# FUM conference abstracts

**Keynote 1 - Ethical issues and Dilemmas in Educational Research: How to research under conditions of uncertainty? Exploring the use of arts-based methodologies in the preparation of primary teachers of science.**

**Laura Colucci-Gray, School of Education, University of Aberdeen**

Within the current context of global, socio-environmental change, the question of what constitutes relevant or useful knowledge has come under scrutiny. Environmental problems are no longer separated from issues of social behaviours and culture and their effects are located at multiple levels, across space and time. Society is facing complex, wicked problems for which no single solution exists. Knowledge is plural, contested and inherently contingent.

In this context, questions of ethics and whether or not research in conventional sense can still take place have become paramount. The multi-perspectival nature of the problems states that any knowledge which is being produced cannot be disentangled from the nature of the relationships that are established amongst all stakeholders, with the cross-cutting issues of power and linguistic mediation. Who holds the ultimate responsibility for what is being learnt? Or what is being taught? What are the implications for the pedagogical contract between teachers and learners? This talk looks at the ethical demands which are thrusted upon the teaching of science in Higher Education with a particular focus on the preparation of primary science teachers. In this talk, I will draw upon recent experiences of action-research in my own professional context. I adopted arts-based methodologies to explore questions of knowledge as it emerges in relationship between participants and their local context. I will pose some critical questions and invite the audience to thinking about some of the answers.

**Keynote 2 - Responsible Research in Education**

**Stephen McKinney, School of Education,University of Glasgow**

This paper explores the idea of responsible research in Education and the contribution it can make to the individual and to society. The paper will first draw out some key aspects of responsible research identified by the Research Councils UK. These key aspects include: contribution to society and economy; the improvement of social welfare; the enhancement of cultural enrichment and quality of life. They also include a strong awareness of the need to ensure that research is relevant – meaningful, timely and useful – and has a multi-faceted dissemination strategy and clear understanding how end users will engage with the research. The paper will then examine three examples of research that could be considered to be responsible. All three examples are focused on the integration of new arrivals or those who are vulnerable. First, a project that aimed to help new arrivals integrate into higher Education in the Russian Federation. Second, a case study of a school that used a nurture group to ensure that vulnerable children could be retained in mainstream schooling. The third example is of a school cluster that aimed to include new arrival children and help them with the challenges of language and culture in their new school.

### Keynote 3 - Gatekeepers and Children's participation in research

#### Hervör Alma Árnadóttir, University of Iceland

From the standpoint of evidence-based practice and laws on children's rights, children should be encouraged to participate in research which may affect their lives. Researchers are often interested in needs of the most marginalized children in society and those who are not receiving appropriate services. When that is the case, children's participation in research is often controlled by so called gatekeepers, such as parents/guardians, professionals and institutions involved with children. Getting past these gatekeepers can be challenging and may hinder researchers in reaching to a broad and representative population of children. The study aims include an exploration of the experiences of two parties which are bound to communicate "at the gate". These parties include researchers who do studies among children and gatekeepers in social and educational services, who handle applications for access to children in that context. Data are based on focus group interviews with researchers engaged in children's studies and gatekeepers in social and educational services in Iceland. Results indicate a protectionist stance towards research including children as participants and a lack of transparency in the application processes. Professionals often seem reluctant to provide access to children, even though research protocols have been ethically cleared and granted funding . There seems to be a need to support researchers in generating knowledge on diverse aspects of children's lives, and particularly regarding children in disadvantaged positions. This calls for clearer research application pathways, more transparent regulations and increased dialogue on children's ability and rights to participate in research.

### Keynote 4 – Working across borders in educational research – lessons from participating in international research projects

#### Ingólfur Ásgeir Jóhannesson,  University of Iceland

The presentation is structured around stories from participation in international research projects. It focuses on some of the lessons learned from the Educational Governance and Social Integrations/Exclusion project, a EU-funded project from 1998–2000 (http://www.gu.se/digitalAssets/1320/1320558_finalreport-egsie2.pdf). The presentation also deals with some of the difficulties that need to be overcome in joint multi-country cooperation projects and about the challenges of having to work in two or more languages at once.

### From student learning to student research: Extending the ActSHEN project (Session A)

#### Sydney Ross Singer and Allyson Macdonald, University of Iceland

Over the last three years Nordic researchers from four institutions, supported by a NordPlus development grant (2013-2016), have worked on the so-called ActSHEN project, which has focussed on student-generated action in higher education for sustainability. Project teams have evaluated varying levels of participation and student engagement in decisions on curriculum, instruction and assessment.

