Semester description 7th semester
Information Studies, Aalborg

Semester details

School: School of Music, Music Therapy, Psychology, Communication, Art and Technology (MPACT)
Study Board: Studyboard of Communication and Digital Media
Study Regulation: Regulations and curriculum for the master’s programme in information technology (information studies):

Semester framework theme

Semester theme: Analysis of ICT in Practice
The semester consists of three modules and an elective course:
User Practice, User Analysis and Pilot Studies (project module, 15 ECTS)
ICT based Data Collection and Analysis (course module, 5 ECTS)
Professional inquiry (course module 5 ECTS)
Elective course (course module, 5 ECTS)

The overall purpose of studying Information Studies is to design and adapt well-reflected and useful ICT solutions in various contexts. The master’s programme particularly emphasizes the importance of understanding what the use or introduction of ICT means to practice, as it always entails changes in organizational practices - changes which give cause to rethink, reformulate, or remediate practices in a given context. The domains relevant for this area of study are many, but the focus is on the use of ICT in practices relating to work, learning, and knowledge sharing processes within both public and private sectors.

The scope of the project work this semester is Analysis of ICT in Practice. The aim of the course, readings, and project activities within this framework is that you gain such a degree of theoretical, analytical and methodical knowledge and skills that you can complete a semester project and exam within the subject of User Practice, User Analysis and Pilot Studies. You are free to choose your empirical case and methodological approach within this framework, but the central challenge of this semester’s project work is to show that you can question, evaluate and argue for your empirical and methodological choices, analytical approaches, and conclusions.
Some of you may be new to problem based project (the Aalborg PBL model). You can read more about it and watch videos about this pedagogical model here and in the course Professional Inquiry this model will be introduced and practiced in more depth.
Semester coordinator and secretarial assistance

Coordinating teacher: Ann Bygholm (ann@hum.aau.dk)

Secretariat assistance provider: Pia Knudsen (piak@hum.aau.dk)
Welcome to the module in ICT based Data Collection and Analysis

This module introduces theories, methods and tools within the area of ICT based Data Collection and Analysis, offering a range of possibilities of collecting large amounts of data regarding the use of e.g. web-based ICT solutions. These possibilities call for fundamental consideration of options and problems, including ethical concerns on the significance of the potentially extensive mappings of individual user behaviour. The students are expected to engage in ICT based data collection and analysis for the support of ICT user analysis and pilot studies.

The module comprises courses and excercises within the following:

- Theory and method within ICT based data collection and analysis
- Tools for ICT based data collection and analysis

You can read more about the module in the study regulation.

The course module is completed with a set, individual internal written exam (max. 10 pages) graded according to the seven-point grading scale. The student is given 7 days to complete the assignment.

The module starts Tuesday 4th of September.

**We recommend that you buy the following book on research methods:**

  (You can also use the 4th edition of Bryman's book from 2012)

Module coordinator: Mette Skov (skov@hum.aau.dk)

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**Introduction to ICT based data collection and analysis**

Lecturer: Mette Skov

Date and time:

The first lecture will introduce to ICT based forms of data in HCI such as big data, log data, sensor data etc.

Literature:


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**Video-based Interaction Analysis I + II**

Lecturer: Jacob Davidsen

**Part one: Video-based interaction analysis: method, theory and practice**

Date and time: 19th of September 8.15-10.00
In this lecture, I firstly introduce a brief historical outline of the use of video for studying interaction, secondly, we discuss how video based interaction analysis can be used for studying and (re)designing practices, and thirdly we discuss how interaction can be represented in transcripts.

Literature:


**Part Two: Video-based interaction analysis: method, theory and practice**

Date and time: 21st of September 10.15-12.00

In the second part, we work with ELAN - a tool for annotating and transcribing video data. The student’s will be working with existing data, which should be transcribed using the tool.

Download ELAN.

**Computer-assisted qualitative analysis I + II**

Lecturer: Mette Skov

Date and time: Monday 25th of September at 12.30-16.15 and Thursday 28th of September at 10.15-12.00.

Empirical qualitative research often generates large amounts of data in the form of field notes, interview transcripts, data from open-ended questionnaires etc. In two lectures we will work with computer-assisted qualitative data analysis using the Nvivo software as example.

Bring your laptops and please install Nvivo beforehand (free campus license can be downloaded here: http://www.ekstranet.its.aau.dk/software/nvivo/download-nvivo).

Literature:
Quantitative data and analysis I + II

Lecturer: Tanja Svarre Jonasen

Date and time: Oct 3rd, 8.15-12 and Oct 5th, 10.15-12

The two lectures concern quantitative data analysis. The first lecture presents the nature of quantitative research, quantitative data collection, and data analysis (statistics and visualization). The lecture also includes hands-in SPSS on the basis of data collected by the students on UX in mobile banking. The second lecture continues the exercises and the students present their work with data in SPSS.

