

Conference programme schedule

Date: Monday, 17/Sep/2012

5:30pm - 8:00pm Registration: Front desk
Invalidenstraße 42, 10115 Berlin

Humboldt-Universität zu Berlin
7:00pm - 10:00pm Reception: Address of welcome
Invalidenstraße 43, 10115 Berlin

Date: Tuesday, 18/Sep/2012

9:00am - 10:45am Opening: Welcoming and keynote speech
Session Chair: Dirk Krüger
Henry Ford Building (HS A) President of Freie Universität Berlin: Prof. Dr. Peter-André Alt; Director of the Institute of Biology: Prof. Dr. Constance Scharff
Keynote speaker: Prof. Dr. Shaaron Ainsworth (University of Nottingham)

11:15am - 12:45pm 1.1 A Oral: Scientific thinking
Session Chair: Marida Ergazaki
Henry Ford Building (HS A)

11:15am - 12:45pm 1.1 B Oral: Biology education in informal settings
Session Chair: Michael Reiss
Henry Ford Building (HS B)

2:15pm - 4:15pm 1.2 A Poster: Session I
Session Chair: Holger Weitzel
Henry Ford Building (HS A)

2:15pm - 4:15pm 1.2 B Poster: Session I
Session Chair: Armin Lude
Henry Ford Building (HS B)

2:15pm - 4:15pm 1.2 C Poster: Session I
Session Chair: Andrea Möller

4:45pm - 6:30pm 1.3 A Oral: Student conceptions
Session Chair: Harald Gropengiesser
Henry Ford Building (HS A)

4:45pm - 6:30pm 1.3 B Oral: Teaching socio-scientific issues
Session Chair: Margareta Ekborg
Henry Ford Building (HS B)

Date: Wednesday, 19/Sep/2012

9:00am - 11:00am 2.1 A Symposium: Supporting students' interactions with Socio-Scientific Issues
Session Chair: Beverley France
Henry Ford Building (HS A)

9:00am - 11:00am 2.1 B Oral: Student conceptions
Session Chair: Kerst Thomas Boersma
Henry Ford Building (HS B)

11:30am - 12:30pm 2.2 A Oral: Health education
Session Chair: Kirsten Schlüter
Henry Ford Building (HS A)

11:30am - 12:30pm 2.2 B Oral: Models and modeling
Session Chair: Annette Upmeier zu Belzen
Henry Ford Building (HS B)

2:00pm - 4:00pm 2.3 A: Business Meeting
Session Chair: Margareta Ekborg
Henry Ford Building (HS A)

6:30pm - 9:00pm Tour evening
Boat trip

Date: Thursday, 20/Sep/2012

9:00am - 10:30am 3.1 A Oral: Environmental education
Session Chair: Tali Tal
Henry Ford Building (HS A)

9:00am - 10:30am 3.1 B Oral: Argumentation
Session Chair: Grégoire Molinatti
Henry Ford Building (HS B)

11:00am - 12:30pm 3.2 A Oral: Health education
Session Chair: Graça S. Carvalho
Henry Ford Building (HS A)

11:00am - 12:30pm 3.2 B Oral: Biology education and Publication in international journals
Session Chair: Michael Reiss
Henry Ford Building (HS B)

2:00pm - 4:00pm 3.3 A Poster: Session II
Session Chair: Philipp Schmiemann
Henry Ford Building (HS A)

2:00pm - 4:00pm 3.3 B Poster: Session II
Session Chair: Jörg Zabel (enquired)
Henry Ford Building (HS B)

2:00pm - 4:00pm 3.3 C Poster: Session II
Session Chair: Doris Elster

4:30pm - 6:30pm 3.4 A Symposium: Teaching evolution: cognitive and affective factors
Session Chair: Marcus Hammann
Henry Ford Building (HS A)

4:30pm - 6:30pm 3.4 B Oral: Pedagogical content knowledge
Session Chair: Anat Yarden
Henry Ford Building (HS B)

7:30pm - 10:00pm Gala Dinner
Königin-Luise-Straße 6-8
14195 Berlin
Botanic Garden

Date: Friday, 21/Sep/2012

9:00am - 10:30am 4.1 A Oral: Teaching strategies
Session Chair: Maria José Gil_Quilez
Henry Ford Building (HS A)

9:00am - 10:30am 4.1 B Oral: Teaching genetics
Session Chair: Dirk Jan Boerwinkel
Henry Ford Building (HS B)

11:00am - 12:30pm 4.2 A Oral: Interest and motivation
Session Chair: Marie Christina Knippels
Henry Ford Building (HS A)

11:00am - 12:30pm 4.2 B Oral: Teaching strategies
Session Chair: Patricia Schneeberger (enquired)
Henry Ford Building (HS B)

