

# Curriculum Vitae (Meritportfölj) for Lisa Björklund Boistrup

## 1. Academic competence (Vetenskaplig skicklighet)

### 1.1 Academic exams (Akademiska examina)

Docent (Associate professor)

2018                      March 23. Appointed as ‘Docent’ (Associate professor) in Mathematics Education. Reviewer: Professor Simon Goodchild, University of Agder.

Doctorate

2010                      November. PhD in Mathematics Education (Matematikämnets didaktik). Title of dissertation: Assessment discourses in mathematics classrooms: A multimodal social semiotic study. Main supervisor: Prof. Astrid Pettersson, assistant supervisors: Prof. Staffan Selander, and Dr Torbjörn Tambour.

### 1.2 Academic production (Vetenskaplig production)

Peer-reviewed publications (see also Publication list):

- Peer reviewed journal articles: 11, including 1 before PhD and 4 after docent application
- Peer reviewed book chapters: 12, including 4 before PhD and 2 after docent application
- Invited and peer reviewed conference papers: 3, all after PhD
- Peer reviewed conference papers: 30, including 8 before PhD and 5 after docent application
- Monographs: 2, including the PhD thesis

Supervision in research education (see also Appendix 2, Attestation of supervision):

*Finalised theses within research education, where I was main supervisor:*

- Anna Pansell, Stockholm University. Defense: November 23, 2018. PhD. Opponent prof. Uwe Gellert, Freie Universität Berlin. Title: The Ecology of Mary’s Mathematics Teaching: Tracing Co-determination within School Mathematics

Practices. (I was her main supervisor 2013-2018, which was the major part of her PhD study)

- Anna-Karin Nordin, Stockholm University. Defense: September 23, 2016. Licentiate (half of a PhD degree). Opponent prof. Johan Lithner, Umeå University. Title: Matematiska argument i helklass-diskussioner: En studie av lärares och elevers multimodala kommunikation i matematik i åk 3-5 [Mathematical arguments in whole class discussions: A study of teachers' and students' multimodal communication in mathematics in years 3-5]. (I was her main supervisor from the very beginning to the end, 2011-2016)

*I am supervising the following students within research education as main supervisor (in order of expected completion):*

- Jenny Fred, Stockholm University. Jenny is planning to defend her licentiate thesis in mid 2019. Her interest lies in the teaching of patterns and algebraic structures. (I have been her main supervisor since 2015)
- Jane Tuominen, Stockholm University. Jane is planning to defend her licentiate thesis at the end of 2019. Her interest lies in the teaching of algebra, subtraction and negative numbers in grades 1-3. (I have been her main supervisor since she started in 2015)
- Charlotta Andersson, Stockholm University. Charlotta is planning to defend her licentiate thesis in 2019. Her interest lies in the teaching of algebra, subtraction and negative number in grades 7-9. (I have been her main supervisor since 2015)

*Finalised theses within research education where I was a very active assistant supervisor:*

- Maria Johansson, Malmö University. Maria successfully defended her licentiate (half of a PhD degree) thesis in September, 2014. Opponent: Ass. Prof. Peter Gates. Title: Transitions making up for (epistemic) gaps: A qualitative study of workers as learners in transition between school mathematics and mathematical activities in the workplace. (I was Maria's supervisor her whole licentiate process, 2012-2014, and I was acting as an informal main supervisor during most of the process)
- Niclas Larson, Linköping University. PhD. Defense: December 2014. Opponent: Prof. Rudolf Sträßer. Title: Matematikämnet och stadietbytet mellan grundskolan och gymnasieskolan: En enkät- och klassrumsstudie. [The education of mathematics and the role of the school subject mathematics during the transition from lower to upper secondary school: A survey and classroom study]. (I was an assistant supervisor during the last 3 years).

*I am supervising the following students within research education as an assistant supervisor:*

- Elisabeth Eriksson, Linköping University. Elisabeth is planning to defend her PhD thesis during 2019. Her interest lies in day-to-day assessments in primary school. (I have been Elisabeth's supervisor since 2014)

- Laura Caligari, Stockholm University. Laura started mid 2018 as a licentiate student.

