Bachelor's Thesis Seminar autumn 2020 (57C99902)

https://mycourses.aalto.fi/course/view.php?id=27191

Riitta Hekkala, Andrei Vedernikov & Markku Tinnilä
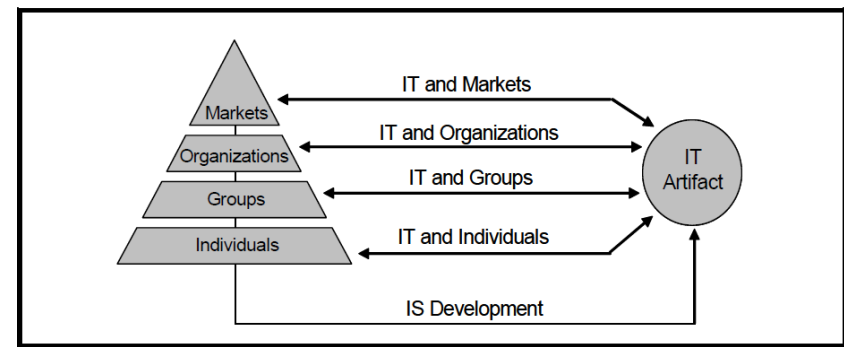
Lecture

September 29, 2020

Contents of today's lecture

- Introduction of the 3 research fields and supervisors in ISM - Information and Service Management

- Objectives and requirements for a Bachelor's thesis and/or thesis seminar

- Research as a process
  - Identifying your topic
  - Formulating your research question/problem
  - Searching for source material

- How to build the Research Plan

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Division of supervision

- 52 participants registered for the autumn seminar.

- Supervision work will equally divided to three supervisors.
  - Equal amount of theses will be assigned to each supervisor.
  - Avoiding supervisor overloaded and improving the quality of the work
  - Criteria: best match between thesis topic and supervisor expertise
  - Language of theses
    - Riitta Hekkala & Markku Tinnilä (Finnish / English)
    - Andrei Vedernikov (English only)
  - Please write your research plan in English

3 Research Fields / Disciplines in ISM

- Management Science (MS)
    - Including Quantitative Methods of Economics and MS
    - Responsible for the **Business Analytics** specialization in ISM

- Logistics
    - Including Supply Chain Management (SCM), Operations Management (OM), Technology Management, Services

- Information Systems Science (ISS)

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(Sidorova et al., 2008)
Alternative / Aggregated view of the topics researched in ISS

Supervisors (ISS)

- **Riitta Hekkala**

- Ph.D. in Information Processing Science

- Assistant Professor of Information Systems Science
  - https://people.aalto.fi/riitta.hekkala
  - Fields of specialization:
  - Topics in information system development (ISD),
    - such as social and organisational aspects of ISD; IS implementations, Role of emotions in IS implementations, adoption and use, Power/ Leadership aspects of ISD project work etc.
  - Information technology (IT) and the changing nature of work;
  - Fields of interest: Artificial Intelligence
    - + Other related topics...

- E-mail: riitta.hekkala@aalto.fi

Supervisors (MS)

- **Andrei Vedernikov**
    - Ph.D. Candidate in Management Science
    - https://people.aalto.fi/andrei.vedernikov
    - Fields of specialization:
- Monte Carlo Simulation
- Portfolio Optimization
- Risk Modelling
- Decision Analysis
- Data Analytics
- Tel: +358 46 532 8448
- E-mail: andrei.vedernikov@aalto.fi

Supervisors (logs)

- **Markku Tinnilä**
  - Docent of Logistics; head of bachelor program
  - Fields of specialization:
    - topics in logistics
    - e-business
    - service processes
    - service modularization
    - business models and new services
    - mobility and transportation
- E-mail: markku.tinnila@aalto.fi

Objectives and Requirements for a Bachelor's Thesis and/or Seminar

Objectives of a Bachelor's Thesis

- To familiarize yourself with the main concepts, theories, research traditions, and research findings in a research discipline

- To practice independent scientific thinking by setting up research questions and studying a specific topic

- To get to know literature databases, to find relevant literature, and to apply it for resolving a research question

- To write a structured, scientific report

- To learn to review scientific writings

- To practice scientific discussion and argumentation.

(Kemppainen and Latomaa, 1999, 30)

What a Bachelor's thesis is
- and what is it not?