Presentations

Date: Tuesday, 18/Sep/2012

1.1 A Oral: Scientific thinking

Time: Tuesday, 18/Sep/2012: 11:15am - 12:45pm

1.1 A Oral: 1

Competential Feedback Effects on Scientific Reasoning, Calibration, and Self-Efficacy

Mareike Wollenschläger¹, Jens Möller², Ute Harms¹

¹IPN –Leibniz Institute for Science and Mathematics Education, Germany; ²Department of Psychology at the University of Kiel, Germany

1.1 A Oral: 2

Problem Solving in Biology: Assessing Competence Development

Julia Arnold, Kerstin Kremer, Jürgen Mayer

Department of Biological Education, University of Kassel

1.1 A Oral: 3

Age-related differences in inquiry-based learning in biology class

Angelika Kremer, Kirsten Schlüter

Universität zu Köln, Germany

1.1 B Oral: Biology education in informal settings

Time: Tuesday, 18/Sep/2012: 11:15am - 12:45pm

1.1 B Oral: 1

Do zoo visitors need zoology knowledge to understand biodiversity conservation?

Tracy Dove¹, Jenny Byrne²

¹Isle of Wight Zoo, United Kingdom; ²University of Southampton

1.1 B Oral: 2

Learning at the museum: motivational aspects of guided tours

Jennifer Härting¹, Andrea Möller², Norbert Pütz¹

¹University of Vechta - Biology and Didactic, Germany; ²University of Trier - Biology and Didactic, Germany

1.1 B Oral: 3

Beginning biology – interest and inquiry in the early years

Annette Scheersoi¹, Sue Dale Tunnicliffe²

¹Goethe University Frankfurt, Germany; ²Institute of Education (IOE) London, England

1.2 A Poster: Session I

Time: Tuesday, 18/Sep/2012: 2:15pm - 4:15pm

1.2 A Poster: 1

Animal biodiversity in ecosystems - the consciousness of pupils and students

Eija Inkeri Yli-Panula

University of Turku, Finland

1.2 A Poster: 2

Promoting the development of students' coherence of biological concepts

Micha Ummels¹, Marcel Kamp¹, Hans de Kroon¹, Kerst Boersma²

¹Radboud University, Netherlands, The; ²University of Utrecht, Netherlands, The

1.2 A Poster: 3

A pattern that connects (some) students' explanations for species evolution

Jörg Zabel¹, Harald Gropengießer²

¹Universität Leipzig, Institute for Biology, Germany; ²Institute for Science Education, Leibniz Universität Hannover, Germany

1.2 A Poster: 4

A cognitive model for students' purpose-based conceptions about biological adaptation

Holger Weitzel

University of Education Weingarten, Germany

1.2 A Poster: 5

Students' Perceptions of Biology --- Glimpses from Indian Context

Meena Kharatmal, Sugra Chunawala

Homi Bhabha Centre for Science Education (TIFR), Mumbai, India

1.2 A Poster: 6

PRIMARY SCHOOL PUPIL'S CONCEPTIONS ABOUT THE RESPIRATORY TRACT AND SMOKING UNHEALTHY EFFECTS

Rosa Branca Tracana¹, Sara Viveiros², Graça S. Carvalho³

¹Polytechnic Institute of Guarda, Guarda, Portugal; ²CIEC, Institute of Education, University of Minho, Braga, Portugal; ³CIEC, Institute of Education, University of Minho, Braga, Portugal

1.2 A Poster: 7

Enhancing scientific inquiry learning and the quality of motivation - Evaluation of a competence-orientated science-course in year 11

Cornelia Stiller, Stefan Hahn, Andreas Stockey, Matthias Wilde

Universität Bielefeld, Germany

1.2 A Poster: 8

PREDICTORS OF ACADEMIC SUCCESS: ACHIEVEMENT MOTIVATION OF BIOLOGY AND ACADEMIC SELF-EFFICACY

Mirac Yilmaz¹, Hikmet Katircioğlu²

¹Hacettepe University, Faculty of Education, Department of Science and Mathematics Fields in Secondary Education, Turkey; ²Gazi University, Faculty of Education, Department of Science and Mathematics Fields in Secondary Education, Turkey

1.2 A Poster: 9

Does Judgment Quality affect the Attitude-Behaviour-Gap in Organ Donation?

