Moving Beyond the Linear Model: the role of mixed methods research in an age of complexity

Abstract Booklet
Professional Software for Qualitative & Mixed Methods Research

Without Software

With MAXQDA

The Mixed Methods Expert!

reliable
State-of-the-art software since 1989

compatible
with SPSS, Stata, SAS, etc. XLS/X format

flexible
documents, interviews, surveys, Twitter, typologies, focus groups

20% MMIRA Discount (valid until August 31st, 2016) Coupon code: WX5-KBU
Interactive-Participatory Mixed Methods Workshops Three Times a Year.
Join mixed methods experts to work on your mixed methods study proposal or paper, network with your peers and receive expert advice!

Consulting Services.
Work with leading mixed methodologists on your project design and proposals for funding.

Co-directors:
Michael D. Fetters, M.D., M.P.H., M.A. & John W. Creswell, Ph.D.

“Fantastic! One of the most, actually THE most effective workshop I have been to in a long time!”
~ Gurjit Sandhu, Ph.D.
University of Michigan, USA

“A high-quality workshop where theory and practice come together”
~ Herman Grobler, Ph.D.
North-West University, South Africa

Follow us on Twitter @M3RSP
Find us online at www.mixedmethods.org
Contents

Keynote Speakers p. 2

Authors Meet, Greet, Dialogue and Critique Session p. 3

Panels p. 3

Roundtables p. 17

Sessions p. 17
KEYNOTE SPEAKERS

Brannen, Julia
Mixed Methods Research and Data: Developments & use
Professor, UCL Institute of Education, London

In this paper I will examine the changing context in which MMR is coming to the fore and consider some of developments of MMR in the UK. A key feature of this context relates to the continuing major investment made by the UK research council (ESRC) in large scale data sets including birth cohorts. Given their dominant funding advantage, the paper examines some of the ways in which mixed method research designs can be created by making linkages to the samples of large scale data sets. It will also suggest some of the ways in which such MMR designs can work to the mutual advantage of both qualitative and quantitative approaches by complementing, explaining and raising questions about the analyses generated by large scale data.

Sandelowski, Margarete
Is Mixed Methods Research Too Inclusive?
Cary C Boshamer Professor, University of North Carolina at Chapel Hill

In her introduction to the 2015 Oxford Handbook of Multimethod and Mixed Methods Research Inquiry, editor Sharlene Hesse-Biber comprehensively reviewed the multiple “border crossings” contributing to the “turbulence” in the contemporary mixed methods research landscape. Indeed, the idea of borders is thematic to the content and structure of this text. Like the Oxford Handbook, the MMIRA Conference we are participating in today is focused on the many divides that the current mixed methods movement aims to address, engage, and even transcend. The very term mixed methods research increasingly signals to an ever growing and more diverse global audience a sphere of activity encompassing philosophical, theoretical, methodological, disciplinary, sociocultural, political, and other differences. Mixed methods research now signals inquiry agendas ranging from knowledge development to social justice and transformation. In short, mixed methods research encompasses ideas, activities, and goals so much more diverse, complex, and even—to borrow the Oxford Handbook co-editor R. Burke Johnson’s word—“utopian” than simply “mixing methods.”

The questions I address in this keynote presentation are: should it, and should this question even be asked? That is, in its current remit to be inclusive and wide open to a range of diversities, is the mixed methods research field in danger of excluding nothing and therefore of meaning nothing? Will the sheer variety of border crossings characterizing the contemporary mixed methods research landscape ultimately undermine the distinctiveness of mixed methods research and therefore its power to change inquiry: to engage the complexity of integrating both modes and objects of inquiry? In short, is the mixed methods movement trying to do too much and therefore is it in danger of doing too little? Then too, does asking these “should it” questions itself betray a mode of thinking at odds with the mixed methods research enterprise or at the very least a conservative desire to—using Hesse-Biber’s words—“tame the turbulence” of the field?

Uprichard, Emma
Mixed Methods, Complexity and Time
Associate Professor, University of Warwick

This presentation extends the mixed methods debates specifically in relation to studying the social world from a complexity perspective. In turn, three key methodological implications are raised and problematised, namely: time and temporality, data integration, and the capacity
for empirically capturing change. Overall, then, the paper reflects on some of the key implications and opportunities that a complexity perspective raises to mixed methods designs.

AUTHORS MEET, GREET, DIALOGUE AND CRITIQUE SESSION

Hesse-Biber, Sharlene & Johnson, Burke

The overall description of the Handbook on the Oxford website site notes: *The Oxford Handbook of Multi and Mixed Methods Research Inquiry* is designed to offer a range of innovative knowledge-building perspectives and methods tools with the goal of enhancing new ways of asking and addressing complex research questions. The *Handbook* offers multiple quantitative and qualitative theoretical and interdisciplinary visions and practice. The Handbook reflects the most current thinking and scholarship on emerging multi and mixed methods research inquiry within and across the disciplines. It addresses interdisciplinary and complex questions that traverse a range of research communities both in and outside the academy, and its empirical focus demonstrates the synergistic of multi and mixed methods research inquiry for answering complex research questions.

This session is an open "meet and greet" the co-editors of the *Oxford Handbook of Multimethod and Mixed Methods Research Inquiry*. In this session, Handbook co-editors, Sharlene Hesse-Biber and Burke Johnson elaborate on their overall vision of the Handbook and the future directions and critical issues within the field of mixed methods research overall. We aim to engage in a robust conversation with the audience in both celebrating and in critical engaging in dialogue with this publication. Copies of the Handbook will be available for your perusal as well as a Table of Contents. We invite all Handbook chapter authors who are attending the conference to attend this session and to talk about their Handbook chapters as well.

PANELS

Archibald, Dr Mandy M

*Integrating the arts and mixed methods research approaches*
*RN, BScN, PhD, University of Adelaide*

The use of arts-based and arts-informed research approaches is gaining traction across diverse interdisciplinary and geographic contexts. Given the concomitant rise of mixed methods research globally, there is untapped potential for integrating the arts and mixed methods research approaches. Although such integration might facilitate "coming at things differently", questions remain: how are the arts and mixed methods research approaches presently integrated, and how do these approaches inform one another? What are the foreseeable challenges of integrating arts-based, arts-informed and mixed methods research, and how might these considerations influence future research, education, and practice? What are the current and potential points of intersection and theoretical foundations of arts-based and mixed methods research? What are the implications of integrating arts-based and mixed-methods research approaches for study participants? Arts-based and mixed methods researchers will tackle these cutting-edge questions in this invited panel.

**Paper 1:**

**The Arts and Mixed Methods Research: Current Practices and Future Directions**
*Mandy M. Archibald, RN, BScN, PhD*

The arts and mixed methods research share, at their core, an understanding that integrating diverse perspectives facilitates pluralistic and confirmatory understandings of complexity. Yet, how the arts and mixed methods research approaches have been merged has not yet
been explored, which hinders our understanding of the actualities and potentials of arts and mixed methods approaches in elucidating meanings of complex phenomenon, facilitating data and inference integration, and communicating research findings to diverse stakeholder groups. This paper reports on the results of a literature review on the intersection of the arts and mixed methods research. Using systematic review procedures, articles were located that integrated the arts and mixed methods research approaches either (a) theoretically or (b) empirically, at any stage of the research process (concept formation, data collection, data analysis / integration, dissemination). Articles were then coded and data analyzed thematically and descriptively, to answer the following questions:

What are the current points of intersect between the arts and mixed methods research approaches?

How are the arts and mixed methods research approaches most often integrated and for what purpose?

How do arts based, arts informed, and mixed methods research approaches currently inform one another, and what potentials for future practice can be identified from these empirical findings?

The results of this review serve as the state-of-the-science for current applications of the arts in mixed methods research, and highlight promising areas for future exploration and application.

Paper 2:

Mixed Methods Research and Arts-Based Research: Theoretical Considerations
Nancy Gerber, Ph.D, ATR-BC, Director, Ph.D Program in Creative Arts Therapies
Drexel University, Philadelphia, PA, USA

Mixed Methods Research (MMR) and Arts Based Research (ABR) share certain underlying philosophical assumptions and methodological objectives. Both embrace a pluralistic ontology, an eclectic epistemology, and dialectical methodological approaches. Also implicit in these research perspectives is the emphasis upon emergent, dynamic, creative thinking, and integrative synthesis relative to conceptualization, data generation, and analysis resulting multi-dimensional insights into diverse aspects into the human condition. It is the receptivity to these diverse and dialectical ways of conceptualizing research phenomena, constructing designs, and conducting research that creates the parallels between arts based and mixed methods research theory and practice. ABR, using the arts as the primary investigative method, relies upon the dialectic between emergence and concealment, inductive and deductive, immersive and reflective, and intersubjective constructivist approaches resulting in the creation of an evocative artistic representation of complex human phenomena. These dynamic and iterative processes in ABR resonate with the core values and practices of integrating convergent and divergent qualitative and quantitative data in MMR. Challenges include decisions about how and at what points in the research ABR might be strategically included. For instance might ABR be conceptualized as either a third strand or a method for translation and integration at various intersections during the research process between the two QUAL and QUAN strands. The addition of arts based practices at various intersections in the research process can facilitate the dialogue between QUAL and QUAN strands bridging the knowledge divide or the space in between. ABR approaches can give form, shape and texture, illumination, and assignation of meaning to the emergent research processes of reflexivity, topic development, design conceptualization, data mapping, data alignment and integration, interpretation and ultimately representation of the results. Finally, ABR results can contribute more depth and accessibility in that they are aesthetically and emotionally evocative and often performative which moves the synthesis and dissemination of results from the abstract into a living, experiential dimension.

Paper 3:

Meaning-Making and Self-Analysis: The Impact of an Arts-Based Approach on Participants in a Mixed Methods Research Study
Peggy Shannon-Baker, PhD, University of Cincinnati, Cincinnati, OH, USA
This paper discusses the important role that arts-based research had for student participants in a mixed methods study. The larger mixed methods study used a concurrent design based on arts-based data (self-portraits), qualitative data (interviews, written reflections, and observations), and quantitative data (instruments on cultural distance and adaptation). These data were originally collected and analysed separately by the researcher, and then integrated by both the researcher and the student participants to understand the students’ experiences of culture shock. For the purposes of this case study, I analysed the qualitative data for references to the art-making process, students’ reaction to the arts-based component, and inferences the students made about their experiences based on the arts-based data. I found several important nuances to using participant-generated art in a mixed methods study. First, students used the multimodal forms of data to explain their experiences “better” to the researcher. Second, the arts-based data provided a grounding mode of analysis for students to understand the “progress” of their experiences over time. These arts-based data also helped to both contextualize and complicate their other forms of data. Third, some students embraced the visual mode of communication. Conversely, other students were challenged by perceptions of their own skills as well as their concerns about how others viewed their portraits. I conclude by discussing the implications for using arts-based approaches, and self-portraiture in particular, in mixed methods studies.

**Note:** Instead of utilizing a traditional discussant, this invited panel will involve the use of a “visual recorder”, who will visually document emerging topics, questions, and themes. This visual rendering will be used to stimulate discussion and bring together converging and diverging concepts in a new manner consistent with arts-based approaches.

Ivankova, Nataliya¹ & Plano Clark, Vicki L²  
*Advancing the Field of Mixed Methods Research: Books in the New Mixed Methods Research Series*  
¹University of Alabama at Birmingham  
²University of Cincinnati  

**Panelists:**  
John Hitchcock, Indiana University  
Mieke Heyvaert, University of Leuven  
Nataliya Ivankova, University of Alabama at Birmingham  

**Discussant:**  
Mike Fetters, University of Michigan  

**Introduction to the Theme of the Panel:**  
The panel will introduce the new *Mixed Methods Research Series* (SAGE Publishing, sagepub.com/mmr) that includes practically focused books on mixed methods topics across disciplines. The editors (V.L. Plano Clark and N. V. Ivankova) initiated the Series to provide consumers of mixed methods research with books that address issues and debates of current interest to the field of mixed methods in an applied and practical way. The purpose of the Series is also to engage new voices in the discourse about mixed methods research and provide a new publication venue in the field that accompanies journal articles, major textbooks, and handbooks. The session will begin with a description of the editors’ goals for the Series and its role in the growing field of mixed methods research. Then, the authors of books in the Series will introduce their book topics, describe their approach to conceptualizing and writing about the topic, and discuss how the topic contributes to and expands the field of mixed methods research. The panel will conclude with a discussion of the contribution of the Series to the advancement of the field of mixed methods research, topics for future books that may be of interest for the field, as well as general questions about what it is like to develop a book for the Series.

**List of Papers:**
Using Mixed Methods Research Synthesis for Literature Reviews: Conceptualization and Contribution to the Field of Mixed Methods Research
Mieke Heyvaert, University of Leuven
Karin Hannes, University of Leuven
Patrick Onghena, University of Leuven

The increasing amount of published scientific research articles and books has been an impetus for conducting literature reviews. When researchers, policy makers, and practitioners want to read about a topic or problem they are interested in, it is way more time-efficient to read one or a few good literature reviews, than to be swamped by all primary level studies published on the topic or problem. Traditionally, there have been two major approaches to reviewing the scientific literature: the quantitative (i.e., meta-analysis) and the qualitative (i.e., meta-synthesis) approach. However, these mono-method approaches to conducting literature reviews do not allow answering to the complexities of today’s reality. In order to study complex topics and problems and answer complex review questions, review authors have recently developed mixed approaches for combining empirical evidence described in various kinds of primary level studies, by using various kinds of synthesis techniques, within a single literature review. When a team of review authors undertakes a literature review by applying the principles of mixed methods research, we say that they undertake a mixed methods research synthesis (MMRS). By applying the MMRS approach for literature reviews, complex topics, problems, interventions, programs, and phenomena can be approached from different perspectives, resulting in more complete, concrete, and nuanced answers in comparison to mono-method literature reviews. This might result in more useful suggestions for policy and practice. Our book ‘Using mixed methods research synthesis for literature reviews’ provides methodological and practical guidance on how to conduct an MMRS literature review and how to avoid potential pitfalls. The book acts as a practical and integrated resource for readers interested in or engaged in systematic literature reviews. During the presentation, we will discuss the content and conceptualization of our book as well as its contribution to the field of mixed methods research and its educational potential for use in methodological curricula.

Using Mixed Methods for Development and Evaluation of Culturally Constructed Intervention Programming
John Hitchcock, Indiana University
Bonnie Nastasi, Tulane University

There are numerous challenges associated with developing and evaluating culturally-relevant interventions. At a minimum, there is a need to: (1) develop a strong understanding of a local culture and context, (2) account for one’s own etic perspectives, (3) assess intervention needs in a localized setting, (4) develop participant buy-in, (5) identify cultural brokers and gate-keepers, and (6) understand intervention development and evaluation process, all while (7) working in a dynamic environment characterized by cultural-co-construction (meaning that a local context should be expected to change even as an interventionist is operating within it). Oftentimes, evaluation teams will also be multidisciplinary in nature, a scenario that can create its own set of opportunities and challenges. If that were not enough, most evaluation goals will entail communication of sensitive information, generation of empirical evidence, often within a causal framework, and desire to generalize findings to other settings. It can be difficult to address these various challenges but the utilization of a mixed methods approach begins to provide the means for addressing these various needs. The author will provide an overview of these challenges and introduce a model for comprehensive mixed methods participatory evaluation that has been refined over two decades to meet the challenge of culture-specific intervention work. This model depends on the systematic integration of qualitative and quantitative data gathered via a mixed methods design. This general conceptual model will then be translated into the Participatory Culture-Specific Intervention Model (PCISM). Both models can be
adapted by audience members as they conceptualize their own plans for developing culture-specific interventions and/or evaluation work.

**Introducing the Socio-Ecological Framework as a Guide for Navigating the Field of Mixed Methods Research**

_Nataliya Ivankova, University of Alabama at Birmingham_

_Vicki L. Plano Clark, University of Cincinnati_

Mixed methods research is growing in acceptance and application across disciplines and countries, and it is becoming increasingly complex, nuanced, and specialized. The field of mixed methods research now encompasses an extensive body of literature and a diverse community of researchers representing different perspectives and approaches to understanding and applying mixed methods. The existence of the many perspectives on mixed methods research adds complexity to navigating the field of mixed methods, particularly for those who are new to mixed methods research. To address this complexity, we advanced a conceptual framework in our book for considering the body of literature, community of scholars, and research practices that are part of the field of mixed methods research. Our framework takes the form of a socio-ecological model of interconnected levels and their components consisting of the mixed methods research process, mixed methods research content, and mixed methods research contexts. The mixed methods research process is at the center of the framework because it unfolds based on researchers' decisions informed by mixed methods research content and that these decisions are dynamically shaped by a system of hierarchical mixed methods research contexts, such as personal, interpersonal and social. Our socio-ecological framework for mixed methods research acknowledges that mixed methods research practice is a dynamic and interactive process and involves complex relationships among multiple methodological domains and contexts that occur in this process. This framework can be useful for both synthesizing the field of mixed methods research from a methodological perspective, but also helping novice researchers construct a practical understanding of it.

**Discussion:**
The panel discussant, Mike Fetters, Professor and Co-director of the Mixed Methods Research and Scholarship Program at the University of Michigan and who is also a co-editor of the Journal of Mixed Methods Research, will discuss the presented book topics and provide his insight about the Series' role in the advancement of the field of mixed methods research.
The panel will conclude with a Q&A session about the topics for future books that may be of interest for the field, as well as general questions about what it is like to write a book for the Series.

_Ivankova, Nataliya & Papadimitriou, Antigoni^2_

**Creating an Organizational Culture for Building Students’ Mixed Methods Research Capacity: A Case of One School of Nursing**

^1 University of Alabama at Birmingham

^2 Assistant Professor of Leadership, John Hopkins University, School of Education

Panelists:
Antigoni Papadimitriou, as above
Nataliya Ivankova, as above
Doreen Harper, University of Alabama at Birmingham
Linda Roussel, University of Alabama at Birmingham
Karen Heaton, University of Alabama at Birmingham

Discussant:
Rosalie Aroni, University of Queensland (rosalie.aroni@monash.edu)

Introduction to the Theme of the Panel:
In times of evidence-based and data-driven calls for improvement, higher education programs are facing the need to prepare students with knowledge and skills that will make them compatible in addressing complex research situations and translating research into practice. To address this challenge, many post-secondary institutions offer graduate level courses in mixed methods research, or incorporate mixed methods in existing research methods courses. Mixed methods research that meaningfully integrates quantitative outcome-based oriented approaches with qualitative stakeholder engagement methods has a methodological capacity for addressing complex issues from both pragmatic and translational science perspectives. However, successful building of students’ mixed methods research capacity may be challenging because it does not exist in a vacuum. It involves active organizational involvement and support of all who are in charge of helping students learn and construct knowledge. Therefore, successful students’ mixed methods research capacity building should be integrated into organizational culture and structure and be promoted at three levels: macro (university/school), meso (department/program), micro (faculty/student). The purpose of this panel is to provide an organizational perspective using the case of one school of nursing that has a history of successful engagement of its graduate students with mixed methods research. The panelists will provide multilevel perspectives on how to create an organizational culture that enhances building students’ mixed methods capacity by supporting teaching and learning of mixed methods.

List of Papers:

**Organizational Perspective and Role of Leadership for Building Students’ Mixed Methods Research Capacity in Higher Education Institutions**
Antigoni Papadimitriou, Hellenic College
Nataliya Ivankova, University of Alabama at Birmingham

This presentation introduces the theoretical considerations for our panel on the building mixed methods students’ research capacity rooted in organizational perspective. The university has been characterized as a complex organization with many layers, each of which must be studied in order to gather multiple perspectives on organizational change such as the adoption of quality improvement. Additionally, university leadership is characterized as a crucial topic in establishing an institutional quality improvement system by many scholars. While a major and frequent challenge is the need to foster leadership and management capacities at the institutional level, not just through increasing competences (i.e. knowledge, skills, and professionalism) but also through motivation. In the changing environment, strong institutional management and leadership is needed because of the greater complexity of the external environment and the need for faster decision-making to affect the changes essential to ensure future institutional success and survival. Therefore it is important to investigate the higher education phenomenon at stake not only at one level but in a multi-level perspective macro (university/school), meso (department/program), micro (faculty/student) as well the role of leadership.

**Building Capacity in Mixed Methods Research in the UAB School of Nursing: A Dean’s Perspective**
Doreen Harper, University of Alabama at Birmingham

This panel presentation will describe the dean’s perspective on the development of a research organizational approach to support mixed methods team science and translation at the University of Alabama at Birmingham School of Nursing through the Office of Research and Scholarship (ORS) and doctoral curricular innovation. As a research-intensive nursing environment with both a Doctor of Philosophy in Nursing (PhD) and Doctor of Nursing Practice (DNP) programs, organizational infrastructures have been developed to support the dynamic integration of clinical and translational science as well as dissemination and implementation research. The ORS is composed of senior faculty and staff who provide mentoring, research consultation, statistical expertise, programming, Human Subjects review, pre-grant award review, budget development and monitoring, publication and presentation editorial support measured by faculty and student outcomes.
modifications for the PhD and DNP programs incorporate the mixed methods research administration and implementation science to strengthen practice-based inquiry. As mixed methods research has emerged, we sought to build capacity and expertise in this multimethod curriculum and supportive approach that integrates quantitative and qualitative methodologies in our ORS for the benefit of doctoral students and faculty. This presentation will discuss essential organizational resources needed to develop mentoring for faculty and student development opportunities that supports mixed methods research. Our experiences of building and supporting mixed methods research can serve to guide others working in similar institutions.

**Advancing Practice Doctorate through Translation and Use of Mixed Methods: A DNP Program Perspective**

*Linda Roussel, University of Alabama at Birmingham*

The Doctor of Nursing Practice (DNP) is a practice doctorate focused on translational science. Graduates of the DNP are expected to use research-based evidence to improve patient care outcomes and healthcare delivery. Using improvement science, the DNP students in the UAB School of Nursing engage in a scholarly practice project (during their practice immersion experience) that requires a methodological framework guiding their planning, implementation and evaluation of change (process improvement). Understanding the process requires the students to engage in a mixed methods approach to implementing change. The panelist will describe her experience in mentoring DNP faculty and students in using a mixed methods approach in evaluating quality improvement work through scholarship of practice.

**Incorporating Mixed Methods into the PhD Curriculum: Alignment with the ANCC Pathways to Excellence**

*Karen Heaton, University of Alabama at Birmingham
Karen Meneses, University of Alabama at Birmingham
Linda Moneyham, University of Alabama at Birmingham*

Preparing students in the discovery of knowledge is the hallmark of a research-focused, doctoral program in nursing (PhD). The American Association of Colleges of Nursing published a report in 2011 outlining targeted outcomes and essential curricular components of research-focused doctoral programs in nursing. Using these guidelines, core PhD faculty, guided by the Associate Deans for Research and Academic Affairs, conducted a curriculum revision that mapped to all essential elements and outcomes included in the document. The goal of developing the science in mind, the expected outcomes of integrating different science perspectives in the conduct of research, and the essential curricular element of ways of knowing, scientific methods, and concepts and components of scholarship all provided the impetus for expanding research methodology courses in the PhD curriculum to include mixed methods. The panelist will discuss the experience of visioning the expanded methodology, recommending the curricular addition and specific course elements, and course implementation and evaluation with the first cohorts of nursing PhD students enrolled in the revised curriculum.

**Discussion:**

The panel discussant, Rosalie Aroni (University of Queensland, School of Medicine, Australia), will tie together the themes in the panelists’ presentations. Drawing on her rich experience of teaching research methods to nursing students, health sciences students and students of all the allied health professions, she will provide her insight about the cultural and structural issues faced in academic and other arenas when introducing mixed methods training and the strategies required to be successful in creating positive organizational structures.

The panel will conclude with a Q&A session and sharing of the attendees’ experiences with organizational support systems for teaching and learning mixed methods research.

*Johnson, Burke*
Understanding the Theory and Practice of Dialectical Pluralism
Susan Tucker, Ed McLain, Ray Ivatt

The dialectical approach to research and evaluation has been promoted by Jennifer Greene (2007), and it has been extended by Burke Johnson (Johnson, 2011, 2015). Our group of four presenters proposes to conduct a “panel” on the dialectical approach to mixed methods research. Each panelist will engage the audience with activities to probe dialectical pluralism (DP) theory and practice.

The first panel member (Burke Johnson) will explicate the theory of dialectical pluralism for the audience. Johnson emphasizes the recognition of a plural reality and the use of a dialectical/dialogical/hermeneutical approach to learning from difference through dialogue. DP constructs heterogeneous groups that include the least powerful and relies on equal power, and ultimately, deliberative democracy in final decision making. Because of this decision making process, products of the group are likely to be viewed as legitimate and be accepted by group members. The approach specifically provides process legitimation. The research/stakeholder team/group is composed differently for each research project, depending on particular situational needs.

The second panelist (Susan Tucker) will share a framework for applying DP principles in research and evaluation. The path to DP is a non-linear journey where it is more of a process than a product. This framework highlights challenges occurring along the way, which can become program strengths if collaboratively resolved. DP-compatible-strategies will be identified to build individual capacity, group process building, and optimizing DP values systemically.

The third panelist (Ed McLain) will select a specific strategy from the framework (i.e. collaborative logic modeling) to demonstrate the specifics of DP implementation. Our purpose is to show how to use collaborative logic modeling (CLM) and dialectical pluralism (DP) to dialogue with multiple perspectives and negotiate a common vision. We use CLM as an ongoing process to identify program theory/assumptions and map the relationship between a program’s resources, activities, and intended results. Several challenges prompt more attention by evaluators and researchers: (a) Many projects are launched without theories of change and core assumptions being clearly articulated, much less understood or reconciled across diverse partners; (b) It is unclear in the literature how the logic modeling process continues beyond the initial stages of a grant; and (c) While most logic models (LM) tend to focus on developing a linear service delivery map of a single program, few practitioners adapt LMs to reflect an open system or map complex, non-linear initiatives. Situated in the context of STEM partnerships where logic models are often required by the funders, the authors have been using CLM as both an ongoing process and a product to ‘map’ the relationship between a program’s resources, activities, and intended results as well as articulating the program’s underlying theory and assumptions (2013; 2014; 2015). The approach also is applied to applied research.

The remaining panel member (Ray Ivatt) will facilitate a discussion about audience reactions to the DP approach for research and evaluation. The goal will be to produce a shared product and “win-win” outcome.

Mertens, Donna M¹ & Hesse-Biber, Sharlene²
Mixed Methods and Program Evaluation: Addressing Complexity and Inequity
¹Gallaudet University, ²Boston College

The purpose of this panel is to elucidate mixed methods as a distinct strategy in program evaluation in order to bring greater understanding to what it means to mix methods and to strengthen the credibility of evaluation findings. Evaluators have intuitively used mixed methods, possibly because they sensed that the programs, policies, products, systems, and organizations they were asked to evaluate were complex and that use of a single approach
or type of data collection would not capture that complexity. Mixed methods are particularly appropriate for addressing wicked problems and other problems that are couched in complex contexts because they allow evaluators to have a common language to discuss methodology with colleagues, to address the needs of diverse stakeholders who can be accommodated by using a variety of methods, and to provide information for policymakers about the nature of problems and solutions in a more nuanced way (Gomez, 2014).

Mertens will present: Mixed Methods in Evaluation: Addressing Complexity and Wicked Problems

The evaluation world operates with several major paradigms; each of which can lay claim to supporting the use of mixed methods. In this presentation, I will present the methodological assumptions that guide evaluators in their use of mixed methods and will provide an example of how each of the paradigms would approach the design of a mixed methods study, focusing on the programs designed to prevent violence, with specific attention to marginalized communities.

Hesse-Biber will present: Tackling and Addressing the Wicked Unintended Consequences of Social Justice/Social Change Development Project Interventions through Deployment of Hybrid Methodologies and Mixed Methods

The concept of unintended consequences (UC) is used in this context to refer to those outcomes of development programs or policies that utilize RCT and QED interventions that are unanticipated and for the most part undesired. UC's are rarely addressed by the evaluation development community. This paper develops a "hybrid" methodology and mixed methods approach for detecting and addressing UC's in evaluation development projects that privileges epistemological pluralism and a mixed methods design framework for detecting UC's before during and after implementation of RCT/ QED development interventions. Several RCT and QED development intervention case studies whose goals were intended to serve social justice and social change ends, serve to illustrate undesirable UC's as well as how to implement Hybrid Methodologies and Mixed Methods to address these issues to promote their intended social justice/social change outcomes.

Mertens, Donna M

The Future of Mixed Methods Research: A five year projection to 2020

1Gallaudet University, US
Pat Bazeley, Research Support, Australia
Lisa Bowleg, George Washington University, US
Nigel Fielding, Surrey University, UK
Joseph Maxwell, George Mason University, US
Jose F. Molina-Azorin, University of Alicante, Spain
Katrin Niglas, Tallinen University, Estonia

The field of mixed methods (MM) research has expanded over the last few decades with a plethora of publications, the launch of the Journal of Mixed Methods Research (JMMR), and the establishment of the Mixed Methods International Research Association (MMIRA). Given the nascent status of MMIRA, its Executive Board established a task force on the future of MM and the MMIRA, asking us to cast our gaze to the future. In this presentation, we will provide a summary of progress in the MM field and then identify fertile topics and challenges that members of this community may engage with for the next five years (2016-2020). The topics we will discuss include:
Definition, character and history of MM
Purpose, Questions, Design Research and Technological Advances
Social Justice and the MM Researcher’s Responsibility
Teaching MM research
MMIRA, the profession, and professional development
We will offer specific recommendations for each of these topics for consideration by the MMIRA leadership and membership, as well as for MM researchers across the globe. We will invite audience members to share their thoughts about the future of MM as well.

Moeller, Aleidine J.¹
Mixed Methods and Language Assessment: A New Frontier
Edith S. Greer¹; John Creswell²; Evelina Galaczi³; Nick Saville³
¹University of Nebraska-Lincoln; ²University of Michigan; ³Research and Thought Leadership Group, Cambridge English, Cambridge University

In the last four years the University of Nebraska-Lincoln has worked closely with Cambridge English at Cambridge University to encourage mixed methods as a more central feature of testing and language assessment. The symposium leaders, consisting of a mixed methods expert and language testing and assessment specialists, represent the participants in this collaborative effort to spread the practice of mixed methods research into the field of language testing and assessment, a new frontier for using mixed methods. Essential background information for understanding the basics of this methodology needed to conduct mixed methods research within the context of language assessment is the focus of this session.

The parallel paradigm shifts from language teaching to learning, from a testing to an assessment culture, and from a psychometric research method to a more multiplicitic research approach has set the stage for alternative ways of collecting and combining quantitative and qualitative data in the test development and assessment process. Its applicability is visible in several testing arenas such as gathering both forms of data when developing a test, examining how test-takers and stakeholders view the utility of a test, revising the rating scales for a test, and assessing the appropriate level for a test based on an individual’s language ability.

Mixed methods research in the language testing field has inherent strengths that offset the weakness of a purely quantitative or qualitative study as it allows for a breadth and depth of understanding that would not have been possible had researchers been limited to only one data source. By combining and merging qualitative data that consists of open-ended responses where individuals provide their own individual perspectives and ratings to questions and closed-ended quantitative responses where the inquirer sets the questions and the response categories in advance allows for a deeper probing and understanding of the language testing process, the perspective of the test taker, the impact on the community (school, parents) and the effectiveness of the assessment tool.

Exemplars of mixed methods studies in the language and assessment field will illustrate the benefits and added value of using a combination of the two databases and how mixed methods research has contributed to a deeper understanding of language learning and learners, testing procedures and the impact of testing on stakeholders. Criteria for evaluating a high quality study and recommendations for using mixed methods in testing and language assessment will be presented.

The order and content of the symposium presentation will be as follows:

a. Creswell - the adoption and use of mixed methods across disciplines and countries around the world (15 minutes)

b. Saville - the need for mixed methods within validation and testing in the UK and abroad with English tests (15 minutes)

c. Moeller - the increased presence of mixed methods within language assessment (15 minutes)

d. Galaczi - a specific mixed methods project at Cambridge English (15 minutes)

Pluye, Pierre MD¹, PhD & Hong, Quan Nha PhD(c), MSc²
The role of mixed methods in literature reviews: Overcoming challenges for synthesizing qualitative and quantitative evidence from primary research
Mixed studies reviews are becoming popular in health and social sciences (also called mixed methods reviews and integrative reviews). In line with the definition of mixed methods research, we define these reviews as a type of literature review in which a team of reviewers identifies, selects, appraises, and synthesizes qualitative, quantitative and mixed methods primary research studies. They are relevant across disciplines, particularly with respect to complex and highly context-sensitive interventions. They can provide a rich and highly practical understanding of complex issues. In this panel, examples of qualitative, quantitative and mixed methods syntheses (using convergent and sequential designs) of qualitative and quantitative evidence will be presented. In addition, challenges and ways of overcoming them will be discussed. Papers:

**Mixed methods research syntheses: step-by-step approach, possibilities, and challenges**
Mieke Heyvaert, PhD, Faculty of Psychology and Educational Sciences, University of Leuven (KU Leuven)
Karin Hannes, PhD; University of Leuven (KU Leuven)
Patrick Onghena, PhD; University of Leuven (KU Leuven)
We will describe a step-by-step approach for conducting mixed methods research syntheses, and zoom in on the specific possibilities and challenges related to each of these steps. Furthermore, we will discuss overall possibilities and challenges for mixed methods research syntheses.

**(sequential mixed synthesis design – quantitative synthesis guiding a qualitative synthesis): Addressing the challenges of mixed studies reviews: data transformation, results integration and knowledge transfer**
Paula Louise Bush PhD, Department of Family Medicine, McGill University
Pierre Pluye, MD PhD; McGill University;
Gillian Bartlett-Esquillant, PhD; McGill University
Michael T. Wright, PhD, LICSW, MS; Catholic University of Applied Sciences Berlin
Jeanne Haggerty, PhD; McGill University
Jean-François Pelletier, PhD; University of Montréal
Christine Loignon, PhD, University of Sherbrooke
Vera Granikov, MLIS; McGill University
Reem El Sherif, MD, MSc; McGill University
Ann C. Macaulay, CM MD FCFP FRCPC (Hon); McGill University
Mixed studies reviews can answer complex questions by combining qualitative, quantitative and mixed methods studies. However, the combination of diverse methods complicates the synthesis. The challenges encountered in synthesis will be discussed using a mixed studies review that aimed to answer the question "What are the processes and outcomes of organizational participatory research (OPR) in health?" In this review, 107 studies were included. Textual data were transformed into numerical data (variables) using a reliable quantitative content analysis, and a multilinear logistic regression was conducted. This quantitative synthesis guided the sampling of a subsequent qualitative synthesis of 84 studies. This mixed review allowed us to synthesize a heterogeneous body of literature and have a more thorough understanding of OPR processes. The results will allow us to develop guidelines to advise researchers, managers, health professionals, and patients in their OPR projects to improve practices, services or policies.

**(sequential mixed synthesis design – qualitative synthesis guiding a quantitative synthesis): What are the outcomes associated with the use of online consumer health information in primary health care? A systematic review with framework synthesis of quantitative and qualitative evidence.**
Reem El Sherif, Department of Family Medicine, McGill University
Systematic reviews in public health and oncology suggest the use of Online Consumer Health Information (OCHI) improves knowledge, participation in health care, and health outcomes. Our mixed studies review aimed to answer the following question: “What are the conditions and outcomes of the use of online consumer health information?” We followed the four stages typically used in systematic reviews: identification; selection; quality appraisal; and synthesis of retained studies. We followed a sequential design with a phase-1 qualitative synthesis informing a phase-2 quantitative synthesis. First, we used a framework synthesis, which consisted of coding evidence against an a priori framework to produce a revised framework of factors and outcomes of the use of online consumer health information. Data extraction and synthesis consisted of a deductive-inductive qualitative thematic analysis, followed by a disambiguation/ harmonization of themes. Second, we adopted a Configurational Comparative Method (CCM). CCM allows the identification of commonalities in the relationships between conditions and outcomes across cases, called the configurations. We used phase-1 results to identify conditions (factors such as context, information-seeking, and use) associated with outcomes. CCM reveals, in a systematic way, whether a combination of conditions is necessary and/or sufficient for an outcome using Boolean algebra.

(result-based convergent mixed synthesis design): Advantages and pitfalls of combining meta-analysis with qualitative synthesis: experiences from a review exploring the barriers and facilitators of interventions to encourage healthy eating in children

Katy Sutcliffe PhD, EPPI Centre, Social Science Research Unit, UCL Institute of Education
Professor James Thomas PhD, EPPI Centre, Social Science Research Unit, UCL Institute of Education

We employed a mixed-studies review in order to identify what helps and what stops children aged 4 to 10 years eating fruit and vegetables. We combined a qualitative synthesis with a meta-analysis of trials to explore heterogeneity in a theoretically informed way. The first stage comprised of a thematic synthesis of qualitative studies examining children’s views on healthy eating. This was then employed to interpret the findings of a meta-analysis of trials of healthy eating interventions and to inform sub-group analyses. The approach was successful in identifying intervention features that explained differences in intervention effects; interventions matching children’s views had greater effects. This session will focus on the advantages and challenges of employing this approach, and briefly describe some alternative approaches to synthesis we have employed in situations when a mixed-studies review involving either qualitative synthesis and/or meta-analysis was not feasible or was inappropriate.

(data-based convergent qualitative synthesis design): Using Mixed Methods in Realist Review: Challenges, Solutions and a Paradigmatic View

Justin Jagosh, PhD; Senior Research Fellow, Director, Centre for Advancement in Realist Evaluation and Synthesis (CARES), University of Liverpool, UK
Realist review is a theory-based approach to literature synthesis examining ‘what works, for whom, under what circumstances, and how’ in the domain of program assessment (i.e., implementation of policies and interventions). The methodology scrutinizes programs for their underlying middle-range theories and explains outcomes in terms of the causal mechanisms in context (CMO configuration). The product of realist review is typically a theoretical refinement of generative, explanatory causation pertaining to why, for whom, or in what circumstances programs produce particular outcomes. The approach is capable of synthesizing evidence from qualitative, quantitative, and mixed-methods studies. This presentation will discuss how the particular research frame, stemming from the underlying realist paradigm, supports the inclusion of mixed methods in realist synthesis and how methodological challenges can be addressed. A brief discussion on keys to successfully completing a realist review and ensuring quality in the process will be included.

DISCUSSANT
Margarete Sandelowski, Cary C Boshamer Professor, University of North Carolina at Chapel Hill

Poth, Cheryl
Dilemmas and Opportunities for Teaching Mixed Methods Research Addressing Complex Social Issues: Expert Panel Perspectives
Chair: Dr. Cheryl Poth, University of Alberta
Panelist 1: Dr. Tony Onwuegbuzie, Sam Houston State University
Panelist 2: Dr. Nataliya Ivankova, The University of Alabama at Birmingham
Panelist 3: Dr. Thomas Christ, University of Bridgeport
Panelist 4: Dr. Kathleen Collins, University of Arkansas at Fayetteville
Panelist 5: Dr. Nancy Gerber, Drexel University

The purpose of this 90 minute panel is to bring together diverse expert perspectives related to teaching mixed methods research addressing complex societal issues. Along with an ever-increasing use of mixed methods research across disciplines, there exists an ever-pressing need for addressing complex societal problems. The consideration of these complex societal problems as ‘wicked’ is attributable to involving multiple interacting systems, an absence of known solutions, and a need for drawing on trans-disciplinary as well as diverse methodological expertise. Together, these characteristics have identified mixed methods research as having the strong potential for addressing complex societal problems (Gomez, 2014; Mertens, 2015).

However, the lack of researcher capacity for addressing complex societal issues using mixed methods research remains a limitation. This led to considering how this demand can be met by learning opportunities and what these learning opportunities might look like. By building upon the experiences of those who have already begun to consider these matters, we present an opportunity for our global MMIRA community to engage together in a dialogue about dilemmas and opportunities for teaching mixed methods research addressing complex social issues.