- Bachelor's thesis is a structured, written report which
  - Focuses on a specific research question
  - Builds on relevant sources
  - Follows scientific practices
  - Represents personal reasoning and thinking of the writer.

- Bachelor's thesis is **not** a collection of summaries, quotations, plagiary, or opinions.
  - Do not summarize research author-by-author, but topic-centered
  - You should not copy-paste any parts from scientific articles!
  - *TurnitIn* plagiarism detection software is **always used** in BIZ when submitting Bachelor's theses to school's thesis submission boxes.

(Kemppainen and Latomaa, 1999, 30, 4)

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Requirements – summary

- Independent **studying of video tutorials** + **reflecting on them** using the "diary" (see schedule in detailed syllabus), DL 4ᵗʰ October and second DL 11 Oct.
- A **Research Plan**, deadline **13th of October**
- You may also embed in the plan the research profiling results using library's databases
- **Presenting your research plan** orally (3-5 min) in the seminar on Oct 20
  - Agreeing on the presentation and opponent schedules for December 2020
- Seeking for individual **guidance** (by e-mail or by coaching appointments)
- **Independent work** (reading and writing research)
- A **Bachelor's thesis and presenting its draft** in the seminar
  - You get comments and have an opportunity to improve; final thesis about 20-25 pages
- Acting **twice as an opponent in the seminar** AND delivering the comments in writing (A4) in advance
  - By 11.00 on the day of the presentation to MyCourses
- **Active participation** in the seminar sessions - *the seminar will also be graded with 0-5, separately from the thesis!*
  - 40% from activity, from plan, 10% from presentation
- After the thesis is written: write the **Maturity test** (57C99903)

Seminar webpage:
https://mycourses.aalto.fi/course/view.php?id=27191

Grading scheme

- Research plan (40%)
- Seminar activity, self-study reports, including thesis opposition (50%)
  - Seminar activity 10%
    - Ask questions and participate in discussion
  - Self-study report 10% [Fail or Pass]
  - Thesis Opposition 30% [15% x 2 times]
- Final presentation (10%)

Phases of the Bachelor's Thesis Seminar (2 + 10 + 0 ECTS = Seminar + Thesis + Maturity test)

- Independent self-studying + **Introductory lecture** on **29.9.2020**
- Discussing possible research topics with supervisors and other professors

1 Intro lectures	2 Research Plan & profile	3 Research in Progress	4 Thesis Presentations
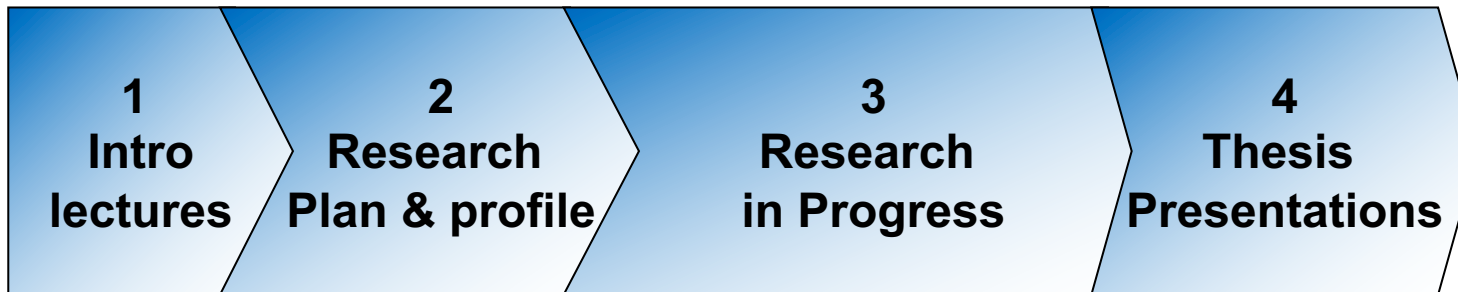
GOAL:
Final version of Bachelor's Thesis submitted by 31.12.2020

Phase 2:
- Creating a **research plan** (1-2 pages) by **13.10.2020**
- Division to groups based on plans
- Discussing the plans in 3 groups on **20.10.2020 (RH, AV or MT)**

Phase 3:
- Independent working
- Reporting on progress (via e-mail or meetings)
- First draft of thesis due 1st December

Phase 4:
- Presenting own **thesis draft** in a seminar session
- Working **twice as opponent** for other seminar papers
- **Sessions 8-9.December**
- **Write the Maturity test after the thesis is done!**

Research as a Process

Research as a process

- Identifying your **topic** area
- Formulating a research problem, **question** or a task
- Selecting a research **approach** or framework
- **Building on the previous phases**,
    - Search for source material
    - Study and work on your source material
    - Use the sources thoughtfully to answer your research problem/ question
    - Write up your findings into a structured report

(Kemppainen and Latomaa, 1999, 34)

NOTE: THE PROCESS IS NOT ALWAYS LINEAR!