Three graduate courses related to sustainability and education have been developed over the last 7-8 years in the School of Education. Ideally partnerships between students and faculty move from high teacher input and active class participation, to more student control and decision making and fewer teacher directives with the aim of students designing their own research. A four phase framework outlines the proposed shift of control.

1. Curriculum-based Agenda: Students are introduced to concepts, and solicited for input on course topics and methodology. Instruction is based on best practices in sustainability education.
2. Instructor-based Agenda: The expectations placed on students change from patient participants to independent practitioners. Students design their own projects, and suggest changes to curriculum and assessment.
3. Cooperation and Integration: Responsibility is placed on students to integrate their own academic needs into the program. Students get to know research and projects in the department and other organisations, and critically reflect on their own projects on teaching and research.
4. Overt Partnership: A focus shift changes the dynamic between students and teachers to overt partnership. Students directly impact class content, methodology, assessment and their learning enviroment, increasing their evolving ability to initiate and/or lead research and projects.

Overt partnership as co-critical reflective practice supports students and teachers in identifying and taking action to meet their own developmental needs for and in sustainability education.

A benefit of the phased approach is that as students and teachers move through them the range and nature of research problems being identified and addressed enhance and challenge the more conventional literature on sustainability.

### Educators as researchers: the moral dilemmas of working with non-conventional pedagogy in conventional education settings. (Session A)

#### Ásthildur Björg Jónsdóttir (Icelandic Academy of Arts) and Sue Gollifer (University of Iceland)

This paper presents findings from applying a relational assessment tool (Wood, 2014) during a workshop held in August 2015 on human rights and visual arts at the Icelandic Academy of Arts (IAA). The workshop provided the context for one of the student-driven pilot courses run as part of the three-year ActSHEN project: Action for Sustainability in Higher Education in the Nordic region.

The assessment tool is represented by a three-dimensional tetrahedron that reveals the deeper ecology of pedagogy. Its application provided an opportunity to explore one of the most challenging aspects of working with student-driven courses in a credit-driven Higher Education (HE) context, where stakeholder expectations are pinned on competence-based or graded learning outcomes.

Data collected from informal and formal assessment processes during the workshop were analysed to answer the questions:

*How much student action is possible in our institutions? What are the implications for educators who are researching ways to promote non-conventional pedagogical approaches at HE as a means of addressing social and ecological wellbeing?*

Student responses revealed emerging dichotomies between students used to working independently in art studio settings and students used to traditional lecture formats. We explore these dichotomies, such as the mutual pedagogic responsibility representing a constraint to organic flexible responses for some, and experienced by others as overwhelming but liberating.

Our findings suggest a moral dilemma for the educator who is exploring the impact of non-conventional pedagogical approaches to pursue normative social and ecological justice goals; how to engage with the subjectivity of the learning process in the context of working towards normative goals? We propose the creation of pedagogical spaces that support dialogic communication representing multiple perspectives and that can recreate themselves in different forms and contexts.

These findings contribute to strengthening non-conventional pedagogy needed to promote sustainability in HE in Iceland and internationally.

## Do we need an ethical review process in educational research: perspectives from research and professional experience? (Session A)

**George Head, University of Glasgow, SERA past president george.head@glasgow.ac.uk**
The introduction of ethical review in the educational research process has proven problematic and controversial. Criticism from the Social Sciences community has centred on the adaptation of a system directly imported from medicine and biological sciences, which has been seen to be an obstruction to rather than supporting research, including educational research. Consequently, in September 2015, the Social Sciences Committee of Science Europe issued a report stating that the Social Sciences should develop its own ethical protocols as a matter of urgency.

In response to these concerns, the European Educational Research Association formed a working group to explore the issues related to ethics specifically in educational research. The working group conducted a survey by electronic questionnaire that attracted more than 500 respondents. Preliminary results indicate a mixture of approaches towards ethical review throughout Europe (and beyond), and a similar mix of experiences of educational researchers.

The ethical conduct of research begins the moment we start to think about a research project whether that be one generated by ourselves or our students, or whether that be applying for funded research. In all research contexts there are some key core issues around which ethical behaviour can be considered namely, informed consent, confidentiality and anonymity. In addition, a number of other issues, including voluntary participation, data handling and dissemination are constituent features of ethical research behaviour. The German, American and British research associations address these matters in broadly the similar terms of integrity, respect and dignity for the researcher, respect and dignity for participants and integrity in gathering and how we deal with data. SERA has developed its own ethical guidelines along similar lines. It is these ethical guidelines that form the basis of ethical review processes and the work of ethics review boards in our universities and other institutions.

