LAPIN YLIOPISTO
UNIVERSITY OF LAPLAND

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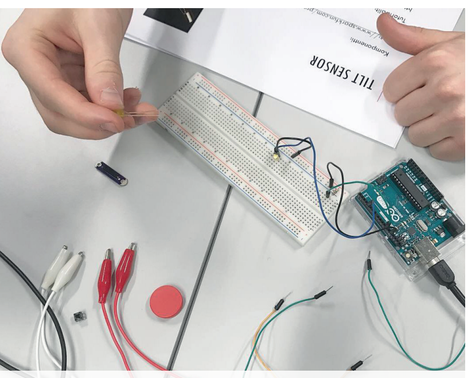

Fig. 1. Students learned about electronics and programming in the workshops.

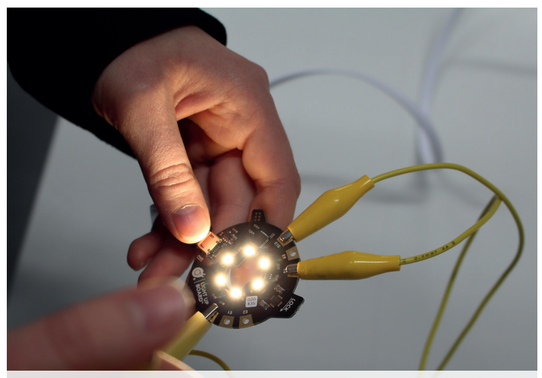

Fig. 2. Bare Conductive´s Light Up Board has six built-in leds. Those could be set to six different modes.

Fig. 3. In the workshops Piritta Mettovaara made rapid prototypes and tested how the electronics could be integrated with the textile materials.

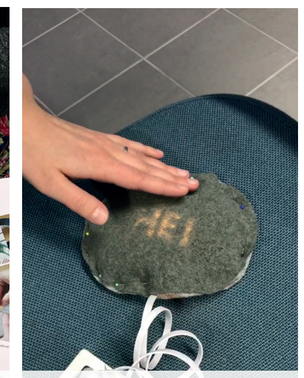

Fig. 4. In the workshop: idea testing wth a rapid prototype.

Fig. 5. The final work includes two sets of Bare Conductive´s Light Up Board. Secret message by Eveliina Muotkavaara, 2019.

Using Technology Toolkits in E-Textiles Education

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Introducing interactive functionalities to arts to textile teaching poses challenges to both students and teachers. While students have to engage in new technologies and tasks such as programming, teachers have to find a good way to introduce the novel topics and find the right balance between level of complexity and design freedom. In this position paper, we present our experiences from introducing technology toolkits for e-textiles education with design students.

Fig 5. Early design of the Linn Dress using electrochromic displays [3] for a hide-and-reveal feature, prototyped with LilyPad Arduino toolkit.

Lesson Learned

- The teaming up and co-teaching has developed not only the students' skills but also the ones of the teachers.
- The know-how has developed in the use of different applications, software and technologies, as well as different working methods, sharing and networking in the the field [1].
- A larger set of teachers and creative technology courses has also given students an opportunity to continue the design process further.

Expanding the visibility of the creative technologies studies through exhibitions and social media has gained also wider interested, and resulted networking and co-operations.

ACKNOWLEDGMENTS

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[3] Heiko Müller, Ashley Colley, Jonna Häkkilä, Walther Jensen, and Markus Löchtefeld. 2019. Using electrochromic displays to display ambient information and notifications. In Adjunct Proceedings of the 2019 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2019 ACM International Symposium on Wearable Computers. 1075–1078.