Some hints for your research process

- One factor for successful research is that **you are interested in your topic**

- It helps if you are already somewhat familiar with it

- It is all right if your topic changes or becomes more focused during your research process as you get more familiar with it

Create a realistic schedule for your research project!

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Identifying your topic

How to choose a topic? 1(2)

- Where to find topics? E.g.
  - Courses and scientific literature, e.g. recent HICSS conferences
  - Place of work, other organizations
  - Media (news, blogs, magazines etc.)
- Does the topic interest you?
- Do you have experience on the topic?
- Why is the topic worth studying?
  - Does the topic have theoretical relevance?
  - Does the topic have practical relevance?

How to choose a topic? 2(2)

- Is it possible to study the topic?
  - Focused enough (to avoid a too shallow or narrow-minded approach)
  - Availability of source material?
- Is the topic current or new?
- (Is it possible to continue with your topic in Master's Thesis research?)
- Is there a potential conflict e.g. with confidentiality issues? Can you resolve it?

Defining and focusing your topic

- A reasoned, specified area that you are able to manage in the scope of the Bachelor's Thesis

    – You should be able to complete the thesis in the given time frame and effort (2+10 credit points)
    – Be realistic in setting the timetable!
        • Get started right away and do it in small portions – instead of working full days in the last 2-3 weeks.

The "funnel" approach

- Interested in e.g. outsourcing?
  - What are the main questions that have been investigated in the field?
  - What are the main theories about the topic?
  - What are the key sources/journals?
  - What evidence is lacking, contradictory, inconclusive or limited?
  - Do you know of particular issues companies are having in relation to the topic?
  - Why is it still important to investigate the topic?

How to find out more about your potential topic?

- Literature review
  - Good start: material from relevant courses
  - Scientific publications: read a selection of newer articles early on to find interesting topics or research gaps
    - Utilize the results of your Research profiling assignment early on!
  - Text books: secondary material

- If you are planning a case study, get to know how the case organization works, e.g.
  - Interviews
  - Other material, e.g. the external and internal communication material, descriptions of the procedures, etc.

Examples of 2007-2020 ISM BSc Theses

- *Peak-time process analysis in Rafla cafeteria*

- *Using a Flexible Queuing Model to Achieve Improved Efficiency in Appointment Scheduling - Case Finnish municipal dental healthcare*

- *Network Neutrality Legislation. Anticompetitive Issues in Internet Tier Structure*

- *ERP System Selection in Small and Medium-Sized Finnish Enterprises*

- *Monte Carlo simulation in evaluating project credit risk*

- *The Dynamics of Supply and Demand in the Long Tail Economy*

- *The Enabling Role of IT in Value Network Based Private Banking*

- *Commercial Utilization of Digital Footprints - Affecting Customer Behavior by Utilizing Online Data*

- *Instant Messaging in Enterprise Context*

- *Review of RFID Technology in Supply Chain Management*

- *Utilizing social media in customer service - Case Lindorff*

- *Ex-post evaluation of growth challenges in a small software company. Case Ecolane*

- *Text Data Analysis. Comparison of Processes and Tools*

- *Techniques for Mining Transactional Data for Personalized Marketing Actions*

- *Real money trading of virtual goods*

- *Problems with IoT security and consumers' attitudes towards it*

- *Modelling and solving logistical problems with combinatorial optimization. Case Parmatic*

See recent ISM BSc thesis PDF's from the **aaltodoc** database:
http://libguides.aalto.fi/c.php?g=410651&p=2796908

https://aaltodoc.aalto.fi

Aaltodoc

Aaltodoc publication archive consists of full text materials produced in the university, such as theses, journal articles, conference publications and research materials produced by the schools of Aalto University. Read more about the service. You can start by browsing the collection or by searching it with the search box on the right.