This paper draws on literature related to ethics in educational research, EERA's research and the author's professional experience as the initial Faculty Ethics Officer in his own institution to explore the issues and question the requirement for, structure, and contribution of ethical review processes in educational research.

Reference

Science Europe Social Sciences Committee (2015) 'Workshop Report: Ethical Protocols and Standards for Research in Social Sciences Today': D/2015/13.324/7

## The Challenges of Crosscultural Research (Session B)

### Ásta B. Schram, The University of Iceland

A certain value is attached to crosscultural research and comparisons. Results can reveal the strenghts and weaknesses of nation´s educational systems, and as such, give valuable information for modification and improvement. Consequently, instruments are often translated from one language to another and adjusted to the target culture. In an instrument translation, the goal or the challenge is to acquire instrument cross-cultural equivalence, that is, the invariance of scales and tests, in spite of linguistic and cultural differences (Byrne & Watkins, 2003; Church & Lonner, 1998; van de Vijver & Leung, 1997). Villagran and Lucke (2005) suggest two important criteria to measure the equivalence of the source and the target scale, semantic equivalence and translation invariance. Semantic equivalence deals with the development or translation of the instrument. Translation invariance is an assessment of how well the instrument performs when it is used in the intended. These processes will be explained. There are several approaches to translating an instrument for use in another culture. Villagran and Lucke (2005) describe five common methods for translating a scale or an instrument: one-way translation, back-translation, the committee approach with decentering, expert evaluation, and the use of a bilingual sample. These methods of instrument translation will be discussed along with some challenges in crosscultural research.

## Successful Educational Contexts in Iceland for Immigrant Students:
## Methodological Issues Concerning Case Studies of Nine Icelandic Schools (Session B)

### Hanna Ragnarsdóttir (hannar@hi.is), Börkur Hansen (borkur@hi.is) and Robert Berman (robertb@hi.is), School of Education, University of Iceland

In the paper, we discuss methodological issues which confronted us in the Icelandic component of a Nordic research project, *Learning spaces for inclusion and social justice: Success stories from immigrant students and school communities in four Nordic countries,* that also included Finland, Norway, and Sweden. In the project, we wanted to pursue a new discourse regarding multiculturalism and inclusion and rethink the approach to schooling in our countries. By focusing on the academic and social success of individual children and students of immigrant background, and of school practices that serve these children and students well, we aimed to highlight features of exemplary schooling that should lead to new teaching guidelines and school reforms to underpin the ideals of *democracy*, *social justice*, and *inclusion* in our schools.

The purpose of the study was to research good practices at three school levels—preschool, compulsory school, and secondary school—that contribute to the social and academic success of immigrant children and students. Two main aims of the study were (1) to understand and learn from the experiences of immigrant children and students who have succeeded academically and socially and (2) to explore and understand how social justice is implemented in equitable and successful diverse Nordic school contexts and other learning spaces. We used purposive sampling methods to identify successful schools for the study, primarily by the means of external expert groups. We then identified through school leaders successful children/students within each of the schools, whom we engaged in semi-structured interviews.

The aim of the paper is to introduce and discuss methodological and conceptual challenges encountered, a number of which confronted the research team, including choosing successful schools and research with immigrants, children, and youth related to positions of power and social difference.

**"Parent to parent: Understanding immigrant parent roles in their child's educational journey" (Session B)**

Elizabeth Lay, MA student in International Studies in Education, University of Iceland with (thesis supervisor) Dr. Brynja Elísabeth Halldórsdóttir, Lecturer at School of Education, University of Iceland

This is an examination of the research process of the study about perspectives of immigrant parents towards their young adolescent's educational experiences in Iceland. It is an intersection of two issues: immigrants in Iceland and home and school partnership. Home and school partnership in Icelandic society is becoming the norm and expectations of parent involvement are growing. This underlines the importance of understanding the motivations of immigrant parents and how they perceive their ability to help their child. Immigrants are currently facing challenges such as integration, language learning, and school dropout. The effectiveness of parent involvement can address these challenges.

Participants volunteered to take part in a survey and an interview. The researcher encountered issues of accessibility, trust, and anonymity in such as small study population. Recent trends in immigration have offered new challenges to working with and researching immigrants in Iceland. Given the relatively small population, both Icelandic and immigrant, keeping anonymity and the private lives of immigrants outside of the research becomes difficult when dealing with family and ethnic networks that may exist within the various communities.