The following panellists have been invited to participate because of their interest (and publication record) in the area related to the teaching of mixed methods. Following a brief introduction of the purpose for the panel (5 min), panellists, and procedures by the chair, Dr Poth, each panellist will have 10 minutes each to speak on the following topics:

The first panellist, Dr. Onwuegbuzie will speak about the landscape of teaching in mixed methods research. In particular, he will situate the field of mixed methods research as becoming popularized over the last quarter of a century. This popularization has increased the demand for instruction in mixed methodology. Although the number of mixed research courses, seminars, workshops, webinars, and the like has increased exponentially worldwide, a significant proportion of these instructional fora are taught or delivered by first-generation instructors who have never been taught mixed research themselves.
Unfortunately, these mixed research knowledge bearers have had relatively little guidance—with, at most, only 2% of the articles published in the area of mixed research being devoted to pedagogy (Frels, Onwuegbuzie, Leech, & Collins, 2012). Thus, the purpose of this presentation is to provide a meta-discussion of mixed research pedagogy. Specifically, first, he will identify all research articles published in this area. Second, he will identify substantive discussion on mixed research pedagogy that is contained across the more than 40 mixed research textbooks in existence. Third, using constant comparison analysis of all published works in the area of mixed research pedagogy, Dr. Onwuegbuzie will map the developing landscape of pedagogy in mixed research.

The focus of the second panelist, Dr. Ivankova, will be about teaching mixed methods research for quality improvement and translating evidence-based practice to address meaningful change. In times of evidence-based and data-driven calls for improvement it is important to provide students with knowledge and skills about mixed methods research that will help address immediate practical issues and thus enhance translation of research into practice. Mixed methods research that meaningfully integrates qualitative stakeholder engagement methods with quantitative outcome-based oriented approaches is well positioned to address the issues of social and health disparities and help identify effective strategies for improvement. The need for mixed methods is particularly evident when students, who pursue practice doctorate degrees focused on translational science, are required to engage in improvement work and produce scholarly practice dissertation and thesis projects that involve cycle and test of change. Using a methodological framework for applying mixed methods in community-based participatory action research, Dr. Ivankova will share her experiences with developing and teaching several online graduate level mixed methods courses that serve students with diverse professional, epistemological and disciplinary backgrounds. The courses include both didactic content and heavy application to real life practical problems by engaging students in learning how to synergistically combine mixed methods with action research approaches to identify, implement, and evaluate improvement initiatives.

Dr Christ as the third panellist will discuss critical theory, participatory action research, and narrative storytelling in mixed methods to reduce oppression. Specifically he will address the issue of oppression as continuing to be a worldwide problem. Complex societal issues including colonization and suppression of knowledge results in groups being powerless to change their conditions. Innovative research techniques including Participatory-Action-Research, Auto-Ethnography & Narrative-Storytelling have emerged in the field of Mixed Methods to overshadow traditional methodologies that ignore imbalances in power. This paper highlights the importance of teaching these research methodologies to the new generation of researchers.

The fourth panellist, Dr. Collins will describe critical questions from an instructor’s evolving perspective about teaching mixed research (MR). Mixed research involves mixing at a single juncture or multiple junctures throughout the research process. A mixed methodology is not a method-centric approach; rather it is guided by the researcher’s philosophical stance and his or her assumptions about what constitutes credible data; the best means to collect and analyse these data, the research question guiding the inquiry, and how to implement strategies for integration. Students face challenges when interpreting and implementing these characteristics of MR into practice. The following questions reflect examples of these challenges: how do you link philosophical stances and methods?; When phrasing a particular question, what is being prioritized as important to ask and what is not being asked?; When selecting participants, what criteria are used to include participants or sites and why other potential participants or sites are excluded? What are the ethical responsibilities when engaging with participants and members of the research team? When applying a strategy to integrate, what is being prioritized as important to integrate and what is not being included in the integration? The responses to these questions elevate in complexity when there are multiple strands in a MR design and collaborative research teams. Dr. Collins’s intent is to
share her evolving perspective about how to address these challenges and to contribute to the dialogue surrounding the teaching of MR.

The final panellist, Dr. Gerber will introduce the challenges around introducing philosophical assumptions, research typologies, and methodologies for Mixed Methods Research to students with no previous exposure. Specifically, students can be challenged when their pre-conceived ideas about research are embedded solely in either quantitative or qualitative traditions. Dr. Gerber will outline her approach to begin by introducing and examining multiple worldviews using experientials, every day vignettes, and arts based methods which expand students’ ways of seeing, knowing, and thinking to include different and dialectical forms of knowledge. In her experience, the use of these creative and non-linear methods of teaching results in students’ increasing receptivity to new ways of perceiving knowledge, conceptualizing research, and learning the theory and practice of mixed methods research. Finally, Dr. Poth will tie together the threads of the presentations in a brief discussion (5 minutes) and then will facilitate a discussion among panellist about what this means for instructional theory and practice (15 minutes) followed by audience participation in a discussion (25 min).

Thus we propose this panel for 90 minutes but are willing to adapt to the conference schedule as needed. This panel, connecting research and theory about mixed methods research addressing complex social issues, can be considered for submission to the conference theme: The Role of Mixed Methods in Enabling Social Change because of its focus on the implications of learning opportunities on the capacity to conduct rigorous mixed methods research. We would also be willing to consider other themes if the organizing committee sees a different fit.

References

ROUNDTABLES
The full descriptions for these are available in the conference programme.

SESSIONS

Adedokun, Sulaimon T
Determinants of Incomplete Child Immunization and Mother’s knowledge of Causes of Childhood Diseases in Nigeria

Sulaimon T. Adedokun1,2, Olalekan A. Uthman1
1Warwick-Centre for Applied Health Research and Delivery (WCAHRD), Division of Health Sciences, University of Warwick Medical School, Coventry, United Kingdom
2Department of Demography and Social Statistics, Obafemi Awolowo University, Ile-Ife, Nigeria
Background: Childhood mortality in Nigeria is high as the country was ranked among the five that accounted for half of the world’s under-five deaths. Most of these deaths are linked to diseases that could be prevented through immunization. This study examines the factors that influence incomplete immunization of children in Nigeria and the knowledge of mothers about the causes of childhood diseases.

Methods: The study employed both quantitative and qualitative approaches. In the quantitative part which focused on immunization, the Nigeria Demographic and Health Survey 2013 data set was used. The data which covered all the 37 states in the country involved 5,825 children aged 12-23 months who were born to women between 15 and 49 years of age. Logistic regression was used for the analysis. The qualitative section which focused on the knowledge of mothers about childhood diseases, involved 14 in-depth interviews which were conducted in the southern and northern regions of the country among women of childbearing age who had at least one under-five child. The responses were recorded, transcribed, analysed and incorporated in the results of the quantitative analysis.

Results: More than three-quarter of the children were not fully immunized. The probability of having a child not fully immunized was higher for mothers who; had no education, were from poor household and were young (15-24 years). Also, not attending antenatal clinic, delivering at home and being of higher birth order (7 or more) increased the probability of having a child incompletely immunized. Although majority of the mothers have adequate knowledge of what causes malaria, more than half of them have poor knowledge of the causes of diarrhea as they attributed it to teething, eating too much food, eating sweet food and sun heat.

Conclusion: The study revealed that high proportion of incompletely immunized children in Nigeria is linked to factors such as low level of maternal education, maternal age, household poverty, not attending antenatal clinic during pregnancy, not delivering in the hospital and higher birth order. Poor knowledge of the causes of childhood diseases could be a contributory factor to mothers having wrong perception about the significance of immunization against such diseases. There is a need for policy interventions to address these issues. Such interventions should involve improvement of maternal and household socioeconomic status and awareness campaign on the importance of attending antenatal clinic, delivering in the hospital and having children fully immunized. Health education at the community level for women within the childbearing age should be organised on a regular basis.

Akimowicz, Mikael
Two of a kind: the complementarity of quantitative and qualitative analyses. The case of farm investment in Ontario’s Greenbelt

Mikael Akimowicz1; Richard J. Vyn2; Harry Cummings3; Karen Landman3
1 LEREPS, University of Toulouse & SEDRD, University of Guelph; 2 FARE-University of Guelph; 3 SEDRD-University of Guelph

Two ontologically- and epistemologically- opposing philosophies of conducting research coexist in social sciences: the qualitative and the quantitative approaches. Each of these approaches has specific advantages and drawbacks, and the nature of the results and the manner in which they can be interpreted varies substantially between the two approaches. However, though stark differences exist, there is the potential for complementarity when these two approaches are used together. We examine for such an outcome in a comparison of two studies – one quantitative, one qualitative – that investigated the issue of farm investment in Ontario’s Greenbelt. We first review the ontological and epistemological differences underlying quantitative and qualitative research in order to identify advantages and drawbacks related to each approach, and to highlight their specificities for research in applied economics. We then analyse the two papers on the factors influencing farm investment in Ontario’s Greenbelt. These studies were conducted around the same time period by two different
research teams working independently. The quantitative research study is based on an econometric analysis using a database of 32,512 farms provided by the Ontario Ministry of Agriculture, Food and Rural Affairs. The qualitative research study relies on mental mapping and narratives analysis collected during in-depth interviews of 20 farmers. These two research studies demonstrate typical differences associated with the methodological approaches (i.e., quantity and quality of data, descriptive or explanatory analyses, and generalizability and power of conclusions) that coincide with their respective advantages and drawbacks. For example, the quantitative analysis is based on a database that had a considerable number of observations but did not contain all required data and thereby required the use of proxies, while the qualitative analysis is based on a limited number of observations which impedes the generalization of results.

We find that the results of the two research studies are aligned to some degree and complement each other. The results align well with each other on the issue of investment persistence: the long-term trend identified by the econometric model was confirmed through interviews with farmers, which provided rationale for this observed result. Complementarity also occurs with respect to the influence of farm location on investment. In the econometric model, different impacts on investment are identified across the different zones within the Greenbelt. That finding echoes farmers’ statements that differences in regulations across Greenbelt zones, particularly where several layers of regulations exist, are a major constraint for investing due to the confusion and additional costs this creates. In each of these cases, the information collected through the qualitative approach complemented and provided a more detailed explanation for the observed quantitative results. While there were other components of the results of the two studies that did not overlap or that focused on different perspectives of the same issue, we did not find any contradictory results.

Our study provides evidence that combining qualitative and quantitative approaches can enhance the quality of the analysis. In particular, the results of qualitative studies can provide detailed information that can better explain the causal relationships observed in the results of quantitative studies.

Al-Ali. Salah
A Model for Enhancing The Quality of Vocational Education Graduates The College of Technological Studies, Kuwait, As A Case Study
Professor, College of Technological Studies, Kuwait

A model is suggested for enhancing the quality of learning in vocational and technical education. The model is designed so that lecturers can address how to maintain high standards in transferring the knowledge, skills, and attitudes required by industry. It embodies several stages that may be useful in generating a quality mix of coursework, workshops, and laboratories. This paper suggests a learning model to create guidelines for the lecturers at the College of Technological Studies (CTS) for providing local industry with skilled and semi-skilled labour. The study consists of a review of the literature, personal interviews with a sample of staff from selected departments at the CTS, interviews with department heads, and selected supervisors in industries in direct contact with CTS graduates. The paper concludes that there is an urgent need for the application of a proper learning model that allows both the CTS and industry to determine the knowledge, skills, and attitudes most in demand. The learning model can also be deemed a performance indicator of both the lecturers at the CTS and the level of industrial contribution in shaping the standards of the CTS graduates.

Al Jahwari, Misida
Exploring Organisational Change: Towards a Model of Strategic Change in Medium-Large Organisations
Doctoral Researcher, Aston Business School, Aston University, Birmingham, UK.
This study seeks to explore and explain ‘what causes and shapes strategic change processes and their outcomes’ in medium and large size organisations in the Sultanate of Oman. The investigation is based on a belief that although there are no universal laws or models of change, it is likely that cases of strategic change (like mergers and restructurings) might have certain common dimensions that could make some relationships relevant across organisations in similar national contexts. Hence, the study is in search for common dimensions across cases and will attempt to explain complex change in terms of relationships between causes, facilitators and inhibitors of the change processes and their outcomes. The aim of the study is to develop a context-specific explanatory model of strategic change for medium and large organisations in Oman.

To advance our understanding of the complex phenomenon of strategic change in an under-researched context (Oman), a mixed methods methodology is seen as the most relevant approach. In order to answer the question ‘what causes and shapes strategic change processes and their outcomes’, the investigation follows the exploratory sequential design. It starts with an intensive qualitative phase that explores and describes common dimensions of strategic change processes for the purpose of inducting a theory. This will be followed by an extensive quantitative phase that will test the theory, the relationships and their generalisability. Hence, phase one will induct a theory and phase two will test the theory.

The data for phase one was collected via 48 semi-structured interviews from 6 organisations that underwent recent strategic changes. To gain a fuller understanding of the change experiences, interviewees came from top managers, middle managers, lower managers and non-managerial employees. Interview data is currently being coded using theory-driven and data-driven methods and then themed. Next, the Eisenhardt method will be used to develop a theory from the multiple cases. Phase one results will help develop a survey (a variance study) to see if the findings from the multiple cases can be generalised to a larger population. Hence, phase two will test the inducted theory via a large sample cross-sectional survey design. This phase might involve developing a new scale or adopting existing one(s). An explanatory model/theory of strategic change in medium-large organisations will be developed and causal explanations will be offered from a critical realist perspective.

This study can help top managers, change agents, consultants and organisational change researchers identify the antecedents and influencers of strategic change programmes and their outcomes in a behavioural and cultural setting that is very different from the typical western context where most change theories and models emerged. The study is expected to contribute to the accumulation of the much needed context-specific knowledge on organisational change and add to our understanding of the complex phenomenon of strategic organisational change via a mixed methods methodology and a critical realist perspective.

Aljasir, Dr Shuaa

An Investigation of Facebook Usage by University Students in Saudi Arabia
Assistant Professor in Media and Communication, Faculty of Arts and Humanities, King Abdulaziz University, Saudi Arabia

Compared with face-to-face communication, Facebook use may provide opportunities for greater interaction in a relatively unencensored environment. This research aimed to critically investigate how Saudi university students are using these opportunities. It employs a theoretical framework drawn from uses and gratifications theory, social penetration theory, and social role theory. A mixed methods approach was used over three sequential phases. The research began with a quantitative questionnaire completed by 372 Saudi university students to investigate the gratifications they obtained from using Facebook and to identify a typology of Facebook users. This was followed by thematic and quantitative content analyses of profiles of a sub-sample of 50 students to explore the status updates they posted.
generated and the types of information they disclosed. To investigate in greater depth the themes that emerged from the previous phases, a final qualitative interview was conducted with 20 of the students. The results revealed that, Saudi students used Facebook as a virtual space within which they engaged in several activities. It allowed for cross-cultural and cross-gender communication. Facebook also enabled them to be citizen journalists, sharing, discussing, and analysing current affairs. They as well used Facebook to defend their religious beliefs and advocate Islamic values. Saudi university students showed that they are willing to jeopardise the privacy of their personal information to maximise the rewards they obtain from using Facebook as long as these rewards outweigh the expected costs from such disclosure. Despite belonging to a gender-segregated society, analysis of gender differences conducted across all three research phases revealed that the gap between genders in their Facebook usage is narrower than in offline settings.

Anane, Eric
Understanding the Complex Mix of Pre-service Teachers’ Motivational Orientations and Self-Regulated Learning: A Mixed Methods Study
PhD, Institute of Education, University of Cape Coast, Ghana

This convergent parallel mixed methods study investigated pre-service teachers’ motivation and self-regulation learning and its impact on their academic achievement during their professional training in colleges of education. In addition, the contributory factors of beliefs and values that lay behind some pre-service teachers’ motivational orientations were examined through episodic narratives. Constant comparative and multiple mediational analyses were conducted to bring out a better understanding of the complex mix of student teachers’ learning, their motivational orientations and academic performance whilst in college. The multi-stage sampling technique was used in selecting 500 teacher trainees from 40 residential colleges of education in Ghana and data sources included surveys, archival and interview data. The results from the study indicated that taken as a set, the motivation component of pre-service teachers’ self-regulation learning construct mediated the relationship between prior performances (entry aggregates) and academic achievement (GPA). The learning strategies component intervened significantly in the influence of prior performance on academic achievement. In the final model, prior performance showed a moderately large indirect effect on academic achievement through ten out of the fifteen variables of the self-regulation learning construct. The pre-service teachers’ narratives suggested that family members and friends, instead of candidates themselves, played a significant role in their choice of colleges of education for training and accordingly the teaching profession; motivation was principally external and teaching was mainly perceived as a means of imparting knowledge to young ones. However, participants held some positive values such as recognizing diversity among children, collaborating with parents to achieve optimal learning for children. This study provides an ecological and empirical foundation for the specification and explanation of the theoretical connections between pre-service teachers’ prior attainment, motivational orientations and self-regulated learning and their academic achievement in professional training context.

Archibeque-Engle, Shannon L.†
The Intersection of Agriculture, Latinas/os, and Higher Education in the Land Grant System: A Mixed Methods Study
†Director of Diversity and Retention; and Gene W. Gloeckner, Professor
Colorado State University

Latinas/os have long been instrumental in United States’ agriculture and yet similar numbers of Latinas/os are not studying agricultural sciences. This study provides universities a portion of the data and analyses necessary to identity how to both recruit and successfully
graduate people prepared to lead as professional agriculturalists. This study deconstructs
the intersection of agriculture, Latinas/os, and higher education. This transformative
convergent mixed methods study examines the learning environment of agricultural higher
education from a Critical perspective. The first segment of this study focuses on what a
student first encounters upon entering a College of Agricultural Sciences. Physical artifacts
present in educational settings make visible the values of the institution. Such messages
signal the institution’s desire for a culturally inclusive and supportive environment. This study
utilizes a campus ecology taxonomy based on visual ethnography methodology to interpret
the equity climate of three agricultural departments to answer the critical question: Who is
welcome? The systematic coding and thematic analysis reveal exclusive learning
environments clearly communicated by the physical artifacts present.

The second portion of this study addresses the lived experiences of students. While there
has been a focus on recruiting Latinas/os and others to study agricultural sciences, there has
not been an examination of the lived experience of Latinas/os currently studying agricultural
sciences in college. The purpose of this narrative study was to describe the lived experience
of six Latina undergraduate students studying in a College of Agricultural Sciences. The
thematic analysis of the transcribed interviews yielded three distinct themes, namely, Overt
Exclusion, Nepantlera, and Intersectionality through the saliency of agricultural identity.
Recommendations for inclusive agricultural education environments were voiced by the
participants, providing us a path forward to fully include and support Latina students in the
agricultural academy.

The third segment of this study focused on undergraduate student success. This study offers
a rigorous and systematic approach to quantitatively assess programmatic needs in three
segments: an analysis of the demographic representation of the state, an analysis of historic
opportunity gaps (1990 through 2014), and an analysis of recent undergraduate student
success utilizing predictive logistic regression models. Using Colorado State University
(CSU) as a case study for this systematic assessment, CSU was found to not represent the
state it serves, Colorado. Further, statistically significant opportunity gaps were found for
gender, Pell eligibility, first generation status, residency, and minority students. Finally, the
first year retention, four year graduation rate, and six year graduation rate predictive models
provided evidence for program investment to support first generation, minority, and resident
students. Of note, non-minority students were found to be 1.78 times more likely to graduate
in four years than were minority students. Minority students were 53 percent less likely to
graduate than majority students in six years. First generation students were less likely than
non-first generation students to graduate in six years and non-residents were more likely to
graduate than residents of the state within the six year time frame.

Bay, Laila T
Everyday Life with Rheumatoid Arthritis. Understanding patients’ perception of
illness, treatment, gender, body, sexuality and social life in an outpatient setting: A
mixed methods study
Department of Rheumatology, Odense University Hospital, Odense, Denmark

Introduction: This prospective Ph.D.-study consists of three individual studies that will
examine three perspectives of everyday life with Rheumatoid Arthritis (RA) and medicine
taking.

Background: Rheumatoid arthritis (RA) is characterized by fluctuating symptoms and
inflammation. This can lead to disability due to joint damages, risk of depression, anxiety,
altered body image, decreased libido, changes in family roles and changed social relations.
These aspects fully affect the patient’s everyday life. Methotrexate (MTX) is used to prevent
the implications of ongoing chronic inflammation, and mortality significantly decreases when
treated within the first year of diagnosis. Adherence to MTX treatment is vital, but medication
taking practice is characterized by complexity.
Purpose: To understand how the patient experiences everyday life with RA with emphasis on the course of treatment, social support and gender.

Design: The study is set up with hermeneutic-phenomenology as framework and a sequential explanatory mixed method will be used in the first and third study, the second uses a qualitative design.

Methods: Study one combines retrospective reviews of medical records with individual semi-structured interviews to examine how outpatient’s care and treatment are documented and performed by health professionals, and experienced by the patient with emphasis on adherence to MTX. Jointly, the two designs will point to connections between guideline adherence and patient adherence and patient’s (subjective) reasons for non-adherence to medication. Study two consists of semi-structured individual interviews and examines how social support and perceived loneliness influence everyday life with RA. Study three combines questionnaires with focus-group interviews to examine the importance of sexuality, masculinity and body image in everyday life with RA seen from the male patient’s perspective. In combination, the two designs will contribute to the understanding of possible associations between male coping patterns and gender, body and sexuality domains.

Perspectives: The study will give insight into the complexity that surrounds the everyday life of patients with RA, and how the care trajectory is experienced from the patient perspective. Furthermore, the study will provide knowledge on the underexposed impact of sexuality and social life when living with RA, and how these aspects can influence the way medication is handled by the individual patient.

Bazeley, Pat
Modelling mixed methods analysis
Research Support P/L, University of NSW, Australia

Mixed methods analysis processes are depicted in a logic model format that identifies starting points, primary processes, secondary processes, outcomes and applications. This model is then expanded to focus on the pathways and interactions that relate these elements. Having such a map leads to greater conceptual clarity about analysis processes and provides researchers with guidance as to what is both needed and possible, without limiting possibilities for further developments.

Bhaduri, Sreyoshi¹ (1)
A mixed method exploration of the evolution of instructional technology use at a college of engineering in the United States
²David Okoth; ¹,²Virginia Tech

A number of researchers have sought to understand the role of technology in undergraduate engineering education. However, very little work has been done to understand the evolution of instructional technology (i.e., technology used for instruction) use by engineering faculty for a particular institution. The purpose of this research is to assess this evolving role of instructional technology in the undergraduate engineering classroom, based on a study conducted at a large public university in United States.

This research analysed the results from two surveys on instructional technology use completed by faculty teaching engineering courses. The first survey was conducted in Spring semester 2011, for a total of 125 faculty members in the College of Engineering, to aid the Undergraduate Technology Committee assess the role of tablets in engineering classrooms. Since then, the tablet requirement has been in place at this large public university, and it was envisioned that instructors would incorporate more instructional technology into their curriculum. The second survey is designed as a follow-up survey and was conducted in Spring semester 2016.
In addition to the survey data, we also analysed key publications on technology use from this institution to develop a more holistic understanding of the instructional technology evolution. Through this research we intend to better understand the key differences observed in terms of use of technology in the classroom, based on a comparison of responses from 2011 to 2016. Specifically, the research questions guiding this study are: 1. What technologies are reported for use by faculty in the classroom? 2. Do the technologies used vary by degree program (such as Mechanical Engineering, Industrial Systems Engineering, etc.) and/or class size (small/large lecture, laboratories, etc.)? This research is envisioned as a concurrent mixed methods design, in which both quantitative and qualitative data collection and data analysis is involved.

We will present preliminary findings from this research. We expect results to indicate trends which reflect the technological boom. We are especially interested in investigating if faculty from certain departments have a lower inclination to adopt instructional technology into their curriculum, and understand reasons for the same. These reasons will help in informing engineering education administration on how to better serve faculty needs to increase technology adoption in instruction and curriculum redesign. Through this research, in addition to the preliminary results, we will also present the challenges in designing and implementing the follow-up survey for faculty. A note on the challenges and benefits of implementing mixed methods to holistically understand complex phenomenon is also presented. We believe that these steps will help fellow researchers in engineering education in developing surveys, and encourage design of mixed methods research for studies in similar contexts.

Bhaduri, Sreyoshi (2)
A mixed method analysis of literature on role of instructional technologies used as part of “in-class” interventions in undergraduate engineering education classrooms
Department of Engineering Education, Virginia Tech

Abstract: This paper describes a systematic Mixed Method Analysis of literature on Instructional Technologies used as part of “in-Class” interventions in Undergraduate Engineering Education classrooms. With the advancement of instructional technology along with widespread recognition of the benefits of the same in the teaching-learning process, many engineering educators have chosen to integrate technology in the classroom. For instance, Information communication technologies comprise technology which enable the students to communicate with the teacher during in-class sessions. These may be used by the faculty to evaluate performance, understand classroom environment, get real-time feedback, and the like.

The purpose of this concurrent Mixed Methods systematic review is to evaluate the strengths of the evidence present for the effectiveness of the programs which reported use of information communication technologies in the undergraduate engineering classroom. In specific, the following research questions were addressed:
RQ1: What student outcomes are reported for the use of ICTs in the classroom?
RQ2: Describe effective ICT based interventions for engineering education.
RQ3: Do outcomes and effectiveness vary by type of program? Identify characteristics of programs which are most effective (i.e. have credible evidence of the most positive outcomes)?
RQ4: What are the documented support mechanisms present which aid use of technology in the classroom? In contrast, what are the documented barriers present to the use of ICTs?

Through this mixed method systematic review, we found that student outcomes for such interventions which adopted technology reported an increase in student engagement, increased retention, student satisfaction, and increase in self-regulated learning. An important finding was that most papers did not use standardized instruments or frameworks to measure or define constructs that were assessed. The breadth of literature reviewed
allowed the researchers insight into various contexts in which technology implementations were successful, and provided documented evidence of challenges and limitations of such implementations. The reported outcomes were mapped to the classroom size of the interventions to visually present the impact of classroom size on student learning due to the interventions. Based on the findings, a model for use of ICTs in engineering classrooms has been recommended.

Bhattarai, Prakesh C.
Ethical Leadership in Nepali Technical and Vocational Education and Training (TVET) Schools: A Convergent Mixed Methods Study
Kathmandu University School of Education (KUSOED), Nepal

The study of ethical leadership is very important to cultivate professional practices and integrity in schools and their principals. This concern is particularly imperative to the principals of the Technical and Vocational Education and Training (TVET) sector in Nepal, where there is the need of immediate reform. Therefore, a convergent mixed method study was carried out to explore: (a) the perceptions of principals’ ethical leadership and its level, and (b) what contributed to the evolution of ethical leadership in principals.

This study featured a paradigmatic mixing of post-positivism and humanism with two equally prioritized parallel phases of data collection and analysis. Quantitative data were collected from the postal survey of a representative sample of 217 principals and 372 instructors. The qualitative data were collected from 9 TVET schools of 3 districts of Nepal by using case study protocol. “Textual description” and “word tables” were prepared for as the outcome of qualitative data analysis. Additionally, tables were developed as the outcome of quantitative data analysis by using mean and standard deviation. These analyses were followed by comparisons of quantitative and qualitative results by seeking dis/similarities within the findings. The findings were then interpreted with literature, theories and personal reflection.

The findings of this study support the literature’s assertion that care, justice and critique were the key dimensions in the perceptions of ethical leadership in TVET schools. In practice, however, principals did not demonstrate optimal care and justice to exercise their professional judgment fully. The ethics of critique was perceived to facilitate and legitimize ethics of care and justice, but its role was dominated by the culture of obedience and silence. The findings also revealed that ethical sensitivity was not consolidated in principals because it was the outcome of their exposure to social-cultural and educational settings and workplace but not of capacity building. Consequently, principals could not harness the benefits of a constructive critical role. In conclusion, each principal is unique in ethical decision making and thus she/he decides with his/her own micro model consideration of his/her own personal, interactional and organizational context.

The study has two main implications. First, policy makers need to abandon the current way of thinking to find the single and macro model of ethical decision making for every context, and they need to empower each principal to support his/her own unique micro model developed through consideration of personal, interactional and contextual elements. Second, convergent mixed methods researchers, who prioritize both methods equally, need to consider “methodology” as a “fifth decision” along with levels of interaction between the strands, their relative priority, timing, and the procedures for mixing.

Brown, Christopher
Using mixed methods to investigate the grassroots sport participation legacy of the London 2012 Paralympic Games
PhD Student, University of Kent, UK

This research is on-going and focuses on the grassroots sport participation legacy of the London 2012 Paralympic Games for disabled adults in England. Researching grassroots
sport participation legacy is a complex process. Focusing purely on an outcome-related perspective neglects the processes involved in legacy creation (Girginov and Hills 2009). On the other hand, a social constructivist approach to legacy is helpful in revealing the mechanisms of sport participation legacy (Girginov and Hills 2009; Homma and Masumoto 2013), but is unable to produce findings that are helpful in measuring the success of the legacy promises of a Games in terms of sport participation increases or decreases. Thus, a mixed methods approach enables the researcher to address the complex phenomena of sport participation legacy, by investigating bottom-up and top-down approaches. As the topic of this research is multi-faceted, there is the possibility of divergent findings being produced, but this can be valuable in explaining a non-linear phenomenon (Jick 1979; Teddlie and Tashakkori 2009).

This research is comprised of three mixed methods studies. Study 1 was designed to address the impact of the Paralympics on grassroots sport participation for disabled adults in England. An outcome and process approach was needed to answer this research question, since relying on just one of these approaches would not have provided enough detail to reach a comprehensive answer to the research question. Thus, a parallel QUAN + qual design was implemented. Preliminary results suggest a small spike in participation following the staging of the Games, but participation has since decreased below the post-Games high. Evidence from the qualitative strand indicates the level of demand for sport after the Paralympics was greater than anticipated, with sport providers not being able to respond efficiently to the demand. There was also a lack of leveraging, issues with funding, and difficulties engaging with National Governing Bodies. Study 2 mirrors the design of study 1, but investigates the physical activity legacy and is also a parallel QUAN + qual design. Early results from this study are similar to that of study 1. Study 3 will be conducted in the next few months, and employs a sequential explanatory mixed methods design, QUAN QUAL, with the qualitative findings aiding the understanding and interpretation of the quantitative findings (Creswell 2014). Both stands have been given equal importance because of the aims of the study, and the complexity of the research question, which is designed to focus on the extent to which the health benefits of the Paralympics was communicated and leveraged amongst the disabled adult population in Kent.

Mixed methods is often underused in sport management research or poorly operationalised (van der Roest, Spaaij, and van Bottenburg 2013). Thus, this research is important as it highlights the benefit of using mixed methods to tackle a challenging research area, the sport participation legacy, via bottom-up and top-down approaches. It is hoped this research will spur debate and understanding of how mixed methods can be used to tackle multi-faceted sport management research issues.

McClain Burke, Holly
A mixed methods evaluation of a social and economic empowerment intervention to reduce adolescent girls’ vulnerability to HIV in Mozambique
Samuel Field1; Lázaro González-Calvo2; Margaret Eichleay1; Catherine Packer1; Troy D. Moon3
1FHI 360, USA; 2 Friends in Global Health, Mozambique; 3Vanderbilt Institute for Global Health, USA

Women and girls are disproportionately affected by the HIV epidemic. This is especially true in Zambézia Province, Mozambique where HIV prevalence among women aged 15-24 is estimated to be 16%—more than triple the proportion of men the same age. Based on evidence that increased economic opportunities for women and girls can reduce HIV risk behaviours, our goal was to determine whether a combined economic and social intervention had the desired effect of reducing adolescent girls’ vulnerability to HIV. Using quantitative and qualitative methods we designed the most rigorous study possible to evaluate the intervention within the complex context it was implemented. During the presentation we will
discuss our study design in detail and explain how it evolved in response to programmatic and logistical constraints. Initially, our preference was to implement a randomized controlled trial design, but after meeting with program implementers we learned this design was not possible because of the programmatic realities that often complicate real-world evaluations. Specifically, there were fewer intervention participants than anticipated, the intervention had already begun in some groups, part of the intervention was not implemented at all, intervention components were not the same across all groups, names used to identify communities and participants varied, and extreme seasonal flooding and political conflict in the province affected the research plan. Having a mixed methods approach from the outset enabled us to adapt our research design accordingly and resulted in a strong evaluation. To measure and compare the effects of the intervention on reducing adolescent girls’ vulnerability to HIV, two cycles of quantitative data were collected from a sample of girls aged 13-19 from six districts in Zambézia Province who participated in the intervention and a sample that did not. From April to May, 2015 we interviewed 884 girls (267 who participated in the intervention from 22 communities, and 617 who did not participate in the intervention from 65 communities). Approximately six months later, from October to December, 2015, we interviewed 87% of the adolescent girls again. In order to describe household and community-level effects of the intervention and potential causal pathways of economic and social empowerment on girls’ HIV vulnerability, we selected a subset of 12 intervention communities to collect qualitative data. From August to October, 2015, we conducted 49 in-depth interviews (IDIs) with adolescent girl intervention participants, 24 IDIs with girls’ household heads, 36 IDIs with central male figures identified by the girls, and 12 focus group discussions with community members. A second round of qualitative data collection with the same girls and their salient references is planned for August 2016 to explore the sustainability of any treatment effects observed during the first round. Final results are expected May 2017. During the presentation we will describe our findings and their contribution to understanding how social and economic empowerment interventions impact adolescent girls’ vulnerability to HIV. The findings will inform decision-making for programmatic approaches to reducing girls’ vulnerability to HIV in sub-Saharan Africa, and will also inform future implementation of the intervention studied.

Bush, Erin

Addressing the Feasibility of Implementing Brain Injury Screening for Older Adults: A Participatory Action Approach

University of Wyoming, USA

Purpose: This participatory action research study focused on the feasibility of professionals working at Area Agency on Aging (AAA) offices implementing routine brain injury screenings for their elderly clients. The elderly are one of the three highest-risk age groups for brain injury.

Design: The researchers chose a mixed-methods design because collecting both quantitative and qualitative data allowed for a more complete view of the potential problems and solutions professionals might encounter when screening individuals for brain injury. This design also allowed for collecting quantitative data about the AAA clients. Finally, the mixed methods data provided useful information for follow-up studies.

Methods: There were two research participant groups. Professionals (service coordinators and case managers) working at AAA offices, and Clients seeking services through the AAA. The researchers gathered both quantitative and qualitative data from the Professionals, and quantitative data only from the Clients. The Professionals group (N=18) participated in six components: 1) a demographic questionnaire 2) a pre/post survey about common brain injury misconceptions, 3) attendance of a brain injury education session, 4) attendance of a training session regarding administration of a specific brain injury screening tool, 5) screening of all their clients using the screening tool, and 6) follow-up focus group interviews.
regarding their participation in the training and education sessions, as well as their experiences screening clients for brain injury. The researchers only collected demographic information and screening results from the Clients group.

Quantitative Research Questions:
1. Did the Professionals show improved scores on the pre/post measure about common misconceptions, following the brain injury education session?
2. How many of the Clients screened positive for potential brain injury?
3. What are the descriptive characteristics of Clients who had positive screens?
4. What percentage of Clients with a positive screen, had not been previously identified as having a TBI?

Qualitative Research Questions:
There were two main aspects that the Professionals were queried about: A) their experiences and opinions about the education and training sessions they attended and B) their experiences with screening the Clients for brain injury?

Quantitative Results:
1. The Professionals group had a significantly greater average score on the brain injury misconceptions post-quizzes, compared to the pre-quizzes.
2. Two hundred-one Clients (out of 558) had potential TBI-causing injuries. Of those, 84 Clients (43%) screened positive for a TBI.
3. Descriptive data has been examined for the Clients and will be presented.
4. Of the Clients with positive screens, 87% had not previously been diagnosed with a TBI.

Qualitative Results:
Analysis of this data is currently underway, aided by the use of NVivo software. Preliminary themes are: Usefulness of the Screening Tool, Future Screening Implementation Issues, Brain Injury Knowledge Gained, and Client Knowledge Gained. Significant statements contributing to the latter two preliminary themes were: “I think this helped me realize that there were probably a lot more head injuries out there than we had realized.” and “My eye-opening thing was finding out how many were abused as a child and domestic violence…and I would have never known that before.”

Bush, Paula L
Reflexive Synthesis: a novel qualitative synthesis method for mixed studies reviews
Pierre Pluye1; Gillian Bartlett-Esquillant1; Michael T. Wright2; Jeannie Haggerty1; Jean-François Pelletier3; Christine Loignon4; Vera Granikov1; Ann C. Macaulay1
1 McGill University; 2 Catholic University of Applied Sciences Berlin; 3 University of Montréal; 4 University of Sherbrooke

Mixed studies reviews can answer complex questions by combining qualitative, quantitative and mixed methods studies. Such questions may involve synthesizing publication data, other than results. For example, in our systematic review of Organizational Participatory Research (OPR) with health organisations, we sought to identify OPR outcomes that were not related to the study objectives (e.g., improved work climate among health professionals who participated in the research). Moreover, we sought to understand the OPR processes that contributed to these outcomes. Thus, the data of interest were often the authors’ reflections as presented in the discussion section of studies. To conduct our synthesis, we developed the “reflexive synthesis” method which we will describe in this presentation, using our review as an exemplar.

This mixed studies review included OPR studies, where health organization members acted as co-decision makers during at least three phases of the research process: setting the research objective(s), interpreting the results, and disseminating or implementing them. The 84 included studies were quantitative (n = 4), mixed method (n = 5), and qualitative (n = 75).
The first step was to reduce each publication to the essence of interest; that is, the OPR processes and outcomes to which they contributed. For each study, we copied text passages describing OPR processes, OPR outcomes, and OPR processes linked with OPR outcomes into an Excel document in the order they appeared in the publication. This yielded 84 Excel documents, each with two columns: one for processes and one for outcomes. Note that when text passages clearly described an OPR process linked with an outcome, we merged the process and outcome cells. We then used these Excel documents to write ‘reflexive accounts’. Given our interest in OPR processes explicitly linked with outcomes, we wove the process-outcome passages into stories, supported by stand-alone process or outcome statements when necessary, to produce a coherent narrative. The result was 84 reflexive accounts, 250-500 words in length. Importantly, the reflexive accounts consist of the authors’ original text; we re-wrote only small parts of text to ensure grammar and style accuracy. We then completed a thematic analysis of the reflexive accounts.

A model of OPR processes and outcomes resulted from our analysis suggesting the need to hold regular, structured work group meetings that assemble a broad variety of stakeholders and provide a supportive environment so that stakeholders may voice their experiences, ideas, & feelings; discuss & debate; accept compromises; gain confidence to effect change; & effect change. Beyond achieving initial objectives, stakeholders gain knowledge, skills, empowerment, and job satisfaction; their collaboration and communication at work improves; and changes pave the way for subsequent changes.

Reflexive synthesis is a novel qualitative synthesis method that allows researchers to synthesize, not only primary research findings, but also authors reflections regarding these findings. Moreover, the data reduction process allows for the synthesis of a large volume of qualitative, quantitative and mixed methods research while achieving an in-depth of understanding through qualitative analysis.

Chandler, Jacqueline¹
A methodological review of Qualitative Comparative Analysis application within health research
Jo Rycroft Malone², PVC Research & Impact; Jane Noyes², Professor
¹CEU, Cochrane, UK; ² Bangor University, UK

Background: Implementation research seeks greater understanding of complexities when implementing healthcare interventions. The evidence-based paradigm within health research promotes systematic net effect approaches. However, system complexity indicates the need for methodological approaches that allow for explanation of mechanisms and processes in complex healthcare social systems. Qualitative Comparative Analysis (origin political sociology) is a systematic synthesis that disaggregates complexity across cases, allowing integration of qualitative and quantitative data. This synthesis based on the logic of set relations using Boolean algebra and fuzzy sets permits drawing explanatory inference for an outcome of interest providing causally complex models.

Study objective: To identify and evaluate applications of Qualitative Comparative Analysis (QCA) in the health science discipline as an additional research strategy to examine variation and heterogeneity across cases.