### Theoretical and methodological developments

The following publications represent theoretical and methodological developments:

- Nordin, A-K., & Boistrup, L. B. (2018). A framework for identifying mathematical arguments as supported claims created in day-to-day classroom interactions. *Journal of Mathematical Behavior*, 51, 15-27.
- Pansell, A., & Boistrup, L. B. (2018). Mathematics teachers' teaching practice in relation to textbooks: Exploring praxeologies. *The Mathematics Enthusiast*, 15(3), 541-562.
- Boistrup, L. B., Bellander, E., & Blaesild, M. (2018). Mathematics in pre-vocational education: A model for interfaces between two different teaching contents. In A. Rogers, B. Street, K. Yasukawa, & K. Jackson (Eds.), *Numeracy as social practice: Global and local perspectives* (pp. 76-98). London: Routledge.
- Boistrup, L. B. (2017). Assessment in mathematics education: A gatekeeping dispositive. In H. Straehler-Pohl, N. Bohlmann & A. Pais (Eds.), *The disorder of mathematics education. Challenging the sociopolitical dimensions of research* (pp. 209-230). Cham: Springer.
- Boistrup, L.B. & Gustafsson, L. (2014). Analysing and construing mathematics containing designing activities in adults' workplace competences. *Quaderni di Ricerca in didattica*, 24(1), 86-89.
- Boistrup, L.B., & Selander, S. (2009). Coordinating multimodal social semiotics and an institutional perspective in studying assessment actions in mathematics classrooms. In V. Durand-Guerrier, S. Soury-Lavergne & F. Arzarello (Eds.), *Proceedings of CERME 6, Sixth Conference of European Research in Mathematics Education* (pp. 1565-1574). Lyon, France: Institut national de recherche pédagogique.
- Boistrup, L. B., & Samuelsson, J. (2017). Aktionsforskning tillsammans med lärare: Presentation av en modell. In L. B. Boistrup, M. Nordlund, & E. Norén (Eds.), *Texter om bedömning: "Alla människors möte borde vara så". Vänbok till Astrid Pettersson* (pp. 62-73). Stockholm: Prim-gruppen.

### 1.3 Scientific leadership (Vetenskapligt ledarskap)

#### Project leadership:

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|------|--|
| 2019 | Facilitator for action research project funded by Academedia with mathematics teacher and vocational teachers at Praktiska gymnasiet, Liljeholmen.   |
| 2016 | Facilitator for action research project funded by Malmö municipality on connections between mathematics as a school subject and mathematics as part of a vocational subject in upper secondary school. |

- 2012-2015 Scientific project leader of research project funded by the Swedish Research Council: *Adults mathematics: In work and for school*, nr 2012-5151. In the project there was a working group of six people (from Sweden, Denmark and Australia) and an international reference group (Denmark, France, Germany, and UK). The project produced qualitative studies, quantitative studies, literature reviews and theoretical constructions, in around 20 publications.
- 2014 jan-2015 feb Leader of two research projects together with municipality mathematics developers (at Linköping University). Focus on National tests in mathematics and result reporting by school heads in relation to effects on the teaching of mathematics.
- 2012 aug-2014 feb Leader of six action research projects with four mathematics teachers in each (at Linköping University). Focus on assessment and communication in mathematics classrooms. Together with Joakim Samuelsson.
- 2010 Within PRIM-gruppen responsible, under scientific supervision of prof Astrid Pettersson, for the development of new national mathematics test for grade 6. Commissioned by the National Agency.
- 1999-2009 Within PRIM-gruppen responsible, under scientific supervision of prof Astrid Pettersson, for the development of various national assessment materials in mathematics reaching respectively around 100 000 students a year (commissioned by the National Agency), such as National test in mathematics for grade 5, National test in mathematics for grade 3, Diagnostic material for grades 1-9.
- Leader of researchers in collaboration
- 2018- Appointed as Chair of Topic study group on Adults and mathematics at ICME 2020 in Shanghai.
- 2017, July Group leader of working group at CIEAEM 69 in Berlin.
- 2016-2017 Thematic Working Group Leader at CERME10 in Dublin (by invitation). Responsible for review processes of approx. 30 papers and 7 posters before conference, and after, for post-conference proceedings.
- 2016, spring Administrative leader of the research group at Stockholm University: Social and critical aspects in mathematics education (initiator with Eva Norén)
- 2014, April-2015 Thematic Working Group Leader at CERME9 in Prague (by invitation). Responsible for review processes of approx. 30 papers and 7 posters before conference, and after, for post-conference proceedings.