This presentation explores such issues related to small sampling sizes in survey research, as well as issues related to snowball and convenience samples. Grounded in a mixed methods study the authors explore the challenges faced when finding a representative sample that would yield valid research results and that could be used to illuminate the discourse surrounding immigrant parent involvement in early adolescent school lives.

### Tensions and role-conflict in an insider action research  (Session C)

**Hjördís Þorgeirsdóttir, konrektor (deputy head teacher), Menntaskólinn við  Sund**
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This presentation describes the strength and weaknesses of an insider action research in an upper secondary school in Iceland. One of my tasks as a school-leader is to enhance the teachers' professional development and I have found action research the most effective way to do that. We have experienced the empowering effects of action research and how it increases teachers' agency to change the practice and their cross curriculum agency. But I have also experienced tensions and challenges of role duality in an insider action research. I will discuss my different roles as a researcher and as a deputy head teacher, the conflict between the roles and my attempts to co-configure these roles. The conceptual framework of the activity theory by Engeström is used to analyse the data. My action research is guided by the ideas of McNiff and the approach to the issue of challenges in insider action research is also grounded in the work of Coghlan and Brannick. My data collection is based on my research diary, conversations with my critical friend and participants in the action research group and audio recordings from the action research group's meetings. My conclusion is that I can't co-configure my roles as a researcher and a school-leader in any other way than learning to live with the role-conflict and use it to my advantages in both the activity systems of action research and leadership in the school where professional development is the shared object. It was first and foremost a methodological role conflict because of the importance of ownership of research in action research and therefore it was very important to stress co-operation rather than intervention and create a participant centred research rather than a researcher centred study.

### Researching with teachers – possibilities and challenges (Session C)

**Jónína Vala Kristinsdóttir – University of Iceland, School of Education**

The purpose of this paper is to discuss methodological approaches to conducting research with teachers into their practices. A specific goal is to discuss developmental research and challenges facing the researchers as well as opportunities for learning about teacher practices.

The discussion will focus on results drawn from a developmental research where seven primary school teachers and a teacher educator collaboratively inquired into mathematics teaching and learning in their practices (Goos, 2004). The aim was to build a co-learning partnership between teachers and a researcher in order to support classroom inquiry (Jaworski, 2006). The methodology of developmental research (Freudenthal, 1991; Gravemeijer, 1994) and the 'developmental research cycle' (Goodchild, 2008) guided the cyclic process of the research. During the three years of the research process two interconnected cycles of research and development that model a dialectical evolution of both theory and practice guided the research process.

Data was collected of video recording from 17 workshops where the teachers worked with a teacher educator at looking into their way of teaching mathematics, audio recordings from interviews, notes from classroom observations and copies of students work. The analysis started at the outset of the study as the outcomes of each step of the study guided the further steps taken. A more fine-grained analysis was carried out after the study finished with the purpose of getting a deeper insight into the learning process that emerged during the study.

The challenges of carrying out a research where local theories are tried out in practice, analysed and adjusted, feeding back to the research cycle that in turn guides the developmental cycle will be

discussed. The hindrances on the way to inquiring into own teaching will be highlighted as well as the potentials that arise when teachers and researchers collaboratively work at researching their practices.

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**Discourse differences between regions in Iceland and Scotland (Session C)**

**Anna Guðrún Edvardsdóttir, Ph.D student, School of Education**
One part of my doctoral thesis is an analysis of the discourse about the knowledge society, regional development and sustainability of communities in Westfjords, East Iceland and the Western Isles of Scotland in order to find out if the expansion of university activites in rural areas had had any effect on the viability of communities.

Historical discourse analysis was used to identify themes in policy documents about the knowledge society, regional development and sustainability.

The first discursive theme found in the Icelandic documents revolved around the importance of the economic factor as the key factor in regional development and reinforcement of rural areas. The second theme reflected the role of the knowledge society in regional development and the third theme, the importance of forming clusters in local industry. Fourthly, a theme of sustainable development was identified and fifthly, an emphasis on the need for rural areas to identify their strength and specialities and use these for the benefit of the economy. In the Western Isles documents four discursive themes were identified in the rural policy documents. First is a vision about creating sustainable communities, where the environmental, economic, social and cultural well-being of people are important. The second discursive theme is the importance of creating resilient communities. Discourse about the demographic balance in the island population is the third and the fourth is about the role of the knowledge society in rural development.

The findings show that there is hardly any difference in the discourse between the two Icelandic regions. However, the difference in the discourse between the two Icelandic regions and the Western Isles was substantial. They agree in the importance of creating sustainable communities but have different approaches on achieving it.

