

Long-term (longitudinal) research methods

ADVANCED TOPIC SEMINAR SUMMARY

Number of Presenters:	1
Topic Category:	<input type="checkbox"/> Usability method implementation or adaptation <input type="checkbox"/> Building usability within the organization or product life cycle <input type="checkbox"/> Issues and strategies for experienced usability professionals <input type="checkbox"/> "Outside the box" <input checked="" type="checkbox"/> Other: Implementation and adaptation of methods from other disciplines
Presentation Type	<input type="checkbox"/> Business case study <input type="checkbox"/> How-to Discussion <input checked="" type="checkbox"/> Advanced concepts, philosophy or methodology <input type="checkbox"/> Presentation of advanced approaches to design <input type="checkbox"/> Other:
Audio Visual Requirements	Standard

ABSTRACT:

Long-term investigation is commonly used in many disciplines, but is less known in usability. The seminar reviews the different *strategies of longitudinal research* and their applicability given the goals, requirements, and restrictions of usability work. *Advantages and limitations* of longitudinal data in usability are discussed, together with common *activities, timeframes* and *measurements*.

GOALS FOR THE SESSION:

Attendees of this session will:

1. Learn different strategies for the construction of longitudinal evidence, such as repeated cross-sectional studies, prospective studies, and retrospective studies;
2. Recognise advantages and disadvantages of longitudinal data in various usability areas, such as user research, design, and user evaluation.
3. Evaluate fitness of the longitudinal strategies to different usability goals and requirements.
4. Identify and discuss common patterns and pitfalls of conducting long-term investigations for usability. Particular attention will be given to such issues as measurements, length of investigation, optimal frequency of data collection, number of users, and generalisation of findings.

The 'Advanced Topic' format is chosen to increase the impact of the discussion in the given time frame. While longitudinal investigation is widely used in social and medical sciences, it does not belong to the common set of usability methods. Seminar participants are not expected to have detailed knowledge or extensive experience in longitudinal studies; the potential knowledge gap will be addressed by Goal 1. However, Goals 2 and 3 call for substantial usability expertise and the ability to evaluate fitness of the proposed method efficiently and effectively. Goal 4 is equally demanding with regard to usability proficiency, as it targets practical solutions that attendees will be able to take away and use immediately on their jobs.

The seminar intends to raise the questions of interest, applicability, and feasibility of long-term investigations in usability work. Should the questions be received with interest by experienced professionals, the topic will be taken for further development, such as design of workshops and tutorials for future conferences.

HANDOUTS OR OTHER SESSION MATERIAL

The session slides contain a description of the long-term investigation methodology and a list of references on the topic. The methodology description includes details of different strategies, advantages and limitations of longitudinal data. The following longitudinal strategies will be discussed:

- Repeated cross-sectional studies;
- Prospective studies, including representative panels, cohort panels, and linked panels;
- Retrospective studies.

The slides also contain templates for sample longitudinal studies in usability, to be filled in at the end of the session (see Detailed Description of Content).

The handouts include reference cards for each discussed strategy of long-term investigation. Each card contains:

- Strategy definition
- Strong points
- Weak points
- Reference/examples.

PREVIOUS PUBLICATION OR USE OF THIS MATERIAL

The material is original and has not been presented or published before.

YOUR BACKGROUND IN THIS MATERIAL

Lada Gorlenko is a Usability Consultant and Interaction Designer with the IBM Usability Competency Centre in the UK. She leads User Experience work for a variety of clients, including the UK government, IT, retail, and financial sectors.

Lada has a solid background in research methodology and a decade of research experience in social psychology and HCI. In the course of her career, she led a number of longitudinal studies on psychological adaptability, continuing effects of intercultural learning, and sustainability of skill development.

Lada frequently teaches on a variety of design and usability topics, such as qualitative research in interaction design and usability; evaluating for usability; and improving usability in mobile interaction. She holds M.Sc. degrees in Psychology and in Cognitive Science.

REFERENCES

1. Menard, S. (1990). *Longitudinal Research*. SAGE Publications.
2. Singer, J.D. and Willett, J.B. (2003). *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. Oxford University Press.
3. Taris, T.W. (2000). *A Primer in Longitudinal Data Analysis*. SAGE Publications.
4. Ruspini, E. (ed.) (1999). "Longitudinal Analysis: A Bridge between quantitative and qualitative social research". Special Issue of *Quality and Quantity*, 33 (3).

DETAILED DESCRIPTION OF SEMINAR CONTENT

Based on a 90-min session and 9-20 attendees

N of Min	Format	Topic or Event
5	Presentation	Session introduction: topic, learning objectives, structure, target outcomes
5	Presentation	Definitions and attributes of longitudinal investigation
15	Presentation	Strategies for longitudinal investigation: <ul style="list-style-type: none"> • Repeated cross-sectional studies • Prospective studies • Retrospective studies
10	Presentation	Advantages and limitations of longitudinal data
5	Q&A	Questions, answers, and comments on the presented material
10	Small-group exercise	Exercise 1: <i>Advantages and limitations of different longitudinal strategies</i> for <ul style="list-style-type: none"> • User research • Design • Product evaluation and lifecycle The audience is split into three groups. Each group is given a scenario representing one of the three usability study areas. The groups evaluate the strength and weaknesses of each strategy against the scenarios and choose the best strategy for their scenario.
10	Facilitated discussion	<i>Best-fit strategy(-ies) for long-term usability investigations.</i> Each group presents the results of the above exercise, followed by a discussion. The strategies are rated on their fitness to different usability goals and requirements.
10	Small-group exercise	Exercise 2: <i>Users, measurements, timeframes.</i> The audience is split into groups as in Exercise 1. Each group continues to work with their scenario, takes on a particular strategy and develops a sample study plan for the scenario, with justification of methodological choices.
15	Facilitated discussion	Each group presents the results of the above exercise, followed by a discussion. To summarise the session results, three empty templates for sample longitudinal projects are provided, to be filled in by participants at the end of the discussion. The template categories include: <ul style="list-style-type: none"> • Study goal

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N of Min	Format	Topic or Event
		<ul style="list-style-type: none">• Project/product phase• Investigation strategy• Minimal and optimal number of users• Study activities• Primary measurements• Optimal frequency of measurements• Business value• Limitations and pitfalls
5	Q&A	Session questions and conclusion