Methods: Scoping searches were undertaken from January 1987 to September 2015 using the highly specific term “Qualitative Comparative Analysis” across electronic databases: MEDLINE, CINAHL, PsycINFO, ASSIA, ERIC, HMIC, Sociological Abstracts, Web of Science, also a QCA bibliographic database (www.compasss.org). Broad systematically developed inclusion criteria intended to capture as many examples as possible. Data extraction included study health topic and context, data sources using non-QCA methods, a detailed breakdown of QCA methods applied, the rationale for using QCA, also whether author conclusions were consistent within their specific field. In addition, extracted phrases used by authors to convey the epistemology of QCA. A quality checklist evaluated the
completeness and integrity of the applied QCA methods. Framework synthesis examined the appropriateness of the study purpose, author rationale and epistemological concepts to judge whether QCA provides a set of methods useful for the health sciences.

Results: Thirty-one included studies cover health care topics from the macro system and policy level to the individual patient. Authors use data sources such as trials, surveys, routinely collected data and qualitative research. Authors were primarily using QCA to ascertain the conjunction of multiple conditions sufficient for a pre-determined outcome. Although, studies indicate increasing sophistication of application overtime, systematic quality appraisal of the QCA methods exposed poor reporting of, and compliance with, core methodological components. Using QCA ‘methods’, does not necessarily imply engagement with QCA ‘methodology’. Findings suggest adherence to underlying epistemological concepts needs a better understanding of set relation principles. Nevertheless, many authors applying QCA as a research strategy were able to systematically disaggregate complex heterogeneous data and draw conclusions consistent with other work within their specialist field. Furthermore, enhance understanding of their phenomena of interest.

Conclusion: The increasing application of QCA methods in the field of health sciences indicates a need for greater understanding of QCA logic and methodology to improve its potential application. Authors, however, found it a useful method to manage complex phenomena.


Charmaraman PhD, Linda
Avoiding cultural bias in establishing program observation accuracy: Reflections on our evolving action-oriented mixed methods evaluation design
Allison Tracy, PhD; Wellesley Centers for Women, Wellesley College

With the increasing use of observational tools to evaluate and assess Out of School Time program quality, we conducted a training development and evaluation study of the Assessment of Afterschool Program Practices Tool (APT). A unique strength of the APT is that it was developed to capitalize on links between specific dimensions of program quality (e.g., supportive staff-youth relations, high program activity organization) and eight youth outcome areas, (e.g., sense of competence as a learner, future planning). The primary purpose of our project is to advance understanding of how youth settings can be improved through program measurement development and online training. APT has been part of quality assessment systems to identify programs in need of support, providing feedback for improvement, monitoring programs to ensure continued quality performance, and making program funding decisions, thus the measurement of program quality can have high stakes for youth programs. Our study protocol used video clips of afterschool practices to train 39 youth program directors and staff from 4 different U.S. states to increase their observation accuracy levels. We then administered online exams to assess rater accuracy improvement between time points, when different components of the training were introduced. Our qualitative strands included open-ended survey feedback at different time points in the study, and a consensus-building meeting with community-based partners to solidify “gold standard” master scores for video clips used in practice modules and exams. We will describe how our study began as a more traditional mixed method evaluation design with primarily a Qua-qual, linear hypothesis-driven orientation (e.g., will raters improve in their program rating accuracy with our different training enhancements over time?). The study program evolved into an action-oriented mixed method design that recursively used both quantitative and qualitative strands to continuously improve the online training system developed, after on-
going consultation and feedback with stakeholders, community-based partners, and the study participants throughout our development and evaluation process. At the heart of the transformation into an action-oriented framework, there was a tug of war between philosophical traditions. For instance, how does one quantify qualitative observations and is it even possible? If there is a “gold standard” that each observation should match, from who’s perspective is that coming from? How can group consensus from raters of diverse backgrounds contribute to the most inclusive, culturally-relevant standardization of observation ratings? In addition to describing this unusual process of shifting methodological frameworks during a study, we will discuss some of the problems we faced in (a) using video to document social relationships and group interactions, (b) establishing a gold standard for observations when there can be many interpretations due to point of view, culture, background, and experience, and (c) using both quantitative and qualitative evidence to establish a meaningful “pass rate” for a rater to be considered “accurate” in program quality observations, which has implications for youth program practice, policy, and research, and ultimately the students and families utilizing youth program services.

Chen, Lei 1

Integrating quantitative and qualitative data in the investigation of impact of intangibles on bank performance

Prof Jo Danbolt 2, Prof John Holland 3

1 University of Sheffield, 2 University of Edinburgh, 3 University of Glasgow

Integration is argued to be a unique feature of mixed methods research (MMR), producing an outcome greater than the sum of the individual qualitative and quantitative parts (Fetters and Freshwater, 2015). However, integration is also one of the biggest challenges to mixed methods researchers as quantitative and qualitative data and findings do not appear to be substantially integrated in many studies that use multiple methods (Bryman, 2007). The absence of exemplars tends to be one of the main factors inhibiting integration from being carried out in MMR (Woolley, 2009), and this seems to be particularly problematic in accounting (Grafton et al., 2011).

This paper aims to investigate the impact of intangibles on bank performance by combining quantitative and qualitative methods together, providing an exemplar how quantitative data and qualitative data can be integrated during different stages of research.

Knowledge based intangibles are at the heart of bank value creation and competitive advantage, leading to the use of the intellectual capital literature and the resource based view (RBV) of the firm as appropriate theoretical frames. However, our understanding of the impact of intangibles on bank performance tends to limited, due to: the difficulties of identifying and measuring intangibles (Lockett et al., 2009); and the debate over the methodological developments in this field. Rouse and Daellenbach (1999) emphasise the importance of a qualitative approach in identifying strategy resources, while Levitas and Chi (2002) highlight the power of a quantitative approach in providing robust tests of the theories. We argue that it is possible to bridge the gap between these two approaches in intangibles research and explore potential ways of combining both approaches that allow for an in-depth understanding of competitive advantages.

Specifically, this paper investigates the role of intangibles in the European banking sector using a mixed-methods research design. A qualitative approach is employed to assess how intangibles affect bank performance and how they can be measured, by conducting semi-structured interviews with bank managers and analysts in the UK. Meanwhile, a quantitative approach is adopted to test the relationship between proxies of intangibles and bank performance (outcomes) using publicly available data. Quantitative and qualitative data are integrated at the stages of data collection, data analysis and reporting results in this research. The paper makes a contribution to the methodological development of management and accounting research by providing an example of how the combination of
quantitative and qualitative approaches can improve test of theories compared to individual methods. The paper also shows how quantitative and qualitative data can be integrated at all stages of the project in order to achieve enhanced integration.

Christie-de Jong, Floor¹

Knowledge, attitude and practice concerning cervical cancer screening among female Filipino migrant workers: preliminary findings from a web-based mixed-methods approach

Sara Morris¹, Siobhan Reilly¹, Gareth McCray²

¹Division of Health Research, Faculty of Health and Medicine, Lancaster University; ²Department of Mathematics and Statistics, Fylde College, Lancaster University, Lancaster

Background: Cervical cancer is the second cause of cancer related mortality for Filipino women. Proportionally high mortality rates of cervical cancer have been found amongst Filipino women due to late presentation. Low participation rates in cervical cancer screening (pap-testing) have been found among Filipino women. Migration may present other barriers to pap-testing. Gaining understanding of barriers and facilitators to pap-testing for this group is crucial in order to improve uptake of pap-testing.

Aim: To gain insights into the knowledge, attitudes and practices concerning cervical cancer screening among female Filipino migrant workers.

Methods: The study adopted an explanatory sequential mixed-methods research design which consisted of two phases, a web-based cross sectional survey, followed by individual web-based qualitative interviews. The web-based survey, delivered via Qualtrics, was adapted from existing instruments measuring cognitive, cultural and structural factors in relation to pap-testing. Participants were recruited through the use of social media and quantitative data collection (October 2015). The survey was completed by 487 Filipino women (59.2% domestic workers), living and working in 28 different countries, with the largest proportion of women working in Hong Kong (25%) (mean age 36.37, age range 21-64). Frequencies assessing participation rates in, knowledge of and attitudes towards pap-testing as well as associations between pap-testing and potential barriers and facilitators to pap-testing were analysed using bivariate analyses followed by multivariate analyses, including factor analysis and logistic regression. These results were further explored in eight individual web-based qualitative interviews (February 2016) using a vignette approach to gain a deeper understanding of the quantitative results. Qualitative results were analysed using thematic content analysis.

Results: Despite finding that 91% of women were aware of the procedure, less than half (43%) had ever engaged in pap-testing. Factor analysis reduced the large number of variables associated with pap-testing and logistic regression found three significant overarching predictors of pap-testing: 1) Perceived barriers to action 2) Cultural and societal values, 3) Health beliefs. Making sense of the quantitative results in the qualitative exploration, revealed additional findings. Despite an apparent willingness to participate in pap-testing, many migrant women had not truly considered attending pap-testing in the host countries. The cost of pap-test Vs. saving money to provide for family back home, limited understanding of pap-testing, not knowing where to go, lack of local health care provider and no recommendation from health-care provider, were significant barriers. In the quantitative phase, ‘lack of time’ was found an important barrier, however, only when exploring this barrier in more depth qualitatively was it revealed that social, working and living circumstances underpinning this factor, presented additional challenges to engaging in pap-testing.

Conclusion: These findings indicate that a mixed-methods approach was warranted, the sum of the findings added valuable information and the use of either the quantitative or qualitative approach alone would not have answered the research question satisfactorily. Findings
revealed the complexity of accessing pap-testing for this population, indicating that interventions aimed at increasing uptake of pap-testing should be targeted at multiple levels.

Collins, Kathleen M T
Sampling Decisions and Designing High-Quality Research
University of Arkansas, Fayetteville

The researcher’s underlying intention when conceptualizing research is to conduct high-quality research, in which the design is defensible, the research process is transparent, the outcomes are justified, and the conclusions are considered relevant by the research consumer (Collins, 2015). There are several critical decisions involved in conducting high-quality research; one example is the intertwined decision of deciding the sample design (i.e., sample scheme and sample size), and responding to sampling challenges when implementing the design in practice, especially designs requiring multiple stages as in the case of mixed and multi-method research. It is this intertwined decision implemented in the context of mixed and multi-method research that is the topic of this paper.

In this paper, examples of sampling decisions accompanied by sampling criteria are outlined at the following stages of the research process: conceptualization, design, implementation, and outcome. To illustrate the complexity of creating sampling designs in practice, also discussed are the challenges of selecting a representative sample, selecting samples that lead to successful integration of results and inferences, and meeting ethical responsibilities when engaging with participants and members of the research team.

A characteristic of high-quality research when designing mixed and multi-method research is the degree that there is interpretive consistency between the sampling design and the credibility of the researcher’s inferences and chosen generalizations (Collins, Onwuegbuzie, & Jiao, 2006). To address this topic, strategies designed to enhance interpretive consistency are presented. Ethics are discussed in the context of researchers’ responsibilities toward protecting participants’ rights and collaborating in team research. An important part of this discussion is how researchers’ philosophical standpoints impact team collaboration when designing research, interpreting data, and writing a final report that reflects balanced reporting of the emic (members of a group participating in the study) and etic (individual researcher or team of researchers) perspectives. Selective examples of published sampling designs are presented to support the topics presented and as illustrative applications of sampling designs in practice.

References

Cooper, Anna Mary
Digitising Children’s Data Collection: innovation of a children’s mixed-method data collection app
Margaret Coffey, University of Salford, UK

A person’s behaviour is influenced by a huge variety of factors: knowledge, society/culture, peers, family, media, social constructs, socio-economic circumstances as well as their own desires and attitudes. In addition, there are a multitude of settings that impact on health and routines. For children, key settings include the home and school. However, the added complexity for children’s health-related behaviour relates to the many aspects of their daily routines that they do not fully control (e.g. bedtime, or meal times).
Although adults play an essential role in ensuring children’s health needs are met, there is a growing recognition that primary-school aged children can be actively involved in reporting their own behaviour, knowledge and attitudes related to health and be active in the research process. Furthermore there is recognition that research and programmes designed to benefit children should ensure they play an active part in all stages. However, current evidence shows that many interventions seeking to change health related behaviours in children are implemented in schools, rather than where the behaviour is established, i.e. the home.

To understand the complexities of children’s health-related behaviour mixed-methods are needed to capture the multiple perspectives and positions of those taking part. Mixed-methods recognise that different paradigms enable understanding of different research questions or phenomena. Further a tenet of mixed-methods is being able to gain confirmation through the combining of outcomes.

The amount of data generated using mixed-methods can be labour intensive to collect, collate and link when using traditional paper based methods, particularly those used in children’s research, e.g. draw and write, surveys, or focus groups. In order to address some of these challenges and aid research with children this paper reports on the design, development and initial user testing of an application which digitises children’s data collection. The app, which is the focus of this presentation, consists of two separate applications, the ‘Supporting Server Application’ (SSA), and the Tablet Application (TA). The SSA is a remotely installed web application that manages studies and stores data flowing to and from the ‘TA’. The ‘TA’ allows flexible data collection with children aged 3-11 using four methods:

- Draw & write (or talk) - requires children to draw pictures relating to questions and then to either explain them through writing or talking,
- A simple multiple-choice questionnaire - requires children to tick boxes relating to questions on a given topic (number of responses can be varied and include pictures or use a smiley face scale),
- Photographs & write (or talk) – asks children to take pictures linked to questions (e.g. of their fridge) about the topic (pictures of people will not be asked for due to data protection) and then to explain them through writing or talking,
- Record my voice (interviews) - asks children to verbally respond to questions allowing them to explain their responses in greater detail.

The combined applications provide the functionality to allow ‘Study Groups’ to design and build mixed-method research studies that children between the ages of 3-11 can participate in via tablet devices.

Cortez-Arrevillaga, Millagros
Basic Ecclesial Communities (BECs) Involvement and the Spiritual Growth of the Youth and Adults in Selected Areas of Davao, Philippines
Research Centre for Culture, Education and Social Issues, University of Santo Tomas, Manila, Philippines

This research endeavours to describe the involvement of a selected group of Catholic Filipino youth and adults in Basic Ecclesial Communities (BECs) and how such involvement contributes to their spiritual growth. The BEC has been integrated by some of the Philippine parishes in their respective systems to mobilize manpower and enhance people involvement through the grassroots-level of evangelization.

Utilizing the Mixed-Methods Research Design (exploratory sequential), the researcher started with the conduct of survey. This was followed by Focus Group Discussions (FGDs) to help explain quantitative results in depth. Survey questionnaire used was content-validated by an expert in BEC. It was pretested and shown to have a correlation coefficient of 0.824.
Inclusion criteria were set in the selection of sampling, namely: minimum of one year membership in the BEC; active involvement of the respondents in their respective parishes. Respondents of the survey and the Focus Group Discussions were from the parishes of Davao City; St. Joseph, the Worker Parish; St. Jude Thaddeus Parish; and St. Mary of the Perpetual Rosary Parish. A brief but intensive interview with the Vicar-General of Diocese of Tagum, Rev. Fr. (Msgr.) Ulysses “Unyong” L. Perandos was also conducted.

Means were used to determine the respondents’ level of thought, emotion, behaviour and overall spiritual growth; Pearson’s correlation coefficient to determine the relationship of involvement to the spiritual growth of the participants; T-test to determine if there is a significant difference between the youths’ level and adults’ level of spiritual growth; ANOVA to compare the spiritual growth of the three groups of respondents.

Results of the survey indicate that involvement as represented by the years of membership in their respective BECs is significantly correlated to the overall spiritual growth of respondents from St. Joseph Parish, but not for the respondents from St. Mary’s Parish and St. Jude Parish indicating that for the latter groups - greater involvement in BEC does not guarantee higher level of spiritual growth. Involvement is significantly correlated only to the emotions of the respondents from St. Joseph’s Parish. This shows that their self-reliance is based on an identity not controlled by external circumstances, but by an inner strength rooted in spirituality. This was made evident during the group-sharing.

There is no significant difference between the overall spiritual growth of young and adult respondents. In terms of thought level, there is a significant difference between the thought levels of both the youth and the adults. These indicate that adult respondents are more critical of themselves and of others. Age, however, is not a determinant of spiritual growth as shared in the FGDs.

Highlights of FGDs included benefits, namely: a sense of belongingness, self-confidence developed, family as the greatest influence to evangelize and be evangelized, renewed faith in God, personal renewal such as vices overcome, e.g., smoking, gambling, drinking. Among the challenges shared, the following dominate: time management, multiple responsibilities handled; communication problems between the elders and the youth; lack of funds. Sharing of experiences on personal encounter of their God in their lives culminated the group sessions.

Key Words: Youth involvement, Spiritual growth, Basic Ecclesial Communities, Davao parishes

Research Focus: To present a relationship between involvement of the youth and adults in Basic Ecclesial Communities (BECs) vis-à-vis their spiritual growth; to differentiate thoughts, emotions and behaviour of the youth and adults in terms of their communal involvement.
This presentation has a methodological purpose. We used a mixed method approach to content analysis and a multi-phase approach to analysis to identify the value-added of mixed methods research articles framed with an initiation design and to explore if there is a link to distinguishing design or reporting features. The research addresses three inter-linked research questions:

What design features, including timing and priority, characterize mixed methods studies with an initiation design?

What types of meta-inferences are produced in mixed methods studies with an initiation design and by what means are they derived?

What other features of the research and reporting from the larger project are linked to the value-added of research articles framed with an initiation design?

Methods

A purposeful or qualitative approach was used to identify five critical case studies that were explicitly framed by the authors in ways that are consistent with the Initiation rationale. Each of the articles in the final sample satisfied quality criteria identified in two different quality frameworks. Following Guest’s (2010) suggestion, each of case studies is framed within the wider context that incorporates other, inter-linked publications from the same project.

Results

The value-added of the initiation design is achieved through additional data collection and/or analysis and application of references to the literature that extend beyond the conventional purpose of framing the need for the study.

Conclusions/Implications of Findings

The analysis reiterates the importance of contradiction and paradox to the value-added of mixed methods research.

References


Crow, Graham

Straws in the wind: the methodological challenges of capturing social and economic change as it happens

University of Edinburgh, Scotland

It is the ambition of many social scientists to be among the first to notice and report upon new developments in social and economic life. This often turns out to be easier said than done, however. Claims to have discovered something new are commonplace, as are related claims to have detected the end of existing arrangements, but these claims have a history of turning out to be exaggerated. Among the reasons for this are the methodological challenges of capturing change as it happens. This talk will begin by looking at how sociologists have fared in this field, before going on to examine in more depth Ray Pahl and his team’s Isle of Sheppey study in the late 1970’s/early 1980’s which led to various influential publications including the book Divisions of Labour. This study will be used to highlight key issues that are raised when attempting to detect and describe social and economic transformations through research using a variety of methods. The Sheppey research team employed qualitative interviews (including some elite interviews), a survey of households, archival historical research, imagined futures essay writing, ethnographic observation, newspaper analysis, and visual methods, not necessarily in that order. The ordering of the methods turned out to be pivotal to the results of the study, which took on quite a different complexion.
once the findings of the survey became available to complement the initial results that were based on qualitative interviews and ethnographic observation. The use of individual households as representative of different trajectories in the broader social trend of social polarization is also an important feature of the study. The research on Sheppey involved some half a dozen researchers at different points during a decade or more of fieldwork, and this added to the challenge of knitting together the results of different research methods in a complex, multi-faceted research project.

Cuffy, Violet
Demystifying Research: mixed methods and ways of seeing, the researcher’s dilemma
Queen Margaret University, Edinburgh

The issue of adopting a clear research philosophy, and from then forth operating within a chosen paradigm has long been a challenge for researchers but has now been further complicated by the onset and rise of a new generation of researchers. Mixed methods have been in existence since the 1950s but began to develop and be more widely practiced around the 1980s (McKim 2007). There is still much disagreement on the best approach for engaging in and employing mixed methods within the broad field of research debate. There has been some effort in putting forward workable definitions (Johnson et al 2007) establishing guidelines for implementation (Creswell and Clark 2011) and exploring its benefits (McKim 2007; Creswell & Tashakkori 2008) and challenges (Salehi et al 2007) but the critics (Symonds & Gorard 2007) prevail. Nevertheless, mixed methods as ‘the third methodological movement’ (Tashakkori & Teddlie 2003) is now increasingly utilised by researchers across a number of fields as they seek to broaden the scope of their work for a range of reasons such as: increasing impact; reaching a diverse readership and audience; appealing to funding agencies; or simply to expand their research skills. Additionally, some do believe that the use of mixed methods enhances the credibility, validity and trustworthiness, while providing deeper insight and understanding of key constructs.

One area that needs to be further explored is the role of the researcher and their impact on the nature and output of the research exercise itself. The literature highlights the ongoing gulf and bias between proponents on both sides of the qualitative and quantitative divide. Undoubtedly, the researcher’s entrenched philosophy or lack thereof is a strong determinant of the choice of research design and ultimately the quality of any approach adopted. Thus, the future of this evolving phase of research lies in further robust exploration of the challenges operating within specific disciplines, internal philosophical conflicts, level of subject knowledge and practical research expertise of the individual researcher. Equally, educators and academics in the area of business research methods face their own unique dilemmas. Charged with the responsibility of training and passing on methodological knowledge to undergraduates who represent the current pool of future researchers and doctoral candidates can at times be overwhelming and there is the danger of perpetuation of individual biases. This paper adopts a reflective stance in unearthing these unique set of issues confronting the advancement mixed method research.

Dalkin, Sonia M
Exploring the possibility of explicitly combining realist and system thinking: an exemplar
Lhussier, M1; 1Northumbria University

Realist evaluation has gained momentum in the last decade as key mixed methods to understand and engage with socially complex systems. As this interest grows, there is also increasing interest in its possible combination with other complexity oriented approaches.
We suggest that the epistemology of Soft System Methodology (SSM), with its focus on constructing models to account for the phenomenon being examined, complements that of realist evaluation, which provides theory driven explanations of what lies beneath complex social programmes. In SSM, models are built and compared to the real world using stakeholders’ descriptions of complex programmes based on structured thinking. Realist evaluation places emphasis on stakeholder engagement to enhance understanding of how complex programmes work. In this presentation, we argue that SSM can support the development of theory driven explanations of complex phenomena.

Exemplar: SSM maps were used within a realist evaluation of an Integrated Care Pathway (ICP) for patients with palliative care needs in North East England. In this study, the maps were co-created with service developers and implementers over a series of focus groups in order to visualise and detail the pathway and its varied resources. Chains of causality were hypothesised and tested through qualitative and quantitative data collection. The project provided theory based explanations of how, why and in which circumstances the care pathway was most effective.

We conclude that using SSM with realist evaluation can provide: a) a systematic approach to understanding complexity within programmes; b) a framework for stakeholder involvement; c) explicit identification of contextual intricacies. The combination of SSM and realist evaluation presents an innovation in mixed methods research designs, which can serve a key role in advancing understanding of complex social issues. We hope this presentation will stimulate debate and open up the possibilities of explicitly combining realist and system thinking.

Danks, Kara
Understanding the impact of health peer interventions in the prison setting; a mixed methods evaluation design
Northumbria University, UK

Prisoners tend to come from socially disadvantaged communities and compared to the general population, and are at greater risk of non-communicable and communicable diseases. These individuals often have complex health needs that can be linked to their criminogenic risk factors. A range of multi-faceted peer support roles are currently utilised in prison settings and they can be beneficial to those who receive and those who provide these interventions. The prison environment serves as a unique situation providing an opportunity to engage individuals with high levels of needs in health-related behaviour change and health promotional activity. A health-related peer initiative is in development in the North East prisons, informed by phase one of the current research project which involved a systematic literature review underpinned by a realist approach and qualitative interviews with prison staff and focus groups with prisoners across four sites, to identify specific contextual barriers and facilitators in relation to the implementation of the initiative. The second phase of the research is the evaluation of the intervention which will be concurrently implemented, specifically exploring the impact on prisoner knowledge, attitudes and behaviour. The findings from phase one of the research have also informed the evaluation design which is a mixed methods approach underpinned by a realist evaluation framework aiming to examine what works, for whom, in what circumstances and why. The intervention is complex as is the prison setting and therefore requires an approach that attempts to engage with this. The intention for the findings of the evaluation is that they further inform the development and improvement of the intervention, by examining the mechanisms at play that may be inhibited or enabled by the context, influencing intended and unintended outcomes.

This paper will explore the mixed methods evaluation design proposed for phase two of this research and the culmination of understanding this may facilitate. Due to the nature of this research, the relationship between the findings and professional practice within the prison is paramount, therefore an exploration of the ways in which the findings to date have been
disseminated to the prison stakeholders and how this is expected to continue throughout the evaluation process will be considered.

Suggested thematic strands: ‘The role of mixed methods in evaluating complex interventions in complex systems’ or field related thematic strand of ‘criminology and related areas’.

De Haan, Mah

Practical and Methodological Challenges of Mixed Methods in Evaluating Complex Health Interventions: An example from the Netherlands.

van Eijk-Hustings and Vrijhoef

1Clinical Epidemiology and Medical Technology Assessment (KEMTA), Department of Patient and Care, Maastricht University Medical Center (MUMC+), the Netherlands;
2Saw Swee Hock School of Public Health, National University of Singapore and National University Health System, Singapore.

Task shifting is a textbook example of a complex health intervention that demands a mixed method approach. Task shifting refers to the transfer of work (and/or responsibilities) from one professional group to another, in order to increase the effectiveness and/or efficiency of care (Fulton et.al. 2011). Since multiple factors can influence such a complex intervention, it is important to look further than standard healthcare outcomes when evaluating its impact. Consequently, mixed method approaches are required to fully understand its effects. Dutch healthcare legislation has been identified as a possible barrier to effective task shifting in the Netherlands, prompting more flexibility to experiment (RVZ 2002). As a result, independent authority to perform reserved procedures (traditionally a prerogative of physicians), has been expanded in the Netherlands to include Physician Assistants, Nurse Practitioners and Technical Physicians.

We have been commissioned by the Dutch Ministry of Health to evaluate the effects of granting Technical Physicians such an independent authority. The project collects quantitative- (surveys and registrations) and qualitative data (interviews and observations) in a multi-phase mixed methods design. Due to this design, this project experienced several methodological and practical challenges. For example, it was a struggle to find appropriate triangulation guidelines for combining quantitative- and qualitative data. Also, it proved difficult to design and conduct a Mixed Method Research (MMR) project within the timespan given and in particular to find adequate sample sizes for both the quantitative- and qualitative data. Additionally, at times it was difficult to convince stakeholders that a mixed method approach was necessary since limited examples of such projects exists within our discipline. Furthermore, it was challenging to report the results of the study without diminishing either the quantitative- or qualitative sides of the project while simultaneously keeping the results accessible for policymakers and stakeholders less familiar with MMR.

These challenges are not unique to our project and are experienced by many mixed methods practitioners. Nevertheless, there remains a disconnect between the methodological debate and the practicality of conducting MMR (Bryman 2007; O’ Cathain et.al. 2009; Leech & Onwuegbuzie 2010). Our study provides an opportunity to discuss the methodological and practical challenges health researchers (can) face while utilizing MMR to evaluate a complex healthcare intervention. In order to do so accurately, we will first introduce our evaluation project by using the seven characteristics of mixed methods studies put forth by Creswell et.al. (2004). Subsequently we will highlight (some) of the methodological and practical challenges we encountered within the project by using the five challenges identified by Creswell et.al. (2011). Furthermore we will discuss how we (aimed to) overcome these challenges and what future health researchers can learn from our experiences.

In doing so, we aim to contribute to the ongoing debate on how MMR can be used (more) effectively to evaluate complex health interventions. Whilst our project focuses on healthcare research in the Netherlands we are confident that the lessons and recommendations can also be applicable for researchers interested in using MMR in other disciplines and countries.
De Nardis, Evelina

The richness of mixed methods in social research

Roma Tre University, Italy

Research in social sciences domain is becoming increasingly interdisciplinary, complex, and dynamic. So, the complementary of different typologies of research methodologies is required for a better understanding of integration of qualitative and quantitative approaches. Choosing mixed methods allows to the researcher mixing and matching components design that offer the best possibility of answering to complex research questions. Mixed methods research, applied to interdisciplinary approaches can offer more systematic ways to intend epistemological issues arising with collecting and analyzing the data.

From this point of view, mixed methods research provide a more comprehensive evidence for studying different research problem (Morse, 1991, Johnson et alt. 2004) by encouraging the use of multiple world views through a continuum that spans from the post-positivism and the constructivist approaches. The fundamental principle of mixed methods concerns the combination of qualitative and quantitative methods in a way of overlapping strengths and weakness of qualitative and quantitative approaches (Johnson and Times, 2003). The goal of mixed research is to consider the strengths and the weakness of two or more approaches by combining them in an attempt to enrich the different methodologies of research.

A reason to merge qualitative and quantitative data is to develop a more complete understandings of a problem of research to validate or triangulate results with the aim of examining and taking into account the processes and the results of research. A priority exists in social science research to develop new methodologies in direction of a better quality and power of data. This aspect leads to an extraordinary surge in methodological diversity that reflect the nature of the problem studied. Evidence in published literature attest the application of mixed methods in health related research. There are several reason for using mixed methods in health research: researcher may seek to view problems from multiple perspectives to enhance and enrich the meaning of a singular perspective with the aim of contextualizing information to make a macro picture of system.

Drury, Amanda
Putting Quality into Practice: A Practical Application of Quality Standards in Mixed Methods Research for Healthcare
Anne-Marie Brady\(^1\), Sheila Payne\(^2\)

\(^1\)Trinity College Dublin, Ireland; \(^2\)Lancaster University

Quality appraisal in mixed methods research is an ever evolving field. Mixed methods researchers have long fluctuated between the quality appraisal standards of quantitative and qualitative research to design and conduct rigorous mixed methods research with outcomes which can be appropriately incorporated into practice. This adds to the discourse surrounding integration of methodologies in mixed methods studies, raising questions about whether the quality of a mixed methods study can be judged as a standalone methodology, or whether quality must be judged as the sum of the reliability and validity of the quantitative study and the rigour of the qualitative study.

A practical implementation of the mixed methods quality appraisal standards by Curry (2015) is presented in relation to a mixed methods sequential explanatory design study. The standards of veracity, consistency, applicability and neutrality are applied to a study of colorectal cancer survivors’ quality of life, experiences of unmet need and continuity of care. An integrated sampling strategy was implemented within this study, using purposive sampling for the quantitative phase, and maximum variation sampling for the qualitative phase. Information about quality of life, unmet need and continuity of care were collected via postal surveys completed by colorectal cancer survivors’ attending hospitals and cancer support centres in the Republic of Ireland. A sub-sample of survey participants were followed up during semi-structured interviews to gain further insight about the influence quality of life, unmet need and continuity of care have on colorectal cancer survivors’ daily lives in the physical, psychological and social domains.

Approaches to ensure veracity of the study included the founding of clinical and stakeholder advisory panels to evaluate the study design and methods, audiotaping of interviews and verbatim transcription, field notes and reflexive journaling. Consistency of the study is enhanced through transparency in the reporting of study procedures and assessment of the internal consistency of quantitative data. Multi-site sampling, and description of the study context improve the study’s applicability. Finally, neutrality calls for transparency in the reporting of analytic decisions in the quantitative and qualitative stages of the study, which are facilitated through memos and journaling throughout each of the data collection and analysis phases of the research.

A practical demonstration of the steps taken to uphold the mixed methods appraisal principals proposed by Curry (2015) are presented. The challenges encountered in achieving the standards and the contingency plans established to overcome such challenges are discussed within the context of healthcare research. The mixed methods quality appraisal standards provides a clear framework which aligns the traditional values of reliability, validity and rigor of the quantitative and qualitative approaches within a configuration appropriate to mixed methods research.

Conflict of Interest: This study is funded by the Health Research Board of Ireland, grant number HPF.2014.715.

Eager, James
Pressure to quantify the unquantifiable: the case of criminology and multi-country research
Optimity Advisors

Policy-makers place an increasing focus on quantitative data to support the findings of legislative evaluations and impact assessments. This paper will build on Optimity's experience and expertise in the collection and analysis of qualitative and quantitative data for the provision of practical public policy advice in complex topic areas. This experience stems
from our work in the area of criminology for European Institutions, in particular the European Commission and Parliament, as well as UK government entities, such as the Ministry of Justice.

In line with the conference theme, the paper will first outline the complexities of conducting mixed methods research in criminology and related areas. To illustrate this, examples will be drawn from a recently published research paper, co-authored by Optimity Advisors, on 'The Cost of non-Europe in the field of Organised Crime'; this research was commissioned by the European Parliament. The paper will outline the difficulties with defining complex fields, such as organised crime, which exhibit great variance. The Europol Serious and Organised Crime Threat Assessment (SOCTA), for example, outlines nine priority threats facing the EU, which range from trafficking in human beings to excise fraud to cybercrime. Furthermore, the illicit nature of these threats adds a significant barrier to the collection of accurate and reliable quantitative data. The complexities of conducting research spanning the EU will also be illustrated. Not only do the research methods used have to take the 28 different systems and approaches of the EU Member States into account, they have to consider the dynamics of cross-border interaction.

Complementing the discussion of topical complexities, the paper will examine the pressures between policy-makers’ increasing need to convey a strong message through the use of statistics and the monetisation of impacts on the one hand, and the lack of accurate and reliable data, especially in policy areas relating to crime and criminal justice, on the other hand. New concepts have emerged in the European public policy arena, such as the “cost of non-Europe” and, more recently, the “cost of non-Schengen”, to identify and monetise the benefits of interventions at the EU-level. However, quantitative data on the scale of the problem to be tackled and the drivers of these problems are often scarce and unreliable, especially given their illicit nature. In the past, estimates on the “cost of crime” were based on vague and unreliable extrapolation of data (such as the IMF’s assumption that money laundering could be estimated to be worth around 5% of the global GDP). More recently, authors have refrained from providing estimates on the potential value of crime (Prof. Michael Levi’s work on the cost of crime). In addition, innovative institutions such as the What Works Centre for Crime Reduction and the US-based Crimesolutions.gov show that a large proportion of crime reduction interventions reviewed are unable to collect or provide economic cost information. In this respect, the paper will discuss the need, particularly in the field of criminology, for the prioritisation of mixed methodologies.

Edwards, Cherie D
A Systematic Literature Review of the Outcomes of Arts-Based Interventions Programs in At-Risk Student Populations
Virginia Polytechnic Institute and State University

Need/Contribution: The issue of at-risk students has grown and become more complex with each generation of new students (Carter, 2012). Despite multiple efforts to mitigate risks within student populations, few approaches provide the flexibility and creativity necessary to adapt to the varying issues within diverse student groups (i.e. LGBTQ, immigrant/refugee, disadvantaged/SES). An increasingly popular approach to mitigating these risks is the use of arts-based interventions. Repress and Lufti (2006) present evidence suggesting the arts are particularly impactful in diverse at-risk student populations due to their abilities to enhance cognitive abilities, emotional stability, perceptions of self-worth, and reduce deviant behaviors. Even with the growing interest of these interventions, there is little empirical evidence supporting the viability of such programs in culturally diverse student populations nor the sustainability of their impacts.

Purpose. This is a mixed methods systematic literature review, purposed with examining the outcomes of arts-based intervention programs in LGBTQ, immigrant and refugee, disadvantaged or low SES, and juvenile delinquent at-risk K-12 students.
This research is guided by the following questions:

1. What are the outcomes of arts-based intervention programs for at-risk students?
2. Do the outcomes of arts-based intervention programs differ across different populations of at-risk students?
3. Is there a significant difference in the number and type of outcomes based upon program intensity?
4. Do duration and sample size influence the limitations reported in these interventions?

Methods: A mixed methods systematic literature review was conducted on 25 research studies using some form of the arts as an intervention method within LGBTQ, immigrant or refugee, disadvantaged/low SES, or juvenile delinquent at-risk student groups. This integrative analysis allowed for an evidence-based summary of qualitative, quantitative, and mixed methods research studies (Creamer, Simmons, & Yu, 2015). After controlling for quality, each article was coded using a qualitative deductive approach to coding, then analyzed to assess frequency and prevalence of outcomes based on student population, study duration, reports of limitations, and arts-based approach. T-Test were calculated to analyze statistically significant variance between the means of each outcome.

Results: While there is not a statistically significant difference between the outcomes produced by each artistic approach, arts-based interventions produced varying prevalent outcomes in each of the at-risk student populations.

Conclusions/Implications of Findings: This study adds to the empirical evidence on arts-based intervention programs in at-risk communities as well as the literature on conducting mixed methods systematic literature reviews in the social sciences. The findings of this study suggest that impactful interventions employ arts-based approaches that are meaningful to the specific at-risk student population.


El Sherif, Reem

What are the outcomes associated with the use of online consumer health information in primary health care? A systematic review with framework synthesis of quantitative and qualitative evidence

Pierre Pluye; Vera Granikov; France Légaré; Sophie Desroches; Maria Cristiane; Barbosa Galvão; Francesca Frati; Burnand Bernard; Carol Repchinsky; Jo-Anne Hutsul; Benoit Rihoux; Quan Nha Hong; Isabelle Marie Vedel; Roland Grad

1McGill University; 2University of Laval; 3University of Sao Paulo; 4Health Sciences Library; 5University of Lausanne; 6Canadian Pharmacists Association; 7Université catholique de Louvain

Objectives: More than six million people go online to look for health information in North America every day. Systematic reviews in public health and oncology suggest the use of online consumer health information (OCHI) improves knowledge, participation in health care, and health outcomes. Little is known, however, about the ‘value’ of this information in primary care, no comprehensive tool for assessing information-use, no integrated aids to help people find relevant information, connect them to resources, and evaluate their experience.

The objectives of this mixed studies systematic review are to revise a conceptual framework on OCHI and list the types of patient health outcomes associated with the use of OCHI in primary health care.

Methods: We followed the four stages typically used in systematic reviews: identification of potentially relevant studies using a comprehensive search strategy; selection of relevant
studies; quality appraisal of selected studies; and synthesis of retained studies. Eligibility criteria included: qualitative, quantitative, or mixed methods studies; English or French; 1990-2014; primary health care; online consumer health information use. Four health librarians developed and peer-reviewed the search strategy, which also led to the development of a 'mixed filter' for mixed studies reviews. Searches were conducted in Medline, Embase, PsycINFO, CINAHL, LISA, and the grey literature. Two independent researchers selected (using DistillerSR) and critically appraised (using the Mixed Methods Appraisal Tool) all included studies.

A framework synthesis was used, which consisted of coding evidence against an a priori framework to produce a revised framework. Data extraction and synthesis consisted of a deductive-inductive qualitative thematic analysis (using NVivo), followed by a disambiguation/harmonization of themes.

Results: Out of 4322 unique records identified in our search, 66 studies fulfilled the eligibility criteria (48 quantitative studies, 11 qualitative, 3 mixed methods and 4 using diverse designs). Included studies demonstrated that using OCHI is associated with both positive and negative outcomes. We identified new system-related outcomes. For example, using OCHI may increase physician's responsibilities or lead to excessive ER visits and longer wait times. Moreover, we established factors influencing OCHI acquisition and outcomes (e.g. health literacy). All identified themes underwent a harmonization process, resulting in a terminology of key terms and concepts (e.g. improvement of health status).

Conclusion: Based on these results, we propose a revised conceptual framework of the outcomes associated with OCHI in primary health care, as well as potential influencing factors (facilitators and barriers) of the acquisition, cognition, and use of information.

Emmel, Nick
Purpose, precision, and the pernicious place of people in randomised control trials
University of Leeds, UK

In this paper we question the frequently repeated claim that the randomised control trial (RCT) is the gold standard in experimental investigation. Our concern here is not to dismiss the RCT’s claim to explanatory power, but to question the frequently unquestioned basis for claims to explanation. We note, for instance, how leading proponents of the RCT acknowledge both the limits to the explanatory power of RCTs and their place amongst a wide range of methods and processes of informed judgement in the application of their findings. The first part of this paper argues that RCTs have the potential to inch forward evidence. They do not clinch the case.

