EARLI 2021:

Overview of Contributions from Members of SIG 20 “Inquiry Learning”

Dear members of EARLI SIG 20 (“Inquiry Learning”),

on the following pages, you can find all contributions of SIG 20 members at the EARLI main conference in 2021, along with information on time slots and online meeting rooms. As this overview shows, and thanks to you, our SIG is well represented at the main conference. One highlight is certainly going to be the SIG 20 Invited Symposium entitled “Engaging Teachers in Inquiry Learning” (organized by Wouter van Joolingen), which is going to take place on Thursday, Aug. 26 at 9:00 h in Session Room 4. But also beyond this “highlight”, there are many presentations related to various aspects of the topic “Inquiry Learning” – we hope that the present document will help you in picking the right sessions and talks!

A second thing that becomes apparent when looking at the program is that the research of many of our members is not confined to topics related to Inquiry Learning, but also touch upon themes that are related to other SIGs as well, e.g., to SIG 6 (“Instructional Design”), to SIG 7 (“Technology-Enhanced Learning and Instruction”), to SIG 11 (“Teacher Education”), or to SIG 26 (“Argumentation, Dialogue and Reasoning”). We feel that many presentations of members of our SIG that may more strongly relate to other SIGs still may have important implications for future research on Inquiry Learning – this is why we also included such presentations in this booklet. Please note that members of our SIG are marked as bold on the following pages.

One final thing we would like to draw your attention on: This year’s SIG 20 Business Meeting is only happening the week after the conference, i.e. on Tuesday, Aug. 31, at 16:00 h. Still, we very much hope to see you there!

We wish you a stimulating conference!
### Session A9
(10:45 h, Session Room 4)

**Schlatter, E., Molenaar, I. & Lazonder, A.:**
The process of learning scientific reasoning: a latent transition analysis

### Session B3
(15:45 h, Session Room 13)

**Lämsä, J., Hämäläinen, R., Koskinen, P., Viiri, J., Lampi, E.:**
Temporal analysis procedure for computer-supported collaborative learning: Literature review

### Session B4
(15:45 h, Session Room 18)

**Primor, L. & Barzilai, S.:**
Teachers' Assessment of Multiple Text Integration

### Session B7
(15:45 h, Session Room 10)

**Stokhof, H. & Oolbekkink-Marchand, H.:**
Exploring hypothetical question trajectories as support for guiding student questioning

**Barzilai, S., Tal-Savir, D., Abed, F., Mor-Hagani, S., Goldik, N., Davidov, O. & Talmon, I.:**
Misinformation is Contagious: Learning to Detect Misinformation Through an Online Game

### Session E4
(17:30 h, Session Room 12)

**Johansen Froytløg, J. I., Rasmussen, I. & Ludvigsen, S.:**
How microblogging affords conditions for the realisation of student voices about sensitive topics

### Session E9
(17:30 h, Session Room 1)

**Spikol, D., Kaivo, M. & Cuartielles, D.:**
Supporting Computational Thinking with Design Activities

### Session F11
(18:45 h, Session Room 11)

**Greisel, M., Spang, L., Dresel, M. & Kollar, I.:**
Regulation in Collaborative Learning: An Expert Study to Assess Immediacy of Regulation Strategies

