



## **Girls on Ice Switzerland – field-based science short courses**

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Girls on Ice Switzerland provides tuition-free field-based short courses about alpine climate change for young women (15-17 years) from diverse backgrounds. Next to scientific contents, mountaineering skills and art concepts are taught. Girls on Ice Switzerland does not only intend to transfer scientific knowledge (i), but also aims on a general understanding of scientific concepts (ii), on a mediation of nature experiences (iii) and on an enhanced self-confidence and self-evaluation (iv). A combination of inquire-based teaching, experiential learning, and the tangibility of climate change science in the alpine environment provide a unique teaching environment. This particular framework allows to (a) communicate science to non- and potential not-yet-peers, to (b) facilitate insights into the scientific work through hands-on experiences, and to (c) enhance the participants' general interest in science.

Between 2017 and 2020, Girls on Ice Switzerland is funded by a science communication (Agora) project of the Swiss National Science Foundation and organises three to four courses. Within the Agora project, the Evaluation Office of the Zurich University of Teacher Education performs an evaluation including pre- and post-inquiry of the participants. Through both quantitative and qualitative methods, the evaluation focuses on the aims of the program, the surrounding theoretical framework, and the conclusions drawn from the previous evaluation(s). Evaluated aspects include (i) scientific knowledge, (ii) idea of science and knowledge about scientific professions, (iii) closeness to nature and (iv) self-assessment and self-efficiency. The first-year and second-year's course evaluation showed, that the programme overall reached its initially set aims. In our experience, the formal evaluation helps to optimize the science communication by demanding a clear set of goals for different characteristics of the program. The results of the questionnaires make it possible to track the success and to make according changes to the program for the following years. In addition, we use another, rather informal tool for the optimization of the science communication. After each programme, we have an instructor debriefing where we take the time to discuss how the program performed overall and what could be adapted and improved. Here the basis for optimization are the instructors and their perception of how things went. Thus, comments and interactions with the participants will shape how the instructors will perceive the success of the program.