Melanie Basten, Matthias Wilde

Universität Bielefeld, Germany

1.2 A Poster: 10

Development of learners' attitudes and concepts at transitions

Alexandra Moormann

Humboldt University of Berlin, Germany, Department of Biology, Didactics of Biology

1.2 A Poster: 11

Undergraduate biology students' ability to read and evaluate research articles

Miriam Ossevoort, Edwin van Lacum, Martin Goedhart

University of Groningen, Netherlands, The

1.2 A Poster: 12

The natural history perspective on bio-communities – a narrative approach

Martin Jurgowiak, Jörg Zabel

Universität Leipzig, Germany

1.2 B Poster: Session I

Time: Tuesday, 18/Sep/2012: 2:15pm - 4:15pm

1.2 B Poster: 1

Fostering Scientific Modeling with Biological Worked-out Examples

Anja Czeskleba, Philipp Schmiemann

Freie Universität Berlin, Germany

1.2 B Poster: 2

Experience-based teaching and learning of socioscientific issues

Shu-Nu Chang Rundgren¹, Carl-Johan Rundgren²

¹Karlstad University, Sweden; ²Stockholm University, Sweden

1.2 B Poster: 3

Embodied metaphors and analogies as imaginative thinking tools

Kai Niebert¹, Treagust David²

¹Leibniz Universität Hannover; ²Curtin University of Technology, Australia

1.2 B Poster: 4

Metacognitive knowledge as a predictor for communication competence in science

Kathrin Klöpffel, Julia Schwanewedel, Jürgen Mayer

Universität Kassel, Germany

1.2 B Poster: 5

How teenagers justified their swine flu vaccination decision

Mats Lundström, Margareta Ekborg

Malmö University, Faculty of Education and Society, Sweden

1.2 B Poster: 6

The emergence of criteria for evaluating models in science classrooms

Andres Acher¹, Lisa Kenyon²

¹Martin-Luther-Universität Halle-Wittenberg, Germany; ²Wright State University, USA

1.2 B Poster: 7

Students' perspectives on leaves - Challenges in the tree identification processes

Svenja Affeldt, Dennis Stahl, Jorge Groß

Leibniz University of Hannover, Germany

1.2 B Poster: 8

Addressing the ideas of replication and observer bias to 5th grade students conducting a mealworm experiment

Roman Asshoff, Hilwerling Ruth, Philipp Westphal

Zentrum für Didaktik der Biologie, WWU Münster, Germany

1.2 B Poster: 9

Teeth are not like Teeth: Students' Conceptions when Identifying Clams

Dennis Stahl, Svenja Affeldt, Jorge Groß

Leibniz University Hannover, Germany

1.2 B Poster: 10

Students' conceptions about sexuality and ways to clear their doubts

Zélia Ferreira Anastácio, Ana Luísa Alves

University of Minho, Portugal

1.2 B Poster: 11

Context-contingent influences on the competency of evaluation and judgment

Melanie Werner, Julia Schwanewedel, Jürgen Mayer

Universität Kassel, Germany

1.2 B Poster: 12

The Hidden Hand That Shapes Conceptual Understanding

Harald Gropengieser, Kai Niebert, Tanja Riemeier

Leibniz Universität Hannover, Germany

1.2 C Poster: Session I

Time: Tuesday, 18/Sep/2012: 2:15pm - 4:15pm

1.2 C Poster: 1

Learning Study in upper secondary school: What is the relationship between genome and individual characteristics?

Mona Holmqvist Olander¹, Clas Olander¹, Kerstin Gross², Elsa Fagerjord²

¹University of Gothenburg, Sweden; ²Bäckäng Upper Secondary School, Borås, Sweden

1.2 C Poster: 2

Observation competency training in guided play activities

Lucia Kohlhaut, Ulrike Rutke, Birgit Neuhaus

Ludwig-Maximilians-University Munich, Germany

1.2 C Poster: 3

The application of concept maps in teaching invertebrate zoology

Jelena D. Stanisavljević, Ljubiša Ž. Stanisavljević

University of Belgrade - Faculty of Biology, Serbia

1.2 C Poster: 4

The didactical implications of biology teachers' understanding of research as praxis

William John Fraser¹, Annemarie Hattingh², Erna Du Toit³, Mia Abrie¹, Johannes Slabbert¹, Jan Nieuwenhuis¹, Lindelani Mnguni¹, Estelle Gaigher¹, Elize Randall¹

¹University of Pretoria, South Africa; ²University of Cape Town; ³University of the Free State

1.2 C Poster: 5

Analyzing students' argumentations in reasoning about processes of adaptation

Nicolai Basel¹, Helmut Precht², Ute Harms¹

¹IPN-Leibniz-Institute for Science and Mathematics Education, Germany; ²University of Potsdam - Institute of Biology Education

1.2 C Poster: 6

Natures of Science: A Case Study of Biodiversity Conservation

Esther M. van Dijk

University of Hildesheim, Germany

1.2 C Poster: 7

LEARNING BIOLOGY BY LIVING IT - regulation of tenseness

Heléne Bergentoft, Mona Holmqvist

University of Gothenborg, Sweden

1.2 C Poster: 8

INCLUSIVE SCIENCE: TEACHERS' ATTITUDES AND PRACTICES

António Costa^{2,3}, Maria Eduarda Ferreira^{1,3}, Carlos Sousa Reis^{1,3}, José Miguel Salgado^{1,3}

¹Instituto Politécnico da Guarda, Portugal; ²Unidade de Investigação para o Desenvolvimento do Interior; ³UDI – Research Unit for Inland Development

1.2 C Poster: 9

Using Concept Maps to foster students' socioscientific reasoning and decision making

Anne Nitsch, Sabina Eggert, Susanne Bögeholz

Georg-August-University Göttingen, Germany

1.2 C Poster: 10

ECO-SCHOOL EFFECTIVENESS: A MATTER OF VALUES?

