TEACHING CASES

How to teach digital competencies?

2020-2021

DC | digital curriculum

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. The teaching cases presented in the following are all examples of how to teach digital competencies within the subjects of the Humanities and Social Sciences.

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CONTENT

SPATIAL ANALYTICS

INFORMATION

Teacher: Adéla Sobotkova

Faculty: Aarhus University, Arts

Discipline: History

Course: Spatial Analytics

Level of study: BA

Teaching Method: Lecture, Small class teaching & 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-source, 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 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 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.

RESSORCES & 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 spare 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 censors who were specialised in spatial analysis.

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

MEDIA TECHNOLOGY AND DIGITIZATION

INFORMATION

Teacher: Kim Toft Hansen

Faculty: Aalborg 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 digitization.

USE OF TECHNOLOGY

- Google search (introducing a specific method for locating online material: desktop production studies)
- Statsbibliotekets Mediestream (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.

CHALLENGES & ADVICE

The teachers realise that there are no obvious technological resources or digital methods to be used as part of the course – there was too little time and no direct necessity for the final exam type.

This course was developed to supply first year students with digital literacy, i.e., competencies

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.

RESSORCES & 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

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. The best advice would be to accept the lack of digital literacy among students and teach content evaluation bottom-up directly using digital

COUNT YOUR TEXT: DIGITAL TEXT ANALYSIS

INFORMATION

Teacher: Ulf Dalvad Berthelsen

Faculty: Aarhus University, Arts

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 digital methods as an elective, it is made possible for the teachers to try 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 relation to 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 and in practise, this is done through case analysis.

USE OF TECHNOLOGY

- Python with a focus on Pandas- & SpaCy modules
- Github (for sharing Notebooks and data)
- Jupyter Notebooks (used for groupwork and the students own projects)
- Guthenberg Projects (access to public domain-literature)
- YouTube (tutorials)

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

OUTCOME

Most students were optimistic about the elective and the ones that came the furthest made it further than expected. In the evaluation, most students expressed that they felt equipped

ACTIVITIES

Preparation for class:

- The students had to read academic texts about digital humanities, case examples, theoretical and scientific issues.
- They watched chosen 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, the student presentation was discussed (case analysis or Python-script).
- The students worked together in smaller groups with the weeks programming assignments, that were prepared in Jupyter Notebooks by the teacher.
- The teacher should walk around between the groups and participate in discussions on codes and the exam.

RESSORCES & SUPPORT

- The students were provided with 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.

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/legal in relation to the GDPR-law. 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 use extra time.

COMPUTATIONAL METHODS FOR ARCHAEOLOGICAL FIELDWORK

INFORMATION

Teacher: Tom Brughmans

Faculty: Aarhus University, Arts

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

ACTIVITIES

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

RESSORCES & 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

of computational tools that exist and have access to resources they can draw on when the tools become relevant.

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.

CINEMETRICS AND MOVIE ANALYSIS

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 lesson

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.

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

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.

RESSORCES & 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.

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 struggle to see the relevance. This is to be expected but it was not a problem. However, the students had some issues with defining the shot scale but most of the students were productive. 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. Another good advice is to find manageable works to analyse in class.

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: Two sessions

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, that is a communication practitioner, for an organisation.

USE OF TECHNOLOGY

- Vader (used to do an 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 Kristoffer Nielbo from CHC):

- 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 slowly forward, and a hand-out based on Kristoffer's introduction to Vader analysis from the previous week was prepared for the students beforehand.

RESSORCES & SUPPORT

- UCloud was made available for all the students to access and use Vader through
- A hand-out was provided for the second session
- Having a second session just for students and teacher to go through slowly the steps helped the students understand better.

CHALLENGES & ADVICE

The biggest challenge was that 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 good advice for teachers is to brush up or take some courses to develop digital/ computational skills. Lower ambitions for the students and make room 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.