Clinching the case is assumed to be the outcome of procedure and protocol to direct the experimental design of RCT’s, in which, as the name suggests, randomisation and control are what matter because they confer precision through design. This, however, is insufficient as a justification. It is an experimental regress in which the claim to a precise outcome rests on the design, but no useful judgement can be made about the validity of either outcome or design because they serve each other at the expense of critical explanation. An epistemological claim to precision, derived from Newtonian science, invariably ignores the complexity of the objects of investigation. Thus, the second part of this paper introduces the challenge of real world complexity and questions the validity of the findings from all but the most simple of RCTs.

The third part of this paper acknowledges the place of human agency in the design, conduct, and interpretation of RCTs, and more broadly evidence about what works, for whom, in what circumstances, and why. In so doing we offer an account of the accumulation of evidence progressed through the relation between theory, as bundles of hypotheses that can be reasonably empirically tested, and methods to test these. These may include but are certainly not limited to the RCT.
In recent years the issue of quality of mixed methods (MM) research has received a considerable attention in the literature. However, a number of issues remain unresolved. Firstly, most of the works published to date are based on theoretical discussions instead of empirical examinations of how quality of MM is actually defined and operationalised by researchers. One may suggest, therefore, that current criteria do not entirely reflect researchers’ views and decisions in practice and may turn to be inefficient. Secondly, most authors who looked at quality of MM did so from the angle of the development of quality criteria and frameworks. Little attention has been shed on other, yet significant, aspects such as the congruence and utility of the published frameworks, the appropriateness of reaching a consensus on quality criteria within the MM community, or the ideal criteria format (checklist, guiding principles, open-ended questions, etc.). Thirdly, current discussions are ignoring the influence that key attributes such as the discipline, the geographic location, the methodological expertise or the understanding of MM have in the way researchers conceptualise and operationalise quality of MM. This state of affairs clearly contrasts with recent emphasis on the ‘disciplinarisation’ of MM research and the importance attributed to contextual factors in the definition of quality. In an attempt to address these issues, this study adopted a multiple case study design to explore and describe the perceptions and practices regarding quality of MM research. An international sample of 44 MM researchers residing in 14 countries across 3 continents (Europe, America, and Oceania), and representing the disciplines of sociology, psychology, nursing and education, took part in online and phone interviews between late 2013 and early 2014. The study findings indicate a) a correspondence between the quality criteria used by researchers in practice and those predominant in the literature; b) an agreement among participants regarding the core criteria that should guide the evaluation of quality of MM research; c) a need that future quality frameworks be more accessible – i.e. less complex and shorter; d) the existence of two antagonistic approaches to defining and assessing quality of MM research: a rigid and universalistic approach versus a flexible and local approach; and e) a relationship between those two approaches and the discipline and attributes of researchers. Implications of the findings for further research and the development of the issue of quality within the MM field will be discussed.

In this paper we draw on our combined experiences as co-editor, associate editor, reviewers and authors of the Journal of Mixed Methods Research (JMMR) to consider the vexed and contested space that is the MMR discourse. Our point of reference is a journey which concerns the publication of a conceptual map of discourse development. Explicating this journey, we not only recount the conceptual content of the publication, and how it does or does not account for the production of mixed methodologies, but also offer a critical reflexive lens on the publication process. We go so far as to suggest that concepts and practices such as MMR, far from being reified entities, are constructions created through publication and other editorial practices, and as such significantly impact on knowledge (mixed methods or otherwise) production.
Concerning our conceptual map of discourse development – we reflect on how the two key methodological paradigms of evidence-based practice and MMR continue to impact and be impacted by patterns of knowledge production relating to healthcare practices and professions. We aim to generate discussion on:

1) How methodologies are constructed and perpetuated in the context of research paradigms
2) What exactly constitutes a paradigm?
3) How the proposed conceptual map provides a novel and original method for understanding knowledge production in the context of health care education and practice

We suggest that this publication is such a fitting subject for the MMIRA conference because it exposes two key areas of dissension, which are continually being enacted within the MMR community. First: Is Mixed Methods a paradigm or not? This has previously been vigorously debated through JMMR publications and editorials “Why Write” (Freshwater and Cahill, 2012a) and “Paradigms Lost and Paradigms Regained” (Freshwater and Cahill, 2012b). Through grappling with the slippery terminology that surrounds references to paradigms, we encountered the second important area of dissension: the semantic boundaries of the terms qualitative/quantitative/mixed methods, terms which have been used somewhat imprecisely and not always distinguished between their dual meanings of (a) set of procedures and (b) methodological approach. This has led to some conceptual confusion and ill advised judgement as to whether MMR could or should indeed be viewed as a paradigm. These points of dissension do of course have implications for the research designs and evaluations that could potentially influence healthcare and health education.

Throughout these debates, which we hope to continue here, we made a plea for some degree of plurality to be tolerated within the MMR community. We would further argue that plurality forms a consistent thread through these and related debates as we remain mindful of Freshwater’s (2007) post modern critique of MMR: in its quest for unity across methodological approaches and resolution of uncomfortable tensions MMR can sometimes culminate in a bland fusion.

What we aim to do is to use the dialogic medium of the conference to ensure that dissenting voices are given expression and to cultivate an awareness of how certain practices assume dominance, potentially leading to hegemony within the MMR community.


Gallo, Jospeh J. 1
Skills Development of Scholars in the First Cohort of the NIH Mixed Methods Research Training Program for the Health Sciences

Timothy C. Guetterman2; John W. Creswell3; Charles Deutsch3

1Johns Hopkins University; 2University of Michigan; 3Harvard University

Because training opportunities have been limited, health researchers often use mixed methods approaches without taking full advantage of the methodology. The Mixed Methods Research Training Program for the Health Sciences is a mentoring-based program to train faculty in mixed methods research. We describe changes in the ability of the scholars to define and apply mixed methods concepts after an interactive retreat. We will briefly describe the development and validation of the Scholar Mixed Methods Skills Self-Assessment instrument to assess skill development in the program. The instrument has domains of “research questions,” “design/approach,” “sampling,” “analysis,” and “dissemination.” For each item (i.e., skill), we requested three ratings drawn from an educational competency ratings scale: “My ability to define/explain,” “My ability to apply to
practical problems,” and “Extent to which I need to improve my skill.” Response options for each item were on a five-point Likert-type scale. We then used the instrument to assess pre-post changes in scholar skills at entry to the program and approximately 2 weeks after the interactive retreat. Analysis consisted of descriptive statistics and paired t-tests. We calculated Cohen’s d as a guide to the magnitude of differences. The 14 scholars in the first cohort represented a diverse set of disciplines and research topics. While scholars expressed a strong interest in learning mixed methods skills, they came into the program with limited professional experiences with mixed methods. We found that scholars reported significantly increased confidence in their ability to define or explain concepts and in their ability to apply the concepts to practical problems. Only practical applications of case studies and ethical principles of research did not show statistically significant improvement after the retreat.

Participation in an interactive retreat significantly improved the confidence of scholars. The MMRTTP holds promise to bridge the gap between complex research questions in medicine and investigators suitably trained to address them. This paper will be of interest to individuals developing training programs or workshops.

Ghalib, Asad K (1)
Can Microfinance Alleviate Poverty? A Mixed Methods Study in Rural Pakistan
Liverpool Hope University and University of Manchester, UK

The study assesses two things: first, which categories of the poor are being served by microfinance institutions: are they the very poor, middle poor or less poor ones? Second, whether household access to microfinance reduces poverty, and if so, to what extent and across which dimensions of wellbeing. The study was based on direct observations and primary data gathered from semi-structured interviews of 1,132 households across 11 districts in the rural areas of the province of Punjab in Pakistan. Methodologically, the research employed a quasi-experimental research design which employed data collected by interviewing both borrower (treatment) and non-borrower (control) households. Sample selection biases were controlled by matching propensity scores.

This paper discusses the limitations of using either qualitative or quantitative data alone to interpret survey responses and observations from the field. It explains how and why the mixed methods approach offers a solution to this predicament. The paper develops further to provide a detailed account of how the mixed methods approach was used to collect, analyse and interpret qualitative and quantitative data. Within mixed methods, the case goes on to explain the triangulation approach that was eventually used to analyse quantitative and qualitative data.

This paper will help the audience and readers of the paper to:
Understand and appreciate the rationale behind using mixed methods;
Comprehend the limitations faced by using either quantitative or qualitative methods in research;
Appreciate the use of both quantitative and qualitative methods to form a well-rounded opinion of the study in question;
Gain knowledge of various mixed methods designs and a detailed knowledge of how triangulation is applied, with particular emphasis on the Convergence Triangulation Model.

Methods Used: Semi-structured interviews, focus groups, life history interviews, ethnography, multi-stage sampling, mixed methods, triangulation. Keywords: Microfinance, poverty alleviation, depth of programme outreach, impact assessment poverty ranking, South Asia, Pakistan.

Ghalib, Asad K (2)
Using a mixed methods approach for assessing student engagement to improve learning and teaching: Empirical observations from a student-led tutorial format
Dr Curtis E. Ziniel, Business School, Liverpool Hope University, Liverpool, UK

Location: Liverpool Hope Business School, Liverpool Hope University.
Level: Year 1 and 2 - Undergraduate degree programme
Learning and teaching model: Student-led tutorials
Process and rationale: with a maximum of 10 students, tutorial sessions are established to encourage active student engagement in the education process as well as to improve students’ communication, presentation skills and overall confidence. As such, each student delivers a presentation and subsequently leads a discussion for the duration of the session. The survey and method: At the end of the academic year, a survey was held that was designed to capture student response on the newly introduced process. The questionnaire comprised a range of fixed-choice and open-ended questions and a set of detailed interview sessions with individual students. A number of focus groups were also conducted to form a rounded opinion of how students perceived the new ‘student-led’ model.
Student-led tutorials were introduced at the Business School after carefully considering a range of factors and the reaction of students in the previous ‘teacher-led’ model. It was felt that tutorials were becoming just another form of ‘mini-lectures’ with the lecturers going through tutorial readings in class with minimal student participation.
The new ‘student-led’ model was designed to engage students, which was ‘incentivised’ by awarding them marks for: attendance, submitting a one-page summary for the reading, presenting the material in the form of PowerPoint slides, and most importantly, for preparing a set of questions relating to the reading that were put forward to the group at the end of the presentation. These questions are designed to invoke engagement on the part of all students and lead to a rich discussion of the topic. The lecturer awards marks to each student for engagement and participation. All marks are collated at the end of each session and form a part of the portfolio submission that counts toward the final mark for that year.
The new intervention was evaluated by using a range of data collection tools and methods. To begin with, a student survey was held at the end of the academic year in order to capture student feedback. There were a number of interesting findings that came up, with the first year students being largely appreciative of the system and stating (in the open-ended questions) that these presentations had led them to be more confident in standing up and speaking in front of the class. There were mixed responses; however from second year students as they had followed a legacy system in which they got an ‘easy ride’ by just sitting idly in tutorials with the knowledge that they are not being assessed. Interestingly, it was observed that there was a remarkable improvement in attendance across all years in which this model was introduced.
The conference paper is aimed at discussing and elaborating the method used to collect qualitative and quantitative feedback data for the new model, and its subsequent interpretation to gauge pedagogical and personal development effectiveness. The discussion will lead to how such pedagogical models can be enhanced by conducting student surveys and how the feedback thus obtained can be used to improve both teaching and learning at the higher education level.

Gilmartin, Dr Jo
Pedagogy and Practice in the mixed methods classroom
Dr Philip Esterhuisen, School of Healthcare, University of Leeds, UK

Background: The literature identifies diverse pedagogical challenges that students face within mixed methods classrooms. Students are not usually equipped in both qualitative and quantitative approaches. The knowledge gap can result in deep pedagogical challenges compromising student’s ability to fully understand the mixed methods paradigm. Although we are shifting from a teacher centred (pedagogical) to a learner centred, self-directed approach
(andragogical) student reluctance to engage with blackboard activities and critical appraisal of mixed methods design and papers persists.

Aim: To explore the student predicament/reluctance by collecting written reflections at the end of a mixed methods post graduate study day and across a post graduate module on mixed methods research.

Methods: Reflective teaching-learning methodology using the self-inquiry model.

Results: Several barriers and enablers were identified ranging from difficult paradigm/methodology language, grappling with diverse mixed methods designs/language, and the challenge of using critical appraisal tools, interpreting mixed methods data, to the benefits of small group work, the insights gained from critiquing mixed methods papers and the importance of a positive student-teacher relationship.

Conclusion: To tackle the myriad of challenges encountered, dynamic teaching strategies and the sustainability of student centred approaches will be considered to lever up and empower the learning climate in mixed methods classrooms.

Key words: mixed methods research, pedagogical challenges, student reflections, innovative teaching strategies.

Gloeckner, Gene W

Complexity of Models in Physics: Lessons from Feynman & Hawking to Guide Democratic Inclusion

Professor & Chair of Social, Behavioural, and Educational Research Committee, Colorado State University Fort Collins, Colorado

Roberto Unger exposed the complexity of social democratic experimentation in his seminal work Democracy Realized: The Progressive Alternative. Also in 1998, a series of philosophically based lectures titled the Mean of it All were published. In his work, Richard Feynman relates quantum mechanics to everyday thinking and living. Steven Hawking expanded on Feynman’s work and proposed a variety of theories to handle very complex problems in The Grand Design (2010). Hawking presents the history of physics philosophies and this paper demonstrates the surprising parallels with mixed methods thinking.

Similarly, Hawking and Feynman have spent their entire lives fighting value systems that indicated that their thinking was impossible. The two now however, are thought to be among the smartest people of the past 50 years. Their thinking around how to conceptualize complexity around difficult everyday principles is brought to life in the writings and examples highlighted in this paper.

Recently, many are realizing the value physics can play in their lives as demonstrated with the popularity of Steven Hawking, The Big Bang Theory, and popular physics related books and TV series such as Brian Greene’s writings titled The Fabric of the Cosmos (2005, NOVA Series 2011) and Neil deGrasse Tyson hosting of the remake of Carl Sagan’s COSMOS titled Cosmos: A Personal Voyage (2014), and he hosts Star Talk a weekly radio and TV science today. Although many mixed methods articles have focused on the value of realism to mixed methods, the integration of Hawking’s most recent writings has been ignored in the mixed methods literature.

Hawking does not just critique philosophical views of old, but offers a refreshing philosophical view that matches mixed methods and the work of Unger. Hawking stated:

“According to model-dependent realism, it is pointless to ask whether a model is real, only whether it agrees with observation. If there are two models that both agree with observation, like the goldfish’s picture and ours, then one cannot say that one is more real than another” (p. 46).

“We make models in science, but we also make them in everyday life. Model-Dependent Realism applies not only to scientific models but also to the conscious and subconscious
mental models we all create in order to interpret and understand the everyday world. There is no way to remove the observer – us – from our perception of the world, which is created through our sensory processing and through the way we think and reason. Our perception – and hence the observations upon which our theories are based – is not direct, but rather is shaped by a kind of lens, the interpretive structure of our human brains” (Hawking, p.46).

This paper ends with a comparative table with four common societal problems across Unger’s theories with a methodological suggestion as to how Feynman and Hawking might approach the problem.

References

Startalk. Radio and TV weekly science show.(2008-2016). Hosted by Neil deGrasse Tyson, National Geographic Channel and Sirius FM.

Good, James M M
Moving Beyond the Qualitative-Quantitative Binary: Q Methodology’s Emancipatory Potential for a Transformative Applied Social Science
Steven R. Brown\(^2\) 1Durham University, UK; \(^2\)Kent State University, OH

In a number of recent publications Susan Ramlo has suggested that Q methodology (hereafter Q) with its use of both classification and factor analysis can profitably be seen as a mixed method (Newman & Ramlo, 2010; Ramlo & Newman, 2011). Most recently, Ramlo has also suggested that there are important lessons for the mixed methods community from the past 80 years of Q research (Ramlo, 2016); While we welcome Ramlo’s attempts to introduce Q to a broader scholarly community, we feel that Q has much more to offer than just being seen as yet another mixed method. More specifically with respect to the theme of this conference, we argue that Q methodology can make an important contribution both to the reconstruction of some current tools of the social sciences and also to the development of procedures for transformative social change.

Q methodology involves procedures for ascertaining a social actor’s point of view and relating it to those of others. It also embraces a set of assumptions about the nature of science and social enquiry. While based on powerful quantitative procedures (correlation and factor analysis) it also has several affinities with qualitative research, especially in its focus on subjectivity and self-reference. The basic ideas of Q methodology were first set out by its founder William Stephenson, an English physicist/psychologist in a letter to Nature published in 1935 but the first detailed exposition did not appear until 1953 (Stephenson, 1935; 1953). For Stephenson, Q methodology did not just provide a rigorous objective technique for assessing a person’s (subjective) point of view (as it is often seen today) but was part of a life-long quest on Stephenson’s part to develop a science of subjectivity that would enable the discipline of psychology ‘to put its house in order). In this quest Stephenson often drew on his training as a physicist to formulate his case against the then current Newtonian worldview of psychology and cognate social sciences, arguing instead for a post-Einsteinian discipline appropriate to the Age of Complexity, one that acknowledged indeterminism, complexity, contingency and fallibilism.
Commensurate with these theoretical developments, for much of his career Stephenson was applying Q methodology to a variety of applied issues in the domains of health, education, communication and the public understanding of science. In recent years Q researchers have demonstrated the relevance and power of Q methodology for applied social research studies on topics such as empowerment (Brown, 2003; Mutuku, 2011), conflict resolution (Durning, 2009), Muslim minorities in Western societies (Dryzek & Kanra, 2014), deliberative democracy (Dryzek & Braithwaite, 2000), and stakeholder dialogue on energy options (Cuppen et al, 2010). We believe that such studies amply demonstrate the potential of Q methodology to contribute to the development of the kind transformative applied social science envisaged by Roberto Unger.

References

Graff, J Carolyn
Transforming Data in Mixed Methods Research: Methodological and Theoretical Issues
University of Tennessee Health Science Center

This presentation will focus on methodological and theoretical issues that arise when data analysis in mixed methods research involves transformation of data. Teddlie and Tashakkori (2009) discussed conversion mixed data analysis strategies and identified three strategies that involve data transformation. These strategies include quantitizing qualitative data, qualitizing quantitative data, and an inherently mixed data analysis technique such as social network analysis. The transformation of data that have been collected in a mixed methods study using a convergent design involves a process that is relatively easy for researchers to follow and for consumers of mixed methods research to understand. Researchers pose questions that are addressed by a qualitative strand and questions that are addressed by a quantitative strand. Data are analyzed for each strand and merged. Data from the qualitative
strand are transformed to be merged with data from the quantitative strand. The methodological and theoretical issues that arise with transformation of data in a mixed methods study using a convergent design are recognizable and can be discussed rather straightforwardly. When data transformation involves qualitizing of quantitative data collected in a convergent design study, methodological and theoretical issues become complex. Transformation of data collected from a mixed methods study using a sequential, embedded, transformative, or multiphase design presents more complex issues for researchers and may be more challenging for consumers of research to understand. Mixed methods studies that involve transformation of data will be used to explore and discuss methodological and theoretical issues. Strategies to address these issues will be proposed.


**Grobler, Herman**

**The effectiveness of appreciative inquiry in strengthening the sense of self of intellectually challenged adolescents within familial relationships: a mixed methods approach**

*Christene Louw (1st author), North-West University, South Africa*

A central premise of Appreciative Inquiry as an approach, is that the process of knowing is socially constructed, which takes place through interactions with and within a social system. The intellectually challenged adolescent is seen as part of this social system. Appreciative Inquiry involves the art and practice of asking positive questions that strengthen a system’s capacity to apprehend, anticipate and heighten positive potential. This article focus on the effectiveness of Appreciative Inquiry as an approach in strengthening the sense of self of intellectually challenged adolescents with in familial relationships. A combined or “mixed” method approach was chosen for this study. Quantitative and qualitative approaches were followed and a single system experimental design A-B-A-A was chosen for the study. Twenty four intellectually challenged adolescents and their families living in the same household were selected by teachers and therapist from a school for children with intellectual disabilities. Quantitative data were collected from pre- and post-tests by administering the Bar-On EQ-i Youth Version to adolescents in the experimental and control groups and the Family Environmental scale to their families. Qualitative data were collect through Appreciative Inquiry intervention with families and semi-structured interviews with adolescents. The findings indicated that adolescent's sense of selves can be strengthened through positive relationships, support and appreciation from their families.

**Grogan, Miles**

**Looking at assessment in the Japanese EFL context: What’s the “point”?**

*Kansai University, PhD Candidate, Faculty of Foreign Language and Research*

Assessment in language education is a perennial topic. Classroom-based assessment in particular—the way in which teachers award points and credit over the course of a semester—is gathering much interest (e.g. Hill, 2012). Some commentators are looking at the technical knowledge that teachers need (e.g. Fulcher, 2010) while others look at more reflective practices of teachers themselves (e.g. Scarino, 2013). It is clear that a number of threads are important in constructing grades that fit particular contexts, and that a balance of local and global factors are involved. This on-going project aims to look at multiple perspectives in an attempt to uncover what factors may be used in a particular context to provide viable and valid grading for those involved.
Initially conceived as a Grounded Theory-based study (Glaser & Strauss, 1967), this ongoing project looks at English classes in a private university in western Japan. The author is a language teacher investigating the particular context he is involved with. Through a process of participation and interview, the intention is to identify key factors in how teachers award grades and the processes of validation that underlie those grades. The concept of “validation” in language assessment is extremely complex. Newman and Shaw (2014) list 150 different types of validity in the literature, so the theoretical discussions and models available are manifold. Given that grounded theory was originally conceived as mixed-methods approach to theory generation, this approach moves away from theoretical complexity and moves towards the day-to-day mapping of what is actually happening in the classroom.

Interviews were carried out with seven contract teachers using specific courses to try to elicit key behaviours in 2015, while faculty members responsible for the administration of the courses were interviewed in follow up. These were coded and preliminary factors in the processes and perspectives are being identified. This is being cross-referenced with student perspectives of aspects of the grading process, using a narrative frame methodology (Barkhuizen & Wette, 2008). These have been compared with a more statistical analysis of grades in one area of assessment (specifically vocabulary). Input has also been sought from administrators from the university to look at how grades may be perceived by others, utilising the concept of constant comparison to keep theory generation robust and in line with observed data.

Through the modelling of local behaviour to generate applicable theory, reform and review of processes can be made more effective. A criticism of a grounded approach is that it sometimes generates “no theory or a rather trivial one” (Dörnyei, 2007). To avoid such a fate, the author is exploring ways that are practical for a teacher in this context to give robust grades, and to build a concrete resource of locally viable practices suitable to a range of teacher styles and learner needs. The ultimate goal is to enhance the practices within the context in a way accessible to teachers, course designers, administrators, and the students involved in the creation and validation of grading practices in the context.

Gronholm, Petra

**Mixed methods research as a framework for examining the influence of mental health-related stigma on young people’s pathways to care**

Kristin R. Laurens, Graham Thornicroft & Sara Evans-Lacko

1 Health Services and Population Research Department, Institute of Psychiatry, Psychology and Neuroscience, King’s College London (London, United Kingdom); 2 Department of Forensic and Neurodevelopmental Science, Institute of Psychiatry, Psychology and Neuroscience, King’s College London (London, United Kingdom); 3 School of Psychiatry, University of New South Wales (Sydney, Australia); 4 Schizophrenia Research Institute (Sydney, Australia); 5 Personal Social Services Research Unit, London School of Economics and Political Science (London, United Kingdom)

This research examined the role of stigma on pathways to care amongst young people at risk for psychosis. This focus was informed by the treatment gap observed between mental health service need and utilisation amongst young people, and subsequent calls for an enhanced understanding of the processes underpinning young people’s help-seeking and service contact, and, critically, barriers to these.

The research was nested within an ongoing prospective longitudinal investigation of children’s and adolescents’ health and wellbeing (the London Child Health and Development Study). This approach provided access to a unique sample of participants and relevant data; a community cohort (n=407, aged 9-18 years) enriched with individuals putatively at high risk of developing psychotic disorders, and a large set of quantitative data on young people’s service use and stigma-related characteristics. Embedding this research within an ongoing
study was, however, also associated with certain practical restrictions, for example in terms of the specific data that had been collected previously, and what procedures were appropriate in view of additional data collection. A consistent consideration whilst developing the PhD study design was thus ensuring that the research objective, rather than practical constraints, remained at the heart of the inquiry and decisions made regarding study methods.

A mixed methods research (MMR) approach was selected for this work. This followed recommendations from previous literature, where comprehensive perspectives building on both qualitative and quantitative insights have been highlighted as optimal frameworks for examining the key themes within this research; namely, help-seeking processes, and the presence and influence of mental health-related stigma. Specifically, a sequentially-timed multiphase convergent MMR design was chosen for the project, comprising one systematic mixed studies review and three empirical studies (one qualitative, two quantitative). This approach enabled this project to provide novel evidence on stigma on young people’s pathways to care, through an in-depth exploration building on: (1) a grounding perspective of synthesised qualitative and quantitative evidence on stigma and pathways to care amongst young people at clinical high risk of developing psychotic disorders or experiencing first-episode psychosis; (2) qualitative insights regarding the influence of stigma on processes and motivations underpinning young people’s help-seeking; (3) quantitative assessments of broader patterns of caregivers’ help-seeking and young people’s service contact, and how these were associated with stigma; (4) an overall synthesis of these findings, based on contrasting and corroborating insights for a comprehensive and nuanced understanding of these processes.

The findings have implications on efforts aiming to reduce stigma-related barriers on young people’s pathways to care. Namely, it appears important to target stigma not only amongst young people but critically also their caregivers, whose help-seeking efforts hold a key role in young people’s service contact and where stigma was observed to influence how caregivers sought care and support for young people’s mental health problems. Additionally, these findings suggest that anti-stigma strategies in relation to young people’s mental health could benefit from promoting a dimensional perspective of mental health and well-being, as already initial symptomatic thoughts and behaviours, not only diagnosed difficulties, appeared to elicit stigma-related concerns.

Guetterman, Timothy 1 (1)
Process Evaluation of a Retreat for Scholars in the First Cohort: The NIH Mixed Methods Research Training Program for the Health Sciences
John W. Creswell 1; Charles Deutsch 2; Joseph J. Gallo
1 University of Michigan; 2 Harvard University; 3 Johns Hopkins University

The need for mixed methods research to address population and behavioural health issues has led to an increase in mixed methods studies funded by the U.S. National Institutes of Health and U.K. Medical Research Council. As the use of mixed methods dissertations and published studies also increases, more individuals are interested in learning mixed methods. Despite the increasing demand for mixed methods courses, the opportunities to learn mixed methods at the graduate or faculty level are limited relative to learning opportunities in qualitative research (e.g., qualitative inquiry, grounded theory, ethnography) and quantitative research (e.g., statistical methods, psychometrics) (Poth, 2014).

Addressing this issue, the Mixed Methods Research Training Program for the Health Sciences aims to enlarge the national pool of trained investigators in mixed methods and improve the quality of grant applications to the NIH. Selected scholars are assigned a consulting team, participate in webinars, and attend an annual “retreat” focused on learning mixed methods through application to their research. The purpose of our paper is to summarize the process evaluation of the retreat. The retreat itself was a two and a half day
event held in person at a U.S. university. It included the 14 scholars, the 3 program faculty who serve as investigators and mentors for the program, and 2 consultants. We collected data through observations during the entire program retreat and open-ended survey questions about goals and reflections on the retreat itself (n = 14). Qualitative theme-based text analysis identified major themes of the retreat. We organized the exposition of the themes under three rubrics: academic survival skills; specific mixed methods topics; and the interactional nature of the retreat. Scholars valued the focus on grant writing and in finding potential collaborators or academic teams. A focus on mixed methods topics, particularly intervention designs and integration methods was both evident and a commonly cited need of scholars. Throughout the retreat, we observed scholars applying what they learning to their own projects. Scholars identified strengths in small interactive groups to discuss individual projects and the opportunity to apply learning. Scholars wanted even more opportunity to discuss individual projects, understanding interventions and mixed methods, and finding collaborators. Our findings will be useful to leaders developing workshops or similar programs at the post-graduate, faculty level.

Guetterman, Timothy (2)
The Development, Design, and Test of a Self-Assessment Instrument of Mixed Methods Research Proficiency
University of Michigan, USA

Mixed methods research is growing in adoption with a related increased demand for training. Training mixed methods scholars is critical to ensure quality research and to continue to advance the field. Nevertheless, a relatively small portion of mixed methods literature addresses mixed methods training and largely focuses on courses and pedagogy. In addition, an instrument was needed to assess mixed methods skills. This study examined proficiency to conduct mixed methods in order to address the mounting need for training to ensure high quality research and the need for additional empirical research on learning mixed methods. Proficiency refers to what individuals should know to conduct rigorous mixed methods research, and quality derives from major mixed methods quality guidelines. The purpose of this study was to qualitatively explore the skills needed to conduct mixed methods research in order to use that information to develop a mixed methods proficiency typology, develop an instrument to self-assess proficiency, and test the instrument. This study employed an exploratory sequential mixed methods design for the purpose of developing a typology and instrument. It consisted of three phases: 1) an initial qualitative exploration of proficiency involving interviews (n = 8) with leading mixed methods methodologists and an examination of curricula (n = 25); 2) an intermediate instrument development phase using building integration to develop the brief Mixed Methods Skills Self-Assessment instrument; and 3) a quantitative follow-up phase that administered the instrument to researchers using mixed methods (n = 264) to examine reliability of scores, evidence of validity through factor analysis, and correlates among the data. After a brief summary of the purpose and methods, the presentation will focus on two major contributions of this research to mixed methods. One product of this research is the typology of mixed methods skills. The typology clarified the underlying skills needed to proficiently conduct mixed methods. The findings yielded empirical support for the existing four-phase model of learning mixed methods and important learning points for novices. A second contribution was the self-assessment proficiency instrument, which contained items generated from empirical qualitative findings rather the researcher. The results provide some evidence of validity and reliability of this instrument. It can be completed in seven minutes, on average, and may be used in workshops, courses, and professional development plans. Furthermore, it contains items not addressed by existing instruments, such as personal characteristics of researchers, value added, multiple integration aspects, teamwork, and adapting mixed methods for a discipline or cultural context. The integrated
qualitative and quantitative results indicated that mixed methods proficiency is comprised of underlying professional experiences, knowledge, skills (know how), and personal characteristics of researchers. An SEM path model of proficiency indicated that professional experiences are important to develop knowledge and skills. Both underlying declarative knowledge about mixed methods and professional experiences are related to skill development (know how). Working on a mixed methods project seems to be the most critical aspect to develop proficiency.

Guetterman, Timothy¹ (3)
Use of joint displays for analysis: The MPathic-VR mixed methods RCT on knowledge transfer through a virtual human intervention to train communication skills among medical students
Fredrick W. Kron¹; Mark W. Scerbo²; James F. Cleary³; Michael D. Fetters¹
¹University of Michigan; ²Old Dominon University; ³University of Wisconsin

Poor healthcare communication leads to decreased patient satisfaction, suboptimal patient outcomes, impaired teamwork, medical error, and avoidable patient harm. The MPathic-VR (Modelling Professionalism and Teaching Humanistic Communication in Virtual Reality) system was developed to train advanced communication skills by enabling physicians to talk with virtual humans. These are computer-based, human-appearing, conversational agents that interact with humans in real time, using communication behaviors that one would expect in face-to-face conversation with another human. The system promotes active learning by analyzing trainees’ performances in an interactive scenario, providing feedback, and then allowing them to repeat the scenario. The purpose of this methodological paper is to highlight the methodological procedures for integrating results through developing visual joint displays of the results of a mixed methods intervention study of MPathic-VR. Joint displays provide a visual means to facilitate and represent integration.

Joint displays are increasingly used to portray mixed methods results, but methodological discussions about constructing a joint display for interpreting findings from an RCT have been lacking. To examine this issue, we use the example of the MPathic-VR mixed methods intervention trial. In this randomized controlled trial, second year medical students (n=415) were randomized to one of two conditions: MPathic-VR or a control condition. The MPathic-VR intervention consisted of two interactive scenarios: one focused on intercultural communication, the other focused on interprofessional communication. The control condition consisted of a computer-based learning module on communication strategies.

The qualitative data source was students’ written reflection responses to open-ended items at completion of the intervention or control. We employed theme-based qualitative text analysis. Quantitative data sources were a Likert-type attitudinal scale, scores in MPathic-VR (MPathic-VR group only) and scores from an objective structured clinical examination (OSCE) of advanced communication skills with a standardized patient instructor (both groups) several days after exposure to the treatment or control. Analysis consisted of an unpaired t-test, ANOVA, and MANOVA, respectively. The mixed methods analysis employed a merging type of integration focused on examining quantitative outcomes with respect to qualitative themes. The analysis sought to examine qualitative experiences by quantitative outcomes to explore differences in experiences. A series of joint displays facilitated merging and presenting the mixed methods results.

Qualitative themes related to the importance of practice and immediate feedback, the development of verbal and nonverbal communication skills, the engagement of the training, and the desire for supplemental training. The quantitative results indicated improved communication skills between the two sessions based on the MPathic score (p<.001) for both scenarios. In addition, the MPathic-VR group performed better on the OSCE relative to the control (F(1,414)=6.09, p=.0140). Student attitudes favored MPathic-VR to the control (t(413)=7.23, p<.001). Qualitative and quantitative findings generally corroborated each other.
Hall, Jennifer
Standing up for mixed methods: evaluating workplace sit-stand workstation interventions
Dr Louise Mansfield¹, Prof Tess Kay¹, Prof Alison McConnell²
¹Brunel University London, ²Bournemouth University

Context: Current public health policy and research identifies potential health risks of both physical inactivity and sedentary behaviour (Department of Health, 2011; Thorp et al. 2011). Office-workers sit for approximately 75% of the working day, thus office-based workplaces have been identified as an appropriate context for both increasing physical activity and reducing sedentary behaviour. Sit-stand workstations, particularly when combined with other strategies on individual and organisational levels, have been identified as a potential solution to reduce prolonged workplace sitting. However, despite a high level of policy and media attention, the evidence base concerning the efficacy, feasibility and acceptability of implementing sit-stand workstation interventions to reduce workplace sedentary behaviour and increase workplace physical activity is weak.

We implemented a sit-stand workstation intervention within two office-based workplaces in London (UK); Macmillan Cancer Support and Public Health England. Mixed methods were adopted to evaluate the efficacy, feasibility and acceptability of the intervention. The aim of this presentation is to discuss the design, execution and interpretation of our mixed methods evaluation of a workplace sit-stand workstation intervention. In doing so, this presentation will demonstrate the value of wider use of mixed methods to evaluate workplace health interventions.

Design: The presentation will describe and provide an in-depth, theoretical justification for the design of the mixed methods sit-stand workstation intervention research; a combined outcome and process evaluation. The outcome evaluation involved the objective measurement of sedentary behaviour and physical activity using a randomised control trial design, and the process evaluation comprised qualitative data collection, in the form of interviews with participants and key stakeholders, and participant observations within the workplace. The mixed methods approach therefore permits an understanding of both whether the intervention might work (outcome), and how and why (process). The outcome and process elements of the evaluation were conducted in parallel and were afforded equal status to avoid perpetuation of the paradigmatic hegemony existent within intervention research. The philosophical implications of the mixed method evaluation design will be discussed in the presentation.

Execution: The presentation will discuss some of the practical benefits and challenges with regards to the delivery of our mixed method evaluation of a workplace sit-stand workstation intervention. This includes selecting an appropriate sample size, dovetailing of methods, researcher workload and expertise, and the role of the researcher.

Interpretation: The presentation will explain how the outcome and process data generated by our mixed method evaluation have been interpreted in a complementary manner with the purpose of seeking comprehensive knowledge regarding the efficacy, feasibility and acceptability of the workplace sit-stand workstation intervention. Further, examples of how the process evaluation identified some of the challenges and complexities of implementing complex interventions in practice will be provided.

Conclusions: The presentation will conclude by suggesting that wider use of mixed method evaluations can enhance the value of workplace health intervention research. Combining
outcome and process evaluations of workplace interventions could help bridge the research-practice gap and will assist employers when considering whether to adopt health-related initiatives within their organisation.

Harper, William A
Exploring the Complex Role of the Principal in Creating a Culture of Academic Optimism: A Sequential Quan → Qual Mixed Methods Study
Nataliya V Ivankova, The University of Alabama at Birmingham, USA

This paper reports on a sequential Quan → Qual mixed methods study that explored how principals create a culture of academic optimism in Alabama middle schools resulting in high student academic achievement. The study aims to expand our knowledge of the complex role principals’ leadership has to influence high student achievement, particularly in schools with high poverty.

Using public data, 212 Alabama middle schools with grade 8 were stratified into categories based on different levels of student achievement in reading and math and socio-economic status (SES). Student achievement was measured by the percent of students in grade 8 scoring in the top two categories of achievement on the Alabama Reading and Math Assessment. SES was measured by the percent of students in the Free and Reduced Program for Lunch. Over 100 middle schools across Alabama were approached to participate in the study. Twenty seven schools agreed to participate and teachers in those schools completed the School Academic Optimism Survey, which measured the degree of academic optimism within each school. Academic Optimism is a latent construct previously shown to be positively associated with student achievement.

The survey data were analyzed using correlational analyses, regression analyses, and recursive partitioning to identify the predictive power of three dimensions of academic optimism. The correlational and regression data analyses indicated that academic optimism was not a significant predictor of either reading or math achievement, even when SES was controlled, which contra-indicated previous research in high schools. Multiple regression did identify academic emphasis, one of the three dimensions of academic optimism, as a significant predictor of student achievement.

In the second phase, based on the quantitative results, principals were selected for follow-up interviews using maximal variation sampling from the schools with high student achievement. The quantitative results also guided the development of the principal interview protocol to maximize opportunities to explain the contradictory quantitative results. Eleven middle school principals representative of the different levels of socio-economic status were interviewed individually to explore how those principals fostered a culture of academic optimism in their schools. Using qualitative data analysis software, an inductive thematic coding was conducted yielding three a priori themes: faculty trust, collective efficacy, and academic emphasis, and a fourth theme, leadership style. The results from the thematic analysis of principals’ narrative responses were integrated with the quantitative results from the teacher survey to reveal several strategies and approaches that principals used in both high and low poverty middle schools to create a culture of academic optimism and high student achievement. The analyses also identified strategies that interacted reciprocally among multiple dimensions of academic optimism. Furthermore, the qualitative results seemed to enlarge our understanding beyond what principals consciously do to build culture and high achievement, to include why they do it. This extended knowledge of the complexities of school leadership holds promise for raising achievement, particularly in low SES schools.

Hense, Andrea
Causal Interpretations in Mixed Methods Research: Advantages and Challenges
Layoffs and subsequent reemployments by the same employer ("recalls") are seen as a discontinuous employment relationship that has hardly been investigated, although analyses provide new insights for scientific research and political debates on precarious work. We implemented a sequential mixed methods design to examine the determinants and consequences of recalls. The design combined qualitative and quantitative approaches as well as secondary analyses and field research. On the one hand, it can be described as a complementary design because quantitative and qualitative analyses dealt with the same phenomenon and research questions but used different methods to get different insights. On the other hand, it can be seen as a development design as results of our secondary analyses were used for the sampling of our qualitative interviews, and findings of these interviews were used for the construction of a quantitative questionnaire. The results of our analyses partly converge or complement one another.

First, secondary analyses of the German Socio-Economic Panel Study (SOEP) and data from the German Institute for Employment Research (SIAB, LIAB) delivered results on individual and operational determinants of recalls and their consequences. We used these mass and panel data for causal explanation based on probabilistic inference and for information about the distribution of recalls in certain groups, industries, and regions. We identified causal links between variables using panel regression analyses, but were not able to examine the processes that explain why variables are linked together. Furthermore, quantitative research is restricted to the variables in the dataset and our knowledge/assumptions about important factors. Thus, we secondly conducted expert interviews within companies that make use of recalls and narrative interviews with recalled employees to gain further insights into their rationale, appraisals, and practices. The SOEP was used to obtain access to recalled employees within different contrast groups, and IAB’s datasets were used for the sampling of the expert interviews. Purposive sampling based on the results of the secondary analyses was combined with theoretical sampling based on the qualitative analyses. The qualitative findings were used to develop the questionnaire for our own quantitative survey. The third component of our research was a standardized telephone survey of employees. This was used to analyze the statistical effect of different determinants and outcomes of recalls which had been discovered during the qualitative research.