Jelle Boeve-de Pauw, Peter Van Petegem

University of Antwerp, Belgium

1.2 C Poster: 11

Content choices within a concept-context approach in primary science education

Annelotte Lammers¹, Ronald Keijzer¹, Marja van Graft²

¹Freudenthal Institute for Science and Mathematics Education, Utrecht University, The Netherlands; ²Netherlands Institute for Curriculum Development (SLO), Enschede, The Netherlands

1.2 C Poster: 12

Comparative Study in Biology Lessons between Germany and China

Ning LIU, Birgit Neuhaus

Ludwig-Maximilians-Universität München, Germany

1.3 A Oral: Student conceptions

Time: Tuesday, 18/Sep/2012: 4:45pm - 6:30pm

1.3 A Oral: 1

Activating a productive epistemological modus – Effects of reflecting intuitive ideas

Kerstin Oschatz

University of Hamburg, Germany

1.3 A Oral: 2

Effects of experiments for pupil's understanding of plant nutrition

Tanja Steigert, Marcus Schrenk

Pädagogische Hochschule Ludwigsburg, Germany

1.3 A Oral: 3

How do students describe and explain biological phenomena?

Tanja Riemeier

Leibniz Universität Hannover, Germany

1.3 A Oral: 4

Explaining transfer: why students have difficulties recontextualising cellular respiration

Menno Wierdsma^{1,3}, Marie-Christine Knippels¹, Bert van Oers², Kerst Boersma¹

¹Freudenthal Institute for Science and Mathematics Education, Utrecht University, Netherlands, The; ²Department of Theory and Research in Education, VU University Amsterdam, Netherlands, The; ³Department of Teacher Education, University of Groningen, Netherlands, The

1.3 B Oral: Teaching socio-scientific issues

Time: Tuesday, 18/Sep/2012: 4:45pm - 6:30pm

1.3 B Oral: 1

Intuitive knowledge acquisition when learning with computer simulations in ecology

Marc Eckhardt¹, Detlef Urhahne², Olaf Conrad³

¹Leibniz Institute for Science and Mathematics Education (IPN), Germany; ²Martin-Luther-University, Germany; ³University of Hamburg, Germany

1.3 B Oral: 2

Reasoning patterns in processing multi-criteria socio-scientific decision-making situations

Nicos Papadouris, Ero Ioannou

University of Cyprus, Cyprus

1.3 B Oral: 3

Students understanding of the logics of the media about socioscientific issue

Grégoire Molinatti¹, Laurence Simonneaux²

¹Université des sciences de Montpellier - IUFM, France; ²Ecole Nationale de Formation Agronomique, Toulouse, France

1.3 B Oral: 4

Arguments, Values & Beliefs of Pre-Service Teachers discussing Socio-scientific Issues

Marina Castells, Katerina Konstantinidou

Universitat de Barcelona, Spain

Presentations

Date: Wednesday, 19/Sep/2012

2.1 A Symposium: Supporting students' interactions with Socio-Scientific Issues

Time: Wednesday, 19/Sep/2012: 9:00am - 11:00am

2.1 A Symposium: 1

Supporting students' interactions with Socio-Scientific Issues

Beverley France¹, Sally Birdsall¹, Ralph Levinson², Olivier Morin⁴, Laurence Simonneaux³, Jean Simonneaux³

¹The University of Auckland, New Zealand; ²University of London; ³Ecole Nationale de Formation Agronomique de Toulouse, France; ⁴Lyon 1 (Université Claude Bernard)

2.1 A Symposium: 2

Digital technology to support student's Socio-Scientific Reasoning about Environmental Issues

Olivier MORIN², Laurence SIMONNEAUX¹, Jean SIMONNEAUX¹

¹Université Toulouse 2 le Mirail, France; ²Université Claude Bernard Lyon 1

2.1 A Symposium: 3

Promoting constructive discourse in philosophical issues through an online forum

Ralph Levinson

Institute of Education University of London, United Kingdom

2.1 A Symposium: 4

Changing attitudes to animal research: Introducing the scientists' perspective

Beverley France, Sally Birdsall

The University of Auckland, New Zealand

2.1 A Symposium: 5

A pedagogy to support understanding of sustainability in 5-year-old children

Sally Birdsall

The University of Auckland, New Zealand

2.1 B Oral: Student conceptions

Time: Wednesday, 19/Sep/2012: 9:00am - 11:00am

2.1 B Oral: 1

Molecular Mechanistic Reasoning: an educational strategy to bridge the gap between the molecular and cellular level.

