

#### 4 - Digital Resources for Science Teaching and Learning | Empirical

##### **SP - (16195) - COLLABORATION AND USE OF SCIENTIFIC KNOWLEDGE PRACTICES IN A DIGITAL LEARNING ENVIRONMENT**

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##### **Short Abstract**

The present study aimed to analyse first-year upper secondary students' use of scientific practices (SPs) and collaboration in a digital learning environment (DLE). Students (N = 16) worked on the collaborative assignments that required inquiries in the context of two virtual experiments and the use of a multitude of digital tools and resources. Students' actions in the DLE were recorded with screen-recording software and analysed from the perspectives of access and use of digital resources, SP use and collaboration. The results indicated that the collaboration actions supported SP use and that the challenges faced by students varied by SP, with developing models and constructing scientific explanations causing the most challenges. The use of SPs was intertwined with the active use of digital resources, and collaboration progressed iteratively.