If you haven't already installed SPSS on your machines, please download it from software.aau.dk ahead of the first lecture.

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Ethics

Lecturer: Sandra Burri Gram Hansen

Date and time: Wednesday 11th of October at 12.30-14.15

This lecture introduces some of the key perspectives of applied ethics, such as utilitarianism, deontology and ontology. Apart from a general introduction to these diverse approaches to ethics, the lecture will address ways to include ethics in the development and evaluation information systems.

Readings:

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Module evaluation

Lecturer: Mette Skov

Date and time: Wednesday 11th of October at 14.30-16.15

In this closing lecture students can ask question about the written exam and evaluate the module.
**Module description**

The module presents PBL as pedagogical model and as a backbone of research practice. Students learn through hands on exercise and critical reflection how to make problem formulation their driver of inquiry. The course highlights how to treat a “problem” theoretically, through empirical investigation, all within the field of Information Studies. The module will use a framework we call “Professional Inquirer in the PBL way” as a map of the landscape of knowledge and skills to be acquired through the course.

**Module title and ECTS**

Professional Inquiry - 5 ECTS

**Location**

7th semester HCI - Study board Communication and Digital Media

**Module coordinator**

Heilyn Camacho hcamacho@hum.aau.dk

**Teachers**

Ellen Christiansen ech@hum.aau.dk and Heilyn Camacho hcamacho@hum.aau.dk

**Type and language**

Study module - English

**Objectives**

Following the study regulation (http://www.fak.hum.aau.dk/digitalAssets/288/288826_ka_information-studies_2017_hum_aau.dk.pdf) students will have the opportunity to acquire:

- **knowledge** of the connections and differences between empirical inquiry and theoretical inquiry in scientific research within the field of informatics.
- **skills** in describing and combining empirical and theoretical research
- **competences** in taking a reflective approach to the basis of scientific inquiry

**Content**

The master study has as its overall objective to educate graduates to become capable of adapting and developing ICT solutions to end user practices within organisational context - and reflect critically upon current practice, and develop and present alternatives. Students do not become professional inquirers by following this course module, but students can learn how to – in the course of their ongoing study practice – become professional inquirers. Professional inquiry is very much a communicative collaborative act of going back and forth over arguments, in acts of listening and questioning. Each module-session deals with one of the constituents of professional inquiry: knowing the research field, the research tools and how to critically reflect upon research. This knowledge is accumulative, the themes are linked, and students cannot skip participating actively.

The topics covered are:

- Topic 1: Professional Inquiry in the PBL way – session 1
- Topic 2: Scholarly ways of reading and writing – session 2
Topic 3: Your identity as professional inquirer - session 3 & 4

- Topic 4: The communicative and collaborative act of going back and forth over arguments session 5
- Topic 5: The process of problem formulation – session 6 and 7
- Topic 6: Fact checking and fact presentation – session 8

Relation to other Modules

This module offers a basis for professional inquiry in the context of problem based project work throughout the different semesters of the master programme in Information Studies

Scope and expectations

The module equals 5 ECTS points corresponding to a student workload of app. 137.5 working hours. The teachers enforce a study practice where literature is read before class, and assignments are carefully prepared.

Requirements

Completed bachelor’s degree in Communication and Digital Media with specialization in Information Studies (Informationsvidenskab) or another relevant bachelor’s degree or professional bachelor’s degree

Participants

Students from 7th Semester of Information Studies master programme

Examination

An internal written examination in English in “Professional Inquiry”. The examination is a seven-day take-home assignment on a set topic. Evaluation: pass/fail.

The assignment paper must demonstrate that the student fulfils the objectives for the module stated above. Alternatively, the examination may be completed by satisfactory and active participation in the module, which demands:

1. Attending 80% of the course sessions
2. Handing in 3 journal entries
3. Leading a critical discussion of an academic paper (as a member of a group)
4. Writing a 5 page article (following the academic criteria)
5. Active participation in the action learning session

Module activities

Face to face sessions: The course is composed of 10 2-hour face to face sessions. Each session comprises lecture, workshop, discussions led by students as detailed below.

Reflective Journal: Students should write 3 entries to a reflective journal: 1) Philosophy of PBL, 2) what is the identity of a professional inquirer – theoretical discussion, and 3) analysis of possible applications of the Lego Serious Play tool in professional inquiry

Critical reading: in groups, students will be in charge of chairing discussion about a selected paper following standards for professional inquiry

Writing a short paper: each student is required to write a 5 page academic article. The topic will be: “What is expected from me when performing as a professional inquirer?”
Session 1: Professional Inquiry in the PBL way

In the first session, we introduce the students to the aim of the course and the key skills required to become a professional inquirer within the PBL approach. In the end of the session participants should be able to understand the interlink between theory, tools and data to investigate a specific field using PBL approach.