Collections in archive

Select a community to browse its collections.

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- 4 Oppimateriaalit / Study materials [17]
- 5 Työpaperit / Working papers [214]
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- 6b Artikkelit / Articles from Research inform
- 7 Lehdet / Journals [9]
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- 9 Vuosikertomukset / Annual reports [108]

Recently Added

1a Kandidaatintyöt / Bachelor's theses

Search within this collection or list all by leaving the search field blank.

Search term(s): [   ] [Go]

➕ Tekijänoikeussyistä pääsyä Aalto-yliopiston tekniikan korkeakoulujen (CHEM, ELEC, ENG, SCI) kandidaatintöiden kokoteksteihin on rajoitettu. Opiskelijat ja ulkopuoliset asiakkaat voivat tutustua töiden kokoteksteihin Aalto-yliopiston kirjastoissa. Henkilökunnalla on pääsy kokoteksteihin kirjautumalla palveluun. (Katso lisätietoa)

🇬🇧 Due to copyright issues the access to the full-text files of the Bachelor's theses of the Schools of Technology (CHEM, ELEC, ENG, SCI) has been limited. Students and other customers can get to the full-texts of the theses from the workstation of the Aalto University Libraries. Aalto University staff can access the f information)

Collections in this community

- [kand] Insinööritieteiden korkeakoulu / ENG [3128]
- [kand] Kauppakorkeakoulu / BIZ [408]
- [kand] Kauppakorkeakoulu / BIZ (Open Access) [247]
- [kand] Kemian tekniikan korkeakoulu / CHEM [1171]
- [kand] Perustieteiden korkeakoulu / SCI [2245]
- [kand] Sähkötekniikan korkeakoulu / ELEC [2263]
- [kand] Taiteiden ja suunnittelun korkeakoulu / ARTS
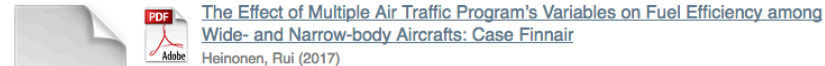- [kand] Taiteiden ja suunnittelun korkeakoulu / ARTS

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Search

"Information and service management" [🔍]

Add filters

Showing 10 out of a total of 22 results for collection: [kand] Kauppakorkeakoulu / BIZ. (0.116 seconds)

1 2 3 Next Page   ⚙

The Effect of Multiple Air Traffic Program's Variables on Fuel Efficiency among Wide- and Narrow-body Aircrafts: Case Finnair
Heinonen, Rui (2017)
Kauppakorkeakoulu | *Bachelor's thesis*

Choose a Login Method

Log in via:

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Kauppakor...

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Formulating your research question / problem

Different types of research problems,
Research Methodologies

How to formulate a research question?

- Research topic
  - General theme containing the main idea of the research
  - Define and focus your topic into sub-topics and research problems
- Research question(s) or task(s)
  - Can you phrase your problem into an explicable question?
  - A good research question for a bachelor's thesis
    - is focused, meaningful, and feasible
    - must be small enough to be thoroughly covered within the thesis
    - must not be too small (i.e. trivial) for the thesis to lose meaning
  - Feasible? One must be able to handle the methodology and acquire the required data
  - The title of your research report should reflect your research question(s)

Different types of research problems

- **Theoretical (conceptual) studies**
  - Concern problems on concepts, aspects, models, and theories in the research discipline
  - The previous research (theories, literature) as research material
- **Empirical studies**
  - Concern an event or a phenomenon in the real world
  - New information on the phenomenon is acquired with systematic methods
- Not easy to draw the line between these two
  - In every empirical study, there are theoretical elements
  - In many theoretical studies, some of the material (at least, secondary material) is empirical
  - (Uusitalo 1991, 60-62)

Theoretical and empirical research

- Theoretical research:
  - Theoretical reviews, analyses of concepts, mathematical modeling, comparison of theories, cultivation of theories (development of new theories)
- Empirical research
  - Explorative (search) studies
  - Descriptive studies (What? How?)
  - Explanatory studies (Why?, Causal relations)
  - Experimental studies (e.g. in chemistry, medicine, psychology)
  - Predicting studies (e.g. extrapolation, scenario analyses)
  - Evaluation, developmental or action research
  - Constructive research (particularly in technological sciences but also in social sciences; e.g. design science research in ISS)
- (Uusitalo 1991, 60-69)