Marc H.W. van Mil^{1,2,3}, Paulien A. Postma¹, Dirk Jan Boerwinkel^{1,2,3}, Arend Jan Waarlo^{1,3}

¹Utrecht University, Netherlands, The; ²Cancer Genomics Centre; ³CSG Centre for Society and the Life Sciences

2.1 B Oral: 2

The interpretation of students' Lamarckian explanations

Kerst Thomas Boersma¹, Caspar Geraedts²

¹Freudenthal Institute for Science and Mathematics Education, Netherlands, The; ²De Praktijk, Amsterdam, Netherlands, The

2.1 B Oral: 3

The Role of Conceptions and Metaphors in Students' Understanding of Seeing

Sarah Dannemann¹, Dirk Krüger²

2.1 B Oral: 4

The effect of teaching on children's ideas about plants' protection

Stella Petrou, Konstantinos Korfiatis

University of Cyprus, Cyprus

2.2 A Oral: Health education

Time: Wednesday, 19/Sep/2012: 11:30am - 12:30pm

2.2 A Oral: 1

A hands-on activity to promote healthy sun exposure behaviours

Maria João Fonseca^{1,2,3}, Patrício Costa⁴, Leonor Lencastre⁴, Fernando Tavares^{1,3}

¹Faculdade de Ciências, Departamento de Biologia, Universidade do Porto, Portugal; ²IBMC - Instituto de Biologia Molecular e Celular, Universidade do Porto, Portugal; ³CIBIO - Centro de Investigação em Biodiversidade e Recursos Genéticos, Universidade do Porto, Portugal; ⁴Faculdade de Psicologia e de Ciências da Educação, Universidade do Porto, Portugal

2.2 A Oral: 2

Comparative Analysis of Food and Nutrients in Textbooks of 16 Countries

Graça S. Carvalho¹, Claudia Ferreira¹, Artur Gonçalves¹, Rosa Branca Tracana^{1,2}

¹CIEC, University of Minho, Portugal; ²Polytechnic Institute of Guarda, Portugal

2.2 B Oral: Models and modeling

Time: Wednesday, 19/Sep/2012: 11:30am - 12:30pm

2.2 B Oral: 1

Students' Conceptions of Models and Modelling

Ulrike Trier, Annette Upmeyer zu Belzen

Humboldt-Universität zu Berlin, Germany

2.2 B Oral: 2

How 7th to 10th Graders Categorize Biological Models

Moritz Krell, Dirk Krüger

Freie Universität Berlin, Germany

Presentations

Date: Thursday, 20/Sep/2012

3.1 A Oral: Environmental education

Time: Thursday, 20/Sep/2012: 9:00am - 10:30am

3.1 A Oral: 1

New Biology Curriculum: National Results of an Educational Intervention

Andreas Ch. Hadjichambis¹, Demetrios G. Mappouras¹, Constantinos C. Manoli², Bruce Johnson³

¹Cyprus Ministry of Education and Culture, Cyprus; ²University of Cyprus; ³University of Arizona

3.1 A Oral: 2

The place of higher education in promoting socio-environmental responsibility among future citizens and professionals

Keren Kaplan, Tali Tal

Technion, Israel

3.1 A Oral: 3

Group behavior and individual roles of undergraduate students during an Environmental Education course

Anthie Christodoulou, Maria Christodoulou, Demetra Paraskeva-Hadjichambi, Konstantinos Korfiatis

University of Cyprus, Cyprus

3.1 B Oral: Argumentation

Time: Thursday, 20/Sep/2012: 9:00am - 10:30am

3.1 B Oral: 1

Effective classroom strategies to promote argumentation skills about genetics socioscientific issues

Vaile Maree Dawson

Curtin University, Australia

3.1 B Oral: 2

Teaching scientific argumentation to pre-university students using primary literature

Marcel Koeneman, Martin Goedhart, Miriam Ossevoort

University of Groningen, Netherlands, The

3.1 B Oral: 3

Students study background and supporting reasons in arguing socio-scientific issues

Nina Christenson, Shu-Nu Chang Rundgren

Karlstad University, Sweden

3.2 A Oral: Health education

Time: Thursday, 20/Sep/2012: 11:00am - 12:30pm

3.2 A Oral: 1

Conceptualizations of Health and Welfare among Elementary School Students in the Negev's Bedouin Arab Community

