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INTRODUCTION

Workshops

Edited by:
Martin Ubani
Liesbeth Baartman
Edith Braun
Sabine Fabriz
Astrid Jurecka
Andrea G. Müller
Elina Hella
Pethó Balázs
Rita Kelemann

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**THE EFFECTIVE USE OF TECHNOLOGY IN THE QUALITATIVE RESEARCH
PROCESS:
AN INTRODUCTION**

Dr. Florian C. Haerle
University of Nevada
(email@florian-haerle.net)

In this workshop you will LEARN HOW to apply technology strategically in various stages of qualitative research, such as data collection, archiving, analysis, and presentation. This will include different devices (e.g., microphone, webcam, & laptop) and software for data recording (e.g., audio, video, & screen recording) and data analysis (e.g., ATLAS.ti & Ethnograph). In small group activities you will design a qualitative research design focusing on the integration of technology.

In addition, you will LEARN WHY technology can be methodologically rationalized in a qualitative research design. For example, you will learn about the theoretical assumptions underlying ATLAS.ti (e.g., Grounded Theory) and how a video camera can take the role of a “detached classroom observer”. Misconceptions about the glory of technology will also be discussed.

Background

I am a visiting scholar/lecturer in the Department of Educational Psychology at the University of Nevada, Las Vegas. I have obtained extensive training in qualitative research methods from Germany, Australia, and the U.S. and conducted a variety of studies following different qualitative methodologies. My specialization is with the conduct of qualitative research in children and the application of technology in the research process.

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VIDEO-OBSERVATION IN RESEARCH ON TEACHING

Dr. Auli Toom & Sanna Patrikainen
University of Helsinki
(auli.toom@helsinki.fi)

The aim of the workshop is to offer the participants the basic information about video-observation in the research on teaching and the possibility to study some basic skills of it.

The content of the workshop is divided into three different phases. Firstly, the overall information concerning the wholeness of video-observation as a research methodology is considered. Some philosophical background factors and the paradigmatic change in the research on teaching are presented, because they both have influence on the increased use of video-observation methodology. After this the different modes and the practical conduct of video-observation are

presented. The possibilities and the challenges of video-observation as a data gathering method are also discussed. Secondly, in the practical part of the workshop, the conduct of the video-observation method and data handling are practiced with concrete video-observation materials. The participants have the possibility to exercise the use of the method, to meet the reality of video-observation in practice, to discuss the challenges and to find the answers to the problems together as well. Thirdly, some basic principles of video-observation data analysis are presented and discussed with concrete and current research cases. The various analysis approaches, the presentation of analysis and the ways of reporting the analysis are discussed in order to help the participants to proceed with their own researches. Because of the nature of the workshop, both the researchers using the video-observation and the researchers using some other research method will benefit from this workshop, because the philosophical issues and the possibilities of the analysis relate to the conduct of the research in general, not only to this particular method.

Background

Auli Toom and Sanna Patrikainen have had several workshops of video-observation, have presented the issues of video-observation and the stimulated recall-method in scientific conferences and published some articles of it as well. Auli Toom (PhD) works as researcher and assistant at the Department of Applied Sciences of Education at the University of Helsinki. Her major research interests are teacher's tacit pedagogical knowing, teacher reflection and teacher education. She is an active member of two research groups around these issues. In addition to her research activities, she has participated in the development of teacher education curriculum in Finland as well as worked as an expert in some international teacher education development projects.

Sanna Patrikainen (M.A. Education) works as a researcher and an assistant at the Department of Applied Sciences of Education at the University of Helsinki. As a basic education she is a class teacher, but she is also qualified to teach mathematics as a subject teacher. Her doctoral thesis (in process) is about class teacher's pedagogical thinking and action in the context of mathematics education. In addition to the research on teacher thinking and didactics, she is interested in teacher reflection, teacher education and qualitative research methods. Besides, she has involved in the development process of the curriculum both in class teacher and subject teacher education in Finland.

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WRITING SCIENTIFIC ARTICLES INTO INTERNATIONAL EDUCATIONAL JOURNALS

Prof. Kirsi Tirri
University of Helsinki
(kirsi.tirri@helsinki.fi)

This workshop deals with criteria for good scientific writing. It aims at helping junior researchers to discern and focus on important issues that need to be considered before, during and after the writing process. Such issues deal with consideration of the motivation to publish and choosing an appropriate publication forum for the article to reach its potential academic audience. The workshop follows the process of academic writing step by step and outlines the basic structure of a good academic paper including the title and abstract. It focuses the IMRD-model of a scientific paper which consists of introduction, methods, results and discussion. Furthermore, the workshop

offers guidelines on each section and check-up questions to help workshop participants to reflect on what is to be considered high quality writing and what are the critical features of a good article.

Kirsi Tirri is a Professor of Religious Education at the Department of Practical Theology at the University of Helsinki, Finland. Her research interests include moral and religious education, gifted education, teacher education, and cross-cultural studies. She has published several books and journal articles related to these fields. For more information please visit: www.helsinki.fi/~ktirri.