### Making meaning of reflection through poetic inquiry (Session D)

Karen Rut Gísladóttir, Assistant professor, School of Education, University of Iceland, Jakob Frímann Þorsteinsson,  School of Education, University of Iceland, Hervör Alma Árnadóttir, Assistant professior, School of social sciences, University of Iceland

One of the challenges facing educational researchers is to find ways in which to capture and represent the complexity of human experience and individuals' working places. Through past decades, educational research suggest that more conventional, textual, descriptions of qualitative findings do not sufficiently represent the complexity of studying human experience. The form of more arts-based research practices is needed to increase possibilities for multiple perspectives to emerge within the research findings and to open up for alternative insights and more resonable interpreations of the meaning of the situation (Eisner, 1997; Butler-Kisber; 2002). In this presentation we disucss how we are using the research practice of poetic inquiry (Chisaga et al., 2014; Pithouse-Morgan et al. 2014) to explore individuals' reflective practices in formal and non-formal educational systems.  This study emerges in the  context of the European REFLECT PROJECT in which four european countries; Iceland, Belgium, Italy and Litháen, come together to explore from the perspectives of formal and non-formal education how we can become better faciliators of the reflective process.  From each country there are two representatives from the formal educational system of academia and two from non-formal educational systems of these countries.  In addtion, sixteen participants entered a specially designed testing phase of the project which lasted for five months.  In this presentation we ask: How can we as educational researchers capture and represent reflective practices as it emerges in participants' experiences in various contexts in ways that gives space to multiple insights and interpretation? In using poetic inquiry in representing participants' experiences of using reflection in their work, we aim to communcate their diverse voices and to illuminate the process of bringing theses vocies together to help us make meaning of the complexities, challenges, and value of reflection.

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### Understanding 'disengaged' pupils' experiences in physical education (PE): an appreciative inquiry approach. (Session D)

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Keywords: disengagement; physical education, appreciative inquiry; successes.

### Background

There is anecdotal evidence to suggest that PE teachers have developed specific teaching strategies to motivate pupils who have previously 'disengaged' from PE.

**Aims**

Adopting an appreciative inquiry approach, this research sought to understand the teaching strategies developed by PE teachers to re-engage disengaged pupils. In doing so, we aimed to illuminate the key factors that enabled success and make available those successes to others.

**Methods**

Teachers from three state secondary schools had previously shared their ideas for increasing pupil engagement with the lead researcher. Subsequently, the teachers and the 'disengaged' pupils from each school were interviewed to identify **and appreciate the best aspects of their practice.**

**Main findings**

*Re-engaged pupils*

PE was a safe and engaging place to be when their teacher was calm, kind, respectful and treated everyone equally. They valued the choices that they were given by their PE teachers, especially when they included a choice of 'novel' activities such as dodge ball or capture the flag.

*Re-engaging the pupils*

An important issue for the teachers was to change their pupils' views about the purposes of PE. To do so, they set a range of learning intentions that focussed on the development of social, emotional, and cognitive skills. The teachers recognised that treating the pupils with respect was critical. Key to this was listening to their views and providing them with opportunities for self-directed learning.

**Conclusions**

The teachers believed that they had improved the PE experiences of their 'disengaged' pupils. Participation in this project has developed their understanding of the most successful aspects of their practice. In the next phase of the project, the teachers will attend a workshop to discuss their successes and collaborate to develop ideas for future teaching and learning strategies.

## Challenges – and rewards – of conducting educational intervention research (Session D)

### Anna-Lind Pétursdóttir

Educational interventions are intended to improve a range of cognitive, affective, or behavioral outcomes in the school system. In order to test intervention effectiveness, research is needed. However, there are numerous challenges facing researchers attempting intervention research in the field. This presentation discusses a few of them, but mostly focuses on the rewards of intervention research through two examples of studies. In the first study, 188 master-level students received training through a distance education course to conduct functional behavioral assessments (FBAs) and behavior intervention plans (BIPs) with 68 boys and 6 girls (aged 3-20 years) displaying persistent behavior problems in inclusive preschools, elementary and secondary schools. Changes in student target behaviors were evaluated with a total of 114 AB single-subject designs and combined data with single group pretest-posttest designs. Comparing medians of means, disruptive behaviors decreased by 78% and aggressive behaviors by 89% while task engagement increased by 91% after intervention. Nonparametric Wilcoxon signed-ranks tests for related samples showed that changes were statistically significant for all groups with sufficient sample sizes. Adjusted effect sizes ranged from $d$= 0.5 to 1.6. The second study evaluated the effects of BIPs on the behavior and participation of preschool five children with long-lasting behavior problems. A multiple-baseline design across participants, showed that active participation increased from 33.7% to 92.9% on average through

intervention. Also, participants' teachers´ and parents´ perspective of FBAs and BIPs was assessed through interviews. Teachers in general considered the strategies to harmonize well with their work and to have positive effects on children's behavior and participation in preschool activities. Parents described positive changes in their children´s well-being and experienced a positive change in the preschool staff's attitudes toward their children. Thus, in some cases, rewards of educational intervention research can outweigh the challenges.