- 2012-2016                    One of two convenors of The International Organization of Women in Mathematics Education
- 2012, spring                Convenor of the seminar group for mathematics education research, Stockholm University

#### External research funding

- 2019                            Research funded by an education company, Praktiska Sverige, of action research during 2019. 10% of Boistrup's time was funded, **127 292 SEK.**
- 2016-2017                    Support, from Stockholm University's Vice Chancellor, of two sabbatical semesters at Freie Universität. **800 000 SEK.**
- 2016                            Research funded by Malmö City, of action research during 2016. 10% of Boistrup's time was funded January-July. **67 950 SEK.**
- 2012-2015                    Municipality funded research in Linköping and Norrköping. There was already an agreement between Linköping University and the cities when I applied for the post-doc. I, however, managed to make the municipality representatives to agree on a project fully focused on research, which was not the plan from the beginning. 60% of Boistrup's time was funded over 2,5 years. Participating teachers had their time funded by 10%.  
**2 500 000 SEK.**
- 2011-2015                    I was co-applicant in an VR-application, with prof. Tine Wedege, Malmö University as main applicant, which was granted money: Adults' mathematics: In work and for school. I took over the leadership early in the project due to illness. **4 450 000 SEK.**
- 1998-2011                    I worked in PRIM-gruppen on the development of national tests, under the scientific leadership of professor Astrid Pettersson. These tests were commissioned by the National Agency of Education and was counted as research. I was part of writing applications for getting the assignment of construction of such materials several times.

#### Scientific memberships

- 2017, July                    Elected as commissioner of CIEAEM, The International Commission for the Study and Improvement of Mathematics Teaching
- 2017, October                Elected as member of the board of the Department of Mathematics and Science Education (Institutionsstyrelsen) at Stockholm University in the role of PhD in Mathematics education.

2015, January	Participant by invitation at <i>The disorder of mathematics education. Working towards research of social and political relevance</i> . Freie Universität. Berlin
2013-2017	Honorary Research Associate in the School of Graduate Studies at University of New Brunswick, Canada
2010-2019	Member of supervisory board at Stockholm University
2000-2008	Member of the Swedish Committee for Mathematics Education in the Royal Academy of Science

### 1.3 External academic activity

#### Reviewer for journals

2019, March	Educational Studies in Mathematics
2019, January	Designs for Learning
2018 September	Nordic studies in Mathematics Education (Nomad)
2018 April	Educational Studies in Mathematics
2017 September	Educational Studies in Mathematics
2017 September	Didactica Mathematicae
2017 May	Educational Studies in Mathematics
2017 March	Educare
2017 March	The Mathematics Enthusiast
2017 January	Educational Studies in Mathematics
2016 November	Educational Studies in Mathematics
2016 August	Nordic studies in Mathematics Education (Nomad)
2016 July	Nordic studies in Mathematics Education (Nomad)
2016 February	Nordic studies in Mathematics Education (Nomad)
2015 December	Forskning om Undervisning och Lärande
2015 November	Nordic Studies in Mathematics Education (Nomad)
2014, April	Forskning om Undervisning och Lärande
2013-2014	Educational Studies in Mathematics
2013, October	Adults Learning Mathematics International Journal
2013, January	Curriculum Studies
2010, October	Special Edition of CADMO on Innovations in Assessment to meet changing needs

#### Program committees

2018, August	Appointed as member of program committee of Madif 12 in Växjö
2018, July	Appointed as member of program committee of CIEAEM 71 in Braga, Portugal

2013, March-2015 Member of International Coordinators of the conference Mathematics Education in Society

Sabbatical and postdoctoral (mentioned also elsewhere)

2016 August-  
2017 July Sabbatical at Freie Universität Berlin. The year was mainly devoted to the writing of peer-reviewed journal articles and book chapters. It was funded as a result of an application to a grant from the Vice- chancellor of Stockholm University.

2012 August-  
2015 February Post doctoral research (60 %) in Mathematics Education at Linköping University, where I performed municipality funded research with teachers and others. Collaboration with Associate Professor Joakim Samuelsson.

Opponent, exam board member and the like

2019, May Exam board member of PhD thesis at Linné University. Respondent: Helena Roos

2018, December Exam board member of PhD thesis at Karlstad University. Respondent: Elisabet Mellroth

2018, November Opponent of 50% thesis at OsloMet. Respondent: Trine Foyen

2018, June Opponent of 90% PhD thesis at Karlstad University. Respondent: Elisabeth Mellroth

2018, May Reader of 25% PhD thesis at Malmö University. Respondent: Marie Sjöholm

2017, December Reader of 25 % licentiate thesis at Stockholm University, Respondent: Martin Nyman

2016, September Internal exam board member of PhD thesis at New Brunswick University. Respondent: Jennifer Andersen.