Activities:

1. Course introduction
2. Lecture by Ellen Christiansen on PBL as pedagogical method and as research approach
3. Critical discussion of a scientific article by Heilyn Camacho

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<td>Kjersdam, F., &amp; Enemark, Stig. (1994).</td>
<td>The Aalborg experiment: Project innovation in university education.</td>
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<td>S. M. Strandvad, K. Samson, M. Hertzum, &amp; O. E. Hansen (Eds.),</td>
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<td>Situated design methods (Chapter 8, pp. 139-160). MIT Press.</td>
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Session 2: Scholarly ways of reading and writing

In this session, we focus on reading and writing skills. We will work with tips and tricks to help students meet scholarly standards. At the end of the session, participants should be able to answer the question: Minimum form criteria for referencing a paper as part of professional inquiry.

Activities:

1. Intro to reading, reading practice, sharing
2. Intro to writing, writing practice, sharing

Literature
### Session 3: The identity of the professional inquirer (part one)

Session 3 and 4 aims to get a deeper theoretical and practical understanding of the field of professional inquiry and the skills and competences of a professional inquirer. In the end of the sessions participants should be able to answer the question: What is expected from you when performing as a professional inquirer?

**Activities session 3:**

1. Lecture by Ellen Christiansen on “Problem oriented approach to theory” (30 minutes)
2. LSP workshop by Heilyn Camacho: Identifying the key concepts, skills and competences of professional inquiry (one hour)

**Literature**

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**Session 4: The identity of the professional inquirer (part 2)**

Activities session 4

1. Lecture by Ellen Christiansen on “Problem oriented approach in practical work as inquirer” 30 minutes
2. LSP workshop by Heilyn Camacho: building the systemic landscape of the professional inquiry field (one hour)

**Session 5: The communicative and collaborative act of going back and forth over arguments**

In this session students will put to practice the knowledge acquired in session 2: reading and writing within the academic community. In this session three groups will be in charge of doing a critical discussion of a paper within the topic of “methods for professional inquiry”. Feedback will be provided after each presentation. The aim is to generate and steer an academic discussion about the different methods.

Activities

1. Groups discussion (three groups)
2. Feedback from Heilyn Camacho and Ellen Christiansen

**Literature:**

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Session 6: The process of problem formulation (part 1)

In this session, we focus on tools to support the problem formulation process. In the end of the session participants should be able to answer the question: What tools to use when to develop a proper problem formulation, that is a problem formulation that can guide professional inquiry and develop as the work progresses

Activities:
1. Introduction to the tools for problem formulation (Lead by Heilyn Camacho)
2. Hands on activities (Lead by Heilyn Camacho)

Literature:

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<td>Marquardt, Michael</td>
<td>Leading with questions: how leaders find the right solutions by knowing what to ask. John Wiley and Sons</td>
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Session 7: The process of problem formulation (part 2)

Once again we focus on practicing the professional inquirer skills, this time on the knowledge acquired in session 5 and 6. Students will participate on an action learning session with the aim to practice critical thinking, reflection in action, asking questions and finding the right question. The session will evolve around a specific problem based
on the students' backgrounds and interests.

Activities:

1. Action learning session lead by Heilyn Camacho

Literature

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Session 8: Fact checking and facts presentation

The topic for this session is fact checking and fact presentation. *In the end of the session participants should be able to answer the question:* How to argue sufficiently, within PBL framework, for the methods chosen?

Activities

1. Lecture by Ellen Christiansen on “The concept of truth in professional inquiry”
2. Critical review of a paper written by a former student lead by Heilyn Camacho

Literature:

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Session 9 and 10

These are two follow up meetings to check out with the students whatever they are using the knowledge acquired in the course for their semester project. The group is divided on two sub-groups and one teacher is assigned to each group.
USER PRACTICE, USER ANALYSIS AND PILOT STUDIES
(KDM_KA_INFORMATIONSVIDENSKAB_AAL)

General

User Practice, User Analysis and Pilot Studies
Lecturers: Pernille Andersen, Anne Marie Kanstrup, Ann Bygholm

Course description:

This module introduces theories and methods relevant for analysis of user practice, user-system interaction, and for pilot studies related to ICT innovation, design and development. The course activities are planned as a series of lectures, casework and discussions, and will help the student in

- Gaining knowledge about the theoretical and methodological issues of studying human practices especially in the context of technology use within different domains.
- Evaluating, choosing and reflecting on strategies and methods of user analysis, and collecting and analyzing data.