### Session F13
(18:45 h, Session Room 9)

**Furberg, A. & Silseth, K.:**
Student resources as mediational means in school science conversations
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:45 h</td>
<td>Keynote</td>
<td><strong>Hämäläinen, R.</strong>&lt;br&gt;Innovative Methods and Technologies for Enhancing Learning and Professional Development</td>
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<tr>
<td>12:00 h</td>
<td><strong>Session H5</strong>&lt;br&gt;(Session Room 10)&lt;br&gt;(12:00 h, Session Room 10)&lt;br&gt;Greisel, M., Wekerle, C., Wilkes, T., Trempler, K., Stark, R. &amp; Kollar, I.:&lt;br&gt;Using the Theory of Planned Behavior to Explain Pre-Service Teachers' Evidence-Informed Reasoning</td>
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<td>15:45 h</td>
<td><strong>Session I10</strong>&lt;br&gt;(Session Room 8)&lt;br&gt;(15:45 h, Session Room 8)&lt;br&gt;Uribe, P., Lämsä, J., Jimenez, A., Caballero, D., Araya, R. &amp; Hämäläinen, R.:&lt;br&gt;How can deep networks help us in the coding of discussions in the context of inquiry learning?</td>
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<td>15:45 h</td>
<td><strong>Session I14</strong>&lt;br&gt;(Session Room 16)&lt;br&gt;(15:45 h, Session Room 16)&lt;br&gt;Wilkes, T., Greisel, M., Wekerle, C., Trempler, K., Kollar, I. &amp; Stark, R.:&lt;br&gt;Fostering pre-service teachers’ reasoning script by productive failure: Does the grain level matter?</td>
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<td>17:30 h</td>
<td><strong>Session J12</strong>&lt;br&gt;(Session Room 5)&lt;br&gt;(17:30 h, Session Room 5)&lt;br&gt;Georgiou, Y., Hadjichambis, A. &amp; Hadjichambbi, D.:&lt;br&gt;Investigating teachers’ perceptions of environmental citizenship: A systematic review</td>
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### Wednesday, 25/08/2021

**Session L1**  
(09:00 h, Session Room 8)

**Hulders, I., Voet, M. & De Wever, B.:**  
Students’ arguing skills: impact of teaching beliefs and students’ epistemological understanding

**Session L4**  
(09:00 h, Session Room 12)

**Belland, B., Zhang, A.Y., Lee, E., & Kim, C.:**  
Predicting early childhood education teacher candidates' views of coding

**Belland, B., Kim, C., Dinc, E. & Zhang, A.Y.:**  
Using lag sequential analysis to determine significant behavior transitions while debugging

**Veermans, K. & Jaakkola, T.:**  
Task perception, task performance, and learning outcomes in simulation-based inquiry learning

**Veermans, K. & Jaakkola, T.:**  
Analyzing science, technology, engineering and mathematics (STEM) field with topic modelling

**Session L10**  
(09:00 h, Session Room 13)

**Landrieu, Y., De Smedt, F., Van Keer, H. & De Wever, B.:**  
Empowering Secondary School Students’ Argumentative Writing Skills

**Session M8**  
(12:00 h, Session Room 5)

**Ludvigsen, S.:**  
Discussion of the symposium “Analysing Educational Dialogues: Integrative and Critical Perspectives”

**Session M13**  
(12:00 h, Session Room 8)

**Abed, F. & Barzilai, S.:**  
Students’ Epistemic Criteria for Evaluating Climate Change YouTube Videos

**Varda, C. & Kyza, E.:**  
“Liking” social media posts with credibility labels: The role of epistemic aims and criteria

**Tabak, I.:**  
Discussion of the symposium “Is this credible information?” – Investigations on the Evaluation of Scientific Online Information

**Session N9**  
(15:45 h, Session Room 17)

**Weckerle, C., Kiemer, K., Wagner, K., Trempler, K., Greisel, M., Wilkes, T., Stark, R. & Kollar, I.:**  
Contrasting pre-, in-service teachers' and educational researchers' evidence-informed reasoning

**Wecker, C.:**  
Discussion of the symposium “Teachers' and teacher educators’ evidence-informed practice: Takeaways for teacher education”

**Session N13**  
(15:45 h, Session Room 14)

**Mochizuki, T., Chinn, C. & Yamaguchi, E.:**  
Integrating evidence when some evidence is cherry picked: Challenges for undergraduates

**Tal-Savir, D., Barzilai, S., Abed, F. & Mor-Hagani, S.:**  
Integrating Multiple Scientific Documents Using Document Maps
**Session N15**  
(15:45 h, Session Room 4)  
Van Schoors, R., Elen, J., **Raes, A.** & Depaepe, F.:  
State of the art of research on digital personalized learning: a systematic review

**Session O6**  
(17:30 h, Session Room 6)  
University Teachers’ Professional Development: A Scoping Review

**Session O12**  
(17:30 h, Session Room 12)  
Kapıcı, H. O., Akcay, H. & Cakır, H.:  
Different Levels of Guidance in Hands-on and Virtual Science Laboratories – What Works Best When?