Examples of Research Methodologies

- Framework or Conceptual Model
- Literature Review / Literature Analysis
- Case Study (or Multiple case studies)
- Survey
- Interviews
- Laboratory Experiment
- Field Study or Field Experiment
- Ethnography
- Action Research
- Mathematical Models
- Secondary data

Source: Palvia et al. (2004)

Searching for source material

Information retrieval, judgment, and use in research

Different types of source material

- **Scientific journal articles – your MAIN SOURCES!**
    - Aalto learningcentre (e-library); electronic databases
    - Snowball effect: look up the references of the first set of articles you find
- Text books, monographs (to be used sparsely)
    - General knowledge and background information; references for literal sources
- Conference proceedings, such as HICSS, e.g. 2017-2020 https://scholarspace.manoa.hawaii.edu/handle/10125/39610
- Newspapers, business magazines, serial publications of research institutions, government publications
    - For different use in the dissertation than academic sources
- Secondary sources
    - Reference databases, bibliographies, etc.

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Examples of scientific publications in OM / OR / MS and Management

OM / OR / MS journals	
Excellent / Specialist journal	**Good/ General journal**
Management Science (MS)	Supply Chain Management Review
Manufactring and Service Operations Management (MSOM)	Int'l Journal of Logistics Mngmnt and Physical Distribution (IJLMPD)
European Journal of Operations Research (EJOR)	Production and Inventory Management (PIM)
Journal of Business Logistics (JBL)	Production Planning and Control (PPC)
Operations Research (OR)	Journal of Purchasing and Supply Management (JPSM)
Transportation Science (TS)	Omega
Production and Operations Management (POM)	Interfaces
International Journal of Operations Research (IJOR)	IIE Transactions
Journal of Supply Chain Management (JSCM)	International Journal of Production Economics (IJPE)
Journal of Operations Management (JOM)	Supply Chain Management: an International Journal (SCMIJ)
International Journal of Operations and Production Management	Journal of Operational Research Society

| Management journals	
Research & Methods / Specialized	**Motivation / General**
Strategic Management Journal	Harvard Business Review (HBR)
Marketing Science	Sloan Management Review
Organization Science	California Management Review
Decision Sciences	European Management Journal
Economica	Long Range Planning
Academy of Management Journal	Industrial Marketing Management
Academy of Management Review	Journal of Marketing
	Journal of Retailing

Major ISS journals (AIS "Basket of 8")

MISQ – Management Information Systems Quarterly (4.373)

JMIS – Journal of Management Information Systems (3.013)

ISJ – Information Systems Journal (3.286)

JIT – Journal of Information Technology (4.435)
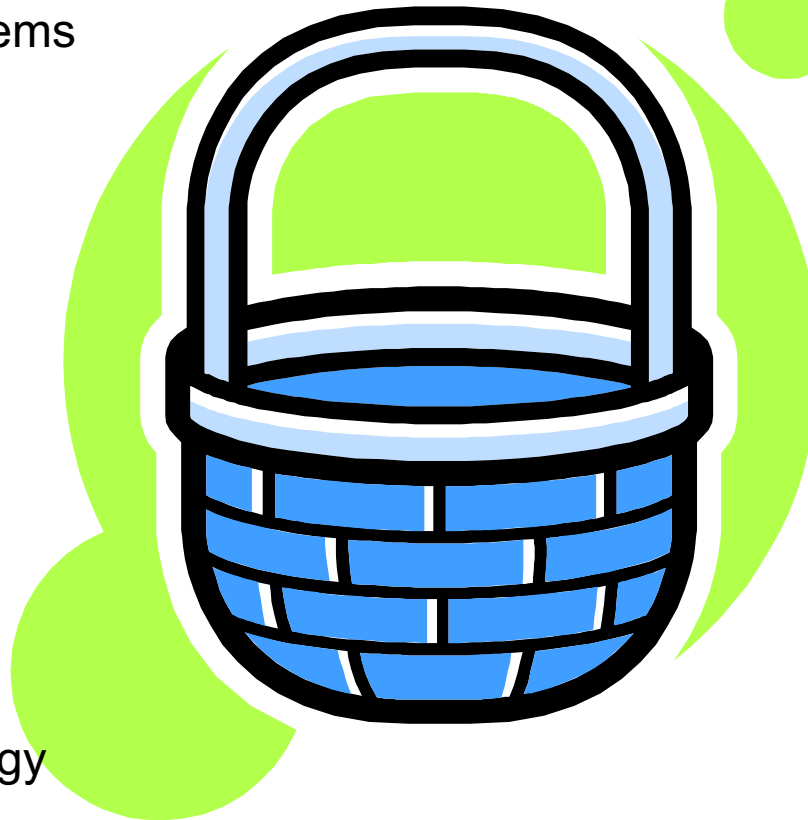
ISR – Information Systems Research (2.457)