The presentation will give three examples how the joined analysis enhances the causal interpretation of recalls: The transaction cost approach could be corroborated, the assumptions about the decision process had to be modified, and unexpected effects of recalls on social recognition could be found. Furthermore, the presentation will discuss three methodological aspects: Causal analysis based on probabilistic inference can benefit from qualitative research to identify causal mechanisms. The problem of unobserved heterogeneity will be moderated using mixed methods research. Purposive sampling based on survey data should be followed by theoretical sampling based on the qualitative findings to fully exploit the potential of qualitative analyses.

Hewett, Angela
Expecting the unexpected: using mixed methods to explore how healthcare professionals prepare for rare, critical events during childbearing
University of Leeds.

Background: Pregnancy and childbirth presents both rare and critical events for which healthcare professionals are required to acquire and maintain competent clinical skills. Globally, simulated practice is an accepted approach to facilitate habitual development of skills, such as rapid decision making and clinical dexterity without panic and disorganisation. In theory, a skill demonstrated using simulation will transfer into practice competently and
confidently; the strength of simulation appears to lie in its validity with clinical context. However, evidence shows that some professionals have difficulty responding appropriately to unexpected critical events, which challenges the value of simulated practice as clinical competency.

Purpose: To understand how midwives develop skills in order to prepare for and respond to RCE during childbirth, and the role simulation plays in skill development.

Methods: An explanatory sequential mixed methods approach, within a pragmatic framework, examined preparation for rare, critical events. A quantitative systematic review (synthesised narratively due to high heterogeneity) was combined using framework analysis of curricula documentation. Subsequently, a conceptual framework of simulation was explored using interviews of healthcare professionals; analysis adopted an attribution theory. Ethical approval was secured.

Findings: Along with a focus on how the research was carried out two key findings will be shared - 'fidelity and realism' and 'practising safely'. Fidelity was important during cardiac arrest scenarios, although it was less important with obstetric focus. Realism affected engagement; not associated with 'real life' and related to play this negatively influenced the value placed on simulation. Practising safely was useful due to limited clinical exposure, paradoxically; confidence was linked to clinical exposure and not simulation. Confidence increased initially following training, decayed over time, although the timeframe for diminution was unclear. Overwhelmingly, simulation was perceived as anxiety provoking.

Application to education and practice: There is contradiction between simulation theory and observed reality; evidence relating to what works, for whom and in what circumstances remains unclear. Data highlights ambiguity between theoretical principles of simulation and the practical application.

The evolving conceptualisation of ‘preparedness’ merges simulation (incorporating multiple-learning strategies) with deliberate practice. The outcomes of the study could contribute to healthcare education and influence the policies and standards underpinning education and clinical practice thus influencing service quality.


Hillis, Sally J
Exploratory Factor Analysis, Advancing the Inferences of a Mixed Methods Study
PhD, RD, LMNT, University of Nebraska, USA

The purpose of this conference paper is to address the current and past use of exploratory factor analysis (EFA) in mixed methods research projects by studying a set of case studies (e.g. Hillis, 2015; Howell-Smith, 2011; Ivankova, 2004; Plano-Clark, et al, 2008; Zhou, 2014) This paper demonstrates the application of EFA in specific studies that utilize an exploratory factor analytical approach allowing the researcher to continue to discover relationships and interconnectedness among variables in the quantitative component of a mixed methods study. Case study examples demonstrate how utilizing an EFA allows us to consider alternative hypothesis and arrive at post hoc solutions that can offer a more complete understanding from the quantitative data. Strengthening the integration of the findings and results, EFA holds the promise of providing a more robust set of mixed methods findings. The advanced statistic techniques reviewed in these case studies include principle component analysis, discriminant analysis, path analysis and cluster analysis. Employing an advanced skill set or working with an interdisciplinary research team allows the researcher to
realize the profits of this advanced quantitative inquiry and show greater complexity in the findings.

Hitchcock, John¹
Using mixed methods to handle complexities in special education research: Promoting methodological innovation
David Houchins²; Anthony J. Onwuegbuzie³; R. Burke Johnson⁴; Jeffrey A. Anderson¹
¹Indiana University; ²Georgia State University; ³Sam Houston State University; ⁴University of South Alabama

There has been an ongoing push to promote high-quality inquiry across multiple facets of education research (e.g., Nastasi & Schensul, 2005; Schneider, Carnoy, Kilpatrick, Schmidt, & Shavelson, 2007). This is also true in special education research. In 2005, several publications were offered to specify quality special education research indicators, covering experimental (Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti), single-case (Horner, Carr, Halle, McGee, Odom, & Wolery), qualitative (Brantlinger, Jimenez, Klingner, Pugach, & Richardson), and correlational (Thompson, Diamond, McWilliam, Snyder, & Snyder) research. These indicators appear to have become reasonably well entrenched in the special education literature, but there is one area in need of further attention: mixed methods research (MMR). MMR has, of course, advanced substantially (e.g., Hesse-Biber & Johnson, 2015; Tashakkori & Teddlie, 2010), but developments have not formally been described within the context of special education. One of the implications of this void is that it appears that MMR is not widely used within the special education arena.

The minimal use of MMR undermines a broad set of ongoing interests within the field that need to be accounted for: (1) child voice in intervention planning and delivery, (2) establishing causal inference in highly contextualized settings with small sample sizes, (3) understanding stakeholder perceptions in a dynamic policy environment, (4) the best ways to train special educators, (5) program evaluation in special education settings, (6) addressing cultural differences within schools, and (7) comprehension of technology innovations. To develop MMR quality indicators for special education, a group of U.S. researchers has been meeting regularly with the initial task of producing publications that will provide guidance on conducting MMR in special education. The proposed MMIRA presentation will update audience members of the group’s agenda, lessons learned (so far) in pushing a national research discussion, and perspectives on expanding efforts to a more international setting.

References
Hong, Quan Nha
Convergent and Sequential Synthesis Designs in Systematic Reviews Combining Qualitative and Quantitative Evidence

Pierre Pluye; Mathieu Bujold; Maggy Wassef

1Department of Family Medicine, McGill University; 2Information Technology Primary Care Research Group, Department of Family Medicine, McGill University

Background: Systematic reviews of qualitative and quantitative evidence are increasingly popular. This form of review is advocated to provide a rich understanding of complex phenomena. The past decade has been rich with methodological advancements, which were highly inspired by the literature on mixed methods research. The main difference is that, in the field of review, the mixing of qualitative and quantitative evidence occurs at two levels: (a) study level, i.e., the inclusion of qualitative, quantitative and mixed methods studies within a same review, and (b) synthesis level, i.e., the use of qualitative and quantitative synthesis methods to analyse the included studies. Several types of synthesis designs have been described, but none has been tested on a large sample of reviews. The aim of this review was to identify the types of synthesis designs and methods, and propose strategies for synthesizing qualitative and quantitative evidence.

Methods: A review of systematic reviews combining qualitative and quantitative evidence was performed. Six databases were searched from inception to December 2014 (Medline, PsycInfo, Embase, CINAHL, AMED, and Web of Science). Academic journal reviews were included if they were systematic reviews including qualitative, quantitative and/or mixed methods studies. The included reviews were analyzed according to three dimensions of synthesis processes: (a) synthesis methods, (b) sequence of data synthesis, and (c) integration of evidence.

Results: A total of 459 reviews were included. Two main types of designs were observed: convergent and sequential synthesis designs. In convergent synthesis designs, the qualitative and quantitative evidence were analysed in a parallel or a complementary manner. They were the most popular (n=438; 95%). Among the convergent synthesis designs, three levels of evidence integration were found: (a) level of data - where qualitative and quantitative data are analysed together using a same synthesis method, (b) level of results of syntheses - where qualitative and quantitative data are analysed separately using different synthesis methods and results of both syntheses are integrated during a final synthesis, and (c) level of interpretation - where qualitative and quantitative data are analysed separately and integrated during interpretation of the results in the discussion section. A minority of reviews used sequential synthesis designs (n=21; 5%). In these designs, the results of a first synthesis phase inform a second synthesis phase. Most of the included reviews synthesized the studies qualitatively (n=418; 91%); they used one or several qualitative synthesis methods to synthesize the qualitative and quantitative studies (e.g., thematic synthesis, meta-ethnography). A small number of reviews used a mixed of qualitative and quantitative synthesis methods (n=41; 9%).

Conclusion: Performing systematic reviews of qualitative and quantitative evidence is challenging because of the multiple synthesis options. In our review of these systematic reviews, convergent and sequential synthesis designs were found as well as several synthesis methods and levels of integration of data and results. Among the included reviews, a small proportion used a mixed of qualitative and quantitative synthesis methods. It is hoped that the results of this review will provide guidance to those interested in performing such systematic reviews.

Horton, Leah
Towards Capabilities-Based Environmental Leadership: A Mixed Methods Case Study from Kanembwe, Rwanda
Jayme Millsap Stone, University of Central Arkansas

Participatory environmental leadership framed by the Capabilities Approach has potential to positively impact Kanembwe, Rwanda. The people there, including many indigenous Twa, face an onslaught of wicked problems: loss of traditional dwellings and land, negotiating the transition from hunter-gatherers to subsistence farmers, unfertile land, rampant illiteracy and unemployment, high child mortality, limited access to health care, and a demand for fuelwood that far outstrips supply. Our data show that 75% of residents gather firewood on a daily basis and over half of those spend up to five hours per day on the task. Due to the degraded local environment, lack of alternative energy options, and extreme poverty, the importance of firewood cannot be overstated.

A mixed methods approach to these issues provides an opportunity to better understand the social reality faced by the people and to place that reality in an historical context. A pilot study from 2015 showed participants recognize their precarious position and are eager to work with researchers, NGOs, and the government to improve their quality of life. One participant shared, “We are trying to work so that we can develop but life is not allowing us to. And we ended up not living a good life but a bad one.” She continued, “I had started to learn tailoring but I failed to get the means and I couldn’t afford to buy the tailoring machine. I wanted to join on vocational trainings, but I failed to get the means.” The words of the study participants revealed the daily challenges of clustered disadvantage (Wolff and de-Shalit, 2007) centered around poverty and food insecurity. Another participant said, “Our life here is difficult; getting a temporary job is hard – you have to go everywhere and get outside this village because inside there are no opportunities that can help someone achieve something….if I go and can’t find work, sometimes it becomes necessary that we sleep without eating.”

The purpose of this study is to demonstrate the role environmental leadership can serve in addressing wicked problems when framed within the Capabilities Approach (CA) championed by Sen (1999) and Nussbaum (2011). We aim to investigate how a multidisciplinary understanding of the environment -- where we live, work, play, worship, go to school plus the natural world (Bullard, 2007) -- of Kanembwe influences how residents answer the fundamental questions of the Capabilities Approach, “What are people able to do and to be?” The research questions include (1) How does the environment of Kanembwe enhance, or limit, the capabilities of the residents? (2) How can environmental leadership, in the form a more fuel-efficient cooking method, influence the capability sets of the people of Kanembwe?

This study is designed as a mixed methods case study bounded by Kanembwe village. Through semi-structured surveys, semi-structured interviews, participant observations, focus groups, controlled cooking tests, and randomized cooking tests, we have gathered quantitative and qualitative data related to gender-roles, time-on-task for meal preparation, cooking, firewood gathering, stove efficiency, and quality of life indicators such as Nussbaum’s Central Capabilities (2011).

Hozien, Wafa
Global-mindedness of Graduate Students in the United States
Central Michigan University

As the world becomes increasingly interdependent, mutual understanding becomes increasingly important. Study abroad is one of the ways to approach internationalization and promote understanding among different people and cultures. According to the Institute of International Education, because of a growing recognition of the importance of international
experience, students from the United States are traveling and studying abroad in record numbers. The number of these American students studying abroad for academic credit increased by 8% in 2013/14 (Institute of International Education, 2015), building on the previous year’s increase. This surge in participation brings the total number of students from the U.S. studying abroad to a record number of 886,052 students in the 2013/14 academic year.

Study abroad is one of the ways to approach internationalization and promote understanding among different people and cultures. We used an explanatory sequential mixed methods approach, with quantitative data collected first using the Hett Global Mindedness Scale in a pre-test/post-test design. During one two week study abroad program, and one 17 day program, students wrote personal narratives of their experience, and a follow-up reflective narrative that was written six months later. The Hett results for the combined sample suggest significant improvements overall and for three of the five dimensions - responsibility, cultural pluralism, and interconnectedness. The student level data indicate marked variation in responses both between and within individuals. The reflective interviews offered insight into personal characteristics that may indicate a predisposition to global-mindedness. Triangulation of data revealed some possible influence of personal agency and social capital on global-mindedness and experiential learning. Action research positions teachers and administrators as learners along with their students. Findings from small scale studies foster action, progress, and curricular development within the sponsoring institution. Information from this study was gathered with the goals of gaining insight and effecting positive changes in student attitudes and teacher practice.

An explanatory sequential mixed methods approach (Creswell, 2008), was used with quantitative data collected first using the Hett Global Mindedness Survey in a pre-test/post-test design. During the two week study abroad program, students wrote personal narratives of their experience; and a follow-up reflexive narrative was written six months later. Details of both components are provided in the paper. Data from each component were analyzed separately and then integrated through the process of triangulation (Creswell & Plano Clark, 2011).

Key Words: Study Abroad, Graduate Students, Global Mindedness, Mixed Methods

Hughes, Tracey

“I think that if you announce what you see nobody can say no”: investigating schools that exceed expectations

University of Stirling, UK

This empirical paper is part of a doctoral study which seeks to explore the factors which contribute to selected case study schools, located in socio-economically disadvantaged areas of Scotland, achieving good educational outcomes for their pupils. The first stage of this sequential mixed-method study identified secondary schools in disadvantaged communities which were achieving good educational outcomes for their pupils. Then, through an embedded multiple case study approach, and drawing upon ethnographic practices, student experiences will be explored to further develop the understanding of the complex and interwoven ecological factors which influence these outcomes. The iterative and selective intermittent time mode (phased approach) of this research will allow for the progressive focusing of this study, as influenced by the experiences of students in these case study schools.

In particular this paper, will highlight the complexities of defining and measuring such widely used concepts (disadvantage and educational outcomes) in an environment where a narrowing of the attainment gap is very much a policy focus. It will outline the various methods and sources that were drawn upon in order to develop a holistic understanding of these two concepts.
Throughout this study a pragmatic approach to research has been adopted. Therefore, it will seek to illustrate not only creativity within action situations (Joas 1998), but also augment the argument that “you cannot lay down in advance fixed rules as to just what should be done. You can find out what are the values involved in the actual problem and act rationally” “with reference to all interests that are involved: that is what we could call a ‘categorical imperative’” (Mead 1934: 388).

Resultantly, the researcher intends to challenge procedures and assumptions regarding the definitions and methods of measurements to the concepts of relevance – and also note the potential implications to policy and practice. Whilst, highlighting the careful consideration, sensitivity and thought taken in the selection of the analysis of statistical data, and documenting how these processes were constructed – in order to encourage an air of “open data”, or transparency (Gayle, Connelly and Lambert, 2015).

Ibrahim, Raquib
Supporting Services to Evaluate an Attachment Based Parenting Programmes for Dads: Using a Mixed Method Design
Mellow Parenting

Mellow Parenting is a registered charity which has developed a suite of early intervention parenting programmes that range from pregnancy to pre-school age children. The need for each programme is researched before it is designed and developed. The programme is released to services and families only after it is rigorously evaluated and shows to be effective. At this point, organisations across all sectors; Health, Education and Voluntary are trained and supported to deliver the programme within their local communities.

Each programme is underpinned by attachment and social learning theory with elements of Cognitive Behaviour Therapy. The emphasis is on building a secure and positive parent-child relationship by providing the parent with an opportunity to reflect on their own life experiences and how these can influence their relationship with their child. Strength-based video feedback is used with individual parent-child interactions and practical advice on early child development is also offered. The programme is delivered in a group setting; therefore, peer support is an important part of the intervention.

This paper will share how a mixed method design was used to conduct an impact study of the Mellow Dads programme across Scotland over a period of 2 years. It will discuss the methodology in detail as well as highlight the benefits and challenges of using both Qualitative and Quantitative methods when conducting research within an applied social setting. Findings of the evaluation and recommendations will be shared within the paper. During the course of the evaluation 100 father-child dyads participated in the programme. However, less than 50% of complete data sets were retrieved. The paper will explore some of the reasons for this low return. One explanation discussed in depth is how the programme was delivered in real social systems, not by researchers but by professionals from Health, Education and the Voluntary sector who worked directly alongside vulnerable families with very complex history and social care needs. Therefore, one of the biggest challenges faced during the evaluation was the unique position the researchers were in, as pre, post and follow-up data collection was done by professionals from services delivering the programme and not by the researchers themselves. This required being reviewed periodically in order to assess and identify new ways of supporting these services so that they were able to collect the data in a consistent and meaningful way. As a result, a new evaluation framework was developed which not only supports professionals and services in conducting robust mixed method evaluations at grass roots level but also helps translate what they are finding into their professional practice and provides an opportunity for feedback to the individual participants and beneficiaries of the programme. Consequently impacting on how services across Scotland now see and use evaluations.
Health care Quality Improvement (QI) programs have been a relevant subject of academic research for many years. Most studies have focused on the potential of QI programs to improve performance, with a minor attention to their impacts on patient outcomes (Shortell, Bennett & Byck, 1998; Wensing, Wollersheim & Grol, 2006).

This abstract describes the mixed methods methodology applied to a QI program tested in a teaching hospital in the southern United States. The described QI program was related to the issue of pressure ulcers. Pressure ulcers refer to the loss of circulation due to excessive and sustained pressure against the body of the patient (Ragan, Kernozek, Bidar & Matheson, 2002).

This abstract refers to a Concurrent Mixed Methods approach (Ivankova, 2014), where the same sample is used for both the quantitative and qualitative analyses. The data collected from the sample was related to the pressure mapping and the perceived differences between the chairs. It also included demographic information like: age, gender, weight, height, BMI, race, education, self-reported chronic conditions, and self-reported level of physical activity. The quantitative methods included descriptive and inferential statistics to analyze data collected through pressure mapping. The qualitatative methods included both open- and closed-ended questions to investigate perceived comfort, safety, mobility, and pain. The number of observations included 30 patients in the gastrointestinal surgical unit in an inpatient setting. Patients were measured using two different style chairs.

This type of mixed methods settings has the potential to influence both practitioners and policy makers. In regard to practitioners, hospitals will benefit from addressing patients’ perceptions about pressure, rather than relying only on the quantitative instrument of pressure mapping. By doing so, practitioners can expect greater levels of patient satisfaction. Patient perception has long been a key measure used in health care to evaluate the quality provided by health care organizations (e.g., HCAHPS); therefore, this type of mixed methods approach could be useful to include patients’ perceptions to a greater extent.


References

Jameson-Charles, Madgerie (1)
Understanding first year university students in a competitive learning environment: experiences, adjustments and well-being
The University of the West Indies, St. Augustine Campus

This mixed methods study investigated experiences in a highly competitive first year university programme that leads to entry into study in the health sciences (medicine, pharmacy, dentistry, medical laboratory services and physiotherapy). The participants in the research were enrolled in the Health Sciences First Year (HSFY) programme at the...
University of Otago, New Zealand. The study looked at the students’ expectations, their experiences, the stresses that the programme put on them and how they coped with those stresses. A mixed methods approach was used to get a holistic view of the varied aspects of the first year experience.

The methodological approach utilized both qualitative and quantitative components. The qualitative component of the study consisted of journal entries, focus group discussions and individual interviews. The journal entries were gathered throughout the year. The focus groups and interviews were conducted at roughly the mid-point of the academic year. The quantitative component of the research was a web-based questionnaire that was conducted during the second semester. The second semester was chosen for the questionnaire because students would have had sufficient experience of first year to give an informed response to the items in the questionnaire.

The findings of the study indicated that students in a competitive first year university environment were focused on their academic work and spent little time on extracurricular activities. Participants were quite stressed by the competition to get into the second year programme of their choice and developed specific skills to help them address the challenges of the competition. The findings also indicated that students’ ability to adjust to the first year was dependent on the quality of social support they received and their ability to cope with stresses through active, positive coping behaviours.

The findings are interpreted in light of the research presented on first year students, students in highly stressful programmes, self-regulatory abilities and on the effects of social comparison and mindfulness in dealing with issues of social comparison. The findings suggest that a broader, more context-dependent perspective on first year students in high stress settings is called for in higher education research. They also suggest that many students find that the stressors involved in such programmes may lead to substantial individual growth in terms of maturity and a sense of responsibility.

Jameson-Charles, Madgerie (2)
Exploring Granadian youth perception of participation in National Development and their level of satisfaction with youth policies and programmes
Charles, Henry, The University of the West Indies

This mixed methods study is a part of a situational analysis of youth in Grenada to inform the development of a new National Youth Policy. We will present the section on youth participation and satisfaction. The study examines the young people’s perception of Grenada’s youth development landscape, specifically youth participation in nation building and their level of satisfaction with the youth programmes and policies implemented by the Government of Grenada.

An exploratory mixed methods design was utilized for the study. The qualitative component of the study consisted of community conversations and individual interviews. These community conversations were conducted with youth leaders, youth workers and other key informants. The quantitative component of the research was a questionnaire administered to a stratified sample of young Grenadians in each electoral district.

Preliminary findings of the study indicated that 75% of the 2233 young people surveyed were interested in participating in programmes offered by the ministry. However, whilst 66% indicated that they had been invited to participate, only 36% indicated overall satisfaction with the programmes offered. Further analysis indicate that education level was the greatest predictor of satisfaction and likelihood to participate in national development.

The qualitative findings indicated that young people did not feel motivated to participate in programmes because they were not involved in the conceptualization and planning of the programmes. The results also suggest young people felt that their participation was tokenistic and not geared at their professional development. The findings are interpreted in
the context of the thrust towards a positive youth ethos and increased support for youth engagement in the global Sustainable Development agenda.

Johnson, R.Burke

How to Conduct Mixed Methods Research: Design and Analysis with Validity in Special Education

David Houchins, John Hitchcock, Anthony J. Onwuegbuzie, Jeffrey A. Anderson

1 University of South Alabama, 2 Georgia State University, 3 Indiana University, 4 Sam Houston State University, 5 Indiana University

There is a relative lack of mixed methods research (MMR) in special education inquiry (Onwuegbuzie & Corrigan, 2016). One possible reason for this is that, whereas the field relies on a number of quality indicators for different designs (see Odom, et al., 2005), there does not appear to be a list of indicators designed to guide MMR in special education. Yet, such indicators are needed because the field of special education deals with, for example, a number of challenges that derive from working with students with low incidence disorders that yields high reliance on idiographic causal inference, interplay among very different stakeholders (e.g., students, parents, school staff) in an ever-changing policy environment, and a need to account for child voice even when such voice is minimized by a disorder and related environmental factors.

The purpose of the proposed paper, therefore, will be to provide an overview of how MMR approaches can be used to address special education inquiry. A particular focus will be to promote MMR design choices and analyses that, in turn, yield trustworthy findings and inferences. Specifically, we will describe the purposes of mixing (e.g., Greene, Caracelli, & Graham, 1989), common design choices (e.g., Creswell & Plano Clark, 2011; Schoonenboom & Johnson, in press), interactive combination of mixing at the levels of method, methodology and paradigm (e.g., Green, 2015), the known strengths and limitations of MMR, different validity concepts (e.g., Onwuegbuzie & Johnson, 2006), and analytic options (e.g., Onwuegbuzie & Hitchcock, 2015). Finally, we will apply these concepts to different types of special education questions.

References


Jura, Jarosław¹  
Comparison of qualitative and quantitative coding in media and Internet content analysis.  
Kaja Kalużyńska²  
¹Lazarski University, Warsaw, Poland; ²National Chengchi University, Taipei, Taiwan

Content analysis of various media is a quickly developing branch of empirical studies, which could be applied in business, governance, sociology, medical studies, etc.

The empirical background of the paper is related with two studies: first one focused on the image of China and Chinese in Zambian and Angolan media and among Zambian and Angolan internet users; and the second one aimed to establish the image of China and Chinese presented by Polish media.

The paper relates to the mixed method approach in two following ways. Firstly, we would like to present the coding approach we applied (aimed at construction of dictionaries and particular categories). It is based on the Glaser’s and Strauss’ grounded theory (which means that we not only use both qualitative and quantitative methodology, but also employ some aspects of more qualitative approach to quantitative content analysis procedures). Moreover, the most important goal of this paper is to present the comparison of results obtained by both quantitative and qualitative analysis.

The most significant bias of quantitative approach in content analysis of textual content (based on dictionaries composed of categories and keywords) is the lack of contextuality. For instance, while trying to analyse co-occurrences of categories related to China and corruption, we could not know for sure how to interpret this information, whether it constituted a negative image of China (China promotes corruption) or a positive one (China fights with corruption). Up to now, as long as the automatic coding technologies (based on AI) are still both time consuming and imperfect, this is probably the major problem and bias related to quantitative analysis of textual content.

On the other hand, qualitative analysis usually is not supposed to be conducted on large sets of data due to the fact that even while supported by CAQDAS software, it could be an enormously time consuming task.

In case of the two studies mentioned before, we decided to conduct both qualitative and quantitative content analysis based on large sets of data and employing categories related to positive and negative image of China. The goal of such procedure was to estimate potential bias related to quantitative content analysis, and to describe differences arising from application of both methods. As we believe, such a procedure, although till now applied only to chosen field of study and geographical areas, may provide relevant information related to data reliability and validity. Furthermore, while supplemented by more studies in the future, it may enable us to develop a better quality mixed method content analysis methodology (applicable to country, brand image studies, etc.). In such case, qualitative analysis will be based on a sample of the whole studied population of textual content, while quantitative analysis will be supported by information related to its potential bias. Furthermore, we hope that at least till the time when fully automated and reliable coding procedures would become available (which may takes quite long time), it might be a method improving significantly the overall quality of the country image focused content analysis.

Kamndaya, Mphatso  
Mixed methods research in the study of the material deprivation and sexual risk nexus among young people in urban vulnerable environments in South Africa and Malawi  
WITS School of Public Health; African Centre for Migration & Society, University of the Witwatersrand, Johannesburg, South Africa
Background: This article examines how methods are best integrated in studies of material disadvantage and sexual risk among young people in vulnerable urban environments.

Objective: We explore the benefits of mixed methods research (MMR) for understanding the material deprivation and sexual risk nexus among young people in the urban slums of Blantyre, Malawi.

Methods: Through a mixed-methods approach, three sub studies were conducted. Sub study one was analysis of secondary data from South Africa to inform the study design and methods in Malawi. Sub study two included five focus group discussions and 12 in-depth interviews, undertaken with a total of 60 young people aged 18-23 years old, exploring living experiences and sexual risk practices. This exploratory qualitative study informed a cross-sectional survey (Sub study three) that explored material deprivation and sexual risk among young people (n = 1,071) in the urban slums of Blantyre, Malawi.

Results: Through synthesis of the findings from the two sub studies, four central themes were identified: (1) patterns of sexual risk; (2) underlying reasons for decisions to engage in transactional sex; (3) measures of disadvantage associated with sexual risk; and (4) study design and methods.

Conclusion: MMR can improve empirical studies with the complexities of social reality and enhance understanding of the relations between deprivation of material resources and sexual decision making among young people living in vulnerable urban environments.

Kansteiner, Katja
Mixed-methods-approach in mono-education research – securing a deconstructive attitude while discovering the social construction of gender
University of Education, Weingarten, Germany

In gender theory the constructivist approach towards gender differences is broadly accepted, however not in everyday school life (Jäckle 2009). The conception of women and men being different by nature or socialization is common and teachers have not yet caught up to the theoretical gender knowledge. At the same time mono-educative schools are highly regarded as better for the learning achievements of girls (less of boys) (Herwartz-Emden 2007). In a current project (Budde, Kansteiner & Bossen 2015) we investigated practices of the social construction of gender within a school that runs mono- and co-educative classes in parallel. We collected data by ethnographical observation in the classroom and qualitative interviews with teachers. Furthermore we added a standardized questionnaire on the students’ experiences in class. Through triangulation (Kuckartz 2014) of different data and of theoretical perspectives – the gender discourse and the school pedagogic discourse on good teaching – we found two important results which would not have been discovered using a single method approach or only one theoretical reference: (1) The mono-educative structure of the school in focus has a meaningful impact on the school members’ perspectives on ‘right’ teaching for the sexes. (2) Behind modern teaching methods claiming to serve individual development teachers’ pedagogic and didactic decisions are run by disjunctive gender attributions. In our explorative design we followed a monomethod multistrand design (Teddlie & Tashakkori 2009) by combining two strands of qualitative data (observation and interviews) in order to enlighten the professional thinking behind classroom practices. Additionally we included a quantitative strand using a questionnaire for students to contrast the teachers’ view on their classes with the students’ insights. So we finally worked with a mixed method design (Cresswell et al. 2003). By triangulating in multiple ways we were not only able to enhance the understanding of the teaching practices and disclose an area of conflict in mono-education. We also ensured a deconstructive attitude as researchers and avoided gender stereotyping in the research process. Those two benefits recommend a flexible mixed methods approach for complex school pedagogic gender research.

Karupiah, Premalatha
Sexual Violence and Tamil Movies: A Mixed Method Analysis
Bala Nikku Raju
School of Social Sciences, Universiti Sains Malaysia, Malaysia

Sexual violence is socially constructed. What it means to be a victim or perpetrator of sexual violence is very different in different societies. Similarly, the loss experienced by victims may be socially constructed. Discourses on sexual violence are often articulated in the media. These discourses are important in the treatment of victim and perpetrator not only by the state and media but also by the society and most importantly those closely connected or related to the victim or the perpetrator. Research has consistently linked violence viewing with imitative behaviour, increased hostility and acceptance of violence. Many studies have analysed sexual violence in movies in Hollywood movies. Studies focusing on movies from South Asia focus are very few and mostly focus on Hindi movies. This paper is based on a preliminary analysis of ten Tamil movies. Quantitative content analysis was used to identify type and extent of sexual violence and qualitative content analysis was used to explore the meaning of sexual violence in Tamil movies. The movies were selected using a purposive sampling method. Only movies that have at least one scene showing or discussing sexual violence were selected. In Tamil movies, sexual violence particularly rape is used both as the main plot or a sub-plot. Other than that, sexual violence is also used in comedy scenes. The perpetrators are male and are mostly the ‘villain’ but can also be the ‘hero’ or supporting characters. Some forms of sexual violence are portrayed as being part of courtship. Rape and pre-marital sex are sometimes discussed in a similar manner in some movies and this blurs the line between what is rape and sex. Portrayal of sexual violence particularly rape focuses mostly on the loss of honour and virginity and does not give much importance to the trauma faced by the victim. These portrayals raise concern on how sexual violence may be perceived and constructed by the viewers.

Khalsa, Gurupreet K
Dialogism as Remediation: Building Self-Efficacy of Underprepared Writing Students
University of South Alabama, Mobile, AL USA

Dialogism is a theory that all ideas and meaning are products of human interaction (Bakhtin, 1981). Learning is a social activity; dialogical education implies multiplicity, a “shared production of meanings” (Sidorkin, 1999, p. 41). Kuhn’s (2015) research suggests that dialogical engagements have a positive impact on intellectual development. Novice scholars need to experience control and authority over what may seem like the foreign environment of academic discourse (Johnson & Krase, 2012; Jones, 2008).

This mixed methods study attempted to capture in a holistic manner student perceptions and opinions as they participated in classroom activities based on dialogical interactions. The qualitative and quantitative aspects worked together to provide a more thorough understanding of the students’ experiences than either element could do alone. The research was framed in four general questions: What are students’ experiences in a developmental writing course where dialogical classroom processes are employed? Does students’ participation in dialogical processes affect their self-efficacy for college writing? Does students’ participation in dialogical processes affect their epistemic beliefs? Does students’ participation in dialogical processes affect writing characteristics? The primary, or core, component of the study was narrative inquiry. The experiences of participants in a particular situation were investigated by exploring the personal and social interactions that they developed during the course of the experience. Qualitative data included writing assignments, student journals, and interviews with individual students. Two quantitative instruments were used. The Writing Self-Efficacy Scale (WSES) developed and modified by Jones (2008) has three subscales measuring writing behaviors, writing tasks, and writing skills. The Epistemological Beliefs Survey (EBS), developed by Wood and Kardash (2002), includes five subscales: (a) characteristics of successful students, (b) knowledge
construction and modification, (c) speed of knowledge acquisition, (d) structure of
knowledge, and (d) attainability of objective truth. Qualitative data elaborated and complemented the findings from the questionnaires. Changes on the WSES related to students’ confidence to analyze text sources and to include viewpoints different from their own supported the statements that students made about understanding different perspectives. Increases in scores in the EBS dimension of knowledge construction and modification related to forming one’s own ideas about an issue were supported by qualitative data. The rich depth of students’ own words about their experiences illuminated particulars of those experiences, suggested the theoretical process, and when viewed holistically conveyed a general picture of concepts explored. Findings indicated that for the majority of students, dialogical interactions were positive, expressing many variations on the theme of having more ideas to explore. Students also reported that their confidence for college writing improved. In courses where students can engage together to explore ideas rather than sit through a monological transmission of information, they are more likely to engage with content and to be enthusiastic about sharing perspectives as well as likely to improve academic outcomes (Kuhn, 2015). Such strategies can potentially improve student success in college (Lucas, 2014) as well as provide necessary bridges between old identities and new ones as members of an academic community.

Klassen, Ann C.†
Creating Eco-literacy: Agency and Responsibility in Media Presentation of Sustainability Issues in Diverse Populations
Suzanne Grossman†, Marisa Felsher† and Kelly Joyce‡
†Department of Community Health and Prevention, Drexel University Dornsife School of Public Health, Philadelphia; ‡Program in Science, Technology and Society, Drexel University College of Arts and Sciences, Philadelphia

Introduction: The environmental movement has long suffered from a public image of elitism, and the interests and goals of environmental activists are often portrayed as either irrelevant, or directly in conflict with, the needs of low resource populations and communities. This limits the ability of sustainability policies to gain widespread support, and to achieve full potential for insuring future health and well-being at a population and global level. At the same time, the growing recognition of environmental justice issues, on local, national and international scale, has emphasized the vulnerability of low resource populations to threats such as global climate change and extreme weather, water scarcity, and management of waste to avoid environmental degradation and health risk. Low resource communities are seldom portrayed as being in control of their environmental future, and rarely given the practical tools needed to achieve “eco-literacy” and create sustainable lifestyles into their own communities and families. Thus the group most in need of education and skills in order to control the environmental sustainability of their communities are the least likely to receive them. The media play a critical role in creating public perception of issues such as environmental sustainability. The media set the agenda for public attention to issues, as well as presenting the framework within which certain issues are understood – through presentation of causes, actors and possible solutions to problems. To the extent that public health and environmental advocates can understand how media agenda setting and framing influence public understanding of issues, so we are better prepared to make sure key public health messages are communicated, and public understanding is improved. It is especially important to increase the understanding of sustainability and environmental issues in low resource populations, who may have limited access to information about environmental issues affecting their communities and interests.

Methods: This exploratory mixed methods study analyzes news coverage of sustainability and environmental issues, focusing on the portrayal of diverse and vulnerable populations
and communities. Using LexisNexis and iteratively developed key terms, we captured all 2014 U.S. print news stories portraying environmental issues and vulnerable populations, which were then coded for content, using structured coding. A purposive subsample was also coded qualitatively for thematic content. A mixed methods analysis is being used to identify potential ways in which environmental health messages could be improved.

Results: An initial capture of 1374 articles yielded a final sample of 312 articles from 84 U.S. newspapers. Codes were developed to capture 40 unique environmental issues, 12 different vulnerable populations, and 16 stakeholder groups. Coding captured article characteristics (prominence, tone, slant), and story elements including portrayal of conflict between groups, direction of the environmental situation (declining or improving), and agency of vulnerable populations.

Conclusions: There is substantial media coverage of a diverse range of environmental issues confronting vulnerable communities, offering opportunities for improved environmental health awareness and education.

Kmiotek-Meier, Emilia
Student mobility research and mixed methods approach
Dr Ute Karl, University of Luxembourg

Intra-European student mobility has a high political priority, stressed e.g. in the official documents. At the same time very little solid empirical evidence (structural and research data) exists. Additionally, the political goal to achieve 20% student mobility rate by 2020 seems to miss overall guidelines and the quota is still remote.

The study focuses on intra-European student mobility with focal points regarding the 1) fostering and hindering factors linked with a student stay abroad in another European country through the theoretical lens of the agency approach and 2) (potential) difference between credit and degree mobile students. Until now the research has focused rather on structured short-term intra-European mobility (Erasmus) and neglected the other dimension and the complexity of student mobility phenomenon.

To address these two foci, various aspects of student mobility will be focused, e.g. the process of preparation, mobility capital, obstacles and support before/during/after the stay and relevant relations relating to abroad experience - to name a few.

To capture those aspects in one study, the mixed methods approach was chosen. The conference contribution will focus on following challenges and pitfalls while designing and conducting a mixed methods project related both to methodological and practical side of a research process:

- different aspects need different access – the choose of appropriate methods against the backdrop of the theoretical perspective of agency approach;
- when and how to design which instruments – having in mind that they should be coherent and ‘brought together’;
- bringing things together – when and how to start with bringing the results together, so that the ‘mixing’ potential is given as good as possible.

We hope to contribute with the study to discussion regarding the mixed methods approach in the field of mobility research, which is still rather divided in the qualitative and quantitative perspectives.

The study is a part of the MOVE-project (Mapping mobility – pathways, institutions and structural effects of youth mobility in Europe) financed by the EU-programme Horizon 2020.

König, Stefan
A Plea for Mixed Methods Research in RT-PE
University of Education, Weingarten
Research on Teaching in Physical Education (RT-PE) has become a fruitful branch of research in sport pedagogy focusing on the teaching and learning process by analysing the “processes, social dynamics and outcomes (motor skill, attitude, knowledge and fitness) of physical education” (Silverman & Skonie, 1997); this includes inquiry into the preactive (planning), active (execution), and postactive (reflection) phases of instruction (Silverman, 1991, p. 352). As a consequence, RT-PE works with different approaches from the social and behavioural sciences ranging from full experimental quantitative studies to ‘pure’ qualitative studies, but still mainly following an “either - or”-strategy (e. g. Novak & Bernstein, 2015). However, Physical Education comprises a lot of complex phenomena, e. g. game ability, fitness, self-concept, or juvenile sport engagement – issues which can be understood at a more profound level by using mixed methods research approaches (MMR). Nevertheless, a thorough observation of research in both sports science in general and RT-PE in particular only shows a gradual adoption of this paradigmatic discussion, and if so, the discussion seems to take place in emerging sub-disciplines of sports science rather than in its social and behavioural core disciplines such as sport pedagogy and sport psychology – a reverse development compared with other scientific fields (e. g. Tashakkori & Teddlie, 2003).

In view of these facts this presentation will deal with the potentials and limitations of mixed methods research in RT-PE, therefore also trying to generate an additional value for MMR by applying and proving its designs in a rather young and specific scientific domain. Hence, it first approaches research streams and methods of RT-PE by analysing some milestone papers to illustrate the state-of-the-art. Secondly, some key elements of mixed methods research, e. g. timing, weighting, etc., are examined with the aim of integrating this approach into RT-PE. In a third step, several examples of mixed methods designs from the field of RT-PE are presented to show the added value of MMR for different epistemological interests of RT-PE; this will be substantiated with the examples of a convergent, an experimental, and a quantitative dominated cross-over design using hierarchical linear modelling. In doing so, this presentation will also contribute to the conference idea of approaching complexity in applied social research. Finally, the mutual benefits for RT-PE and MMR will bring about a more general view of the issue at hand.