There will be a recurring case that we work with throughout the course. The module as a whole is completed through an external, combined written and oral examination based on a project report prepared by one or more student(s). The project report requires a minimum of 15 pages per student and may not exceed 20 pages per student (max. 30 pages in individually prepared reports).

Recommended literature

The textbook for the course is:

(available for download at Aalborg university library)

Additional literature appears from the description of the individual course sessions.

Reading Guide

In some of the lessons, we will zoom in on articles for more thorough examination. The reading guide (see below) consists of a set of questions that you should use when reading those texts (and a good guide to reading all of them as well).

For articles via "AUB link" you need to be logged in through AUB and for others to access/be on AAUs network or VPN.

Below a list supplementary literature (something you could read not should)


Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems.


Orlikowski, W. J., & Iacono, C. S. (2006). Desperately Seeking the ‘IT’ in IT Research: A Call to Theorizing the IT Artifact (pp. 19-42). Chichester, UK: John Wiley & Sons Ltd.
Topic 1

Understanding users and use practices

v/Ann Bygholm

This class introduce the concept of practice, and discuss why a practice based approach is valuable in relation to ICT innovation, design and development. Also, it situates the programme of Information Studies within these traditions.

Literature:

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Topic 2

2. Understanding users and use practices

v/Ann Bygholm

In this lecture we discuss practice as tradition and community. Furthermore techniques to acquire, represent and analyze data on use practices is also presented.

Literature:
Topic 3
Understanding users and use practices
v/Ann Bygholm

In this lecture we focus on understanding practice as activity. We also work more with techniques from Contextual Design to represent and analyze data.

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Topic 4
4. Understanding users and use practices
v/Ann Bygholm

Continuing our examination of practice theory - focus on practice as accomplishment. We also continue our work with techniques to represent and analyze data on use practices.

Literature:
This class introduces different principles and practices of Participatory Inquiry. In specific we will discuss different mind-sets and approaches towards participatory inquiry and the consequences hereof in terms of how people are invited into jointly explore, discuss, and define a problem.

**Literature:**

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This class will give an introduction to tools and techniques of participatory inquiry. Focus will be on tangible and visual artefacts/techniques and their communicative, mediating and generative qualities. We will discuss how artefacts can be used in different settings to access and collect data as well as to challenge knowledge derived from such data.
from different domains and practices.

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**Topic 7**

**Participatory Inquiry – Design Games**

v. Pernille V. K. Andersen

In this class we will explore the concept of design games as a tool, a mind-set and a structure for user involvement in participatory inquiry. We will explore and discuss fundamental principles of how to design and use different forms of design games as a way to facilitate participatory inquiry.

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In this class we will address cultural probes as an exploratory research method and a provocative instrument. We will explore different ways in which cultural probes can be applied to inspire new forms of self-understanding and communication about users own practices, thoughts and interactions.


Preparations for the class: read the two texts and bring your notes on (a) what are important arguments for conducting pilot/case studies (Flyvbjerg’s text can help you with answers to this question) and (b) what is important when you design a pilot study (Yin’s text can help you with some answers to this question.

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Pilot studies: methods and examples

v/ Anne Marie Kanstrup

At this class we examine 4 examples of studies of the use of information systems in practice.

Preparations for the class: it is important that you read the literature BEFORE the class as we will do exercises based on our readings. The four papers are all interesting studies of the use of various information systems in diverse types of context - nice readings. When reading make notes about (a) the research question that the authors investigate, (b) the methods/approach used to investigate the research question, (c) the results from the study and (d) limitations.

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Pilot studies: analysis and exercise

v/ Anne Marie Kanstrup

At this class we will first focus on analysis of qualitative empirical results and second start working with your exercise - your own pilot study design.

Preparations for the first part of the class: Read the two texts. Reflect on/make notes on (a) the value of a framework to support critical investigations of information systems (Bardzell’s text can help you with some answers for this) and (b) the value of a (inductive) thematic analysis (Braun and Clark text can help you with some answers for this question).

Preparations for the second part of the class: Read the paper by Kanstrup & Bertelsen to understand the background for the MOVE-application. At the class you will be presented to the MOVE application and start working with designing a pilot study for this application. Bring all your notes from this course as you are expected to combine theoretical elements and methods you have been presented for.

Literature

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Pilot studies: presentation and feedback

v/ Anne Marie Kanstrup, Pernille Viktoria Andersen, Ann Bygholm

No readings but mandatory presentation on class of the exercise you have worked on since last class.