GEOSPATIAL DATA VISUALISATION

INFORMATION

Teachers: Mikkel Høghøj & Mikkel Thelle

Faculty: Aarhus University, Arts

Discipline: History

Course: Cultural Historic Subject

Level of study: MA

Teaching Method: Small class teaching

Number of students: 12

Duration: Singe session

MOTIVATION

This course aimed to explore the cultural history of nature in the modern city. Digital methods 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 decided to employ digital methods in their exam papers.

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 guest lecturer Adéla Sobotkova, in class online
- The students afterwards reflected on a specific exercise concerning water use in 19th century Copenhagen
- The students were offered further mentoring if they would pursue using historical data in their assignments

RESSORCES & SUPPORT

- The students were given Adela Sobotkova's slides with links to additional tutorials and literature.
- The students were given material to do 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.

DATA ANALYTICS IN PYTHON

INFORMATION

Teacher: Pernille Smith & Michela Beretta

Faculty: Aarhus University, BSS

Discipline: Innovation

Course: Managing Innovation

Level of study: MSc

Teaching Method: Lectures

Number of students: 44

Duration: Short series of activities

MOTIVATION

Digital competencies will be important for innovation management students to acquire in relation to their career start and development. Many innovation-related jobs will require students to understand main 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, 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 Centre for Humanities Computing as the most appropriate for this type of activity.

OUTCOME

The students that participated were interested, and their assignments and presentations were generally good. Some groups made some very sophisticated analysis, 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 time consuming and therefore at the

ACTIVITIES

- The students work on an activity where they will get acquainted with data analysis techniques for analysing large amounts of qualitative data from an idea platform.
- They collaborate with a group of data scientists. From the collaboration, they learn 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 are introduced to the most common techniques to make sense of and analyse data.
- The students have a lecture by a researcher in Humanities Computing elaborating on the different techniques.
- Students work in groups and send 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 takes place, where each group meets with the assigned data scientist and discuss the requirements they have previously sent and whether adjustments are needed. Based on the feedback from the data scientists the students readjust their first requirements.
- The students can now run the analyses and reflect on the obtained results.
- The students present their project – explaining which criteria and techniques they have defined for analysing the data and explain and reflect on the results obtained.
- The students also reflect on the process of collaborating with the data scientists.

RESSORCES & 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 lastly, feedback from the instructors.

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.

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 every year, if it needs to be permanent. 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).

ADVANCED GRAMMAR

INFORMATION

Teacher: Marie Møller Jensen

Faculty: Aalborg University, Humanities

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 activities

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.

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 were to do all activities in class and the time that was spend 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.

RESSORCES & 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 numbers and they also found it tricky to extrapolate from patterns from 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

INFORMATION

Teacher: Jens Lohfert Jørgensen

Faculty: Aalborg University, Humanities

Discipline: Nordic studies

Course: Contemporary Theories and Methods in Scandinavian Studies

Level of study: MA

Teaching Method: Lectures, small class teaching and teaching by student teachers

Number of students: 19

Duration: Single 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 has a 'low entrance barrier' 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.

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 when 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.

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.

RESSORCES & SUPPORT

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

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. Using the University of Copenhagen version of Voyant proved to be a challenge, since it was not possible for the students to make use of it in the week, when they did their group work.

A 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.

SCALABLE READING IN VOYANT

INFORMATION

Teacher: Helle Strandgaard Jensen

Faculty: Aarhus University, Arts

Discipline: History

Course: Introduction to Archives and Digital Methods

Level of study: BA

Teaching Method: Lecture and Supervision

Number of students: 120

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 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 understandable 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 the 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 firstly 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.

RESSORCES & 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.

A 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 set-up. 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.

WORKING WITH DIGITAL PERSONNEL FILES, NETWORK & VISUALISATIONS

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: How can one design a research-based course, where 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. 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
    - 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.

RESSORCES & 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 their 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 good 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.

ARCHIVING AND ANALYSING DIGITAL MATERIAL

INFORMATION

Teacher: Elisabeth Muth Andersen

Faculty: University og 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 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.

RESSORCES & 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:

- 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 little, 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 learnt from these experiences is to show the students why the use of methods and tools is helpful, in order to help 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 - because that way they can help the most.

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 2020-2023.

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 digitisation 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