**Koopmans, Matthijs**  
Implications of Complexity Theory for Mixed Methods Research  
*Mercy College*

In applied social science research, our understanding of what works and what does not is often a result of the causal inferences we draw from our research findings. Yet, our ability to do so is inhibited by a predominantly restrictive view in the policy arena of the circumstances under which such inferences are permissible. As randomized control trial (RCT) designs have been elevated to the gold standard for causal research, the approximation of that standard is a critical factor in making decisions about funding research, as well as in deciding what research findings really matter to the field. The privileged status of RCT received some pointed criticism from qualitative researchers, as well as from the point of view of complexity theory. This presentation will discuss this latter perspective, and its implications for the use of mixed research methods to improve our understanding of cause and effect. Complexity theory aims to describe the behavior of systems that are multifaceted, contain many interacting components, and are hierarchically structured in the sense that the behavior of a system in its entirety cannot be readily reduced to the behavior of its constituent components (i.e., the whole is greater than the sum of its parts). Systems of this kind are typically the ones in which policy researchers take an interest (e.g., schools, classrooms, healthcare, social services, youth development organizations). With respect to the use of RCT in these contexts, complexity theory takes issue with the following: The focus on outcomes isolates individuals’ behavior from the systemic context in which it occurs; Causality is retroactively inferred from mean differences between treatment groups, while the processes in the system
generating that causality are not observed systematically; The complexity of many interventions cannot be readily reduced to a simple categorical treatment-control group designation, as many components of an intervention may be shared across treatment modalities; Static outcome measures (“snapshots”) may not accurately describe systems that are in flux or in a high state of turbulence, and whose behavior might therefore be unpredictable; Explanatory models that reason from interventions to outcomes (linear causality) ignore the feedback loops in the system (recursive causality). Addressing these shortcomings calls for mixed method research that combines a statistical description of outcome differences with data about the complex processes through which these outcomes are generated. It is proposed that the following methodological principles may help give shape this endeavour:

- Triangulation of outcomes from experimental studies with information about complex processes in the systems of interest to fortify causal inferences;
- Greater utilization of single case designs allowing for a fine-grained examination of the processes of change over time to understand the baseline settings of the system as well as departures therefrom;
- Two-tiered studies in which a detailed examination of social interaction patterns within systems is coupled with interviews or other qualitative data collection procedures gathering information about subjects’ perceptions of the systems of which they are part, thereby linking microscopic to higher level systemic processes.

Kuckartz, Udo¹
Joint displays as tools for the integration of qualitative and quantitative findings. New developments in research methods.
Stefan Raediker², ¹Philipps-University Marburg / Germany; ²Verbi Software, Berlin/Germany

The following abstract concerns the question „What are the cutting edge analysis and interpretation strategies and practices with regard to the integration of qualitative and quantitative findings that can serve to enhance the credibility of mixed methods outcomes? Doing mixed methods requires much more skills than doing data analysis only within one paradigm. As a mixed methods researcher you need to have skills in both of the methods qualitative as well as quantitative - and moreover you need to know how to integrate the results of the quantitative and the qualitative strand. The crucial point of mixed methods research is not only the design it’s the integration of results. The kind of integration depends on the mixed methods design and the motives for choosing a mixed methods approach.

This paper will address strategies and practices with regard to the integration of qualitative and quantitative findings that can serve to enhance the credibility of mixed methods outcomes. Generally spoken, integration, or let’s say connection, of QUAL and QUAN, can be realized in four ways

a) on the level of results, e.g. research reports
b) in the way that the result of one study have an impact on the data collection of the other study – this is typical for sequential designs, and it can happen in both ways
c) on the level of data, in this case it is required that QUAL and QUAN data have been collected for all respondents
d) by transformation of one data type into the other type; so to say by qualitizing or quantitizing

The paper will particularly focus on the so-called “joint displays”. According to Creswell a “joint display is a figure or table in which the researcher arrays both quantitative and qualitative data so that the two sources of data can be directly compared: In effect the display merges the two forms of data.” We will present the latest developments of joint displays and also the integration in state-of-the-art software.
LaChenaye, Jenna M  
The University of Alabama at Birmingham, USA

Despite its continued growth in popularity in social science research, mixed methods as a tool in evaluation has remained largely ill-defined in the practice as well as in academics. Evaluation as a discipline differs from traditional research not in its selected methods, but in the inclusion of value judgments in the final conclusions and dissemination of evaluation results — results that often influence or determine the continuation of programs or services that serve varying populations. As mixed methods researchers work to define their practice in evaluation circles, the strengths of mixed methods designs within this discipline should be further discussed as evaluators work to define the specific role of mixed methods in evaluation. The goal of this paper is twofold: first, to make a case for not only promoting mixed methods use in evaluation, but to define mixed methods evaluation specifically and encourage the building of this subgenre of the paradigm; and second, to further this case for mixed methods inclusion by drawing attention to mixed methods’ role in assisting evaluators in meeting the standards of cultural competency in evaluation.

Cultural competency focuses on the ways in which culture influences the assumption of value in evaluation and the ways in which evaluators, as cultural beings, are influenced by their own biases in evaluative work. With all evaluation work taking place in “on the ground” initiatives, incorporating cultural competency into evaluation practice has become of greater importance and a greater stress has been placed on attending to program context. Mixed methods in particular has the ability to help uncover this context and participant values by encouraging qualitative measures in addition to traditional quantitative ones and, perhaps more importantly, to encourage the idea of continued evaluation improvement by embodying an idea of continued data collection and critically viewing the limitations of single strand and one-stage evaluation data collection.

To better illustrate these tenets of mixed methods research and benefits in evaluation, the presenter will share a specific case study of an evaluation utilizing an iterative design and discuss the ways in which mixed methods practices improved evaluation results exponentially, the ways in which cultural context was highlighted through its incorporation, and the benefits mixed methods afforded specifically in the realm of value judgment in evaluation. The proposed presentation seeks to examine its role in and discovery of cultural values and influences, and possible implications for the purposes of culturally responsive evaluation.

Larson, Elizabeth  
Developing evidence for health care practice: It may work but does it fit client’s lives and will they adopt it?  
University of Wisconsin-Madison

Currently Random Controlled Trials (RCT) are at the pinnacle, as the highest standard. Yet even Cochrane recognized the limits of evidence-based medicine in addressing the scope of information important to clients. In producing evidence for practice, as demanded by professions and funders, health practitioners not only need to identify effective treatments but also interventions that are likely to be adopted and sustained by clients. This session will provide an overview of the issues in developing evidence for practice; and describe key elements necessary for client-centered knowledge generation. These key issues include ways to leverage clients’ personal experience and knowledge to develop adoptable sustainable interventions, tailor interventions while still providing replicable manualized procedures, effectively examine intervention outcomes at multiple levels and dimensions, and ethically investigate intervention effects by carefully designing control group.
comparisons. An exemplar of a participant-driven mixed-methods study design used to develop and evaluate a wellness program for caregivers of children and youth with autism will be provided and evaluated. Participants are encouraged to bring their own experience, quandaries and study designs to discuss the development of sustainable, tailored evidence-based interventions. We will focus on how the use of using mixed methods may address challenges in producing high quality client-adoptable evidence for practice.

Lipps, Garth
INSIGHTS into Children’s Temperament: Evaluating a behavior management programme

Department of Sociology, Psychology and Social Work, The University of the West Indies, Mona, Kingston, Jamaica

Loraine D. Cook (1st author) School of Education, The University of the West Indies, Mona, Kingston, Jamaica

The purpose of this study is to apply multiple methodologies to evaluate the process and outcome of an early childhood educational programme – “INSIGHTS into Children’s Temperament Programme” – in a Caribbean context. INSIGHTS is a three year intervention programme that provides parents and teachers with child behaviour management strategies tailored to fit individual children’s personality styles and to help children develop self-regulating skills. At the end of the academic year 2014/2015 (the second year), the INSIGHTS Programme impacted 1,299 children (5 to 6 years of age), 76 parents and 43 teachers. Process evaluation of the implementation and functioning of INSIGHTS was conducted via weekly questionnaires and focus group interviews. To evaluate the effectiveness of INSIGHTS, a randomized institutional cycles design was employed using a subset of students from the programme. Twelve classrooms of students five years of age from 6 schools located in low income communities in a selected urban area of Jamaica were randomly assigned to either receive INSIGHTS immediately (6 classrooms) or to receive INSIGHTS at a later time. Due both to the costs and time needed to administer the battery of measures; the sample size of participants was restricted to 5 students randomly sampled with replacement from each classroom along with one of their parents and two of their teachers. In all 60 children, 60 parents and 24 teachers took part in the outcome evaluation. At the start and the end of the INSIGHTS intervention a battery of measures were administered to students, parents and teachers. Two subtests of the Woodcock Johnson IV Tests of Achievement (Letter-Word Identification and Applied Problems) were administered to the students. Parents completed The School Age Temperament Inventory which assesses personality (Negative reactivity, Task persistence, Withdrawal, and Motor activity) and the Parent Daily Report which measures children’s disruptive behaviours. Classroom teachers of sampled students completed four measures – The Academic Competency Evaluation Scales (ACES) which measures students’ reading, math and critical thinking skills; the Sutter-Eyberg Student Behaviour Inventory (SESBI) which measures students behaviour problems, (attentional, overt aggression, emotional opposition, covert disruptive behaviours, and problems for the teacher); the Teacher School-Age Daily Report (T-SATI) which assesses children’s temperament (Negative Reactivity, Task Persistence, Withdrawal, and Motor Activity); and the Student-Teacher Relationship scale which assesses closeness and conflict between the student and teacher.

The use of a multimethods approach will allow the researchers to address the benefits and challenges of the programme and provide an understanding of parents’ and teachers’ experiences in the programme. The outcome evaluation will provide evidence of the impact of the programme at this point of the intervention on students’ academic performance and behaviour. Based on results from previous studies (McClowry, Snow, & Tamis-LeMonda, 2005), the implementation of the programme in Jamaica is expected to enhance teacher-student relationships by providing teachers with effective classroom management tools; to
enhance parents' behavioural management skills by providing them with effective behaviour management skills tailored to their children's personality; and to develop students' self regulatory skills.

Losoncz, Dr Ibolya (Ibi)
Mixed methods approach in refugee migration research: moving from empirical observations to theoretical explanations of social transformation
RegNet, School of Regulation and Global Governance, Australian National University, Canberra, Australia

This paper examines the role of mixed methods to critically query and better understand the complex processes of refugee migration and resettlement. Refugee migration is enmeshed in historical events, legal structures, institutional power, and actions and ambitions. Its research requires the study of the micro-level experiences and actions of refugee migrants and the institutional structures and actions of state powers. Some of these elements, such as, legal frameworks and responses to it (i.e., observe, overlook, or violate) exist objectively. Yet, the mechanisms underlying responses are experienced subjectively. The experience is subjective as it is influenced by the individual, cultural, and historical experiences of actors. These subjective experiences have a strong influence on how migration and resettlement processes and experiences are constructed. Thus, refugee migration research needs to account for both the objective and the subjective.

Objective aspects of social research tend to be analysed by quantitative methods, typically informed by a positivist approach, while subjective aspects approached from a constructivist perspective using qualitative methods. Despite the desirability of acknowledging both aspects, migration research is dominated by quantitative analysis of observable events only, as a source of evidence for policy making, without accounting for the underlying processes developing on both psychological and societal planes, and the personal and sociocultural experiences of actors. This may partly due to the methodological challenge of integrating objective and subjective aspects of ones' research despite their different ontological planes. Data collected from different methods cannot simply be added together to produce a unified reality; it needs to be integrated and be made sense of in relation to each other.

The paper explores the use of critical realism as one framework to connect data collected by different methodologies to capture subjective realities with objective patterns of the social world. I demonstrate how taking a critical realist approach my mixed method research enquiry of the forced migration and resettlement experiences of South Sudanese refugees in Australia has led to broader theoretical propositions on systemic exclusion of refugee migrants. It is an example, how research, prompted by an applied query, can go beyond of uncovering and describing social change to providing analytical accounts and theoretical explanations of the mechanisms generating social change and its reproduction. Taking this approach is also more likely to generate more appropriate policies and interventions.

Mapp, Fiona
The untapped potential of national survey data in mixed methods research: using Britain’s third National Survey of Sexual Attitudes and Lifestyles (Natsal-3) as an example
London School of Hygiene & Tropical Medicine

Background: Mixed methods research tends to either use small samples of participants, or unlinked data from different samples to investigate complex social phenomena. By including additional research strands to existing survey projects, it may be possible to synthesise findings on a larger scale and gain more comprehensive insights into social issues. We present integrated quantitative and qualitative findings about experiences of genito-urinary symptoms and associated healthcare-seeking behaviour using Natsal-3. Natsal-3 is a large,
detailed survey of sexual behaviour in Britain building on previous surveys conducted over the past three decades. We use this study to exemplify opportunities for mixed methods research using an existing survey protocol.

Methods: This study uses an adapted participant-selection variant of the explanatory sequential mixed methods design with a dominant qualitative strand. Data collection was sequential with a minimum of 22 months between quantitative and subsequent qualitative strands. The quantitative component uses Natsal-3 probability survey data from 15,162 women and men aged 16-74 collected between 2010 and 2012 with a response rate of 57.7%. We focused on a sub-sample of sexually-experienced Natsal-3 participants aged 16-44 (n=8947) who answered questions about recent genito-urinary symptoms and attendance at sexual health clinics. Complex survey analysis was carried out to estimate prevalence of reported genito-urinary symptoms and non-attendance at sexual health clinics.

We identified a sub-sample of Natsal-3 participants who reported genito-urinary symptoms and never having attended a sexual health clinic. Purposive sampling was used to recruit participants for semi-structured interviews focussing on genito-urinary symptom experiences, service use and STI perceptions. Interviews took place 2014-2015. Data was digitally recorded and transcribed verbatim. We used Interpretative Phenomenological Analysis to analyse transcripts and double coded one third.

Data was analysed independently but concurrently to enable emergent qualitative findings to inform quantitative analyses and vice versa. Additional analysis was then conducted using mixed method matrices to produce integrated, synergistic findings about genito-urinary symptoms and care-seeking.

Results: Quantitative findings showed current symptoms (last 4 weeks) to be more commonly reported by women than men (21.6% (95% CI 20.4-22.9%) vs. 5.6% (95% CI 4.9-6.6%), of whom 86.3% (95% CI 84.2-88.1) reported not having attended a sexual health clinic in the past year. Qualitative findings from 16 women and 11 men suggested bodily changes were not always viewed as symptoms requiring healthcare. Individuals normalised, concealed and/or distanced their experiences from STIs. GPs were the preferred service provider due to familiarity of settings and the non-specificity of the health problems addressed. Integrating findings shows that not all genito-urinary symptoms are recognised, leading to potential under-reporting. Sense-making processes and decisions about care needs are complex and gendered and symptoms do not necessarily trigger care-seeking.

Conclusions: A mixed methods approach using existing Natsal-3 protocols enabled us to produce insights into genito-urinary symptom experience and explanations for why people had not attended a sexual health clinic with linked data. By integrating the quantitative and qualitative findings we were able to produce nationally representative and generalizable symptom and non-attendance at sexual health clinic estimates contextualised within individual lived realities.

McCalla, Rohan

Evolution of Mixed Methods Research in a Developing Region

Lorraine D Cook (1st author), Stanford Moore, Tashane Haynes-Brown, Karen Thwaites, Olivene Thomas, Leemoy Weaver, Clavia Williams, Steve Weaver, Lloyd Waller, Avalloy McCarthy

Mixed Methods Research to some Caribbean researchers is still in its embryonic stage and can at times lead to uneasy relationships among colleagues. To date, its designs and procedures are still not fully understood and embraced by some researchers in the English-Speaking Caribbean. There is little attention in Caribbean literature with regards to how researchers integrate quantitative and qualitative strands into the same study. Further, there is a dearth of information on the conceptualization of mixed methods research and how it has changed over time. This paper will consider the historical and recent use of quantitative and qualitative research published within single studies within the Caribbean. This will be a
methodological review of dissertations and articles over the past 20 years from disciplines within Social Sciences, Education and Nursing in the English-speaking Caribbean. In the analysis conducted we will categorize these publications into mixed methods or multi-methods approach according to their use of each method in different stages of the research process. We will seek to identify strengths and concerns in researchers’ use of mixed methods designs. This paper also aims to delineate designs for mixing quantitative and qualitative research. It is hoped that the findings of this paper will provide a foundation from which researchers within the region will provide more robust analysis of the social problems of the region.

Keywords: Mixed methods research, methodological review, Caribbean, multi-methods research, qualitative and quantitative research

McIntyre-Mills, Janet
Research design and process to address wellbeing, food, energy and water security through narrowing the gap between service users and providers

The paper addresses the design and process used in three projects to address participatory democracy and governance in South Australia. It details the qualitative and quantitative approach used by an interdisciplinary research team spanning public sociology, anthropology, Aboriginality, critical systems thinking and informatics. The multistage project used narrative, storytelling, participant observation, focus groups, soft systems mapping and the co-creation of scenarios to build a shared platform for data collection with the help of an informatics designer.

The purpose of the approach was to ensure that the lived experience of the service users provided the empirical basis for service provision. The perceptions of service users on social, economic and environmental concerns were elicited through asking participants to express in their own words what supports or undermines wellbeing in their community.

This project then makes suggestions for scaling up the research in Jakarta to address the human security concerns associated with our current living choices pertaining to food, energy and water. There is little doubt that accelerated climate change will adversely affect wellbeing and sustainability in Australia (Flannery, 2005, Stiglitz et al, 2010) — particularly if we continue to consume at current rates (Davies & World Institute, 2008, Rees and Wackernagel, 2008). The impact of climate change has been underestimated (Rockström et al, 2009) and if the ‘UN Future Earth’ initiative and the ‘Paris Agreement on Climate Change’ are to achieve a lowering of emissions that meet the so-called Tuvalu Test that measures consumption choices (Murray, 2007) — then Australia (and other Developed Nations) will need to limit the size of ecological and carbon footprints even further so that rising sea levels will not adversely affect the life chances of humans and other species on islands such as Tuvalu and Kiribati. This research addresses the paradox raised by Wadsworth (2010: xvii) that ‘we want change’ – and yet ‘we do not want [to] change’.

As a non-Aboriginal researcher, the paper discusses 18 years of research with Aboriginal Australians including an ARC linkage grant and several publications including 5 monographs. The process of participation is detailed in ‘User-centric policy design’ (McIntyre-Mills 2008), based on research conducted in South Australia and funded by an Australian Research Council Linkage Grant and ‘Critical Systemic Praxis for Social and Environmental Justice’ based on research conducted in the Northern Territory and funded by Local Government (McIntyre-Mills, 2003). They respectively made the case that participation enhances attachment to policy ideas and narrows the gap between perceived needs and service outcomes. In ‘Wall Street to Wellbeing’ (based on the Australian Local Government funded research) McIntyre discusses in detail public engagement to enable people to make better social, economic and environmental consumption choices and thus to think about wellbeing and sustainability. Specifically, this research builds on the findings of 1) a Participatory
Action Research (PAR) project with Aboriginal Australians focused on wellbeing (ARC linkage LP0560406) and 2) a PAR project on decision-making to promote adaptation to climate change (Local Government Grant https://wellbeing.csem.flinders.edu.au/) and 3) Ethical non-anthropocentric approaches to decision making.

McKay, Veronica
The ethics of care in mixed method community engaged research
University of South Africa

This paper discusses the ethics of care as a necessary precondition for implementing community engaged research projects, as interventions in South Africa. The paper refers to two projects: (1) The Kha Ri Gude, the South African Literacy Campaign, established within the South African Ministry of Education and aimed at enliterating 4 million South African adults. (2) The 500 School Project, aimed at intervening for improving practices in schools identified as “underperforming” by the South African Department of Basic Education. Both projects called for a practice which both involved and improved through making participants aware of their potentialities, involving stakeholders in collective social reflection which might feed into and improve practices. Both projects relied on engagements with communities, necessitating the establishment of relationships of trust with, between and among stakeholders, researchers and, (in the case of the two projects discussed in this paper) with government.

Given the South African post-apartheid context and the backlogs in education, the two projects chose to use community engaged research, using participatory and collaborative research methods, and mixing the data from the engagement with quantitative data both from specifically designed instruments as well as quantitative data from government. The benefits of mixing the data at various phases of the project were twofold: Firstly the “mixed” data had policy implications allowing for changes at a macro level, while secondly, the engaged approach employed, served to bring about change and improvement in practices. Moreover, the South Africa context made it imperative that the researchers drew on the African value system of Ubuntu, and following Chilisa (2014), strove to shift from (researcher) individualism to a recognition of the collective, with Ubuntu privileging the I/we relationship in contrast to the Western individualism.

Our experience of being “we” in the research process and our way of knowing is affected by the way that people as a collective see the world. The way “I” interact with others will make a difference to “other”. Although this line of thinking is also accommodated in action research or participatory collaborative research African Humanism posits the value system of Ubuntu as a more appropriate way of working with communities because it prioritises sharing power/empowerment and averting domination, with the collective being more than the individual. In such projects, the researcher is required to establish “we relationships” as a means to “we learning” which would give rise to new knowledge through learning together, thinking through the issues together and analysing the information and data together, This is a model of human relationships based on the ethics of care. The paper will elaborate on the ethics of care and will draw out how they became significant in the unfolding of both projects.

Mitchell, Jill
Federations of General Practice – the changing professional organisational archetype
Northumbria University, UK

A mixed methods organisational case study presents a survey of an emerging federated model of General Practice. A longitudinal approach captures the development of the organisation over a four-year time frame.
Interpretivism supports the examination of social phenomena in a natural environment and research topics involve the social actors on the basis that they play a vital part within the social construct (Saunders & Lewis, 2012). The relevance of interpretivism to this study is that it realises the uniqueness and complexity of the General Practitioners who have come together to form federations as new organisational archetypes. Adopting a constructionist approach there is less of a focus on objective reality and a more of a focus on the values, beliefs and perceptions that people hold about reality of the situation being studied (Neuman, 2007). The study examines the motivations and drivers that have supported individual business leaders (General Practitioners) to collaborate and form a new corporate venture to support the development of General Practice.

The unit of study is one example of a General Practice federation in the North East of England. A mixed methods study incorporates a qualitative enquiry in the form of interview (face to face and focus group). Quantitative surveys have also been incorporated in the study. An organisational culture survey provides a baseline assessment at an early stage of the federation’s development. A leadership questionnaire has also been applied to profile the executive management team of GPs and managers who have come together to lead this new organisational archetype.

One of the main challenges of this mixed methods study is the integration of data and findings from multiple data sets into a cohesive framework of analysis. Social constructivism as a strand of interpretivism adopts the belief that knowledge is constructed as opposed to discovered (Stake, 1995). Stake (1995) argues that a constructivist approach within case study does not require the need for generalisation. Stake (1995) summarises that a constructivist approach provides the reader with enough data to be able to draw their own generalisations and the role of the researcher as an interpreter provides the opportunity to explore the subjective meaning and perspectives of the social actors.

This approach provides the study with a detailed insight and in-depth understanding of the members of the organisation. This provided an understanding of the motivations why the business venture was established and the intended purpose.

Molina-Azorin, José F (1)
The use and contributions of mixed methods in research projects on competitive strategy and management systems
Maria D. López-Gamero, Jorge Pereira-Moliner, Eva M. Pertusa-Ortega, Juan Jose Tari
Department of Management, University of Alicante, Spain

Greene (2007) pointed out that mixed methods research is a way of thinking. The purpose of this paper is to show our mixed methods approach and way of thinking. We are a group of management scholars that conduct research in competitive strategy, examining relationships with some management systems, such as quality management and environmental management, mainly in the hotel industry.

We usually adopt a mixed methods way of thinking in our works and research projects. In this paper we highlight the logic and contributions of using mixed methods in our research, examining why and how to implement this approach. Specifically, we indicate the main characteristics of three research projects that the authors have conducted or are conducting, emphasizing our experience with using mixed methods, combining and linking qualitative and quantitative phases. We describe not only the combination and integration of the qualitative and quantitative phases within each project, but also the integration of these three research projects. We also examine the main mixed methods purposes and rationales, the mixed methods designs used and the added value of employing mixed methods in our research about these management topics.

Molina-Azorin, José F (2)
Mixed methods research and social responsibility in management: A prevalence study
Mixed methods is a popular approach used and studied in several fields. However, its contributions and use in social responsibility research in the field of business management has not been examined. This paper is a methodological review of the use of mixed methods in social responsibility research. Together with examining an example of research project that address an important social issue (poverty alleviation) through a mixed methods approach, the paper also identifies and analyzes the mixed methods articles published in the journal *Business & Society*. This journal is a leading contributor within the social responsibility area in the business management field. The main aim of this paper is to examine the prevalence of mixed methods in this journal together with the contributions and added value of this methodological approach to analyze and solve social issues. We examine why and how mixed methods research is being used in this journal. The paper examines the value-added potential of mixed methods for social topics identifying and analyzing some mixed methods articles published.

Regarding the research project, we describe the Social Impact Research Lab (SIRlab), which is a global collaboration between scholars from developed and developing countries seeking to understand the role of business in poverty alleviation. SIRlab employs a mixed methods action-research approach that uses field experiments and multiple rounds of qualitative interviews to garner insights that contribute to theory and practice. The Social Impact Research Lab works with nonprofit and for-profit organizations to improve the implementation of their poverty solutions.

With regard to the prevalence study of the journal *Business & Society*, we examine the last ten years (2006-2015). In order to identify mixed methods studies, all articles published are read and reviewed. Apart from identifying mixed methods studies, this manual search strategy can be used to classify the articles in two groups (non-empirical and empirical) and the group of empirical studies was divided in quantitative, qualitative and mixed methods articles. The mixed methods studies identified were included into the final sample for a content analysis in order to determine the purpose of combining methods, the priority of methods, the sequence of implementation in which the methods are used, and the type of design.

**Moore-Millar, Karena**

*Making Headway: using mixed methods to disentangle the problems associated with wearing wigs, for those with alopecia areata*

*Design, Manufacture and Engineering Management, University of Strathclyde, UK*

This study used mixed methods to capture wig user requirements and examine the relationship between physical and psychological qualities of wigs. The study used results from 2 focus groups, and 14 semi-structured interviews to inform the development of a detailed questionnaire (n=54), which focused the direction for laboratory experiments. The results highlighted positive and negative aspects relating to wig use, and identified a correlation between manufacturing techniques and material selections which have the potential to impact on the end users lives and lifecycle of the product.

**Morgan, David**

*Living Within Blurry Boundaries: The Value of Distinguishing Between Qualitative and Quantitative Research*

*Portland State University*

Recently, a debate has arisen regarding what can be called the “indistinguishability thesis,” i.e., the claim that it is impossible to distinguish between qualitative and quantitative research, which makes it unwise for mixed methods research to rely on this distinction. In
contrast, this article argues that the inability to define simple, sharp boundaries between qualitative and quantitative research does not eliminate the value of this distinction. In particular, it is important to recognize that the separation between qualitative and quantitative research underlies the fundamental point that different methods have different strengths. Ultimately, we must learn to tolerate the blurry boundaries between qualitative and quantitative research, while still appreciating the value that this distinction has for mixed methods research.

Moseholm, Ellen¹
Health-related quality of life in patients with serious non-specific symptoms undergoing evaluation for possible cancer, and their experience during the process: A mixed methods study
Rydahl-Hansen, Susan², Lindhardt, Bjarne Ørskov³, Fetters, Michael D⁴
¹Department of Pulmonary and Infectious Diseases, University Hospital of Copenhagen, Nordsjælland; ²Research Unit of Clinical Nursing, Bispebjerg and Frederiksberg University Hospital, and Department of Public Health, Section for Nursing, Aarhus University, Denmark; ³Department of Infectious Diseases, Copenhagen University Hospital, Hvidovre; ⁴Department of Family Medicine, University of Michigan

Purpose: Undergoing diagnostic evaluations for possible cancer can affect health-related quality of life (HRQoL). Little is known about how patients suspected of cancer due to non-specific symptoms experience the diagnostic work-up phase. The purpose of this mixed methods study was to measure changes in HRQoL during the diagnostic work-up phase in patients presenting with non-specific symptoms, to describe their experiences of HRQoL and to integrate these findings with the intent of developing a holistic understanding of their HRQoL experience during this stressful life event.

Methods: A mixed methods design was used and involved quantitative data about HRQoL measured by the EORTC-QLQ-C30 questionnaire and qualitative interview data about patients’ HRQoL experiences. Participants completed the EORTC-QLQ-C30 questionnaire prior to and after diagnosis. The baseline questionnaire informed the purposive sampling for the qualitative interview study, and open-end questions paralleling EORTC-QLQ-C30 constructs were used in the semi-structured interviews.

Results: A total of 838 patients were enrolled in the quantitative study; 680 (81%) also completed follow-up. 21 patients participated in interviews. The overarching themes in the MM analysis include: physical function, social function, role function, emotional function, cognitive function, social function, symptoms and quality of life.

Conclusions: Patients undergoing diagnostic evaluation for possible cancer experienced an impact on their HRQoL that was greater than could be attributed to the diagnostic work-up alone. Most EORTC domains improved over time as patients’ adapted and coped with their situation. Using a mixed methods research design provided a holistic understanding of the nature of the patients’ experiences of HRQoL.

Munce, Sarah E.P.
Evaluation of quality based procedures in stroke care: protocol for a mixed methods study
Toronto Rehabilitation Institute-University Health Network, Toronto, Ontario, Canada; Supervisor: Mark T Bayley MD

Background: Ontario’s Excellent Care for All Act health system funding reforms include Quality-based Procedures (QBP) that reimburse organizations on a per patient basis for providing evidence informed best practice care. Implementing evidence-informed pricing for targeted QBP, including stroke, will encourage health care providers to adopt best practices and maximize efficiency and effectiveness. The Ontario Stroke Network received support
from the Canadian Institutes of Health Research Strategy for Patient Oriented Research initiative to 1) evaluate the implementation of stroke QBP activities (e.g., funding changes and the clinical handbook) in emergency departments, acute care, and in-patient rehabilitation; and, 2) understand the experiences of patients and families who have received care since QBP implementation.

Methods: A mixed methods approach will be used. For the staff component, an explanatory sequential approach involving an on-line survey followed by qualitative interviews will be used. Survey questions were derived using the Theoretical Domains Framework and will be administered to regional program directors, senior leaders and clinical teams (n =1300) in a variety of hospitals to understand variations across the Ontario. Building on survey findings, interviews will be conducted with a subset of respondents for an in-depth understanding of how QBPs were implemented. The patient component will adopt an exploratory sequential approach, commencing with semi-structured interviews with patients and families followed by an on-linesurvey informed by interview results.

Results: The overall approach to this study will be presented. Results of the staff surveys and interviews as well as the patient interviews will be available in April 2016. Preliminary analysis and integration of these results will also be presented.

Conclusions: This is a unique opportunity to evaluate the impact of this pay-for-performance policy and the results will have wide influence and relevance. Factors identified that influence success of stroke QBP implementation will inform recommendations to the Ministry of Health and development of an implementation and sustainability guide that will be adaptable to QBPs in stroke and other populations.

Muncey, Tessa
Writing individuals into your mixed methods research
Research Consultant

Many years ago in my doctoral research I grappled with ways of combining different methods to studying the qualities of the good nurse and what implications this had for nurse education. I settled on a case study using triangulation as my justification for the combination of approaches. One of the more hidden aspects of my thesis was the professional hunch that directed my research. Another dilemma at the end of the study was my fascination for the contribution of one of my participants and my supervisors need for me to justify this focus. Fortunately she was satisfied by Potter's (1996) notion of the 'deviant case' as a rationale for inclusion. I was unhappy from the start with the notion of deviant case and eventually this focus on the individual in research and its contribution to all kinds of studies ultimately lead me to Autoethnography. However, I remain convinced that including individual's in all kinds of studies can illuminate, provide professional hunches and subvert dominant discourse and therefore can make a valid contribution to Mixed Methods writing. This paper will consider a variety of ways that the individual can be used in Mixed Methods studies.

Murphy, Marie
Mixed methods in health research as a threshold learning concept and students’ negotiation of it through a creative learning experience
Rebecca Johnson, Frances Griffiths, Division of Health Sciences, Warwick Medical School, University of Warwick

Background: The use of mixed methods in health sciences has been gaining ground over the last decade, therefore teaching health science students to become health scientists requires critical examination of multiple perspectives. Learning to understand mixed methods can be conceptually challenging for students (a ‘threshold concept’), given the different epistemological approaches of qualitative and quantitative research and students’ backgrounds. Open Space Learning (OSL) is a pedagogical technique which aims promote
collaborative and active learning using challenging topics and tactile, memorable experiences in open spaces. This is a technique more commonly used in the arts and humanities, and to our knowledge, has not yet been tested for teaching in health sciences. We discuss the implementation of a classroom activity for teaching mixed methods synthesis for postgraduate Health Sciences students at a UK university.

Methods: The teaching sessions consisted of two key learning activities: 1) a theory building group activity based on OSL; and 2) a practical group scenario in which students could make use of their new conceptual knowledge. The first activity introduced the concepts of mixed methods synthesis using a card sorting activity: students worked in groups to ‘make sense’ of a set of A4 cards featuring a variety of data on health-related topics, consisting of images, quotes, graphs, scientific abstracts, newspaper articles and video transcripts, with students encouraged to use the space to make thematic ‘maps’ of their topic. Following a feedback session, students were asked to apply these concepts to a mixed methods systematic review question, discussing methods for integration of quantitative and qualitative findings. The topics selected were the Ebola crisis in Sierra Leone; fruit and vegetable consumption; behavioural interventions for type 2 diabetes; and physical activity in children from minority ethnic groups.

Results: The evaluation consisted of a formal reflection session by the teaching staff and quantitative and qualitative student feedback. Through reflection, we observed that there was some individual variation in the success of activity one in aiding students to develop a deep knowledge of the concepts of mixed methods, but that by incorporating a student-led feedback element, a valuable peer-to-peer teachable moment was created, enabling all students to reach a similar level of conceptual knowledge before moving on to activity two. We observed that the session increased levels of interaction between students compared to previous teaching sessions, so was opportune in reinforcing the interdisciplinary nature of mixed methods. Our reflection enabled us to adapt the session before delivering it to a second group of students. Feedback indicated that the session helped students to visualise mixed methods concepts and gain a deeper understanding of them; feel more comfortable in using mixed methods in practice; and develop skills in the negotiation of different perspectives.

Conclusion: The evaluation suggests that the session met its objectives in creating an active, collaborative and memorable learning experience and in bringing about transformed perspectives and understandings of mixed methods as a discipline. OSL proved an appropriate and valuable tool for helping students to negotiate difficult threshold concepts of mixed methods synthesis.

Narasimhan, Kavin

A mixed methods approach to model energy consumption in households
Nigel Gilbert, Centre for Research in Social Simulation, University of Surrey

Our research uses a mixed methods approach to understand how domestic energy practices, such as heating, cooking, laundry, visual entertainment and electronic communication, affect the daily amount of energy consumed by households. We combine data from walking interviews, remote energy monitoring of household appliances and a national sample survey to calibrate an agent-based model that is then used to explore the effect on energy consumption of making changes to energy practices.

According to statistics released by Department of Energy & Climate Change (DECC) in 2013, the residential sector accounts for a third of total energy consumption in the UK. In order to implement effective measures to reduce domestic energy consumption and the associated emissions of greenhouse gases, it is important to first understand how occupants use energy in households. Computational modelling is one way to ascertain the role of behaviour on energy consumption. Most existing computational models assume that occupants engage in making rational and informed decisions about their energy
consumption. However, a growing body of work suggests that energy consumption in households is just a by-product of the practices performed by occupants in the service of normal everyday life. For example, watching TV is generally done for the sake of entertainment and not as the result of a rational decision to consume energy.

This paper takes a practice-centric perspective to model energy consumption in households. An agent-based model, the Households and Practices in Energy consumption Scenarios (HOPES) model, includes three types of agents: households, practices and the elements underlying practices. Elements represent the meanings, the materials and the competences involved in practices. Meaning refers to the social or symbolic significance of performing a practice. Material refers to the objects (e.g. domestic appliances) used to perform practices. Competence refers to the skills needed.

There are three main processes in the HOPES model that link the agents at every time step. The choose-elements process enables households to choose different elements from the system. The perform-practices process enables households to perform practices by combining the chosen elements. The adapt-elements process enables the meaning, material and competence elements to evolve based on the repeated performance of practices. Data obtained from walking interviews conducted in 60 households have been used to formulate the rules influencing households’ choice of elements from the system.

The results of an energy monitoring study conducted in 24 households and the findings of a household energy survey (N = 1004) have been used to formulate the rules governing the performance of practices. A biologically inspired genetic algorithm is used to govern the adaptation of elements. The results produced by the HOPES model demonstrate the short-term (daily) and the long-term (over weeks and months) trajectories of the performance of practices and their influence on the amount of energy consumed by households. Understanding the temporal dynamics of domestic energy practices on both short and long timescales allows exploring the possibility of motivating short-term changes that can influence more permanent lifestyle changes.

Acknowledgements: The authors thank Thomas Roberts and Maria Xenitidou for providing valuable insights from the walking interviews and the WholeSEM household energy survey. The UK Engineering and Physical Sciences Research Council (EPSRC) supported this work through the Whole Systems Energy Modelling Consortium (WholeSEM) project (grant EP/K039326/1).

Ngarko, Deus
Dimensions for positioning tourists’ destinations in Tanzania: A Mixed Methods Research Approach
Hawa Mallya1,2, Centre for Economics and Community Economic Development, The Open University of Tanzania; Faculty of Business Management, The Open University of Tanzania

The main objective of the study was to explore the dimensionality in positioning tourists’ destinations and determine a model using the perspective of attribute dimension. This study followed a mixed research methods research design where a Fully Mixed Concurrent Equal Status Design (MCESD) as describe in Nancy Onwuegbuzie (2009) was used. Both Exploratory and Confirmatory Factor Analysis (EFA and CFA) were used in analysing data. Structural Equation Model (SEM) using AMOS was applied to test the relationship between various constructs in the study. A study involved survey of 750 outbound tourists at Tanzania International Airports. The findings for EFA and CFA yielded eleven and ten dimensions respectively, but SEM results revealed only four dimensions that were significant. The ten dimensions include wildlife adventures, other adventures, hospitality, scenery, safety and security, efficiency at entry and exit point, conservation and protection of wildlife, heritage endowments, beach attractions and pollution. Significant relationship was observed between experience based perception and four constructs, namely, wild life adventures, hospitality, scenery and conservation and protection of wildlife. The study
demonstrates the relevance of positioning theory in marketing tourists’ destinations. It recommends a four dimensional model that can be applied for positioning tourist destinations not only in Tanzania but also in other countries with similar factor endowments, in particular the Sub Saharan African countries

Key words: Tourists’ destinations, tourist dimensions, mixed methods

Ngulube, Patrick

School of Interdisciplinary Research and Postgraduate Studies, University of South Africa

The purpose of this study is to investigate the prevalence of mixed methods research (MMR) studies in knowledge management (KM) research between 2009 and 2015. MMR prevalence studies have been conducted in many fields and disciplines (Molina-Azorin and Fetters 2016; Ngulube and Ngulube 2015). Building on the adoption and use domain that was identified by Creswell (2010) as one the five domains constituting MMR, Molina-Azorin and Fetters (2016) called on scholars to carry out prevalence studies in specific disciplines. Prevalence rates of MMR studies in specific disciplines assist in determining how the fields have embraced mixed methods and how disciplines use MMR to support research (Creswell 2010; Molina-Azorin and Fetters 2016). Furthermore some researchers may misappropriate other research approaches as MMR (Creswell 2010:62) as there is a lot of uncertainty about how to use MMR approaches (Morse 2010:340).

Not enough is known about the prevalence of MMR in KM research. KM emerged in the 1980s and is increasingly becoming popular both in business and the academe. A lot of research on KM has been conducted to shape KM into an independent academic field (Serenko and Bontis 2009). The complexity of KM issues call upon researchers to use research approaches that may uncover comprehensive evidence that enhances the understanding of KM theoretical foundations and practices in order to effectively support decision-making and practice.