JAIS – Journal of the Association for Information Systems (3.103)

EJIS – European Journal of Information Systems (2.603)

JSIS – Journal of Strategic Information Systems (4.000)

(in parentheses their 2018 *Impact Factors*)

https://aisnet.org/page/SeniorScholarBasket

Sorting the wheat (good stuff) from the chaff (rubbish)

- Look for publications by authorities in the field, keynote speakers at conferences, people who other people cite in references, on the editorial board of journals etc.

- Check the quality of the source - journal Impact factors, paper/author citations indexes, e.g.
    - An Impact Factor of a journal is a good indicator of its quality. If the impact factor is over 1.0, it is regarded as a high quality journal.
    - Journal ranking used in Finland: Publication Forum (Julkaisufoorumi):
        http://www.tsv.fi/julkaisufoorumi/haku.php
    An alternative is the ABS list used in the UK:
    http://charteredabs.org/academic-journal-guide-2015/

- Check the authority of the site author/owner. Is it a reputable University? Reputable organisation/company ?

- Follow links from reputable sites and don't trust everything you find via Google

Electronic sources

- Aalto University Learning Centre's databases
  - In Aalto network (or using libproxy when off-campus):
    Digital Campus Library http://libguides.aalto.fi/business
  - Ebsco, ProQuest, ISI Web of Knowledge (WoS), ACM, IEL Online, ScienceDirect, SpringerLink etc.
  - Helecon International, Scima, Thes and Bild
- http://scholar.google.com
- Conference proceedings, e.g. HICSS articles from 1/2020
  https://scholarspace.manoa.hawaii.edu/handle/10125/39610
- Homepages of professors and researchers
- ***More on electronic journal databases in two tutorial videos!***

NOTE: You can access Gartner's Research Reports and ISO Standards via Other resources tab!

Excellent background reports for all technology related topics!

Business Guide: Other resources

Search this Guide   Search

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Case studies

eCase collection lists case studies written at the Aalto University School of Business. Abtracts are included.
The full-text can be ordered from **The Case Centre** (formerly European Case Clearing House / ECCH).

Case study materials can also be retrieved via the following databases:

- **MarketLine**
- **Business Source Complete (EBSCO)**
- **ABI/INFORM (ProQuest)**

Aalto user, report a problem with e-resources to the Learning Centre

Report a problem with e-resources

Intranet resources

These resources can be used by the School of Business faculty, staff and students.

Department of Finance Databases A!   + read more

Gartner Research Reports A!   + read more

Standards

Finanssivalvonta   + read more
IEEE Xplore A!   + read more
Rakennustieto A!   + read more
SFS-standardit A!   + read more

Case studies

ABI/INFORM (ProQuest) A!   + read more
Business Source Complete (EBSCO) A!   + read more
The Case Centre - Free case collection   + read more
eCase collection   + read more
Financial Times A!   + read more
MarketLine A!   + read more
Safari O'Reilly for Higher Education (A valid Aalto University email address is needed to log in) A!
                                                          + read more

More information on standards

The Finnish Standards Association SFS

- Publications and services

Finance databases (Research Database)

Databases specialised in accounting and finance are acquired directly by the School of Business Department of Finance. Thus, these information sources are not accessible via Learning Centre. For more information on these databases, please see at http://findb.aalto.fi/.

