Faculty of Social Sciences, University of Copenhagen
- Faculty of Humanities, University of Southern Denmark
- Faculty of Business and Social Science, University of Southern Denmark

*In January 2022 the faculties of humanities and social sciences at AAU were merged into one, The Faculty of Social Sciences and Humanities