

## **SYMPAB - (16489) - BECOMING OCEAN LITERATE: EXPLORING STUDENTS' LEARNING ABOUT THE OCEAN AND ATTITUDES TOWARDS ENVIRONMENTAL RESPONSIBILITY**

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### **Short Abstract**

*This paper presents data from five pilot projects in three countries from the EU-project Ocean Connections, where universities, schools and aquaria cooperate to innovate science teaching targeting school students' Ocean Literacy. First, the construct of Ocean Literacy is discussed referring to practitioner reports and empirical research from this rather new research field. Based on the literature it is suggested to cooperate with external learning environments like aquaria to provide access to organisms and phenomena creating personal connections for learners. The research questions focus on what students learn about Ocean Literacy and the impact on their attitudes to the Ocean and environmental responsibility. Around 180 students aged 9-15 years from UK, Denmark and Spain have answered the pre and post questionnaire. Additionally, data from interviews with teachers and stakeholders from the aquaria are included. The findings illustrate a rather high level of perceived outcomes. Students highlight positively the work in the aquaria and reflect on learning e.g. about biodiversity. The Ocean Literacy items reveal differences across countries, but show positive learning gains in all groups, with a larger number of students in the post-questionnaire referring to a more nuanced answer that shows a more sophisticated understanding more often. The data also document an increase in students' knowledge about the diversity of life and ecosystems in the Ocean. Thematized open reflections about environmental issues illustrate the students' concerns for the future with around 30% using survival terms like "we can die if we do not act" in the pre-questionnaire. In the the post-questionnaire there is a tendency for more focus on pupils being a part of the generation living on the earth in the future, and therefore having to act, and a little less focus on survival terms.*