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PHENOMENOGRAPHY AS AN EDUCATIONAL RESEARCH METHODOLOGY

Dr. Gerlese Åkerlind

Oxford University and the Australian National University

Phenomenography is a relatively new approach to educational research, with the first publications describing the approach appearing in the early 1980s (Marton, 1981, 1986). However, it has reached a surprising degree of popularity over the subsequent years, particularly in the UK, Australia and Hong Kong, as well as in Sweden, its point of origin, with hundreds of doctoral theses based on phenomenography.

Phenomenography is a qualitative research approach, typically based on interview data. Empirically, it involves a search for variation in meaning or ways of experiencing and understanding phenomena, including key educational concepts such as learning, teaching, knowledge, or key disciplinary concepts such as force in physics, photosynthesis in biology, price in economics or power in political science. The variation in ways of understanding such key educational concepts that emerge from phenomenographic research can be used as a powerful tool for teaching and learning, for example by explicating the nature of common disciplinary misunderstandings amongst students and highlighting what teachers need to focus on in their teaching to encourage more powerful understandings amongst their students.

Following a brief introduction to the theory and methods of phenomenographic research, the majority of the workshop will be spent in analysing sample data to illustrate the nature of phenomenographic analysis and the potential power of phenomenography to elucidate what is needed for a complex understanding of educational concepts. There will be an opportunity to discuss what sort of research questions are appropriate for phenomenographic research.

Background:

Dr Gerlese S. Åkerlind

Oxford University and the Australian National University

Gerlese has particular expertise in phenomenographic research. In addition to using phenomenography in her own educational research over the past 10 years, she has a number of recent publications on phenomenographic theory and methods. She has convened or co-convened two recent international conferences on phenomenography, one in Canberra in 2002

and one in Sydney in 2005, and she co-convened the EARLI special interest group on Phenomenography (SIG 9) from 1999-2003.

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ANALYSING COMPUTER-SUPPORTED COLLABORATIVE LEARNING PROCESSES

Karsten Stegmann & Dr. Armin Weinberger

University of Munich

karsten.stegmann@psy.lmu.de

Dr. Annette Aboulafia

University of Limerick

Prof. Rosamund Sutherland

University of Bristol

Dr. Jan-Willem Strijbos

University of Leiden

Prof. Frank Fischer

University of Munich

Collaborative learning has been regarded as crucial to particularly facilitate key competencies, such as social and argumentative skills, as well as applicable knowledge, i.e. knowledge that can be used to solve new problems. However, empirical evidence suggests specific support is needed to fully develop advantages of collaborative learning. Fostering collaborative learning presumes that mechanisms of collaborative learning are well understood. In this respect analysis of collaborative learning processes is a key aspect of developing such an understanding of the processes of collaborative learning. Depending on the specific research question at hand, qualitative or quantitative methods have to be applied. In this workshop, we will introduce how to apply qualitative and quantitative procedures that are typical for CSCL research (but not the only methods that are possible to study collaborative processes). The qualitative procedure focuses on analysis of video using categories of analysis that relate to particular aspects of collaborative learning. This analysis includes both verbal and non-verbal communication. The quantitative procedure focuses on the segmentation, coding and statistical analysis of discourse data based on a multi-dimensional framework, which distinguishes participation, epistemic activity, social modes of co-construction, and quality of argumentation. Furthermore, we will discuss the benefits of a mixed-methods approach, i.e. the simultaneous application of qualitative and quantitative methods. During the workshop different methods and tools will be introduced. Participants will be asked to apply these methods and tools to sample data. The PhD students can choose whether they would like to work with the data provided by the workshop organisers or, for a limited number of participants, with their own data.

Background

Karsten Stegmann is the Kaleidoscope Scientific Facilitator. Kaleidoscope is a European Network of Excellence in the field of technology-enhanced learning (TEL). The task of the Kaleidoscope Scientific Facilitator consists of enhancing collaborative activities between the different ongoing scientific activities.

Armin Weinberger is a Senior Research Fellow and lecturer on Educational Psychology and Education at the University of Munich (Germany). His research focus is on computer-supported collaboration scripts, argumentative knowledge construction, crosscultural studies, and the analysis of collaborative learning processes. He is the leader of the Kaleidoscope European Research Team „Computer-Supported Scripting of Interaction in Collaborative Learning Environments (CoSSICLE)“.

Annette Aboulafia is a Senior Research Fellow at the Interaction Design Centre at the University of Limerick (Ireland). Her research focus is on psychological aspects of teaching and upbringing, methods of psychology, and computer-mediated human activity. She is member of the steering committee of the Kaleidoscope European Research Team „Production of educational formats“.

Rosamund Sutherland is Professor of Education at the Graduate School of Education at the University of Bristol (UK). She was director of the ESRC InterActive Education Project. Her research centres around teaching and learning with ICT with a particular focus on mathematics education. She is member of the steering committee of the Kaleidoscope European Research Team „Production of educational formats“.

Jan Willem Strijbos is a Post-doctoral researcher at the Centre for the Study of Learning and Instruction at the University of Leiden (Netherlands). His research focus is on computer-supported collaborative learning, protocol-analysis, and peer assessment/feedback.

Frank Fischer is Professor of Educational Psychology and Education at the University of Munich (Germany). His research focus is on collaborative learning and on technology-enhanced learning in school, higher and further education. He is currently the speaker of the Kaleidoscope CSCL SIG.