

**A. Monographs**

1) Olander, C. (2010). *Towards an interlanguage of biological evolution: Exploring students' talk and writings as an arena for sense-making*. PhD-thesis. Göteborg studies in educational sciences 288. Göteborg: Acta Universitatis Gothoburgensis.

<https://gupea.ub.gu.se//handle/2077/21558>

**B. Peer-reviewed articles**

1) Rocksén, M. & Olander, C. (2017). A topic trajectory about survival: evidencing link-making in a sequence of lessons about evolution. *Research in Science Education*, 47(2), 451-472.

DOI:10.1007/s11165-015-9509-3 <http://link.springer.com/article/10.1007/s11165-015-9509-3>

2) Holmqvist Olander, M., & Olander, C. (2014). Engaging in educational design processes for sustainable learning: Learning and becoming in practice. *Proceedings of International Conference of the Learning Sciences*, ICLS Volume 2, 1087-1091. ISSN: 18149316

3) Olander, C. (2013). Why am I learning evolution? Pointers towards enacted scientific literacy. *Journal of Biological Education*, 47(3), 175 – 181.

4) Olander, C., & Holmqvist Olander, M. (2013). Professional development through the use of learning study: contributions to pedagogical content knowledge in biology. *Procedia - Social and Behavioral Sciences* 89, 205 – 212

5) Olander, C. & Ingerman, Å. (2011). Towards an Interlanguage of Talking Science- Exploring Students' Argumentation in Relation to Authentic Language. *Journal of Biological Education*, 45(3), 158-164.

6) Olander, C. & Ingerman, Å. (2010). Students' language use when talking about the evolution of life – negotiating the meaning of key terms and their semantic relationships, *Nordic Studies in Science Education*, 6(1), 92-106

7) Olander, C. (2009). Teaching biological evolution: internal and external evaluation. *Nordic Studies in Science Education*, 5(2), 171-184.

### C. Book chapters

- 1) Olander, C. & Ingerman, Å. (2011). Towards an Interlanguage of Talking Science- Exploring Students' Argumentation in Relation to Authentic Language. In: A. Yarden, & G.S. Carvalho (Eds.). *Authenticity in Biology Education: Benefits and Challenges* (pp. 261-270). University of Braga, Portugal.
- 2) Olander, C. (2008). The reasoning of students aged 11 -16 about biological evolution. In M. Hammann, M. Reiss, C. Boulter & S. Tunnicliffe (Eds.), *Biology in Context, Learning and teaching for the twenty-first century* (pp. 64-74). Institute of Education, London.
- 3) Andersson, B., Bach, F., Hagman, M., Olander, C. & Wallin, A. (2005), Discussing a research programme for the improvement of science teaching. In K. Boersma, M. Goedhart, O. de Jong & H. Eijkelhof (Eds.), *Research and the quality of science education* (pp. 221–230). Dordrecht: Springer.
- 4) Hagman, M., Olander, C. & Wallin, A. (2003). Research-based teaching about biological evolution. *Biology education for the real world. Student - Teacher – Citizen*. Proceedings of the IV Conference of European Researchers in Didactics of Biology (ERIDOB) (pp.105-119). Toulouse – France.

### D. Peer-reviewed conference contributions

- 1) Olander, C. & Holmqvist Olander, M. (2015). *Why am I learning chemistry*. Paper presented at 2nd World Conference on Science and Mathematics Education, Lefkosia, Cyprus, 15-17 October 2015
- 2) Olander, C. (2015). *Chemical literacy – a literature review*. Paper presented at 2nd World Conference on Science and Mathematics Education, Lefkosia, Cyprus, 15-17 October 2015
- 3) Holmqvist Olander, M., & Olander, C. (2015). *Secondary students' expressed understanding of climate changes*. Paper presented at 2nd World Conference on Science and Mathematics Education, Lefkosia, Cyprus, 15-17 October 2015
- 4) Olander, C., & Hamza, K. (2014). *Lärares professionella lärande – representationer som verktyg när didaktiska modeller prövas*. FND 2014 (Forskning i Naturvetenskapernas Didaktik), 5-6 november, 2014, Karlstad.
- 5) Holmqvist Olander, M., & Olander, C. (2014). *Engaging in educational design processes for sustainable learning: Learning and becoming in practice*. Paper accepted for ICLS 2014 (International Conference for the Learning Sciences), June 23-27, 2014.