### University teachers in foreign research landscapes (Session D)

**Guðrún Geirsdóttir, Associate professor and director for the Centre for teaching and learning University of Iceland (gudgeirs@hi.is) and Anna ÓlafsdóttirAssociate professor at the University of Akureyri  (anno@unak.is)**

A diploma in higher education pedagogy is a 30 ECTS line of study located within the School of Education at the University of Iceland. The diploma consists of three 10 ECTS modules and is organized for higher education academics. In the final module, participants design and carry out pedagogical research within their own disciplinary field. Based on the ideology of Scholarship of Teaching and Learning (SoTL), the aim of the module is to enhance disciplinary pedagogical research and scholarly practices within higher education teaching. Despite the fact that the participants are all experienced researchers within their disciplinary fields, educational research is for most of them a foreign landscape. Therefore, conducting such research is for them both a theoretical and methodological challenge.

From educational researchers' point of view, the invasion of SoTL newcomers into their disciplinary field is also problematic. Educational experts may doubt both the integrity and the scholarship of these newcomers within the educational field of research.  Should SoTL research be welcomed as an important contribution to enhance the quality of learning and teaching in higher education, even bringing different disciplinary expertise and disciplinary lenses to the field of education? Or is the invasion of SoTL research seen as a threat to the integrity of those doing "real" educational research?

In the paper we will discuss the challenges experienced by the participants in the SoTl module during their research process. Data was collected through focus group interviews with graduated as well as current participants in the module. Findings will be discussed in the light of the questions raised above.

### Qualitative bullying research, ethical dilemmas and challenges (Session E)

**Vanda Sigurgeirsdóttir, University of Iceland, School of education. E-mail: vand@hi.is**

Qualitative researchers are often personally involved in their study, which can be ethically and emotionally challenging.  Interviewing a young person that sits in front of the researcher crying or hearing from a mother that her child has scars all over the body from self harm and suicide attempts can be upsetting and even heart-breaking for not only the participants but also for the researcher. Qualitative research that deals with sensitive topics such as bullying can thus pose emotional risks for the participants and even the researcher. So what is the responsibility of the researcher regarding potential emotional or even traumatic impact on the participants and them selves? In this paper research among bullied youth and their parents will be discussed in regard to the role of the

researcher. The research took place in 2015. The participants were four young people at the age of 16 – 21 who were bullied as children. Five mothers were also interviewed. In three cases the young people wanted their mothers to sit with them during the interview. In one case just a mother was interviewed. The participants were asked questions about bullying, consequences, protective factors and school intervention. This paper though is not about the results of these questions but about the responsibilities, challenges and ethical dilemma facing an educational researcher when conducting sensitive research. Formal methods will be discussed, such as the fact that clear guidelines for dealing with distress should be in place, but also the personal experience of the author.

## The power of the „almighty" diagnosis (Session E)

### Jonina Saemundsdottir, University of Iceland

In recent years an increasing number of children have been diagnosed with Autistic Spectrum Disorders and according to educational policy,  they are entitled to education in mainstream schools which accommodates their needs. This paper presents the first findings of a small scale study on the experiences of parents of children with ASD in cooperation with schools and diagnostic and support services.

Semi-structured interviews were taken with five parents of six children with ASD and analysed according to thematic analysis. All of the children attended regular schools and mainstream classes. All but one had been diagnosed following preschool, which in some cases had led to a delay or lack of services.

Initial results show that successful accommodation of children's needs is dependent upon the skills and attitudes of individual teachers, especially if the chidren have not been formally diagnosed. Formal diagnosis is a prerequisite for adequate support and understanding of children's needs. Unfortunately, parents must often fight "the system" in their struggle to receive adequate services. In some cases this has had negative effects on the parents' health and wellbeing.

Some of the results in the study are of a sensitive and personal nature and are examples of the shortcomings of health and social service institutions. Presenting delicate information that might evoke strong responses can present challenges for researchers.