Orit Ben Zvi Assaraf, Wisam Sedawi, Julie G. Cwikel

Ben-Gurion University of the Negev, Israel, Israel

3.2 A Oral: 2

Health as a crossroad of Socio-scientific Issues and Critical reading

Ana Maria Domènech Calvet, Conxita Márquez Bargalló, Montserrat Roca Tort

Universitat Autònoma de Barcelona, Spain

3.2 A Oral: 3

Discovering environment and sustainability with mobile devices – concepts and potentials

Sebastian Bleck, Marcel Bullinger, Armin Lude, Steffen Schaal

Ludwigsburg University of Education, Germany

3.2 B Oral: Biology education and Publication in international journals

Time: Thursday, 20/Sep/2012: 11:00am - 12:30pm

3.2 B Oral: 1

Chance and Determinism in Evolution: Teachers' Conceptions in 21 Countries

Pierre Clément

University Lyon 1, France

3.2 B Oral: 2

Publication in International Journals

Michael Reiss, Tali Tal, David Slingsby et al.

3.3 A Poster: Session II

Time: Thursday, 20/Sep/2012: 2:00pm - 4:00pm

3.3 A Poster: 1

Visualization of insects in the early years

Amauri Betini Bartoszeck¹, Sue Dale Tunnicliffe²

¹University of Paraná, Brazil; ²University of London, UK

3.3 A Poster: 2

Support for and barriers to animal welfare education

Michel Vidal¹, Laurence Simonneaux²

¹Sup Agro Montpellier, France; ²ENFA Toulouse, France

3.3 A Poster: 3

Rivers: something more than just streams of water that arise in the mountains and flow into the sea.

Maria José Gil Quilez, Begoña Martínez_Peña

University of Zaragoza, Spain

3.3 A Poster: 4

ASSESSING THE DEVELOPMENT OF STUDENTS' ECOLOGICAL CONCEPTUAL UNDERSTANDING

Maiken Korsager

University of Oslo, Norway

3.3 A Poster: 5

Learning the energy concept in biological contexts at primary level

Sebastian Opitz, Knut Neumann, Ute Harms

IPN Kiel, Germany

3.3 A Poster: 6

Development and optimization of a testing instrument for recording the Nature of Science (NOS) views of students

Johannes Koska, Dirk Krüger

FU Berlin, Germany

3.3 A Poster: 7

Cell, organ, organism – only a structural hierarchy?

Michaela Lutze, Jörg Zabel

Universität Leipzig, Germany

3.3 A Poster: 8

Learners' conceptions about plant physiology - An intervention study with students

Bettina Walter, Marcus Schrenk

University of Education Ludwigsburg/ Pädagogische Hochschule Ludwigsburg, Germany

3.3 A Poster: 9

Conditions of students' motivation to learn plant physiology in a virtual environment

Beata Barbara Jancarz-Lanczkowska, Katarzyna Ewa Potyrała

Pedagogical University of Cracow, Institute of Biology, Poland

3.3 A Poster: 10

MOTIVATION TOWARD MASTERY FOR GIFTED STUDENTS IN SOCIO-SCIENTIFIC ISSUES

Bård Knutsen

The Norwegian University of Science and Technology, Norway

3.3 A Poster: 11

Student's Conceptions of Plant Nutrition – an Intervention Study at Primary School

Marcus Schrenk, Anja Vocilka

PH Ludwigsburg, Germany

3.3 A Poster: 12

When students and teachers deal with the classification of animals

Denise ORANGE RAVACHOL

Université de Nantes, France

3.3 B Poster: Session II

Time: Thursday, 20/Sep/2012: 2:00pm - 4:00pm

3.3 B Poster: 1

Teacher Trainees' Trials and Tribulations with IBSE

Philipp Krämer, Stefan Nessler, Kirsten Schlüter

University of Cologne, Germany

3.3 B Poster: 2

Test-Taking Strategies as Predictors for Biology Students' Test Performance

Miriam Waldmann, Jörg Großschedl

IPN Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Germany

3.3 B Poster: 3

Students' interest in plants: Development of a teaching unit

Sara Neumann

Universität Leipzig, Germany

3.3 B Poster: 4

Learning to guide open inquiry - Integration into the teaching practice

Erika Keller

Austrian Educational Competence Centre - AECC-Bio, Austria

3.3 B Poster: 5

Biotechnology in the Greek secondary biology books

MARIANNA KALAITSIDAKI

UNIVERSITY OF CRETE, Greece

3.3 B Poster: 6

From genes to traits without molecules; genetics in prevocational education.