2016, March Opponent of 90 % doctoral thesis at Uppsala University. Respondent: Ida Bergvall

2015, September Reviewer of almost finalized licentiate theses at Linköping University. Respondent: Cecilia Sveider

2014, December Member of Exam Board for Licentiate thesis at Linköping University. Respondent: Klara Kerekes

2014, November Opponent of licentiate defence at Kristianstad College University. Respondent: Jenny Green.

2014, November Opponent of 90 % licentiate thesis at Karlstad University. Respondent: Anna Öhman

2014, September	Member of Exam Board for licentiate thesis at Malmö University. Respondent: Dorota Lembrér
2014, May	Reader of 50 % PhD thesis at Stockholm University. Respondent: Kerstin Larsson
2014, March	Reader of three Licentiate thesis close to finishing at a conference on Mallorca within the Research School for Learning studies. Respondents: Joakim Magnusson, Anna Lövström, Jenny Svantesson
2013, September	Examiner of PhD thesis, Curtin University, Australia. Respondent: Khoula Zahir Khamis Al Hosni
2008, August	Reader of a 90 % manuscript of a licentiate thesis (a half PhD), Stockholm University
2006, May	Reader of a 90 % manuscript of a licentiate thesis (a half PhD), Stockholm Institute of Education. Respondent: Elisabeth Persson



## 2 Educational competence

### 2.1 Educational courses and experiences

#### 2.1.1 Courses

2018	University mathematics: Mathematics 1, Algebra (a course including linear algebra). 6/15 hp so far.
2017	Preparatory course in mathematics for university studies 7,5 hp
2011	The Faculty of Science's course: Supervision and Leadership (Stockholm University).
2010	After the PhD (Stockholm University) 7,5 hp
2005-2010	PhD studies in mathematics education at Stockholm Institute of Education and Stockholm University.
2000-2004	Education and curriculum studies, 30 ECTS (61-90 ECTS), including thesis of 15 ECTS: "Teachers and assessment: A description and interpretation of teachers' actions in relation to national tests for grade 5 in mathematics.
1999	Course in qualitative research methods, Stockholm Institute of Education (18 hours).
1998-2000	Mathematics education, 30 ECTS (31-60 ECTS), Stockholm Institute of Education, including two theses: "Students' spatial sense within place geometry: A case study", and (with Kerstin Larsson) "Do students and teachers see standard algorithms as the only way of calculating?".
1995-2005	Participant in the seminar series "Assessment of knowledge and competence", Stockholm Institute of Education.
1993-1994	In service training in Mathematics , Stockholm Institute of Education, corresponding to 7,5 ECTS.
1989	In-service course at Stockholm institute of education, "Slow mathematics learning for younger students" Stockholm Institute of Education, 4,5 ECTS.
1984	Teaching degree, University collage of Gävle/Sandviken Mellanstadielärare (for grades 4-6).

### 2.1.2 Teaching and lecturing

1996-present	Teaching in mathematics education in pre-service teacher training, in service training and, since 2011, courses on graduate level. Currently more than 500 hours a year.
1994-1997	Teaching in in-service training on ICT in education
1998-present	Each year a number of lectures (during the years 2000-2008 often more than 10 per year) for teachers on assessment and/or mathematics education. The audience is normally 100 up to 2000 people
1984-1998	Primary school teacher with a main focus on mathematics and grade 4-6

Overall I have extensive experience from teaching, in different kinds of courses. In these I and colleagues have utilized a variety examination forms, such as written exams on campus, oral group exam, course thesis, et cetera.

### 2.1.3 Production of teaching materials

Parts of my publications (see Publication list) are written mainly for teachers, although they normally address my research. Some of these are used as literature in the teacher education They are distributed as follows:

- Books: 3
- Reports about research: 7
- Book chapters: 7
- Articles written for teachers: 18

Construction of national tests and diagnostic materials:

During the years 1998-2011 I worked on the construction of national tests and diagnostic material, on behalf of the Swedish National Agency of Education. Included in this work were educational experiences, such as:

- Interpretations of national steering documents, such as the syllabus in mathematics
- Writing instructions to teachers, on how to carry out the test with the students, and also on how to assess students work
- Constructing test items, suitable for specific age groups and appropriate content

## 2.2 Fulfilling the educational role

### Course evaluations

I have been teaching within teacher education since 1996, and I normally get very positive evaluations.