Five leading KM journals were selected to determine the prevalence of MMR in KM research. To be selected for analysis, the journal had to be in the top 10 journals in the journal ranking list of Serenko and Bontis (2009), and listed in Scopus and the Web of Science. The selection of the period of analysis was based on the minimum-five year period recommended by Thomson Reuters when deciding which years of publications and citations to use to measure research impact (Pendlebury 2010). In selecting 2009 as the starting point we were influenced by the appearance of various special issues on MMR in journals covering many fields in that year, and our sample frame was devised in 2009 (Serenko and Bontis 2009).

Using the two broad categories of MMR design identified by Nastasi, Hitchcock and Brown (2010) the findings show that the few studies that used MMR employed basic design typologies in contrast to complex typologies. It is recommended that KM research should embrace MMR in order to enhance their understanding of the complex problems that KM scholars encounter.

References


Cultural competences among health professionals working as ethnic patient coordinators reducing inequalities to access to health care through an education programme

A. Svabo, J. Grøn, KM. Korsholm, M. Sodemann
Migrant Health Clinic, Odense University Hospital, University of Southern Denmark

Background: The encounter between health care professionals and patients with different ethnic background can be characterized by performances and uncertainty on both sides. This can be rooted in different expectations for the actual meeting. Several studies have showed that nurses and health care professionals lack educational and cultural competences which can cause in inequality in health and access to health care.

Aim: The aim of this study was to examine if a structured education program including opportunities to get supervision could increase nurses communication skills and competences in handling patients with different cultural background.

Methods: This project was conducted using theories of action research – participants took active part in developing the modules. Participants answered a structured questionnaire, consisting of 7 questions referring to their motivation and background for joining the ethnic patient coordinator team before they joined the program. Field observations were conducted during the program, and after the course qualitative interviews with 6 participants were completed.

Results: In total 30 health professionals participated. All had an awareness of caring for migrant patients, and they had interest in developing the area. The questionnaires revealed that all participants had experienced challenges in their working life in caring for patients with minority background. Challenges mentioned were barriers related to patients’ cultural and linguistic needs, but also colleagues being judgemental towards migrants were mentioned. All participants agreed in health care providers lack adequate skills to deal with the complexity of multiculturalism in general.

Cultural competences were developed through personal and professional discussions and reflections. After participating in the courses qualitative interviews revealed that participants had developed their cultural competences and had learned better to put focus on language barriers and on how to overcome prejudices.

Conclusion: This program showed significant improvement in the health professional’s cultural competences. However, the process of adapting health systems to make them migrant-sensitive is complex and resource-intensive and requires a multi sectoral approach, if they are to meet the needs of the diverse populations they serve. The program is now being implemented in more hospitals in Denmark.

Niglas, Katrin
Mixed methods study on teachers' professionality and professionalism in changing context
Meri Ümarik, Maarja Tinn, Tallinn University, Estonia

The aim of the presentation is to introduce ongoing large-scale mixed methods study, which aims to understand how social transformations on the one hand and teachers’ life histories
on the other hand have affected teachers’ professionalism and professionality in Estonia. In this context we define professionalism as socially constructed understanding of the teaching profession and professionality as teachers’ own conception of the teaching profession (Goodson 2003). The greater the harmonisation of professionality and professionalism, the greater the take-up of policy and maximisation of teachers' motivation and commitment. The case of Estonia will be of exemplary interest to the international audience, since there is considerable interest in how post-Soviet education systems are responding to neo-liberal educational policies.

In our presentation we focus on describing the MM design of the study and discuss the value as well as some practical challenges that the integration of quantitative and qualitative aspects within one research project brings about. As the aims and research questions of the study are complex and multifaceted, demanding integration of macro level processes with personal micro level conceptualizations and practices of teachers, we apply mixed-method design. We have purposefully planned to use sequential mixed-methods design to allow the methodological decisions on later stages of the study to be informed by the analysis and results from earlier stages, but also to allow the results of earlier stages to be explained, and enriched by the analysis on later stages. Thus, the main purposes for combining qualitative and quantitative methods are development and complementarity (Greene 2007). Our study is divided into four stages. It started with documentary policy analysis and secondary analysis of existing empirical evidence with the main aim of mapping historical background and changes in theoretical, ideological and normative concepts of professionalism. To complement documentary analysis some semi-structured interviews were carried out with teachers and educational administrators. The content analysis and qualitative thematic analysis resulted in constructing systemic narratives (Goodson, 2010), which are used as historical contextual background and timeline informing data collection, but also interpretation of empirical data, in the following stages of the project. For the secondary analysis we used existing quantitative and qualitative databases. This secondary analysis helped to reduce the amount of new data we need for answering research questions and to inform the development of data collection instruments on the following stages of the study.

At the second stage we implemented survey design to test models of professionalism, to look for the possible typologies of teachers by perceptions of their professionalism and factors they attribute to the changes of professionalism as well as shedding some light on the implications that different concepts of professionalism have on teachers’ work and teaching practices. On the basis of survey data we aim to construct a typology of teachers based on differences in perceptions of professionalism.

At the third stage narrative life history interviews will be conducted with the representatives from all teacher groups defined on the basis of survey data to reach detailed understanding about the paths teachers have followed to develop certain views on professionalism and about the perceived changes and influences forming teachers’ professionality.

In the final stage the juxtapositions between teacher professionalism and teachers’ professionality will be closely interrogated. In this stage, the scenarios for future development of teachers’ professionalism will be constructed, to explain and clarify possible policies and choices for actions. In scenarios, the set of factors, identified in the earlier quantitative as well as qualitative stages of the study, that are structuring the teachers’ professionality, will be integrated.

**Nurjono, Milawaty**

**Mixed Methods Evaluation of an Integrated Care Program in Singapore**

Toh SA, Tan S, Foo KM, Wong SH, Tay J, Wee T, Vrijhoef HJM

1Saw Swee Hock School of Public Health, National University of Singapore; 2National University Health System, Singapore
In response to the rapidly aging population and their needs, the Singapore healthcare system was reorganized into six Regional Health Systems (RHS) since 2012. Each RHS consists of a network of partners working together through different programmes to better integrate care, to enable individuals to seamlessly navigate across different providers, moving through different care setting and empower them to manage their own care needs more effectively. As these initiatives are developing, it is important to evaluate them to further refine the models to improve healthcare quality, contain costs and potentially generate new information to inform future initiatives. To better understand how and in what context integrated care works, its evaluation needs to account for the iterative nature of this improvement strategy and be undertaken prospectively, to generate lessons applicable to ongoing improvement efforts and enable midcourse adjustments. Therefore, our research aims to evaluate the National University Health System (NUHS) RHS to support its further development.

This research adopts the realist evaluation approach to examine what works, for whom, to what extent and how by assessing its context, mechanism and outcome conjectures and developing configurations of the NUHS at the level of the RHS and its constituting programmes. In applying realist evaluation, this research is designed as a mixed methods study. For the first level, mixed methods are used in three stages: first, to surface and articulate the working mechanisms that underpin the RHS; second, to elaborate and test a set of key interventions; third, to synthesize the findings from various observations and describe the working mechanisms behind the RHS through ethnographic observation of meetings and events, interviews with stakeholders and surveys of providers and patients. For the second level, mixed methods studies are used to examine the fidelity of the RHS programmes and effectiveness of the programmes against the pre-defined outcomes including the number of readmissions avoided, reduction in average length of stay, timely discharge of patients from acute hospitals, improved patients’ experience, and improved awareness of the public and more efficient use of the available resources. These will be done through programme document reviews, ethnographic observations of the conduct of programme activities, structured interviews with program team members and patients together with time series analysis of the pre-defined outcomes.

The results of the study, which will be presented during the conference, will be significant on a few levels. It will potentially (i) provide information for improvement of the NUHS RHS, (ii) provide a methodological guide for the evaluation of other RHS in Singapore, (iii) inform policies at the national level, (iv) provide insights to other countries that are experimenting with new models of healthcare delivery to cope with the aging population and (v) contribute significantly to the international literature on healthcare reform and improvement science.

Nzabonimpa, Jean P

Methods effects in a mixed methods quasi-experimental investigation of gendered choices of school subjects in Rwandan secondary schools

Background: This methodologically focused, two-phase equal-weight convergent mixed methods study was designed to investigate whether mixed methods results are comparable and/or complementary. Survey questionnaire on the one hand and interviews and biographic narrative essays on the other were used.

Methods: Qualitative and quantitative components proceeded concurrently at phase one and at phase two and analyses were performed with concurrent samples in the first stage of analysis. During the qualitative data analysis, thematic categories were created using ATLAS.ti and numerically coded variables generated. After numerical coding of the thematic categories, quantitative and quantitised qualitative data were merged using the Statistical Package for Social Sciences (SPSS) and the questionnaire results compared with the dichotomised themes opposing presence to absence, mention to non-mention, yes to no vis-
à-vis a concept or an issue that emerged from the qualitative interviews and essays. The chi-square test of independence is used to compare phase-one and phase-two. McNemar's test is used for the case of respondents who participated twice at both phases.

Results: Findings suggest that results are similar over time when the two-phase data from same tools are considered. Such results suggest that when a particular tool is used it is likely that similar data are gathered and results produced, regardless of whether respondents participated once or twice. Results are significantly different by switching and using a different data collection tool. The evidence suggests that the responses per se are not different, but the frequency of the responses provided is significantly different from one strand to the other. Consistently, higher response frequencies were observed for the questionnaire strand than for the qualitative strand. This seems to suggest that the qualitative component, when quantised, may lose its methodological raison d’être or its empirical insights. The fact that the qualitative interviews and essays uncovered various responses that were not included in the survey questionnaire, supports the view that mixed methods research would be effective in instrument development. The qualitative data become de-contextualised through quantitising, while the quantitative data are fleshed out with insights generated.

Conclusions: This study contributes to the development and understanding of mixed methods research, challenging equal-weight designs for triangulation purposes, and also points out that educational choice of school subject is differentially gender-driven. The equal-priority claims in concurrent mixed methods designs do not necessarily ensure equality between the strands: the sample size, data conversions and analysis are different. It has proved difficult to do justice to qualitative data analysis in the mixed dataset. Unless qualitising is brought to bear on mixed methods data analysis, quantitising will continue to gain ground and, as such, relegate qualitative data analysis to lower a status, even in an equal-weight mixed methods research design.

O’Cathain, Alicia
Reflections on the use of qualitative residual analysis: the case of explaining variation in avoidable emergency admissions
Professor, ScHARR at the University of Sheffield, UK

Ethnographic or qualitative residual analysis is a complex three phase mixed methods design used to explore variation in outcomes. It consists of 1. a statistical regression followed by 2. qualitative research followed by 3. revisiting the initial regression based on learning from the qualitative research. The qualitative research is undertaken in cases which do not fit the initial regression model, that is, in cases with large residuals. This approach directs the qualitative researcher to cases which can offer insights into further factors which might explain variation but which were not considered in the initial regression.

Qualitative residual analysis was used to explain geographical variation in rates of emergency admissions to hospital beds which could have been avoided through use of services outside hospitals e.g. family practice, urgent care centres. Avoidable admission rates were calculated for 150 geographical areas in the UK and routine data on characteristics of these geographical areas was used to identify factors explaining variation in these rates. There was a four-fold difference in rates between geographical areas and a number of factors explained over 80% of this variation. For example levels of social deprivation explained 72% of the variation in admission rates. Six areas with large residuals in the regression were identified and case studies undertaken consisting of interviews with stakeholders in the provision of emergency care and documentary analysis of local policies on emergency care. This worked example of qualitative residual analysis revealed a number of challenges including how to identify a ‘large’ residual, how to select a small number of cases for qualitative research from the larger number available, how the qualitative research
complemented the regression results, and the feasibility of phase 3 in the context of limited opportunity to collect further quantitative data. The talk will cover how decisions were made in this specific study and implications for the design in general.

Ogodo, Justina A
Examining the Impact of Physics Focused Professional Development in Advanced Placement Teachers
The University of Alabama, Tuscaloosa

Due to the large population of under-qualified physics teachers in high schools in the United States, there is a critical need to improve the quality of in-service teachers. The need is greater for the advanced placement physics teacher, because of the curriculum demand and level of rigor involved in the course. This case study will examine the impact of physics focused professional development on advanced placement teachers in a southeastern state. Twelve participants ($N = 12$) will be purposefully selected from local high schools in the state. Six participants that experienced additional physics-focused professional development will be compared with the other six teachers with little or no additional in-service training. A mixed method design will be used to collect data from teacher surveys/questionnaires, direct classroom observations, and teacher interviews. The findings may add to existing knowledge on: 1) the need for effective content focused professional development; 2) improving teacher quality by enhancing their content knowledge competence and pedagogical skills; and 3) enhancing the teaching and learning of physics with the goal of improving students’ achievement and learning outcomes. Advancing physics education in America depends on improving the quality, performance, and effectiveness of teachers.

Using mixed method case study will allow for multiple sources of data to be collected and will provide the opportunity for triangulation the data. It is also important as any potential weaknesses that may be inherent in a single method approach can be addressed as well as useful providing the opportunity to validate the research findings (Johnson & Onwuegbuzie, 2004). The participants in this study will be high school advanced placement (AP) physics teachers. They will be contacted to participate in the study through letters of invitation, emails, and person-to-person contact. The letters of invitation will provide information and the rationale for the study. Convenient and random sampling will be used for participants’ selection. Informed consent will be obtained from the participants and they will be informed that responding to the survey/questionnaires is completely voluntary.

Quantitative data for the study will be generated from three instruments: 1) classroom observation protocol with items ranked on a Likert type scale of 0 (not observed) to 4 (very descriptive), 2) survey instrument with 25 items written on a four-point type Likert scale ranging from strongly disagree to strongly agree 3) questionnaire that will provide data on the teacher demographics, teacher academic preparation and experience, instructional practices, and school context.

The survey questions will be sent to the teachers prior to classroom observation. Classrooms observation will be conducted on two consecutive days, followed by teacher interview. Direct classroom observation will be conducted because it will provide data that are reliable, that will complement the teacher self-report provided in questionnaire. Penuel et al. (2007) state that it is important to validate self-report data on instructional practice against direct observation or some other independent measure of practice? (p. 926).

Teacher interview will provide the qualitative data. Participants will have an opportunity to review and, if necessary, correct the contents of their interview responses after it has been transcribed. Participants may also be debriefed to clarify interview responses and ascertain the relevance of the questions to the study objective.

Data collection will be built around specific observable sets of teacher instructional practices based on the science reform teaching guidelines established by the NSES (NRC, 2013,
2015). Collected data will be used to document, describe, and explain if enhanced in-service physics focused professional development (PFPD) improves AP teachers’ pedagogical practice. All the instruments used to collect data in this study have been widely used and validated in studies and are recognized as valid and reliable approach to assess and understand change in the teaching processes. The researcher will function as a neutral observer, and will avoid imposing any preconceived ideas to illicit participants to say what the researcher may expect. The researcher will also keep a field note as part of the observation protocol for all activities during the observation period.

Okamoto, Nahoko
Community Based Participatory Research with urban poverty and older Adults
Chieko Greiner, 1 Department of Nursing, Sophia University; 2 Graduate School of Health Sciences, Kobe University

Community Based Participatory Research (CBPR) has been identified as a useful approach to increasing empowerment and developing community, relatively little CBPR has taken place in which urban poverty in Japan. This study provides a trial model on CBPR with urban poverty and older Adults. CBPR and mix methods approach are utilize to gain an in-depth understanding of how urban poverty and older adults. The process is collaborative and equitable in that partners are included throughout the research, from study design, data collection, analysis, and dissemination. Through such involvement, CBPR is empowering to community partners in that it enhances their awareness, involvement, and ultimately in changing the social conditions under study. This study collect two different samples of participants for the qualitative inquiry that included regularly group meeting and online survey.

Orton, Penny
Access to higher education for the health sciences – a policy implementation analysis.
Durban University of Technology

Introduction: Access to health sciences education in South Africa is a challenging and contested area of higher education seeped in politics and history within a context of transformation. There are a large number of students wanting to study health science courses but there are limited places. The first democratically elected government in South Africa issued White Paper 3: A Programme for the Transformation of Higher Education with a vision of transforming the higher education system to one that was more representative of the country’s demographic profile. However, in the absence of any guidelines for the implementation of this White Paper 3, higher education in many instances has not been transformed as the government envisaged.

Aim of the study: The aim of this study was to identify the factors affecting access to health sciences education at universities in South Africa and to develop guidelines to broaden access for social redress.

Research methodology: This study was conducted within a pragmatic paradigm using a mixed methods sequential exploratory design in the complementarity genre. Universities offering traditional health science courses including medicine were included in the study. The research consisted of 3 Phases – Phase 1 reviewed existing policies and practices through the review of relevant documents; Phase 2 assessed existing practices through one-on-one interviews and Policy Delphi and Phase 3 developed policy implementation guidelines and two policy briefs to broaden access using the information gathered from the literature reviewed and data collected from stakeholders. The Policy Delphi questionnaire
was developed following the analysis of qualitative data collected in Phase 2 and the instrument was subjected to 2 cycles of item content validity index (I-CVI).

Results: The results indicated that achieving equity of access is multi-factorial and has diverse and complex challenges. Some of these challenges are ingrained in South Africa’s apartheid history, some are rooted in the process of access and some in the mind-set of the actors involved in access. The research identified eight categories, promotion of health science disciplines; challenges to transformation; competitiveness; health sciences sets the “bar”; alternative access; reason for choosing a health sciences profession; innovation in teaching and learning and retention and throughput rates which were related to access to health sciences education in universities.

Conclusion: Universities have implemented a number of initiatives to address the past injustice in higher education access however the issue of enabling access for those who are socio-economically disadvantaged is very much more complex and challenging to address. Transformation of health sciences education in universities is essential to the transformation of the health service to reflect one which is accessible, available, affordable and agreeable, something that every South African citizen deserves.

Parkinson, Mark
Rapid Realist Reviews: a means of tackling complex social problems that raises fresh questions in the mixed methods debate.
S.M.Carr, Northumbria University & Fuse

As multi-component, multi-site, multi-agent interventions become increasingly the norm there is a burgeoning need for researchers to find new ways to try to address the challenges posed by such complexity. Not least to ensure that policy and decision-making avoids oversimplification and over generalisation while also ensuring reviews and evaluations are completed in a timely manner to ensure relevance. Rapid Realist Reviews (RRRs) are beginning to demonstrate their potential for yielding valid and highly usable results in the development of practical solutions to complex social problems. A main strength lies in their capacity to unravel complex social issues such as those that exist within public health by providing an explanatory review of the evidence base that seeks to go further than to simply state the outcomes of interventions, programmes or strategies. While there will always be a need to understand whether public health interventions work or not via methods such as systematic reviews, meta-analyses and RCTs, increasingly there is a need to go further to explore ‘process.’ The focus of RRRs on the exploration of process through the identification of what works, for whom, how it works and when (context, mechanism and outcome configurations) provides a potentially rich mine of specific, detailed information concerning why and how causation is generated as well as the specific contexts that might facilitate this.

The paucity of information regarding actual ‘outcomes’ typically encountered during the exploration of emerging topics makes it expedient instead to focus on ‘process,’ e.g. by employing RRRs to examine potential contexts and mechanisms to propose how these might combine to generate causation.

Further, the abbreviated time frame in which RRRs can be completed-within six months or less- becomes crucial in areas such as public health where social contexts tend to change rapidly and where timeliness via a speedier transition from research to policy and practice is essential to ensuring current validity and relevance. However, key challenges lie ahead for the effective utilisation of RRRs: (a) how best to develop and apply workable protocols to what is essentially a relatively open-ended research logic rather than a prescribed research technique (b) how to satisfy Realism’s tendency to avoid ontological bias by occupying the middle ground between constructivism and positivism when a lack of ‘outcomes’ data yielded by emerging evidence biases RRRs towards the former (c) how to satisfy Realism’s non-method specific stance when the paucity...
of information regarding actual ‘outcomes’ in emerging evidence dictates extensive reliance on qualitative methods to first reveal ‘process.’ Despite a shift away from Realism’s pursuit of methodological balance this remains faithful to Realism’s non-biased argument of selecting ‘the best tools for the job’ based on their utility.

The worked example of an RRR presented here provides an illustration of how RRRs can be employed to address complex social issues. Although there is a current need for further worked examples and wider peer evaluation of them to facilitate the best use of this emerging methodology, RRRs offer a broad new landscape of benefits and possibilities for tackling social complexity.

Pedersen, Maria
Department of Cardiology, Nephrology and Endocrinology, University of Copenhagen

Background: Cardiac rehabilitation (CR) after acute coronary syndrome is recommended, however rehabilitation participation is generally low, often below 50%. It is well documented that socially vulnerable patients with low socioeconomic position are less likely to participate in rehabilitation, but the reason for this association is still unresolved. Anxiety, depression, comorbidity and self-efficacy are potential mediators of the association between socioeconomic position and cardiac rehabilitation. Gender, age, residence and close relatives are predictors of rehabilitation attendance, but evidence of their impact on social inequality in CR attendance is sparse.

Aim: The primary aim is to obtain a better understanding of mechanisms of social inequality in post-hospital cardiac rehabilitation attendance among patients with acute coronary syndrome.

Methods: Mechanisms of social inequality are expected to have a complex nature, thus the need to explore the phenomenon with a mixed methods design was evident. The study is designed as a Convergent Mixed Methods design, with concurrent collection of qualitative and quantitative data i.e.: A quantitative, prospective, observational study (N=310), identifying psychological and socioeconomic predictors of CR attendance and uncovering mechanisms of non-attendance concurrently with, An explorative qualitative study, outlining the experiences of patients and their close relatives of the clinical pathway of acute coronary syndrome, exploring what influences cardiac rehabilitation attendance or non-attendance (N=24).

Due to the Convergent design it was possible to apply stratified purposive sampling of informants, they were selected based on particular features or characteristics that enable exploration and understanding of mechanisms of social inequality based on information from the quantitative prospective study.

To enable exploration of mechanisms of social inequality qualitatively we sampled two groups that display variation on rehabilitation attendance and socioeconomic position, but otherwise were relatively homogeneous, so that differences between the two groups could be explored. Finally the qualitative and quantitative data are analysed separately and merged using joint displays.

Results: No results yet.

Piggott, Heather
Attitudes towards Women’s Work in Rural India and Bangladesh; A Comparative Mixed Methods Approach
University of Manchester, PhD Applied Social Research Candidate
The trends in female labour participation in South Asia present a variety of puzzles; in India there is a well-documented decline of female labour force participation, especially in rural areas. In contrast, Bangladesh female labour force participation rates have risen. Issues surrounding women’s work in rural India and Bangladesh have been a significant subject to date, however the attitudes upheld towards women’s work and the causal mechanisms that effect women’s economic activity are not well understood, despite similar studies in a western context being conducted rather widely. It has been acknowledged that understanding the social norms and barriers towards women’s work in the South Asian region is required to inform policy.

This paper describes the initial results from new mixed methods data collected through an ESRC and DFID funded gender norms project in rural north India and Bangladesh. The 450 surveys and 45 interviews per country are utilised in this paper to assess the 1) the contrast in attitudes towards work in each country and 2) the causal mechanisms that effect these attitudes. The innovative methodology of this project allows for comparative analysis of male and female attitudes towards women’s work, whilst considering the structural features, power relations and diverse issues of everyday life in rural Bangladesh and India.

The research design allows for innovative direct analysis of attitudes and their mechanisms across both countries as the data was collected in the same format within the same time period. The findings of this mixed methods research will contribute to knowledge surrounding women’s work from a nuanced perspective; that appreciates and utilises both quantitative and qualitative data.

Pluye, Pierre
Strategies to integrate qualitative and quantitative phases, results and data in patient oriented mixed methods research: A case survey
Enrique Garcia, David Li Tang, Vera Granikov
Department of Family Medicine, McGill University, Canada

Introduction: Mixed methods (MM) studies are increasingly popular in health sciences. Researchers combine (but not necessarily) worldviews, methodologies and designs. They combine (necessarily) qualitative (QUAL) and quantitative (QUAN) research questions, data collections/analyses and/or results. Several strategies for integrating data or results have been proposed, but their conceptualization is usually design-driven or fragmented, and not empirically tested. This is challenging for planning and conducting MM studies, and training graduate students.

Background: Based on a social constructionism worldview, we have developed a conceptual framework combining three levels of integration and nine practical strategies. The levels (low, moderate and high integration) refer to three MM principles (complementarity, dialectical tension and assimilation) without hierarchy (no best level). In the MM literature, we identified three strategies to connect QUAL and QUAN phases (low integration), three to compare QUAL and QUAN results (moderate integration), and three to combine QUAL and QUAN data (high integration). These strategies are not mutually exclusive. For each type of MM design (sequential, convergence, multiphase, and multilevel), multiple strategies can be used.

Research questions and objective: Our research questions were as follows. For each level of integration, to what extent the proposed strategies represent all possibilities for integrating QUAL and QUAN data or results? For each MM design type, what are the combinations of strategies? Therefore, our objective was to develop a taxonomy of these strategies and combinations in patient oriented mixed methods research. Patient oriented research is aimed to produce and apply knowledge for improving patient outcomes, professional practices and healthcare systems. The term ‘patient’ includes relatives, caregivers and lay people (population).
Methods: We used a case survey design. Cases were patient oriented mixed methods studies published in English (eligibility criteria). We searched Scopus (2015-present) using a high-precision strategy (“mixed method*” in title). Based on eligibility criteria and a reliable codebook, abstracts and full-text papers were selected using an innovative collaborative trend monitoring system called eSRAP (launched in January 2016), which retrieves new MM publications as soon as they are indexed in Scopus. Data were extracted from included studies using the same questions for each case. We used a deductive/inductive qualitative content analysis to classify strategies and identify combinations of strategies (theory-driven). In addition, we explored the presence of strategies that were not proposed in the initial framework (emerging from the data).

Preliminary results: Of the 148 publications rated in January 2016, 74 concerned POR including 57 MM studies. Of those, 21 (36.8%) minimally reported their methodology and methods, and 20 (35.1%) described only the QUAL and QUAN methods (not the MM design and the mixing of data or results). Only 16 (28.1%) provided methodological details on QUAL, QUAN and MM aspects. These 16 studies illustrate all proposed strategies, but one (qualitizing), and multiple combinations of strategies.

Discussion and conclusion: eSRAP is a sustained monitoring system, and results from a larger sample of studies will be presented at the conference. eSRAP is collaborative and identifies exemplar studies for MM trainings. Conference participants will be invited to use eSRAP, specifically MM teachers.

Poth, Cheryl
Six Habits of Mixed Methods Researchers and Evaluators Enabling Social Change through Complex Educational Interventions
Jacqueline Pei, University of Alberta

The purpose of this presentation is to describe six habits of mixed methods researchers and evaluators when conceptualizing, conducting, and communicating evaluations of complex interventions. The habits, emergent from the cross-case analysis of two evaluations of complex educational interventions employing mixed methods approaches, involve: identifying and seeking relevant disciplinary and methodological expertise; studying and applying mixed methods research and evaluation practices; designing and adjusting rigorous mixed methods procedures; anticipating and monitoring ethical research and evaluation processes; advocating and planning culturally appropriate mixed methods studies; and illustrating and communicating innovative research and evaluation outcomes.

These comparison efforts heed the call by researchers (e.g., Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004) for further empirical examples to advance our understandings of how mixed methods research designs are applied in practice with a recent emphasis on addressing wicked societal problems (Mertens, 2015). Following a brief situating in the literature underpinning this study, a description of the analytical processes used to compare the two evaluations along with a brief account of each of these evaluations in terms of background and evaluation contexts, data and integration procedures, and outcomes and ongoing impacts will be provided. Finally, the cross-case discussion of six habits describes their individual and collective contributions to enabling social change in light of their implications for informing educational and evaluation policies and practices.

This paper, connecting mixed methods research and evaluation theory with the practical competencies needed for realizing complex evaluation enabling social change, can be considered for submission to either of two conference themes: The Role of Mixed Methods in Evaluating Complex Interventions in Complex Social Systems because the habits emerged from the cross-case comparison of two evaluations of complex educational interventions employing mixed methods approaches or The Role of Mixed Methods in Enabling Social Change because of its focus on the implications of the integrated findings on educational policy and practice.
Rasmussen, Diama Nggida
Self-perceived age among migrant patients with a refugee background attending a Danish Migrant Health Clinic – A pilot study
Josefine Matilda Irene Jussila, Dorthe Nielsen, Charlotte Sølver Rehling, Morten Sodemann. These authors contributed equally to this study.
Migrant Health Clinic, Department of Infectious Diseases, Odense University Hospital

Background: Migrant refugee-patients often suffer from complex illnesses due to physical, psychological and societal factors; nevertheless, there is a lack of culturally sensitive assessment tools that take these considerations into account. Self-perceived age is defined as the age one feels or perceives oneself to be and has shown potential to be an applicable assessment tool in identifying those at risk for cognitive, psychological and physical health-related deficits. Furthermore, current research suggests that feeling older than actual age is an independent predictor of mortality. While no research regarding subjective age among refugee-patients was identified, a study of 1470 native Danish adults found that those aged older than 25 years perceived themselves younger than their actual age while those younger than 25 years perceived themselves older.

Methods: The aim of this study was to explore self-perceived age and the reasons behind self-perceived age among migrant patients with complex, unresolved health conditions referred to the migrant health clinic in Odense, Denmark. A mixed methods approach comprising of a cross-sectional survey and semi-structured interviews was completed with 23 purposefully selected patients during clinic visits. The questionnaire included information on socio-demographic factors, self-perceived age and other age related factors. After completing questionnaires, interviews exploring perceptions of aging and reasons for perceived age were conducted. Interviews were conducted in the patient’s native tongue with the aid of professional video-interpreters. The interviews were transcribed verbatim and subsequently translated. Descriptive statistics and non-parametric tests were used to assess the association between age, self-perceived age and covariates. Qualitative data was analyzed using the constant comparative method of content analysis.

Results: Eighty-seven percent of participants perceived themselves as older than their chronological age, p<0.001. Self-perceived age ranged from -7 to +59 years above chronological age (median +16; IQR 10-20). Contrary to previous research on perceived-age among native Danes, migrant patients in this study reported feeling on average 30% older than their actual age. Interviews outlined physical health problems such as chronic pain, fatigue and physical limitations as common causes for feeling older. In addition, psychological factors related to the migration process e.g. experiences/trauma before and during flight from country of origin and social factors including family related worries were additionally voiced as reasons for feeling older than chronological age.

Conclusion: In line with former research, participants felt older due to both physical health problems, psychological and social factors. However, the psychological and social factors mentioned as reasons for feeling older were often in relation to the migration process, indicating that past experiences from country-of origin, during flights as well as past and present experiences in Denmark need to be taken into account in the assessment, diagnosis and treatment of patients with refugee background. Further research investigating self-perceived age among migrant patients is needed.

Rawlins, Peter
Using Mixed Methods research to transform research culture and build researcher capacity in Aotearoa New Zealand’s changing academic landscape
Maggie Hartnett, Tracy Riley, Massey University
Increasingly, pressure from performance based research funding models have lead Aotearoa New Zealand’s university education departments to examine their research culture and the quality of their research outputs. This examination may necessitate changes, but how can these changes be made at an institutional level? In this session, we argue that focusing on collaborative, mixed methods research is an effective catalyst for change which, importantly, is consistent with Aotearoa New Zealand’s bi-cultural roots.

This session reports preliminary findings from a mixed methods study which examined a staff-led initiative designed to transform an institutional level research culture. The aim of the initiative was to shift the culture from one based on smaller scale, frequently individual, projects using primarily qualitative or quantitative methodologies, towards larger collaborative projects using mixed methods approaches designed to contribute to the complex educational problems at a national and international level.

In 2014, Massey University’s College of Education became a much smaller Institute of Education, within a College of Humanities and Social Sciences. Coincident with this change was a physical change in campus location and a downsizing of staff numbers, resulting in a changed staffing profile with a larger number of new and emerging researchers. Collectively, these changes challenged the institutional identity and culture, requiring a reflective examination of our strengths, strategic direction and research footprint. Mixed methods research approaches could potentially build on the existing qualitative or quantitative strengths within the Institute to create a more collaborative approach to addressing the significant educational research problems, while developing researcher capability and reshaping institutional identity.

A coordinated and strategic initiative was designed to raise the mixed method research capacity within the Institute of Education over a two-year period. This approach involved a series of external professional development opportunities and staff-led internal seminars, culminating in two of the world’s leading mixed methods research experts running a series of workshops at Massey University. Furthermore, a large scale mixed methods research project has recently commenced with the Institute’s Equity through Education research group. This project draws together staff with expertise in the area of equity research and mixed methods approaches.

In 2016 we commenced a mixed methods research project with Institute staff engaged in the institutional changes and mixed methods initiative. In this session, we will share the preliminary findings and show that a collective focus on mixed methods approaches to research is raising the capacity of staff and creating a collaborative research culture. Findings also indicate that the scheduling of lunchtime sessions and the sharing of food, an important bicultural value within Aotearoa New Zealand, helped to create a community of learners. Such sessions encouraged conversations between staff who had never previously researched together as well as building closer relationships between staff and postgraduate students. Furthermore, the national workshops at the end of the period helped build relationships across the wider university, as well as with other New Zealand universities and national and international research institutions. Lessons learned and future directions will also be discussed.

Romm, Norma R A  
Using mixed methods research with multi-layered intervention intent: The case of the South African 500 schools project  
University of South Africa

This paper discusses the design of a research-and-intervention in South Africa called the 500 Schools Project (2102-2015) in which I was involved as one of the principle researchers. (The project leader was Soane Mohapi; and “project owner” was Veronica McKay, as head of our community engagement portfolio in the College of Education.) 500 primary schools
from five provinces most affected by learner “underperformance” in various school subjects were sampled to participate in the project. The research-and-intervention process was meant to be change-directed from the start in favour of learners who become disadvantaged due to the quality of their educational experience. The design consisted of questionnaire administration and focus group discussions, followed by various intervention visits by research staff to selected sites, as well as other (emergent) interventions. The paper reports upon the multi-layered character of the interventions, and on our non-linear notion of causes of underperformance as systemically linked. We sought, while also trying to extend – via the questionnaire, focus group discussions and subsequent meetings – respondents/participants’ understanding of the linkages between factors leading to underperformance, which, if addressed, could contribute to “making schools better”.

In the paper I discuss how we tried to shift “normal” uses of questionnaires as a method in the social sciences (see Romm, 2013) in line with our overall intervention intent: The questionnaire was designed so that at the moment of participants (in this case teachers and principals) filling in the questionnaire, they could be prompted to reflect on issues raised in the questionnaire (through both closed- and open-ended questions). Likewise the focus groups became an opportunity for participants’ learning as they reflected on one another’s statements (see also Romm, 2015). Participants who were involved in focus groups in selected sites were: school management teams; school governing bodies (and other parents); teachers; and learners. The focus groups also were used as a vehicle for participants’ expressing challenges and possible solutions to be further explored during subsequent intervention visits to the sites. In the paper I explore what could be called some catalytic validity of these interventions.

The creation by members of the research teams of an “intervention guide” for schools to contextually make use (based on data from the questionnaires and focus group sessions) was also effected; and some of the information/interpretations gleaned from earlier phases of the project formed the basis for interventions at government level, some of which McKay was directly involved in. I explain how overall we tried to facilitate changes in discourses and in attendant action via our use of mixed methods with transformative intent, and I offer an indication of some feedback we received in this regard from various stakeholders.

References

Scherman, Vanessa (1)
Using mixed methods research to explore validity issues of a monitoring system in the context of South Africa
Psychology of Education, University of South Africa

Monitoring of learner performance provides important information to politicians and the public alike and monitoring of education systems has become a major policy issue. Specifically, monitoring refers to the procedures for the collection of information about various aspects of the education system at national, regional, and local levels. The main purpose of which is to monitor performance to support learning or reach a judgement on achievement. However, within the education system various role players are involved in the monitoring function and each of these role players have ideas about what monitoring entails and how monitoring system should be implemented. With pragmatism underpinning the research design, both quantitative and qualitative methods were used to answer the identified questions and mixed
methods were adopted in this study which focussed on the implementation of a specific monitoring system within the context of South Africa. The typology used for this research was a concurrent nested strategy. A concurrent nested strategy implies that there is a dominant method that guides the research. In the case of this research a quantitative approach is the dominant method. The qualitative component was given lesser priority but was nested within the quantitative approach. The qualitative approach was embedded in the quantitative approach as the method addresses a different aspect of the question relating to validity and seeks information from a different level. While the quantitative approach makes use of information at the school, classroom, and pupil-level, the qualitative approach makes use of information at the provincial and national-levels. The sample included in the study ranged from National Department of Education officials (two officials from curriculum and assessment), Provincial Department of Education officials (one mathematics specialist, one language specialist and one assessment specialist from the Gauteng Department of Education Office for Standards in Education), and specialists in the field of language, mathematics, and psychology as well as 11 schools. Mixed methods can answer questions, which other methodologies in isolation cannot, for example in the investigation of validity issues, which in itself is a complex, where a combination of methods can be used in order to provide different perspectives on the same issue making inferences stronger. Thus, the issue of validity can be addressed quantitatively by using inferential statistics to investigate construct validity, in the form of Rasch analysis, and to undertake reliability analysis. Validity can be addressed qualitatively by undertaking an analysis of curriculum documents, follow-up interviews with the Provincial Department of Education officials and interviews with National Department of Education officials. The analysis undertaken for the qualitative component was thematic content analysis. The results were treated separately, on a parallel track, as different levels of the education system were targeted. It was found that the use of mixed methods provided a much stronger basis for advocating the monitoring system under exploration. The issue of validity could be addressed from the perspective of differently levels and yielded richer, more in-depth insights into the different validity aspects targeted.

Scherman, Vanessa (2)
Understanding the complexities of teaching mixed methods in developing countries
Brigitte Smit, University of South Africa

Within the context of South Africa and Ethiopia the need for methodologists cannot be overemphasised. It is in building capacity in the area of research methodology that many political and social ills can be explored and addressed in creative ways. However, within these contexts many qualitative and quantitative ivory towers still exist. This situation is played out within the supervision of Masters and PhD students, an already difficult task made worse due to the open distance learning environment. The purpose of this presentation is to elicit views and experiences of teaching mixed methods in South Africa and Ethiopia. While the students get exposure to a variety of methodologies it would appear as if the understanding of mixed methods still leaves much to be desired. We argue that research design in addition to methodologies using mixed methods is very challenging. This together with computer literacy, technology and access within the ODL environment possess several obstacles that need to be overcome. We intend to share possibilities of, and imaginable solutions to such obstacles, in addition to achievements and success stories, which are specific to the context of developing countries. This will add to the current debates on teaching mixed methods and ensuring the growing understanding on when and where mixed methods is appropriate.

Schoonenboom, Judith¹
How mixed methods researchers can build temporary and context-bound objectivity: Pickering’s dance of agency applied to Mixed Methods Research
Burke Johnson\textsuperscript{2}, \textsuperscript{1}University of Vienna, Department of Education; \textsuperscript{2}University of South Alabama

This presentation applies Pickering’s (1995) performative approach of research to mixed methods design. Pickering’s (1995) image of conducting research is a “dance of agency,” which is characterized by an alternation of actions performed by the researcher and actions performed by the world created by the researcher. A researcher starts an inquiry with particular concepts that he or she uses to create a particular world, and with particular ideas about how these concepts interact. Pickering calls this “goal setting” and “modelling.” Next, “reality talks back” and tells the researcher whether his or her ideas about the interactions between the concepts are correct or should be revised. Pickering calls this “resistance of material agency” and “accommodation of human agency.” On the basis of the world’s feedback, the researcher adapts his or her model of the world. Then, a new feedback cycle starts. These cycles of alternating turns continue until Pickering’s “interactive stabilization” is reached.