**Session P4**  
(18:45 h, Session Room 3)  
Stokhof, H., Meli, K. & Lavidas, K.:  
Exploring factors for experts’ response rate on an educational Community Question-Answering platform

**Session P7**  
(18:45 h, Session Room 16)  
Engelmann, K., Behrendt, C. & Wecker, C.:  
Fading solution steps and revealing the solution when modelling skills

**Session P9**  
(18:45 h, Session Room 12)  
Krüger, J., Vohwinkel, V. & Bodemer, D.:  
Learning with augmented reality – integrating virtual instructional elements into the physical world
Thursday, 26/08/2021

**Session Q7**
(09:00 h, Session Room 5)
Kron, S., Sommerhoff, D., Achtner, M., Wecker, C., Siebeck, M., Stürmer, K. & Ufer, S.:
Sensitivity to diagnostic task potential: pre-service teachers task selection during diagnosis

**Session Q12**
(09:00 h, Session Room 8)
Ollesch, L. & Bodemer, D.:
Providing Information on Cognitive and Emotional Group Aspects in Social Media Learning Environments

Heutte, J. & Raes, A.:
Creating presence from a distance. Comparing remote and on-site group experiences.

**Session Q14**
(09:00 h, Session Room 17)
Voet, M., Brisard, R. & De Wever, B.:
Students' motivation to learn history: A self-determination theory perspective

**SIG 20 Invited Symposium Q17**
(09:00 h, Session Room 4)
Papaevripidou, M., Xenofontos, N., Hovardas, T. & Zacharia, Z.:
Examining pre-service teachers’ capability to design simulation based inquiry learning activities

Van Joolingen, W., Goei, S. L., Matimba, H. & Thu Aung Ba, R. K.:
A Lesson Study approach to the development of an augmented reality for biology teaching

Jaakkola, T. & Veermans, K.:
Bringing simulations to the classroom: teachers' perspectives

Lehtinen, A., Hähkiönemi, M. & Nieminen, P.:
Guiding student thinking through teacher questioning when learning with dynamic representations

Pedaste, M.:
Discussion of the symposium “Engaging Teachers in Inquiry Learning”

**Session S9**
(14:30 h, Session Room 6)
Georgiou, Y. & Kyza, E.:
Scaffolding augmented reality learning: A systematic review of the literature

**Session S14**
(14:30 h, Session Room 18)
Steinrücke, J., Veldkamp, B. & de Jong, T.:
Self-reflection increases information usage in a digital serious game

**Session S16**
(14:30 h, Session Room 2)
Stress of experts and novices in the flight simulator: Is it order of scenarios that matter?
Session T10
(15:45 h, Session Room 7)
Landrieu, Y., De Smedt, F., De Wever, B. & Van Keer, H.: Design principles for argumentative writing focusing on strategic and conversational support

Session T16
(15:45 h, Session Room 15)

Session U5
(17:30 h, Session Room 4)
Horvers, A., Molenaar, I., Bosse, T. & Lazonder, A.: Exploring students' emotions during learning with adaptive learning technology: a multimodal approach

Session V1
(18:45 h, Session Room 13)
Hämäläinen, R., Vähäsantanen, K., Salo, P. & Vilppola, J.: Competence development of a student teacher already working as a teacher
### Friday, 27/08/2021

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<tr>
<th>Session W7</th>
<th>09:00 h, Session Room 11</th>
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<tbody>
<tr>
<td>Spang, L., Greisel, M., Dresel, M. &amp; Kollar, I.:</td>
<td>Homogeneous Problem Perception, Immediacy and Intensity of Strategy Use in Online CSCL</td>
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<th>Session W11</th>
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<tr>
<td>Schlatter, E., Molenaar, I. &amp; Lazonder, A.:</td>
<td>Effects of micro- and macro-adaptive instruction on children’s learning of scientific reasoning</td>
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<td>Merkt, M. &amp; Bodemer, D.:</td>
<td>Do a rating task and a pause button affect video-based learning? Insights from two experiments</td>
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<td>De Wever, B. &amp; Van Nieuwenhove, L.:</td>
<td>Low-educated adults’ perceived educational needs and barriers to learning: Evidence from PIAAC</td>
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<td>Putzeys, K. &amp; De Wever, B.:</td>
<td>Collaborative synthesis writing quality and collaboration satisfaction: the impact of roles</td>
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