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Useful links

- https://is.theorizeit.org/wiki/Main_Page - Theory pages
- http://aisnet.org/ - Association for Information Systems
- http://aisel.aisnet.org - e-Library of AIS, several IS conference proceedings
- https://www.informs.org/ - Association for OR and Analytics professionals
- http://www.poms.org/ - Production and Operations Management Society
- http://www.nofoma.net/ - Nordic Logistics Research Network
- http://www.ipsera.com/ - International Purchasing and Supply Education and Research Association
- http://www.euroma-online.org/ - European Operations Management Assoc.
- http://www.ifors.ms.unimelb.edu.au/tutorial/ - Int' Federation of OR Societies
- http://www.decisionarium.tkk.fi/ & http://mcda.aalto.fi/ - Aalto's SAL (System Analysis Laboratory) decision science resources
- http://optimization.mit.edu/resources.php - Optimization@MIT resources
- http://users.jyu.fi/~miettine/lista.html - Optimization and OR resources

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A Research plan

A Research plan

- A Research Plan (1-2 pages)
  - Return via MyCourses / Assignments by **13.10.2020** midnight
    - If you wish, you can submit your research plan earlier (+notify teacher about it); and you can continue your work as soon as your topic is accepted.

- Contents of a Research Plan (suggested outline, besides a Title):

  1. Motivation (why do you find it important to study the topic, theoretical & managerial motivation)
  2. What is your topic area and specific research problem(s)/question(s)
  3. Objectives of your research
  4. Examples of important previous research articles on the topic and/or main theory to be used – use full citation details when listing the examples!
  5. Methodology (e.g. a literature review, case study, survey,…)
  6. Tentative table of contents (1. Introduction, *what are the planned titles for chapters 2. – 4-5.,* 6. Summary and conclusions)

  Possible reference list (for references used in the plan)

Note: MOT has just been replaced by RedFox Master - while both can be used, MOT is no longer updated

Writing clinic service now for BSc students too!

https://mycourses.aalto.fi/course/view.php?id=405

MyCourses SCHOOLS   SERVICE LINKS   ALLWELL?   MY OWN COURSES   (EN)

Writing Clinic

» Writing Clinic

» Courses supporting writing and research

Dashboard

Site home

Dashboard / Courses / Language Centre / Writing Clinic

Writing Clinic

Academic writing is demanding for everyone!

Writing your thesis, dissertation or journal article in English adds an extra challenge for non-native writers. We want to facilitate your writing process and help you improve as a writer; to provide individual writing tutoring to help you learn how to plan, organise, write and revise academic papers. This is **not** a language-checking service, and neither is it available to exchange or visiting students (schools' decree).
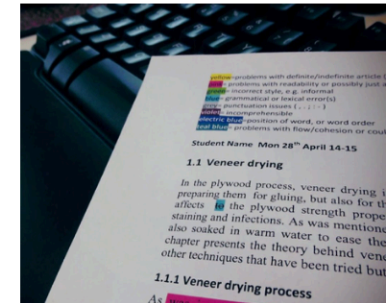
First consultations/appointments are **by default 60 minutes** long and are arranged in Otaniemi, or via Skype Business or Zoom if needed. Longer appointments can also easily be made with the same consultant, but only after the first appointment of 60 minutes has already taken place.

This service is offered to the schools of **ARTS, BIZ, CHEM, ELEC, ENG & SCI**, primarily to **Master's and doctoral students**, as well as academic faculty with some restrictions (i.e., not offered to faculty members of SCI).

Bachelor's thesis writers from the schools of BIZ, CHEM, ELEC, ENG and SCI may also use our service as of January 2019 onwards.

Next session on 20 October

- **Submit your research plan by October 13**

- **We will divide you into three seminar groups based on your research plans**

- Deadline for reviewing the teaching videos is 4th- and 11th Oct at the latest!

References and additional readings 1(2)

- Brunnsberg, M., Koskimies, R. ja Leino, T. (2007), Tutkielmantekijän käytännön opas/ Practical Guide to Thesis Writers, TuKKK, 6. ed.

- Ekholm, K. Ja Heinisuo, R. (2002), Tee gradu! : verkkoajan tutkielmantekijän opas, H:ki, BTJ Kirjastopalvelu.

- Galliers, R. Ed.(1992), Information systems research. Issues, methods and practical guidelines, Alfred Waller, Henley-On-Thames

- Hakala, J. T. (1999), Graduopas: melkein maisterin niksikirja, H:ki, Gaudeamus

- Hirsjärvi, S., Remes, P. ja Sajavaara, P. (2001), Tutki ja kirjoita, Jyväskylä, Kirjayhtymä.

- Hirsjärvi, S. ja Hurme, H. (2000), Tutkimushaastattelu. Teemahaastattelun teoria ja käytäntö, H:ki, Yliopistopaino

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