Like Putnam (1987), Pickering focuses on how objectivity can arise. In Pickering’s view, objectivity originates from the accommodation of the researcher’s ideas about the interaction between the concepts and the world’s feedback; the more cycles that have been completed, the more objective the result. As worlds are basically created, objectivity is always temporary and context-bound, and it is always a matter of degree. Based upon the world’s feedback, objectivity can and does already arise in a situation that involves only one researcher. For example, when the categories derived in a grounded theory analysis prove not to fit the data and the researcher consequently adapts the categories, the revised categories can be said to be more objective than the originally derived categories. The categories have passed their first “reality test”; as Pickering (1995) formulates it, the categories have gone through a first round of the “mangle of practice.”

The mangle of practice can provide a foundation for mixed methods research. Mangles can be of a different nature: grounded theory is a mangle, but so is a statistical test or a peer review. This means that we can apply both qualitative and quantitative mangles. In addition, it implies that we obtain an ever-increasing degree of objectivity by subsequently applying additional and different mangles to the \textit{results} of previous mangles. In our presentation, we discuss various forms of objectivity, and how these build on each other. Objectivity arises through the application of, e.g., grounded theory, statistical tests, independent coders, audits, an intervention, and recognition by peers.

In a performative approach, a mixed methods researcher is described as someone who accepts different kinds of objectivity as legitimate and who accepts that different methods may be used to obtain an increasingly higher degree of objectivity, which is always temporary and context-bound.


Schram, Asta B

\textbf{A Content Analysis of the Use of Mixed Methods in Education Research-- a Promising Analytic Technique}

\textit{The University of Iceland}

In education research, the practice of combining qualitative and quantitative methods in the same study has increased considerably. Employing mixed methods makes it possible for educators to study more thoroughly diverse issues in the field. But how are mixed methods employed in education research? Is their use based on a firm knowledge of mixed methods methodology? What is the best way to study researchers’ use of this method? I performed a content analysis of a sample of 18 studies from science education journals. This content
analysis was built on Creswell and Plano Clark’s (2011) mixed methods guidelines and terminology. In these studies, I evaluated the researchers’ overall practice of using mixed methods. I scrutinized this purposeful sample in terms of the type of data collected, timing, priority, design, the type of mixing between the two data strands in the studies, and the justifications authors provided for using mixed methods. Furthermore, the articles were assessed in terms of how well they met contemporary definitions for mixed methods research. A systematic evaluation of the authors’ use of the methodology was performed using assessment rubrics to identify the studies that best reflected contemporary definitions. Less attention was given to the philosophical paradigms, mainly due to the fact that they were seldom described.

Content analysis as an analytic technique is used in various ways. It is commonly undertaken ‘for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use’ (Krippendorff, 2004, p. 18). It is often assumed that a content analysis is primarily a quantitative technique used to count words or phrases, when in fact it fits very well into the structure of mixed methods (Weber, 1985). In a content analysis, the researcher can approach the data both in a deductive and an inductive manner as the tables provided indicate.

As far as the results of the content analysis are concerned, the studies varied considerably in the use and understanding of mixed methods. A comparison to earlier content analyses of mixed methods research indicated that researchers’ knowledge of mixed methods methodology might be increasing. However, it is clear that the use of mixed methods in science education research calls for an improved methodology, especially concerning the practice of mixing.

Schrauf, Robert W
Mixed Methods Cross-Cultural Comparisons: A Discourse-Centered Integrative Paradigm
PhD, Department of Applied Linguistics; Pennsylvania State University (USA)

Aim: In this presentation, I outline a discourse-centered paradigm for integrating data from cross-cultural, quantitative surveys and cross-cultural, qualitative interviews for the purpose of making systematic, between-group comparisons.

Background: Mixed methods research provides an especially sensitive and powerful means of making cross-cultural comparisons, in which qualitative approaches provide a window onto cultural meaning and the phenomenological ‘feel’ of social life, and in which quantitative methods facilitate the within- and between-groups modeling of social and behavioral phenomena. Further, given that the modal mixed methods design combines surveys and interviews (Bryman, 2006), it is arguable that data are solicited and collected in linguistic interaction, coded and analyzed in linguistic interaction, and ultimately reported and read in linguistic interaction. Thus, linguistic interaction or discourse – more specifically, multilingual discourse – is at the heart of mixed methods cross-cultural comparisons. In sum, discourse provides the framework for integrating qualitative and quantitative methods.

Data and Analysis: The multilingual, demonstration data come from research on ethnicity and beliefs about Alzheimer’s disease among urban Chicago (USA) African Americans (English), Mexican Americans (Spanish), and refugees/immigrants from the Former Soviet Union (Russian). In this paradigm, survey data are analyzed, not in terms of between-group differences in majority knowledge, attitudes, and/or practices, but rather as evidence of a group’s discourse about the survey topic, distributed differentially both within-groups as well as between-groups, and conditioned by critical factors such as gender, age, ethnicity, race, and history (Schrauf & Iris, 2011a,b). Thus, survey data are analyzed via factor analytic methods to develop participant profiles and maps of distributed discourse. This requires re-conceiving participant response to survey items as linguistic stance-taking and attention to participant stance-profiles rather than analysis of individual items. In turn, qualitative
interviews are analyzed, not as the participants’ reports of cultural themes, but rather as inherently intercultural encounters in which participants “do” themselves as culture-members in their own languages, discursively accounting for their actions, attitudes, and beliefs and thereby performing the cultural logics of their respective groups. Qualitative analysis, then, attends to the linguistic, discursive, and narrative devices that participants use as social actions within the interviews to enact their cultural worlds (Schrauf & Iris, 2014a,b). Integration of these quantitative and qualitative analyses – the modeling of discursive networks and the discursive performance of cultural worlds – is accomplished via joint displays that distinguish within- and between-group variations as either ephemeral and idiosyncratic, social and functional, or historical and cultural.

Significance. A discursivist, mixed methods paradigm that is optimally attentive to linguistic interaction and multilingual data is ideal for making systematic cross-cultural comparisons (Schrauf, in press). I suggest that this discursive paradigm is fully integrationist alongside other existing mixed methods paradigms such as pragmatism (Tashakkori & Teddlie, 1998), communities of practice (Denscombe, 2008), reflexive sociology (Fries, 2009), and nested analysis (Lieberman, 2005).

Shim, Minjung
Model-building through a mixed methods grounded theory design: Dance/Movement therapy for resilience-building in people with chronic pain
Postdoctoral Associate, Psychiatry Department, Stony Brook University, USA

This presentation will introduce the design, process and outcome of a mixed methods grounded theory study. The ‘health-despite-adversity’ notion of psychological resilience fits well in the framework for the rehabilitation of chronic medical conditions such as chronic pain. Chronic pain is a complex and multifaceted phenomenon that can have a profound impact on the multiple domains of individuals’ existence. Due to the multidimensionality of chronic pain experience and the prevalence of mental and physical pain comorbidity, a mind-body based psychological intervention such as DMT can be an effective approach for chronic pain management. The presented study aimed to develop a model of dance/movement therapy (DMT) that can describe the mechanisms of resilience-building in people living with chronic pain based on the grounded theory approach. The complexity of the phenomenon under study required a high level of methodological rigor, thus much consideration was given to the selection of research design. Since the existing design options were deemed not best suited to answer the research question, a new design, sequential exploratory-confirmatory mixed methods grounded theory was developed and conducted. Throughout the three-phase study design, a model was generated and tested through various types of qualitative and quantitative data collection and analyses processes. During the exploratory phase, a preliminary model was developed based on the two qualitative study procedures namely, meta-modelling and reflexive grounded theory. During the confirmatory phase, the preliminary model was tested quantitatively and qualitatively in a clinical intervention study. Through a process of integration and refinement, a final composite model was constructed. Based on the findings, theoretical, clinical and methodological implications were suggested. The design has proven its usefulness and efficacy through the successful outcome of the study, which is a theoretical model that explicates a complex and dynamic phenomenon. The final model obtained from this dissertation was ultimately based on three methodologies (Met-modelling of the literature, GT. And MM experimentation), offering a unique and innovative approach to MMR. This dissertation provided a sound example of innovative and rigorous research methodology and practice to the field of MMR.

Sligo, Judith (1)
The integration of qualitative and quantitative methods across datasets to provide greater insights into a research topic? Insights from a research project about young people’s vocational aspirations

University of Otago

This presentation reflects on the role of integration of quantitative and qualitative methods in a mixed methods project that brought disparate historical datasets together to investigate vocational aspirations. The focus is on how a constructivist theoretical position and the research questions integrate the projects as one mixed methods study. Two datasets from a longitudinal study were revisited to investigate whether a cohort of 878 teenagers’ vocational aspirations predicted their adult occupations. The results showed that very few of the adult cohort worked in the job that they had aspired to as teens. Quantitative analyses were able to show that gender, SES and IQ were factors in the difference between aspirations and occupations. A third data set was examined to explore the possible reasons that aspirations and occupations might vary so greatly. This was a qualitative dataset which contained detailed interview data from 93 young people leaving school and was analysed from two different theoretical perspectives. The results from the combined methods addressing different types of data provided insights that neither method would have produced on its own.

Sligo, Judith¹(2)
A mixed methods evaluation of the implementation of a complex healthcare technology system: what is the role of power?
Robin Gauld¹ Vaughan Roberts², Luis Villa²
¹University of Otago; ²Counties Manukau District Health Board

This presentation reflects on the role of power in the implementation of a transformational healthcare information technology programme in a New Zealand District Health Board. There are high stakes involved in implementing information technology into healthcare organisations. Implementation is a difficult, expensive and complicated process involving organisational change. Healthcare organisations are complex, context dependent and each has its own distinctive systems. Management and clinical structures operating within the organisation are unique and there is significant autonomy at different levels. Healthcare technology encompasses multiple digital initiatives with different functions and implementation requires partnership with information technology providers. In this complex environment power struggles are played out, both influencing and being influenced by the technology and its implementation. The evaluation of this health information technology implementation conceptualises power from a Foucauldian perspective: power is diffused, pervasive and embodied in discourses. Power is everywhere, has multiple sources and is constantly contested and resisted. The conceptualisation of power as productive provides insights into how power negotiations can promote or inhibit the implementation of technology. A Foucauldian view also privileges behavioural and social relations over material technologies. This focuses the evaluation on the social and organisational aspects of the planning, design and implementation of diverse technological innovations as part of a transformational health information technology system.

So, Ga-Young
Mixed Methods for Context-Centre in Development Studies (with Special Attention to Gender)
University of Cambridge, UK

This paper inductively raises the importance of mixed methods in enabling social change, drawing upon two gender-related examples from development studies. In this end, the
The illustration of the two examples leads to the necessity of context-centre in development studies as a methodological philosophy. The first example, 2015 United Nations’ Millennium Development Goal on girls’ education, discusses its formation and limitation as a mere development target to meet. Therefore, it has resulted in putting the goals to fill the target statistics over the intrinsic values of all these development aspects. This case provides the paper with implications for further improvements, asking a retrospective question on what was missing in the UN girls’ education goal as a social change or a policy evaluation. In turn, this reinforces that only mixed methods research puts context at the centre in development studies.

The second example, on the other hand, is a successful development case where social change of combating diarrheal diseases has happened effectively in the way positioning context at the centre. In addition to innovating various medical treatments including Oral Rehydration Solution to combat choleras, the International Centre for Diarrhoeal Disease Research, Bangladesh has designed effective ways to reach people in need by training women community health workers. These women community health workers have visited households and gathered relevant health data in this Muslim context where women are allowed to interact with only women. A currently ongoing discussion on the cost and benefit analysis of training these women health workers is also mentioned as a limited framework to understand the issue in this part.

These two examples, with special attention to gender, make a strong case that mixed methods research is necessary in enabling social change across time and space and evaluating policy and development programme outcomes. Qualitative research method captures various narratives of people from the ground whilst quantitative research method guides development studies to places where the needs exist at the aggregate level. Mixed methods evolving out of the combination of the two research methods play a significant role from the formation to the implementation of development.

Positioning mixed methods to go beyond the mere combination of quantitative and qualitative research methods, this paper sums up that mixed methods research is the way to capture context that development studies are absolutely intertwined with. Therefore, mixed methods owns its distinctive layer to emphasize context as the centre with respect to enabling social change and evaluating policy outcome.

Keywords: Mixed Methods Research, Context-Centre, Development Studies

Stanistreet, Debbi
Exploring methodology in a mixed methods ethnographic process evaluation
Elizabeth Deja, Tammy Thiele, Lois Orton, University of Liverpool

The ability to identify the key elements of an intervention that are effective, for whom they are effective, and the conditions in which they are effective, is important for developing and maintaining successful interventions. One increasingly used methodology for doing so is process evaluation. However, whilst it is increasingly recognised that approaches to process evaluation should draw on the strengths of both quantitative and qualitative approaches (mixed methods) guidance on how to do so in practice is limited. This paper describes the challenges and benefits of combining qualitative and quantitative methods within one process evaluation and discusses these issues in relation to epistemological approach; study design frameworks; methods of data collection; and analytical approaches.

We then discuss each of these issues in relation to a case study in practice, a process evaluation of a large multi-site intervention to develop a new system for diagnosing and investigating diarrhoea in the community, known as Integrate. The process evaluation aims to assess the quality and effectiveness of a complex intervention from the perspective of a range of stakeholders, including patients as well as health professionals, and draws on different approaches to data collection including: interviews, observations, document review, participant biographies and a survey comprised of multiple questionnaires. In taking a mixed
methods approach, we are able to provide a rich description of study processes in the context of a multi-site interdisciplinary intervention. The project also combines ethnographic methods with critical action research. These methods are compatible and can be used to promote change in relation to issues of everyday concern via a feedback and action cycle. Given the many component parts of the project, the ethnographic mixed-methods approach to evaluation is considered key to understanding the complexity of relations, perceptions and processes embedded within Integrate. A contextual account is provided of the methods used to capture the non-linear tempos and flows of the various inter-linked components of Integrate. To our knowledge, this is the first prospective, ethnographic process evaluation of a complex intervention that is currently being introduced for managing people with diarrhoeal illness in the UK. We would seek to promote the methodology used in this study in the evaluation of other complex interventions, in order to further refine its scope and impact.

Steer, Mel¹
A mixed methods approach to dealing with discrepant quantitative and qualitative findings: the case of a randomised controlled trial of a complex social intervention.
Suzanne Moffatt¹, Katie Haighton¹, Sarah Lawson¹, Andy Bryant¹, Denise Howel¹, Frauke Becker¹, Luke Vale¹ and Martin White¹²
¹Institute of Health and Society, Newcastle University; ²MRC Epidemiology Unit, University of Cambridge

Introduction: Complex social interventions are challenging to evaluate. Mixed methods research designs provide a framework to understand the complexity of these interventions and to take this into account in evaluating impact. This is particularly important when discrepant findings from qualitative and quantitative methods arise.

Methods: A mixed methods study involving a randomised control trial (RCT) with embedded economic evaluation and qualitative research to assess the effects of domiciliary welfare rights advice for people aged sixty years and over living independently in their own home. 755 volunteer participants (recruited from general practices in disadvantaged areas in the North East of England) were randomly assigned to intervention (n=381) or control (n=374). Intervention participants received domiciliary welfare rights advice delivered by qualified Welfare Rights Advisors (WRAs). Control participants, offered the intervention two years after commencement of the study, could claim benefits or seek welfare rights advice independently during the study.

Quantitative data were collected at baseline, 12 and 24 months. The primary quantitative outcome measure was CASP-19 (a quality of life measure for older people). Secondary outcomes covered mental health, social and lifestyle outcomes. Qualitative data were collected from 50 purposively sampled trial participants (30 intervention, 20 control). These matched the trial sample on key characteristics (age and gender) but included more participants who had benefitted from the intervention than the trial sample overall.

Results: No significant differences were reported between the intervention and control arms of the study for any quantitative outcome, except that intervention group participants reported increased hours of care received. 22% of intervention participants gained financial or non-financial benefits. This was a smaller proportion of trial participants than anticipated and meant that any effect was diluted in intention-to-treat analysis.

However, qualitative study participants who received additional financial and non-financial benefits as a result of the intervention reported a number of dimensions of improved quality of life. Additional income gained was used to pay for a range of services including transport, utility bills, informal and formal care. Successful benefit claimants reported coping better with unplanned financial events, managing debts, alleviating fuel and food poverty and affording social activities.
Discussion: Different results in mixed methods studies are not uncommon. Using a mixed method design enabled us to interrogate the data from a range of perspectives. The qualitative analysis demonstrated the impacts of domiciliary welfare rights advice and active claims assistance in a population known to under-claim that were not reflected in quantitative results. Qualitative findings challenged the quantitative results and helped us to propose explanations (such as the effect was diluted and the follow-up period insufficiently long) that may otherwise not have been considered.

Conclusion: Our analysis identified different findings from the quantitative and qualitative analyses. No health benefits were identified from the quantitative analysis with the measures used, but qualitative findings identified additional income was used in important ways by successful benefit claimants that could lead to future improvements in health and wellbeing. The mixed methods approach provided a framework to explore and explain the discrepancies.

Sutcliffe, Katy
Identifying the critical components of complex interventions: employing qualitative synthesis to inform and structure a Qualitative Comparative Analysis of trials
EPPI Centre, Social Science Research Unit, UCL Institute of Education

Background: Qualitative Comparative Analysis (QCA) is an approach which has recently been employed as an alternative to meta-analysis in systematic reviews seeking to identify critical components of complex interventions. QCA’s benefits are that, unlike traditional methods for meta-analysis, it is able to work with a small number of studies and a large number of possible factors that could explain outcomes and it can cope with multiple pathways to success. However, methods for identifying and selecting the conditions to be examined in QCA models are still in development. This session will draw on a recent series of mixed studies systematic reviews on the critical components of weight management programmes to consider the benefits of using a synthesis of qualitative studies to identify conditions to examine using QCA.

Methods: In the first stage of the reviews we synthesised qualitative evidence to understand which weight management programme features are perceived by service users and providers as critical to successful weight loss. In the second stage of the reviews, a coding tool developed from the qualitative syntheses was employed to identify whether features perceived to be important were present or absent in interventions; we compared studies with higher effects to those with lower effects. Because of the number of conditions we coded, we also relied on the views synthesis to identify key overarching processes that users suggested were associated with WMP effectiveness, and selected conditions to develop QCA models.

Findings: Whilst the mixed-studies approach involved intensive work, we found the approach to deliver several important benefits. A key strength of this approach was its ability to provide fine-grained evidence on the features of successful WMPs where other reviews had been unsuccessful. In particular, the approach was vital to the identification of critical intervention features that are currently overlooked in policy and research literature. The approach also enabled a holistic contextual understanding of the range of factors implicated in weight management. Lastly, using the views synthesis to inform our QCA models also ensured that we avoided ‘data-dredging’ by acknowledging when our inferences were not supported by the views synthesis.

Conclusion: Guidance for the conduct of QCA suggests employing existing theory for the selection of conditions to be examined. However, the use of a-priori theory may be insufficient for QCAs examining complex interventions as a multitude of factors may result in unanticipated consequences of an intervention, or failure of a hypothesised programme theory. Synthesis of qualitative studies may be appropriate to identify conditions to examine in a QCA since experiential knowledge of the practical application of an intervention may be key to understanding the mechanisms at play.
Tajima, Chihiro  
**Investigating language complexity with mixed methods: The conflict between language learners’ self-evaluation and performance**  
*Keisen University, Tokyo Japan*

The purpose of this mixed methods investigation was to understand the complexity of the relationship between second language (henceforth L2) learners’ self-evaluation of their L2 skills, and their actual performance in L2 proficiency tests and L2 communication activities during a three-month study abroad (henceforth SA). This research first sought to determine whether self-evaluation of L2 skills correlated with L2 proficiency test results and the amount of L2 communication. Second, using the quantitative scale results, qualitative data were selected and analyzed to understand more deeply the quantitative results.

This study employed a sequential explanatory design of mixed methods and had two phases. In the first quantitative phase, results from L2 proficiency tests (collected at pre-departure and post-return), survey results on self-evaluation of L2 skills (collected at pre-departure and post-return), and language communication profiles (collected at while-abroad) of 25 Japanese university students were analyzed. In the second qualitative phase, seven cases were selected and divided into two groups based on scale scores: three cases who self-evaluated their L2 skills as high despite their proficiency scores being low; and four cases who self-evaluated their L2 skills as low despite their proficiency scores being high. The qualitative data, mainly consisting of recorded interviews of text data, were used to compare the two groups, and to search for patterns in each group.

A summary of the findings is as follows. (1) *t*-test results showed a significant change in learners’ self-evaluation and the proficiency scores after SA. (2) Correlation analysis results showed that self-evaluation was not correlated to the proficiency test results, and proficiency test results were not correlated with the amount of communication, but self-evaluation was correlated with the amount of L2 communication. (3) Learner experiences revealed some explanations why self-evaluation did not correlate with proficiency test results, but correlated with the amount of communication. More specifically, a total of seven conflicting cases divided into two groups by scale scores provided explanations of how each group of learners were projecting themselves and self-evaluating their skills independently from their actual proficiency. Finally, one outlying case was analyzed using qualitative data to explore the theme of self-evaluation of L2 skills.

The implication of the results are: (1) the continued endorsement of SA programs for L2 proficiency gain and for enhancement of authentic communication activities; (2) the need for learners to have positive, if not accurate, evaluation of their L2 skills, as self-evaluation was a predictive factor for the L2 communication activities, whereas the actual proficiency score was not; and finally, (3) the sequential explanatory design of mixed methods gave an inclusive insight into the complexity of language use by L2 learners.

Takagi, Etsuko  
**Factors associated with Fathers’ health-related quality of life (QOL) during the time of their wives’ pregnancy and after childbirth – Quantitative · Qualitative Study –**  
*University of Human Arts and Sciences, Faculty of Health Sciences School of Nursing*

In Japan, life-style related diseases, depression and suicide in middle-aged men are often has become a problem. They could not build a good relationship with their wives after their childbirth, and some said that this gave adverse effects of men’s health. The health of child-rearing fathers is an issue that needs to be addressed. Therefore, the aim of the present study was to investigate clarify their health-related quality of life (QOL) during the time of their wives’ pregnancy and after childbirth, as well as the factors associated with this QOL. The subjects were 42 couples consisting of a pregnant woman and her partner who visited
the municipal office of City A between June 2013 and May 2014 to receive a maternal and child health handbook (boshi kenko techo), who responded to a second survey.

Current study is sequential explanatory design of mixed methods research. Quantitative data was collected and analysed in the first phase. All couples were asked to complete two questionnaires; one during pregnancy and one after childbirth. In the second phase, qualitative data was collected from 6 fathers who completed two questionnaires. The first questionnaire consisted of the 36-Item Short-Form Health Survey (SF-36), an infant-oriented affection scale, an empathic experience scale, a marital relationship satisfaction scale and the Center for Epidemiologic Studies Depression Scale (CES-D). The second questionnaire consisted of the same scales except for the empathic experience scale.

Results of the t-test showed that health-related QOL in child-rearing men was associated with the number of children, their feelings of avoidance towards their child, the empathetic tendencies of both the father and the mother, and the presence or absence of subjective symptoms of depression. In multiple regression analysis of attribute-expressive variables, the only items that differed significantly among both men and women were those during pregnancy, namely the presence or absence of anxiety about childbirth and the SF-36 subscale items of "physical functioning" in fathers and "emotional role" in mothers. In interview, fathers described feelings of anxiety towards their wives’ pregnancy and birthing process, a decline in their shared emotions, and a deterioration of their marital relationships when their wives were in poor physical health. Moreover, a clear trend towards characteristic perceptions due to empathetic experience was evident among fathers.

Fathers’ health-related QOL was found that to be associated with their feelings of avoidance towards their child, number of children and the relationship with their spouse. The results of multiple regression analysis of CES-D scores showed that collecting information on maternal psychological social function and paternal physical function, are effective as a predictor of depression. Supporting fathers in raising their children from their spousal early pregnancy term may prevent experiences diminished health in fathers’ mature years.

Takahashi, Zaiya
How we turn knowledge into transformation of ourselves; Mixed Method Research on the Citizen Participatory Learning Program on End-of-life Care
Hiroko Nagae and Noriko Iwaki, Chiba University, Japan (End-of-life Care in Nursing)

Background: In Japan, rapidly aging society, over 80 percent of the population meet their death in the hospital. While patient-centered and will-respected end-of-life medical treatment and care is discussed, there are still many difficulties in the actual support process at hospital for patients’ decision making about their end-of-life. And the more fundamentally, the faculties of family and community are rapidly changing in this 20 years and they are faced with difficulty in playing a role in supporting dying or sick people and those around. Authors suggest that the place where our knowledge and consideration for the end-of-life problems are promoted and ‘decision’ or preference for our own end-of-life is cultivated is needed and such place is to be built as ‘learning community’ as distinct from place of mere medical treatment.

Methods: As a trial, we have implemented a citizen participatory learning program on end-of-life care. Research participants are citizens, not necessarily ill but interested in the topic, whose ages are 30s to 80s. Program was implemented 4 times every 2 weeks. We tried to evaluate (1) how the participants changed their values on end-of-life or life itself and (2) how they felt the program and their own experience during it. We used Life Attitude Scale (Itatsu 1992) and Social Support Scale (Iwasa et al. 2007) for the quantitative method for aim (1) and description papers (authors made) for the qualitative method for aim (2). Then we examined the meaning of “learning community” for citizens.

Results and Discussion: From the results of quantitative methods, We have made it clear that such a practice has important effects on the participants, such as giving them the feeling
of cultivating an active and responsible way of life and of being supported by others. At the same time, as many of the participants have had difficulties speaking to their family about end-of-life, we could observe that a place to think and talk about such matters with people outside the family is highly needed.

Questions for the audience: From the description papers we find many claims on our program and the difficulties participants experienced in their daily lives. For example, “Family relationship is much stressed in program but I cannot trust communication with family.” “My husband doesn’t want to talk on end-of-life care preference or how he wants to live in general. Of course he doesn’t listen to me.” “Why do we have to talk about end-of-life? Actually I cannot see enough though it seems important.” The quantitative results show that participants seem to receive positive elements from program that indicate their transformation of value or attitude. On the other hand we find more profound problems from qualitative results that come from partly shortcomings of our program but in another part from the social structural problems participants meet. To clarify what is the problem they meet and therefore how attempts of “learning community” can contribute to it, authors seek to improve research methods.


Van Grootel, Leonie
Translating theory into practice: Combining realist synthesis and the matrix-approach in mixed studies reviews
Floryt van Wesel, Joop Hox, Department of Methodology and Statistics, Faculty of Social Behavioural Sciences, Utrecht University

Since the introduction of the evidence-based movement it has become common practice to use systematic reviews for the evaluation of (complex) interventions. Most frequently used is the technique of meta-analysis, where the results of quantitative studies are combined in order to provide an aggregated value of effectiveness. However, presently synthesizing findings from qualitative studies in a qualitative evidence synthesis (QES) is gaining popularity. Alongside this development, incorporating (synthesized) qualitative findings with (aggregated) quantitative findings in so called ‘mixed studies reviews’, was only a small step away. Therefore, this study focusses on an optimization of the use of one specific mixed studies review method: the matrix-approach. This approach combines both types of evidence by juxtaposing findings from a meta-analysis with outcomes from a qualitative evidence synthesis using a matrix. Drawback of this approach is that only a QES producing policy and practice recommendations is appropriate as input, ignoring a lot of potentially important information gathered in more theory-building oriented QES-es. In order to be able to use such more abstract and theoretical qualitative findings, some form of transformation is needed. This study applies the framework from realist synthesis, which enables the transformation from theoretical models into concrete recommendations, for input in the matrix-approach. This is done by categorizing elements of theoretical models into contextual factors, mechanisms, and outcomes, which in their turn are reformulated in terms of interaction effects. Inference based on these effects are than used as input for the matrix. A motivating example is used to illustrate the application of this strategy and how it contributes to the transparency and generalizability of the use of the matrix-approach. Our proposed approach is especially appropriate for the evaluation of complex interventions in which the underlying causal mechanisms cannot be simplified in terms of direct effects.

Van Wesel, Floryt*¹
Designing a bridge to cross the quantitative-qualitative divide: An example on studying the complex topic of children’s empathy

Simone Roerig*, Judith Schoonenboom

*Shared first-authorship
1Department of Methodology & Statistics, Faculty of Social and Behavioural Sciences, Utrecht University, Utrecht; 2Department of Educational Neuroscience, Faculty of Behavioral and Movement sciences, VU University Amsterdam; 3Department of Education, University of Vienna, Vienna, Austria

A subject such as the empathic abilities of children, can be studied from a solely quantitative (e.g. cognitive abilities) as well as a solely qualitative (e.g. observing human interaction) perspective. Needless to state that both bring in their own research methodology and insights on the matter and are as such complementary. The high complexity of a topic such as empathy seems an invitation to use mixed methods. However, actually synthesizing the quantitative and qualitative insights on the matter at hand into a coherent and more complete story is not straightforward. So what if the default designs for mixing don’t apply? The present study on children’s empathy was designed to seek connectors, i.e. bridges, to cross the quantitative-qualitative divide in our research towards children’s empathy. Our starting point was a three level design: (1) Lab-life: quantitative measures of individual abilities, (2) ‘As if’ life: enacted emotions measured by means of a Theatre Test, and (3) Daily life: qualitative observations of empathic processes in everyday school life. Within the framework of this design we investigated three potential ‘bridges’ i.e. data that somehow link the quantitative and qualitative strands in our study. The first covered the ‘as if’ life wherein children were challenged to infer enacted mental states of their peers and to individually switch between different roles in a given fictitious situation. The second involved the social network within a school class. And the third concerned the ideas and reflections that children themselves had on the concept of empathy. All three bridges contributed uniquely to our substantive understanding of empathy in children, but their bridging capabilities varied greatly. In this paper we will discuss implications of our specific methodological lessons learned with concern to designing a mixed methods study on such a complex topic.

Veljanova, Irena C
Ethnoculture and Health-related Knowledge: Using mixed methods as part of the community participatory research route to emics
School of Social Sciences and Psychology, Western Sydney University

Achieving equitable health outcomes in multicultural societies requires a ‘health-literate environment’ (ACSQHC 2014: 11) within which due relevance of cultural literacy, as a component of health literacy, is observed (Purnell 2012, Zarcadoolas et al. 2006, Kleinman and Benson 2006, ACSQHC 2014). To develop cultural literacy, that is ‘the ability to understand and use [ethno]culture and social identity to interpret and act on [health-related] information’ (ACSQHC 2014: 24), health and allied-health practitioners need to be understanding of and well informed by ethnoculturally relevant health-related knowledge in emic sense.

The main premise in this paper is that Community Participatory Research (CPR) approach provides a methodological framework which can elicit health-related knowledge that is validated in emic sense by the researched ethnocultural community, by means of ‘shifting power in the research process from top to bottom, enabling the researched [community] to partake consistently throughout the research process’ (Veljanova 2010: 88, Cornwall and Jewkes 1995). Drawing from a study that explored the complex relationship between identity, health and health capital by focusing on the Macedonian community in Australia (2006-2010) this paper will showcase the usefulness of the mixed method approach in negotiating the above mentioned shift in power, but more importantly, in generating ‘native’, emic
understandings and interpretations regarding health. The mixed method included five focus groups (N=38) conducted in five different locations throughout Australia and a nation-wide survey (N=817) of the Macedonian community in Australia.

Walker, Tracy  
An examination of pre-service elementary teachers’ perceptions of science teaching utilizing a mixed methods approach  
Virginia State University

Given the widening achievement gap for minorities in science, there is a critical need to increase the numbers of highly qualified teachers from underrepresented groups to nurture the nation’s diverse populations. Research shows that social, psychological and cultural factors greatly influence students’ motivation and ability to learn (Kim & Conrad, 2006; Palmer & Gasman, 2008). Student performance and achievement, especially in STEM areas, are related to motivational beliefs (e.g., self-efficacy) and availability of positive racial/ethnic role models (Cokley, 2003; Harris & Marsh, 2010). Wenner (1993) found that low levels of science content knowledge correlated with a lack of confidence towards teaching science among preservice teachers. Based on this research, a mixed methods study was conducted to examine current pre-service elementary teachers’ perceptions, beliefs, and attitudes towards science teaching utilizing the sequential design in the College of Education at Virginia State University. The Teaching Science as Inquiry assessment was administered as a pre- and post-test during the fall semester in which the pre-service teachers were enrolled in their curriculum methods courses. At the end of the semester, focus groups were then conducted to provide additional context to the findings of the TSI. This presentation will provide a discussion of the scope of the study, the implementation of the QUAN/QUAL sequential design, data analysis strategies implemented, general findings, and how these findings may impact future instructional practice at the university.

West, Caryn  
Alcohol Management Plans and Indigenous Australians: When a single paradigm just won’t do.  
Alan R Clough  
1Nursing, Midwifery & Nutrition, James Cook University, Australia. 2Australian Institute of Tropical Health and Medicine, James Cook University (Cairns Campus)

Implications of the research as it relates to the theme of the conference: Employing unique mixed method approaches in complex environments which explore controversial topics in vulnerable populations. This presentation provides examples of the benefits of MM over a single paradigm approach. Purpose of the paper: This paper will present examples of ongoing National Health and Medical Research Council (NHMRC) of Australia funded projects on Alcohol Management Plans and remote Indigenous Australian communities and why a variety of mixed method approaches were employed rather than a single paradigm. The presentation will deconstruct and evaluate the research components of a multiphase sequential mixed method design, a longitudinal multiphase transformative mixed method design and a longitudinal multiphase mixed method life event comparison. Evidence to the benefits of mixed methods in complex social environments which explore controversial topics in vulnerable populations will be provided and why these approaches outweigh a single paradigm approach. In 2002 Alcohol Management Plans were implemented in a number of Indigenous communities in Queensland, Australia as means of responding to what was widely regarded as a public health emergency of extremely high rates of alcohol-related violence. Observations since implementation showed fragmented attempts to evaluate the impacts of
Alcohol Management Plans but no systematic approach to data collection and reporting was employed. The projects presented as examples are the first independent compilation of injury, violence and health and wellbeing data at a regional level and importantly document the long-term impacts on economic and social outcomes of complex interventions restricting the supply of alcohol in Indigenous communities in Queensland.

Of particular interest is how a mixed method approach allowed for the needs of a vulnerable population to be met. These projects are the first and largest independent reviews that are fully inclusive of the Indigenous populations affected by the Alcohol Management Plans and were designed to specifically address the research and cultural needs of the people whilst providing robust data that will inform policy change.

Descriptors: Indigenous research, mixed methods, alcohol management plans

IRB Approval: Approval number H4967 & H5241 James Cook University Human Research Ethics Committee

Wilkinson, Hen

Negotiating everyday conflict: using complexity-informed mixed methods to better understand the dynamics of collaboration

University of Bristol/Community Resolve

This paper describes the mixed methods, action research design and early data collection of an ongoing PhD study (Year 2) into human experiential space (Dimitrov & Ebsary 1998; Kuhn & Woog 2007). Here, ‘mixed methods’ refers to small-scale, snapshot quantitative, qualitative and observational data collection and analysis approaches. The ‘action research’ element applies to the impact of the research intervention on individual understanding and organisational and collaboration dynamics. Central to the study is an exploration of what complexity-informed research methodologies might – or might not - contribute to a better theoretical and applied understanding of working in cross-sector collaborations. The paper looks at how this underlying theoretical perspective is reflected in all aspects of the design, including in-depth researcher reflexivity (Bazely 2004), and explores results from early data collection activities. The study looks at how humans navigate their differences within collaborative spaces, with a specific focus on the dynamics of multiplicity - relational, cultural, organisational or political. It does this by focusing on two networks of collaboration around citizen-based training programmes, and looks in particular at the different value frames that partners bring to collaborative working. As multiplicity and difference are understood as an accurate representation of our uncertain world, the focus here is on dynamic interaction and emergent thought between entities and individuals, rather than collecting static data from entities or individuals themselves. In a ‘concurrent transformative’ research strategy similar to that proposed by Creswell (2003:211), the research design provides a loose structure within which an emergent creative process between participants can evolve in the room, with subsequent data analysis focusing on moments of collective creativity as differences between individuals are negotiated. This is achieved through the use of self-managed task-based group activities and ‘coherent conversations’ as data collection devices (Kuhn & Woog 2007). These allowed the researcher to bypass direct inquiry – as in a semi-structured interview – and to invite instead a deeper, psycho-social level of participation by those involved in the research (Clarke & Hoggett 2009). The action research aspects of this study rests in these participative spaces and the accompanying feedback sessions. The task-based activities allow a level of discussion and shared understanding to develop between individuals drawn from multiple organisations and levels across a collaborative structure. This immediately triggers a shift and development of thinking and relationship at multiple connection points in the collaborative network, which is strengthened through shared focus group reflections on the data. To acknowledge the defining role of the researcher’s own value frames on any research findings, a deeper layer of reflexivity has been built in through her engagement with a psychodynamic reflection group, to test the assumptions and themes
she finds in the data. This interaction is having an impact on her own understandings, on the iterative shaping of the research design itself, and also on the observational consultancy organisation who are providing the reflection group.

References
Kuhn, L & Woog, R (2007), From complexity concepts to creative applications, World Futures 63 (3 & 4):176–193

Wyndham, Delyth
The challenges of internet-mediated mixed methods health research: Reflections on longitudinal sequential designs
June Keeling, University of Chester

The inherent complexity of people and the systems that they exist within, means that infusing the field of mixed methods research with new technologies and modes of data collection represents both opportunity and challenge. As Hesse-Biber and Griffin (2013) highlight, the traditional research relationship is transformed by the use of internet-mediated technologies. In embracing mixed methods research and “coming at things differently” (Hesse-Biber & Johnson, 2013, p. 103), researchers can readily accept this further layer as an opportunity to revisit core assumptions and research questions. This paper explores the use of internet-mediated technology within a longitudinal sequential mixed method research study in the context of health.

Whilst it may be easier to access wider, more diverse and time constrained populations such as working parents via internet-mediated technology, at the same time the challenge remains that technology is in perpetual flux. For example, the ongoing proliferation of mobile internet has shaped how, when and where participants engage with research. Longitudinal sequential designs in particular, may be subject to issues of engagement and participant retention in the context of asynchronous, somewhat impersonal internet-mediated research. Nevertheless, few problems encountered by mixed methods researchers utilising internet-mediated technology are likely to be unique to the field.

The prospect of longitudinal internet-mediated mixed methods research better reflecting the complexity of phenomena offering fuller descriptions of the human dimensions being explored is encouraging. Moreover, mixed methods research that retains generalisability/transferability whilst giving participants a voice, may positively shape both policy and professional practice within health research. If mixed methods research is comparable to cake (Creswell, 2015), internet-mediated technologies (as the layer of icing) may enrich the overall result.

References

Yadav, Smita
Work and Moral Economy of the Poor
University of Sussex

The current literature and focus on poverty alleviation is ambiguous over the role of social relations and social capital in the lives of materially deprived poor people. In addition, mainstream government and state policies for poverty reforms are made under the assumption that people are poor because of poor economic choices. This paper takes strong contention with this assumption. Instead, it shows how by using mixed method approach newer and emerging areas of poverty and inequality are challenging such dominating assumptions. In this paper, I will discuss how mixed method is applicable in contexts where financial security is experienced not from formal institutions like the state but from informal institutions likes labour market and the informal economy. Focussing on the tribal community, the Gonds in central India, the paper will how mixed method approach was used to highlight an important and changing relationship with the Indian state in their pursuit of escaping poverty and experiencing social change. Despite many state schemes like education, employment, and housing for the poor like the Gonds, the latter have found a way to be financially independent and instead withdraw from the state. Using extensive household surveys combined with ethnographic methods and oral narratives of the Gonds, the paper will show the economic behaviour of the Gonds. The use of mixed method approach on studying working lives of the Gonds, the paper will attempt to show that there are many aspects of poverty, experienced and felt, is varied and will discuss how its impacts on a particular moral economies of poor households. Specifically, it will show what work, labour, and informal economy mean to such poor households and how their quantification of subjective experiences of poverty can be measured using mixed methods approach.