Horst Wolter

Freudenthal institute for science and mathematics education, Utrecht University, Netherlands, The

3.3 B Poster: 7

Analysis of the concept of biodiversity present in textbooks

Camila Sanches Miani¹, Fernanda da Rocha Brando², Ana Maria de Andrade Caldeira¹

¹Universidade Estadual Paulista/ UNESP, Brazil; ²Universidade de São Paulo/ USP, Brazil

3.3 B Poster: 8

Utilization and impact of conservation messages in informal learning settings

Julia Kögler, Hauke Hellwig, Stefan Hartmann

Humboldt-Universität zu Berlin, Germany

3.3 B Poster: 9

Students' motivation to engage in student-scientist-partnerships

Christine Heidinger, Martina Höll, Franz Radits, Martin Scheuch

University of Vienna, Austria

3.3 B Poster: 10

Exploring children's views of what's inside their bodies

Johanna Andersson, Lena Tibell, Ragnhild Löfgren

Linköping University, Sweden

3.3 B Poster: 11

Learning trajectories about the Nature of Science in Student-Scientist partnerships

Manfred Bardy-Durchhalter, Franz Radits

Universität Wien, Austria

3.3 B Poster: 12

Assessing Pre-service Teachers' Professional Knowledge in Biology: The Project KiL

Jörg Großschedl, Ingrid Glowinski

Leibniz Institute for Science and Mathematics Education IPN, Germany

3.3 C Poster: Session II

Time: Thursday, 20/Sep/2012: 2:00pm - 4:00pm

3.3 C Poster: 1

Reframing classroom discourses on genetic testing from an STS perspective

Dirk Jan Boerwinkel¹, Arend Jan Waarlo², Tsjalling Swierstra³

¹Freudenthal Institute for Science and Mathematics Education, Netherlands, The; ²Freudenthal Institute for Science and Mathematics Education, Netherlands, The; ³Dpt. of Philosophy, Maastricht University, Netherlands

3.3 C Poster: 2

Development of Critiquing Practices in Inquiry-Oriented Programs in Biology

Tom Bielik, Anat Yarden

Weizmann Institute of Science, Israel

3.3 C Poster: 3

High-school teachers' appropriation of an innovative curriculum in bioinformatics

Yossy Machluf, Hadas Gelbart, Anat Yarden

Weizmann Institute of Science, Israel

3.3 C Poster: 4

Peers' discursive activity about predation in a computer-supported learning environment

Marida Ergazaki, Vassiliki Zogza

University of Patras, Greece

3.3 C Poster: 5

Mapping controversies about the use of pesticides and agronomy teaching.

Nadia Cancian

ENFA UMR EFTS, France

3.3 C Poster: 6

THE DIFFICULTIES PROSPECTIVE BIOLOGY TEACHERS FACE DURING THE RUBRIC DEVELOPMENT

Perihan Güneş¹, Ali Alas²

¹Hacettepe University, Turkey; ²Selçuk University, Turkey

3.3 C Poster: 7

The measurement of constructivist instruction based on student perceptions

Sabine Marsch¹, Matthias Wilde², Detlef Urhahne³

¹Freie Universität Berlin, Germany; ²Universität Bielefeld, Germany; ³Universität Halle-Wittenberg, Germany

3.3 C Poster: 8

Determination and fostering of students' model competence using hands-on tasks

Juliane Hänsch, Annette Upmeier zu Belzen

Humboldt-Universität zu Berlin, Germany

3.3 C Poster: 9

Processes of Scientific Inquiry in Theory and Practice

Kathrin Helena Nowak, Andreas Nehring, Rüdiger Tiemann

Humboldt Universität zu Berlin, Germany

3.3 C Poster: 10

Sharing experiences of two LearningLABs on bioinformatics for European teachers.

Louisa Wood¹, Philipp Gebhardt²

¹EMBL-European Bioinformatics Institute, United Kingdom; ²European Learning Laboratory for the Life Sciences, European Molecular Biology Laboratory, Germany

3.3 C Poster: 11

The potential of biology textbooks to integrate molecular genetic knowledge

Chantal de Ruijter, Dirk-Jan Boerwinkel

Freudenthal Institute for Science and Mathematics Education, Utrecht University, Netherlands, The

3.3 C Poster: 12

Conceptual Reconstruction and Role of Metaphors in Understanding Germ Theory

Bard Unger

Leibniz Universität Hannover, Germany

3.3 C Poster: 13

Comparative analysis of the activity of two teachers in terms of students' acculturation to science

Yann Lhoste¹, Patricia Schneeberger², Brigitte Peterfalvi³

¹Université de Bordeaux, France (LACÉS, ÉA 4140); ²Université de Bordeaux, France (LACÉS, ÉA 4140); ³Université de Nantes, France (CREN, ÉA 2661)

3.4 A Symposium: Teaching evolution: cognitive and affective factors

Time: Thursday, 20/Sep/2012: 4:30pm - 6:30pm

3.4 A Symposium: 1

Teaching evolution: cognitive and affective factors

Marcus Hammann¹, Christiane Konnemann¹, Clas Olander², Penelope Papadopoulou³

¹Zentrum für Didaktik der Biologie, WWU Münster, Germany; ²Institutionen för didaktik och pedagogisk profession, Göteborg, Sweden; ³University of Western Macedonia, Greece

3.4 A Symposium: 2

Why am I learning biological evolution?