### Lectures at other universities and at academic conferences

2019, March	Invited as keynote speaker at conference for scholars and teachers in mathematics and science education organized by the Centre of School Development at the University of Akureyri in Iceland.
2019, March	Invited to hold a lecture at Reykjavik University.
2018, July	Chair of workshop at CIEAEM 70 in Mostaganem, Algeria
2017, July	Keynote speaker at CIEAEM 69 conference in Berlin. Topic: Multimodality and mathematisation (by invitation)
2015, July	Plenary Round table at CIEAEM 67 conference in Aosta, Italy. Topic: Assessment in mathematics education (by invitation)
2014, February	Panel debate at the Ninth Research Seminar of the Swedish Society for Research in Mathematics Education (by invitation)

## 2.3 Research and development work on teaching and examination

Most of my activity in research and education has connection to research and development work around education and assessment and is described elsewhere. In addition, I have participated in the following activities:

- 2018 I was main applicant of an application to the Vice Chancellor of Stockholm university, which was granted 300 000 SEK. The project is on development of a digital problem collection for teacher students' practices of mathematics.
- I have initiated and been part of the first development of at least a couple of courses. One is "Social perspectives in Mathematics Education" on Master and PhD level.

## 2.4 Educational leadership

I have had course responsibility for the following courses:

- Bedömning och betygssättning i matematik
- Matematikdidaktik Ma/Nv 4-9, Aritmetik, geometri, algebra
- Valbar kurs i datakunskap

- Multimedia och integrerad programvara

## 2.5 External educational activity

Different external educational activities are described elsewhere, such as lectures for teachers. In addition I have done the following.

2013, March-Oct	Reviewer of adult module in Matematiklyftet (National professional development program)
2009, September	Lecture on a conference for the staff of the University of Stockholm, together with prof. Staffan Selander and prof. Ingrid Carlgren
2007 spring	Scholarly reference person in the Swedish National Agency's work on new national goals to achieve for grade 3
2007 spring	Scholarly reference person in the government's investigation into the National target system's structure and content.
2006-2008	Scholarly reference person for TIMSS grade 4

## 3. Competence regarding collaboration with society

### 3.1 Collaboration with society

As described elsewhere I have written many texts for teachers, and I have carried out action research in collaboration with municipalities. In addition, I have, for different periods, given many lectures for (mathematics) teachers in schools and municipalities around Sweden. The topic has often been related to assessment in mathematics education:

1998-present	Each year a number of lectures (during the years 2000-2008 often more than 10 per year) for teachers on assessment and/or mathematics education. The audience is normally 100 up to 2000 people.
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I have been engaged in the following in-service projects:

- August 2001-June 2002 + August 2002-June 2003: Barns möte med matematik [Children's meeting points with mathematics]. An in-service program with pre-school staff in Norrköping (Klockartorpet and Åby) with Mona Hverven. I had one seminar a month.
- VT 2003. In-service program with PRIM-gruppen in Nynäshamn. I gave 7 seminars.
- HT04 + VT05. Kista. In-service teaching with teachers in preschool classes up to grade 3, with Mona Hverven. I had a total of 8 seminars.
- HT03-VT04. In service project with all teachers in mathematics, including preschool teachers, in Västervik, with prof. Astrid Pettersson. One seminar per month and

supervision of participants' own development projects. More than 10 projects were realized, all with reports written by the teachers.

- VT11, HT11, VT12. Learning study projects with all teachers teaching in mathematics education. A total of 7 projects were realized, including the writing of reports.

## **4 Leadership and administrative competence**

### **4.1 Formal leadership education**

2011 The Faculty of Science's course: Supervision and Leadership (Stockholm University).

### **4.2 Experience from leadership and administration**

2018, September	Appointed as one of two leaders of 'Didaktiskt forum' for the teaching staff in mathematics education at Stockholm University
2009-2010	Member of Board of Teacher Education at Stockholm University (PhD representative)
2009-October 2010	Chairman of PhD student council at the Department of Mathematics and Science Education, Stockholm University

During the years 1998-2011, I participated in planning the following different kinds of conferences in connection with construction of national assessment materials (often I have been the chair/convenor):

- International peer group. Consisting of leading researchers in mathematics education and assessment (including statistical methods) together with PRIM-gruppen (a research group for assessment of knowledge and competence).
- Reference Groups. Representation from subject departments from several of Swedish Universities, developers of teaching materials, teachers active in schools, the National Agency of Education and several people from PRIM-gruppen.
- Construction Groups. Similar representation as the above group.
- Assessment Groups (target setting). Other researchers, teacher trainers and teachers than those previously involved in the process.
- Internal meetings of PRIM-gruppen. Meetings similar to the above.

*For other leaderships experiences see sections 1.3 and 2.4 above.*

### **4.3 Mentorship**

When docent Lovisa Sumpter was new at Stockholm University, I was her mentor during the first semester. My role was to help her understand procedures at the department and to in other ways help her.