- 6) Olander, C. (2013). Professional development - contributions to teachers' pedagogical content knowledge through participation in lesson/learning studies. Paper presented and chaired symposia at World Association of Lesson Studies, WALs, 7 September, 2013.
- 7) Olander, C. (2013). *Professional learning through collaboration, collegiality and iterative cycles of shared classroom practice*. EAPRIL 2013, European Association for Practitioner Research on Improving Learning. November 27-29, Bile/Bienne, Switzerland
- 8) Olander, C. & Holmqvist Olander, M. (2013). *Developing communities of practice by the use of learning study*. Paper presented at ARNA 2013 (Action Research Network of the Americas), San Francisco, USA.
- 9) Olander, C. & Holmqvist Olander, M. (2013). *Teacher-Development during the Learning Study Process*. Paper presented at CY-ICER (2 International Conference on Educational Research), Lefkosa, North Cyprus.
- 10) Olander, C. (2012). *Why am I learning Evolution?* Paper presented at ERIDOB (European Researchers in Didactics of Biology), Berlin, Germany.
- 11) Olander, C., & Holmqvist Olander, M. (2012). *Pedagogical content knowledge in Biology generated by the use of learning study*. Paper presented at WALs (World Association of Lesson Studies), Singapore.
- 12) Olander, C. & Holmqvist, M. (2012). *Pedagogical content knowledge in Biology generated by the use of learning study*. Paper presented at ERIDOB (European Researchers in Didactics of Biology), Berlin, Germany.
- 13) Olander, C (2011). *Interlanguage as bridging the gap between colloquial and scientific knowledge*. Paper presented at European Association for Research on Learning and Instruction (EARLI). University of Exeter, England.
- 14) Holmqvist, M., Olander, C., Gross, K., & Fagerjord, E. (2011). *Learning Study in Upper Secondary School: What is the Relationship Between Genre and Individual Characteristics?* Paper presented at WALs (World Association of Lesson Studies), Tokyo, Japan.
- 15) Holmqvist, M & Olander, C. (2011). *Teacher development through iterative processes – Learning Study and Design-based Research*. Paper presented at ISATT (International Study Association on Teachers and Teaching), University of Braga, Portugal.
- 16) Olander, C. (2010). *Exploring scientific literacy through students' talk*. Paper presented at Australian Association for Research in Education, Melbourne University, Australia.
- 17) Olander, C. (2010). *Analysis of students' talk by means of the tension between meaning and sense of words*. Paper presented at symposium: Contemporary Approaches to Research in Mathematics, Science, Health and Environmental Education, Deakin University, Australia.

- 18) Olander, C. & Ingerman, Å. (2010). *Exploring argumentation patterns in the classroom: towards an interlanguage of talking science*. Paper presented at ERIDOB (European Researchers in Didactics of Biology) in Braga, Portugal.
- 19) Olander, C., Lassbo, G. & Webb, P. (2010). Developing strategies for promoting scientific literacy: Cooperation focusing on empirical and theoretical challenges in South African and Swedish second language contexts. Paper presented at IOSTE (The International Organization for Science and Technology Education) in Bled, Slovenia.
- 20) Olander, C. & Ingerman, Å. (2010). *Exploring interlanguage – Supporting students' talk as an arena for learning*. Paper presented at the National Association for Research in Science Teaching (NARST) in Philadelphia, US.
- 21) Olander, C. & Ingerman, Å. (2009). *Learning demand for biological evolution - students' argumentation on need and development*. Paper presented at ESERA (European Science Education Research Association) in Istanbul, Turkey.
- 22) Olander, C. (2008). *Spontaneous and scientific reasoning - students' grappling with content and language patterns*. Paper presented at the Seventh Conference of European Researchers in Didactics of Biology ERIDOB, in Utrecht, The Netherlands.
- 23) Olander, C. (2008). *Argumentative reasoning in peer groups; conceptual issues and epistemological underpinning*. Paper presented at the 9th Nordic Research Symposium on Science Education, in Reykjavik, Iceland.
- 24) Olander, C. (2007). *Students reasoning and argumentation about biological evolution*. Paper presented in a symposium at ESERA, European Science Education Research Association, in Malmö, Sweden.
- 25) Olander, C. (2006). Design and validation of a teaching sequence for compulsory school about biological evolution - students' experiences and development of knowledge. Paper presented at ERIDOB in London, England.
- 26) Wallin, A., Andersson, B. & Olander, C. (2005). A content-oriented theory for teaching and learning biological evolution. Paper presented at ESERA 2005, in Barcelona, Spain.
- 27) Olander, C. & Hagman, M. (2004). *Teachers and researchers as knowledge-builders - biological evolution for compulsory school*. Poster presentation at ERIDOB (European Researchers in Didactics of Biology) in Patras, Greece.
- 28) Hagman, M., Olander, C. & Wallin, A. (2001). Teaching and learning about the biological evolution: a preliminary teaching learning sequence. In *Proceedings of the Third International Conference on European Science Education Research in the Knowledge Based Society*. (pp. 230-232). Aristotle University of Thessaloniki, Greece.
- 29) Olander, C., Hagman, M. & Wallin, A. (2001). Teaching and learning about the biological evolution: a research based teaching-learning sequence. In *Proceedings of the Third*

*International Conference on European Science Education Research in the Knowledge Based Society.* (pp. 576-578). Aristotle University of Thessaloniki, Greece.

30) Wallin, A., Hagman, M. & Olander, C. (2001). Teaching and learning about the biological evolution: Conceptual understanding before, during and after teaching. In *“Proceedings of the III Conference of European Researchers in Didactic of Biology (ERIDOB).* (pp. 127-139). Universidade de Santiago de Compostela, Spain.

31) Wallin, A., Hagman, M. & Olander, C. (2001). Teaching and learning about the biological evolution: Comparing individual interviews and small group discussions as methods for investigating students’ conceptual understanding. Paper presented at ESERA 2001, Greece.

## **E. Reports**

1) Frank Bach & Clas Olander (2007). Virtuellt lärmiljö som integrationsverktyg mellan VFU och ämnesdidaktik. IPD-rapport 07/01

2) Björn Andersson, Frank Bach, Jörgen Dimenäs, Mats Hagman, Clas Olander, Eva Sjöholm & Anita Wallin (2006). *Ämnesdidaktiska teorier - för undervisning i naturvetenskap. I: Resultatdialog 2006.* Forskning inom utbildningsvetenskap (Vetenskapsrådets rapportserie 15:2006), s. 15-20

3) Björn Andersson, Frank Bach, Clas Olander & Ann Zetterqvist (2005). Nationell utvärdering som kunskapsbygge för att förbättra skolans naturvetenskap, Skolverket

4) Björn Andersson, Frank Bach, Clas Olander & Ann Zetterqvist (2005). Nationella utvärderingen av grundskolan 2003. Naturorienterande ämnen, Skolverket