Clas Ludvig Olander

University of Gothenburg, Sweden

3.4 A Symposium: 3

Conceptual ecology of the Evolutionary Theory in the Greek cultural frame: Students' conceptual ecologies before and after teaching.

PENELOPE PAPADOPOULOU¹, EFSTRATIOS KATAKOS², KYRIACOS ATHANASIOU²

¹UNIVERSITY OF WESTERN MACEDONIA, Greece; ²UNIVERSITY OF ATHENS, Greece

3.4 A Symposium: 4

Attitudes towards evolutionary theory: A multidimensional approach

Christiane Konnemann, Roman Asshoff, Marcus Hammann

Centre for Didactics of Biology, University of Münster, Germany

3.4 A Symposium: 5

Acceptance of evolutionary theory: Do problem concepts and different aspects of evolution make a difference?

Marcus Hammann, Christiane Konnemann, Roman Asshoff

Zentrum für Didaktik der Biologie, WWU Münster, Germany

3.4 B Oral: Pedagogical content knowledge

Time: Thursday, 20/Sep/2012: 4:30pm - 6:30pm

3.4 B Oral: 1

Evaluation and validation of testinstruments to measure biology teachers' PCK&CK

Melanie Juettner, Birgit Jana Neuhaus

University of Munich (LMU), Germany

3.4 B Oral: 2

Characterizing tacit PCK of in-service biology teachers

Ronit Rozenszajn, Anat Yarden

Weizmann institute of science, Israel

3.4 B Oral: 3

Teachers' PCK development during a professional development course in ecology

Martin Scheuch, Christine Heidinger, Erika Keller, Franz Radits

University of Vienna, Austria

3.4 B Oral: 4

Biology teachers learning to design context-based lessons

Nienke Wieringa, Fred Janssen, Els De Hullu, Jan Van Driel

Leiden University, Netherlands, The

Presentations

Date: Friday, 21/Sep/2012

4.1 A Oral: Teaching strategies

Time: Friday, 21/Sep/2012: 9:00am - 10:30am

4.1 A Oral: 1

Teachers' objectives and knowledge focus in outdoor teaching, grade 4-6

Birgitta Wilhelmsson¹, Christina Ottander¹, Gun Lidestav²

¹Umeå university, Sweden; ²Swedish University of Agricultural Sciences

4.1 A Oral: 2

From matter cycle to ecosystem: a learning progression proposal

Eva Novella¹, Anna Marbà-Tallada¹

¹Universitat Autònoma de Barcelona. Grup de Recerca Consolidat LIEC. Catalunya.; ²Escola Aula, Barcelona, Catalunya

4.1 A Oral: 3

The connection between secondary school students' internal factors, school experiences and sustainability actions

Anna Uitto, Seppo Saloranta

University of Helsinki, Finland

4.1 B Oral: Teaching genetics

Time: Friday, 21/Sep/2012: 9:00am - 10:30am

4.1 B Oral: 1

Instructional efficiency of tutoring hands-on phases in an outreach lab

Franz-Josef Scharfenberg, Franz X. Bogner

University of Bayreuth, Germany

4.1 B Oral: 2

Teachers talk in the classroom: connecting genes with traits

Karin Helena Thörne, Niklas Gericke, Mariana Hagberg

Karlstad University, Sweden

4.1 B Oral: 3

Training teachers to use bioinformatics resources in developing student assignments

Hienke Sminia

Netherlands Bioinformatics Centre, Netherlands, The

4.2 A Oral: Interest and motivation

Time: Friday, 21/Sep/2012: 11:00am - 12:30pm

4.2 A Oral: 1

First-Year Students' Priorities and Choices Related to Science and Technology Education

Doris Elster, Verena Mauk

University Bremen, Germany

4.2 A Oral: 2

Interest development in biology through learning progression

Morten Rask Petersen

University of Southern Denmark, Denmark

4.2 A Oral: 3

Bilingual Biology teaching: students' attitude depending on motivation and achievement

Petra Duske, Julia Drixler, Michael Ewig

Pädagogische Hochschule Weingarten, Germany

4.2 B Oral: Teaching strategies

Time: Friday, 21/Sep/2012: 11:00am - 12:30pm

4.2 B Oral: 1

From lectures to small-group learning in an undergraduate Biology Course

Tali Tal, Masha Tsaushu

Technion, Israel

4.2 B Oral: 2

Science standards and individualised teaching – A contradiction?

Iris Venus-Wagner

University of Salzburg, Austria

4.2 B Oral: 3

Good student questions in inquiry learning ?

François E. Lombard, Daniel K. Schneider

Université de Genève, Switzerland