## Powerful knowledge in an inclusive educational system (Sesskon E)

### Kristín Björnsdóttir Associate Professor in Disability Studies kbjorns@hi.is   and  Jón Torfi Jónasson Professor jtj@hi.is

In this paper we will attempt to identify what constitutes as powerful knowledge within the Icelandic educational system and therefore of most benefit to our students and the society they live in. The presentation is based on a discourse analysis of public policy documents such as the White Paper on Education Reform which states that Icelandic students should be given access to education "within an education system meeting the highest international standards". The Icelandic educational system is based on inclusive education and when compared to our neighboring nations only few students are being educated in segregated settings. Therefore in that context, the system seems to meet the highest international standards. However research has shown that when providing students identified as having special education needs with accommodation, information is commonly reduced, simplified and discounted which raises questions regarding these students access to the

opportunity to acquire knowledge and skill. There are students who fail to complete compulsory education in Iceland and others drop out early on in secondary schools. Compared to our neighboring nations the dropout rate in upper secondary schools is high which consequently lowers the standards of the system. Also, the knowledge identified valuable or important to Icelandic students will change in response to particular needs and interest of those dominant in society. We will discuss why this knowledge, presented in policy documents, is potentially not powerful for those who drop out of school and how it is important to recognize how knowledge is not given and therefore subject to change. Finally we will discuss the idea of powerful curriculum in an inclusive educational system.

### Inclusive education meets innovation education: Self-study in teacher education (Session E)

Svanborg R. Jónsdóttir, Hafdís Guðjónsdóttir and Karen Rut Gísladóttir University of Iceland, School of Education

Developing inclusive schools can create tensions for students and teachers and at the same time offers opportunities for new ways of learning and teaching. Such challenges call for a pedagogy that empowers teachers to meet diverse groups of students. Responding these needs, we three teacher educators at the University of Iceland, developed a graduate course on inclusive practices for student teachers and teacher learners, and used self-study to understand and learn about the development of the course. The course *Working in Inclusive Practices* (WIP), is a blended course, taught through a mixture of online learning and four intensive sessions on-campus. We use innovation education as a pedagogy and approach in the course as an example of inclusive and responsive pedagogy.

We gathered data from spring 2013 to spring 2015. Sources of data include *minutes and recordings of meetings*, *professional dialogues*, e-*mail communication*, *tickets out of class* (*TOC*s) *documentation from the online program* and *students' discussions* and *projects*. To understand our practice more deeply and support our interpretation as self-study practitioners, we use the voices of our students as they provide the evidence for our claims (Pinnegar & Hamilton, 2010).

Our findings show that students met the presentation of innovation education with some suspicion in the beginning of the course but as the course progressed and they got to know it better and tried out the approaches and tasks they realized the properties and the pedagogy it offered. In many ways it helped them tackle the challenges they encounter in inclusive school, and they managed to expand their thinking about practice and try out new ways. By doing self-study we realized that we had been working with powerful instruments that were neither simple nor easy but had an impact on students in the graduate course.

### Dyadic interviews as a methodology in educational research: benefits and difficulties (Session F)

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Keywords: research, reform and innovation; education policy; mapping research; researchers

This presentation arises from a study of research, reform and innovation (RRI) activities in the

Icelandic preschool and compulsory educational sector in 2003–2012. One key question was: How are RRI activities reflected in the work of early career and long term academics?

Tracking developments and projects in education research creates not only up-to-date information supports institutional memory and strategic planning. The main sources were printed data as well as interviews as the documentary data alone could not provide the context to explain paths traced researcher careers.

A 'dyadic interview approach' was used with researchers from the RRI study interviewing pairs of researchers. Selection met to two criteria, 1) their research area was relevant to a key policy area and that 2) the dyad would consist of one early career researcher and one long term researcher. The interviewer dyad met the same criteria although they represented two rather than one policy area.

The interviews were semi-structured but informal in practice, were transcribed and were rich in data.

One of the study's particular aims is to understand how research, reform and innovation are enacted to affect or empower particular stakeholders. Included in the interview data are stories of selected projects and programs, their inceptions, contexts, progress, funding resources, publications and evaluation of the projects (if available) and a discussion of impact of the projects and future aims within the themes.

The narratives show the interconnectedness of research in a small society, where one decision, a key person, or serendipity can affect a significant decision as to whether projects are funded, implemented and results published.

The short lines of communication across researchers, practitioners and policy makers have two sides to the same coin: decisions can be reached quickly or deferred for many months, or even years. The presentation will address in particular the issue of proximity to others in research systems.

