Editorial

by Koen Veermans, Tasos Hovardas, and Valentina Nachtigall

Dear members of EARLI SIG 20,

We are happy to announce our 12th newsletter.

In this newsletter, we would like to inform you about the following topics:
1. Survey for our Members
2. Webinars on Inquiry Learning
3. Invited Symposium at EARLI 2023
4. SIG 20 Coordination

Please feel free to forward this newsletter to colleagues who are not yet members of our SIG but might be interested in research on inquiry learning or even in becoming a member!

1. Survey for our Members

During the business meeting of SIG20 at the joint conference of SIGs 20 and 26 in Utrecht, we decided to develop and send out a short survey to members and potential members of SIG20 so that we can have an overview of the needs and desires of our members and act accordingly as SIG20 coordinators. We would like to kindly ask you to complete the survey so that we will be able to gather as much data as possible. Here is the link to the survey.

2. Webinars on Inquiry Learning

Following up the business meeting of SIG20 at the joint conference of SIGs 20 and 26 in Utrecht, we plan to organize webinars offered to all SIG20 members, which may be of particular interest for our younger colleagues. Each webinar will last from 60 to 90min and it will be organized around a key presentation by a colleague (up to 30min), followed by a presentation of a discussant (up to 10min) and then an interaction between the presenter, the discussant and participants (20 to 50min). The aim and rationale of these webinars is to concentrate on interesting/ innovative/unresolved issues and challenges around inquiry learning, including instructional methods and research methods. There are quite a few series of seminars or webinars of that kind already taking place in several universities, and the idea is to join forces, open up these standard procedures to all our members, learn from each other's work and initiate collaborations in the form of project submissions or paper submissions. Please let us know if you would consider making such a presentation for a webinar so that we can plan it timely and also if you can think of a discussant to interact with you.

We are thrilled to announce the first two SIG20 webinars of this new series:

Upcoming SIG20 Webinars

"The Interplay Between Physical and Virtual Labs"

Prof. Zacharias Zacharia

Friday, April 28, 2023
10 a.m. - 11:30 a.m. (CET)

Abstract: The focus of this talk is on the contribution that physical or virtual labs makes to students' STE(A)M learning. Both theoretical perspectives and empirical evidence are presented. The theoretical perspectives were drawn from two types of theories, namely embodied cognition and additional (touch) sensory channel. The empirical evidence was drawn from two different lines of research. The first line of research involves studies that have focused on comparing physical and virtual labs (without the provision of haptic feedback), whereas the second involves studies that have focused on comparing virtual labs with and without the provision of haptic sensory feedback. The ultimate goal is to understand when to use physical and/or virtual labs in STE(A)M learning contexts, both from a theoretical and an empirical perspective. The talk concludes with suggestions for future research.

If you are interested in attending the webinar from Prof. Zacharia on April 28, please register here.

"The Inquiry Cycle - Challenges for the Future in Different Contexts"

Prof. Margus Pedaste

Friday, May 5, 2023
15 p.m. - 16:30 p.m. (CET)

Abstract: Inquiry-based learning has been for long an educational strategy for learning. Several cycles have been developed to guide the inquiry process and Pedaste et al. (2015) made a synthesis of these based on a systematic literature review. This cycle differentiates five distinct general inquiry phases: Orientation, Conceptualization, Investigation, Conclusion, and Discussion. However, it's been almost 10 years from that study and the educational landscape has significantly changed since then. First, there has been a continuous movement towards collaborative learning, linked to the ideas of ICAP framework focusing on engagement and Knowledge Integration framework focusing on describing how learners' existing ideas should be elicited, shared, categorised and improved for increasing quality of the learning outcomes. Second, the demands of digitalisation of the learning process during COVID-19 pandemic showed that we need to discuss how self-regulated learning in its all phases (planning, learning, reflection) and areas (cognitive, metacognitive, motivational, emotional) could be linked to the inquiry cycle. Third, recently, even more challenges have been raised by breakthroughs in use of artificial intelligence, e.g. ChatGBT, in learning and instruction. These and perhaps some more challenges call us for revisiting the inquiry cycle to align it with contemporary needs. The webinar consists of four main parts: short introduction to the inquiry cycle and potential challenges, defining the challenges in a shared workspace, discussing the solutions in small groups to face the challenges, reporting back about the groupwork and having general discussion on future directions in research on inquiry-based learning.

If you are interested in attending the webinar from Prof. Pedaste on May 5, please register here.

3. Invited Symposium at EARLI 2023

At this year's [EARLI conference](#) in Thessaloniki, the SIG 20 presents an invited symposium on "Contexts and Variations of the Phases of Inquiry-Based Learning".

The symposium builds on the inquiry-based learning model developed by Pedaste et al. (2015). The model illustrates different main- and sub-phases of inquiry learning and is based on an analysis and synthesis of 32 articles describing inquiry phases or whole inquiry cycles. The model leaves considerable room for *variation within the inquiry cycle, and can be and has been used in different contexts. Hence, the aim of the SIG 20 invited symposium is to bring some of these different variations and contexts together in order to explore how this widely cited model has been conceptualized and applied.*

Organizers and chairs of the symposium are the three SIG 20 coordinators, Koen Veermans, Tasos Hovardas, and Valentina Nachtigall. We are thrilled that **Margus Pedaste**, who developed the aforementioned model, will be the discussant of the symposium which includes the following four papers:

- **Refining Phases of Inquiry: bridging between model and practice** *(Koen Veermans, Tomi Jaakkola, Antti Lehtinen & Wouter van Joolingen)*
- **Enrichment for talented students: Scientific inquiry competencies in primary schools** *(Ulrich Trautwein, Julia Schiefer, Markus Kleinhansl, Julia-Maria Lange, Fabienne Kremer, Lucas Stark, Katerina Tsarava, Jessika Golle, & Benjamin Nagengas)*
- **Mathematical Modelling With Hands-on Experimentation as a Possibility for Inquiry Learning** (*Ramona Hagenkötter, Valentina Nachtigall, Katrin Rolka, & Nikol Rummel*)
- **Problematizing a linear conceptualization of inquiry learning** *(Tasos Hovardas)*

We warmly invite you to attend this symposium and to discuss with us!

4. SIG 20 Coordination

During the upcoming EARLI 2023 conference in Thessaloniki, Koen Veermans (University of Turku, Finland) will step down as the Senior Coordinator of the SIG 20 after the usual term of four years. Also, Valentina Nachtigall (Ruhr-University Bochum, Germany) will step down as the JURE Coordinator of the SIG 20 after the usual term of two years.

SUBMIT YOUR CANDIDACIES UNTIL APRIL 14th, 2023

We would like to give the chance to everyone to step up and to express their interest in co-coordinating the SIG 20-Inquiry Learning with SIG Coordinator Tasos Hovardas (University of Cyprus, Cyprus).
Please let us know via email (sig20inquiry@gmail.com) before **April 14th, 2023**.

Newsletter

March 2023

Newsletter editors:
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