

WRITTEN EXAMINATION

Course: **Research Methodology and Communication**

Course code: **VP761**

Credits for written examination: **4 credits**

Date: 2024-05-28 at 08:15 - 12:30

Examination responsible: Richard Senington

Teachers concerned: Jörgen Hansson

Aid at the exam/appendices: No aids, tools, or electronic devices are allowed

Other: Choose and answer at most(!) four questions out of the six questions. If you are answering more, the last question overflowing the limit will not be graded. Questions are equally weighted (10 points/question). Answer each question as a short text essay composed of one or more paragraphs, supplementing your answer with diagrams if desired. Points are awarded for each reasoning/argument/part of the answer that is distinct (not a repetition of a previous part), relevant to the question and justifiable from an informed reading of the course text.

Answer in Swedish or English. Write legibly!

- Instructions
- ☐ Take a new sheet of paper for each teacher.
 - ☒ Take a new sheet of paper when starting a new question.
 - ☒ Write only on one side of the paper.
 - ☒ Write your name and personal ID No. on all pages you hand in.
 - ☒ Use page numbering. Order your answers in sequential/linear order!
 - ☒ Don't use a red pen.
 - ☒ Mark answered questions with a cross on the cover sheet.

Failure to follow the above instructions will result in point reductions!

Grade points: 40

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|---------------|----------|----------|----------|
| ECTS grading: | A: 36-40 | B: 32-35 | C: 28-31 |
| | D: 24-27 | E: 20-23 | F: 0-19 |

Examination results should be made public within 18 working days.

Good luck!



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Question #1: Mixed methods

Mixed-methods research combines qualitative and quantitative approaches to enhance research depth. Discuss the main motivations for using mixed methods research and describe at least two specific mixed-methods designs. Provide an example of a research question that would benefit from a mixed-methods approach and justify your choice.

Question #2: Research paradigms and bias

Scientific research is often evaluated based on notions of objectivity, subjectivity, and bias. Discuss how these concepts apply to different research paradigms (e.g., positivism, interpretivism, and critical research). Provide examples of potential sources of bias in qualitative and quantitative research and discuss strategies researchers can use to mitigate these biases while maintaining the integrity of their findings.

Question #3: Surveys and experiments

Surveys and experiments are two commonly used research methods. Compare and contrast the designs, strengths, and limitations of these two methods in information systems research. Provide examples of research questions best suited for each method and discuss how results from each can inform decision-making.

Question #4: Case studies

Case study research is a widely used method in information systems. Discuss the three types of case studies: exploratory, descriptive, and explanatory. Provide a real-world example for each type and explain why the chosen type was appropriate for the given scenario. Furthermore, elaborate on the different strategies for selecting a case (e.g., extreme case or critical case) and discuss how case selection impacts research validity.

Question #5: Develop a research strategy

Consider a research project aiming to evaluate the usability of (i) a newly developed mobile application for managing personal finances, or (ii) a new home robot that can assist with doing laundry and keeping the kitchen clean. Design a research strategy using experimental research, detailing the experimental design, variables, and potential findings.

Question #6: Design science

Design science research involves creating artefacts that provide value. Describe the key types of artefacts in design science (constructs, models, methods, and instantiations) using real-world examples from information systems research or your own field. Additionally, discuss how to evaluate whether an artefact is fit for its intended purpose. Finally, explain how the scientific contributions of a design science research project are linked to the artefact itself.