## Professional consciousness; Teacher Educators caught in shifting winds. (Session F)

### Sigurjón Mýrdal

Last decade Teacher Education in Iceland has moved through great turmoil. Formal pre-service education for Pre-school, Compulsory school and Upper secondary school teachers was upgraded to Master's degree by legislation in 2007. Subsequently intensive reforms of T.Ed. programs have taken place in the three higher education institutions providing Teacher Education. This also encouraged collaboration between these institutions.  Simultaneously the largest T.Ed. institution was amalgamated with the University of Iceland. This provided new possibilities for curricular integration and research activities. But at the same time it put stress on the faculty of Teacher Education to align to research traditions of the university and/or struggle to preserve their ingenious research culture and working conditions.

This fluctuating condition accentuated a local discourse on the status and role of Teacher Educators. This found resemblance in a recent EC project on support for Teacher Educators. Internationally a strong global discourse can be detected on the definition of Teacher Educators and their role in educational reforms.
In this interesting time/space of educational reforms and the institutional reconstruction the role and status of Teacher Educators became more pronounced and disputed. In order to map out the field of Teacher Educator in the Icelandic context a decisive semi-structured study was organised. A combination of documentary analysis and interview survey was conducted with twenty Teacher Educators in higher education institutions.
The documentary analysis disposes various historical and education political trajectories in the Icelandic 2000 -2015 period, trying to identify common and different interests in the field of teacher education. In the presentation I will outline the trajectories of teacher education in Iceland at the

outset of the 21st century and attempt to identify main interests in the local field of teacher education.

## Using a Virtual Learning Environment to fostering primary education students' socio-scientific reasoning. (Session F)

**Stephen Day, University of the West of Scotland, School of Education  stephen.day@uws.ac.uk**
**Key words:** Socio-scientific reasoning; Science Education; Blended Learning; Virtual Learning Environment.

**Background:** Socio-scientific reasoning (SSR), is a framework posited by Sadler, Barab and Scott (2007) which suggests that socio-scientific reasoning can be viewed as four constitutive practices involving recognising the *inherent complexity* of SSIs, examining issues from *multiple perspectives*, appreciating that SSIs are subject to *on-going inquiry*, and *exhibiting scepticism* when presented with potentially biased information. Morin et al., (2013) has extended this construct by adding two further dimensions, consideration of *knowledge's provided* by different producers, Exploration of *governance modalities* involving participation of concerned public.

**Aims:** To evaluate the extent to which teacher-mediated dialogue through a virtual learning environment (VLE) supports the development of primary education students' socio-scientific reasoning.

**Methodology:** Sixteen primary education students studying a second year module, Science in Society as part of their initial teacher education programme consented to their VLE discussion forum posts being analysed for research proposes. Twelve students' took part in semi-structured interviews that were transcribed for subsequent analysis. The discussion fora posts and interview transcripts were analysed against the modified socio-scientific reasoning theoretical framework (Morin et al., 2014).

**Findings:** Analysis of the teacher-mediated discussion fora indicate that students' require most support handling the inherent complexity of the SSI being discussed, particularly when multiple and (at time) opposing perspectives make negotiating the issue difficult. A quarter of student's expressed the view that after studying this module they were more likely to closely question sources of evidence. This suggests that students' can develop a more sceptical stance towards socio-scientific issues with support.

**Conclusion:** Online teacher-mediated discussion fora provide a useful tool for supporting the development of primary education students' socio-scientific reasoning. Specifically, they facilitate critical thinking and support students' ability to cope with the inherent complexity and multiple perspectives that impact upon different SSIs. However, students' prior science education experience together with their disposition towards open-mindedness impact heavily upon their interactions during discussions.

Sadler, T., Barab S. A., & Scott, B. (2007). What do students gain by engaging in socio-scientific inquiry? *Research in Science Education, 37*, 371–391.

Morin, O., Simonneaux, L., Simonneaux, J., & Tytler, R. (2013). Digital technology to support students' socioscientific reasoning about environmental issues. *Journal of Biological Education, 47* (3), 157-165.

## Scratch programming games (Session F)

### Salvör Gissurardóttir, assistant professor,  University of Iceland

This paper will focus  on educational media, tools and learning process in code learning and compare visual programming languages with text based programming language as intoduction into programming and preparation for IoT (Internet of Things). It will also discuss the rationale for making coding and programming a specific subject especially in connection with STEM and discuss issues measuring and designing situated learning where online programming learning enviroments  are the communities of practice.
It will also look at game creation and gaming activities in code learning as an example of situated learning and describe ongoing action research project focusing on designing learning material with emphasis on students creating and testing their own games.