NordNice workshop in Aalto University

"Tools for teaching and learning programming"

21-23.4.2016

Program

Thursday, April 21st, 19.30 – 21.00
- Meeting and joint dinner with NordNice network partners
- Location: Restaurant Mount Nepal, Kaupinkalliontie 7, Tapiola (http://mountnepal.fi/)

Friday, April 22nd, 9.00-17.00
- TRACK 1: Workshop for school teachers (mainly in Finnish or Swedish)
    - Tools and pedagogies for teaching and learning programming
- TRACK 2: Seminar for NordNice network partners (in English)
- Location: Aalto University, Open Innovation House, Otaniementie 19-21, Otaniemi Campus

Saturday, April 23rd, 9.00-15.00
- Seminar for NordNice network partners continues
- Location: Aalto University, Computer Science Building, Konemiehentie 2

TRACK 1: Workshop program for school teachers on Friday, April 22nd

Aalto University, Open Innovation House, Room A116, Otaniementie 19-21, Otaniemi Campus

9.00
>Welcome and presentation of NordNice network (Lauri Malmi)

9.10
>Challenges of learning programming (Lauri Malmi / Otto Seppälä)
>- Reflections of learning goals
>- What kind of problems are common and why?

10.00
>Brief demonstrations of some additional free online resources
>- Programming and Minecraft (Rodrigo Duran, in ENGLISH)
>- Thonny – Program visualization in Python (Alvar Annamaa, in ENGLISH)
>- Kerbal Space Program (Lassi Haaranen, in FINNISH): physics simulation of landing in Moon
>- Media programming: Kojo and Pixly (Aleksi Lukkarinen, in FINNISH)

11.00 (IN FINNISH)
>Hands-on working with selected tools
>- Participants are split into groups of 4-6 people according to their preferences of the online resources, and the class years they are working with, e.g., classes 1-3, 4-6, 7-9, 10-12.
>- The groups will
> - work with the resource using their own devices, and
> - prepare jointly a plan for a classroom session for the target group, such that includes the following:
>   - learning goals what students should learn in the session
>   - how do the planned activities support achieving the learning goals
>   - how does the plan engage girls and boys – any possible problems with this?
>   - how could you integrate into the activities students who know much more about programming and computers than other students?
> - Discuss how similar learning goals could be achieved in the context of your own subject domain?

12.00
>Lunch

13.00 (IN FINNISH)
>Hand-on working continues

14.00 (IN FINNISH)

    2-3 groups are merged to form larger groups. Each groups presents their results for the other groups. Reflections and observations are written down.

15.00

    Coffee break

15.30 (IN FINNISH)

    Discussion on identified challenges, good practices and experiences

16.15

    Teaching computational thinking (Valentina Dagienė)
    Discussion

17.00

    Closing.

The workshop is free of cost for participants, and provides free lunch and afternoon coffee. For a limited number of participants, NordNice network also facilitates support for accommodation (1 night, at most 70 euros) and travelling (at most 30 euros).

The number of participants is limited to 35.

TRACK 2: Seminar for NordNice network partners on Friday, April 22nd

Aalto University, Open Innovation House, Rooms A116 and A208, Otaniementie 19-21, Otaniemi Campus, Hall

DRAFT PROGRAM

9.00
        Welcome and presentation of NordNice network (Lauri Malmi, A116)

9.10
        Challenges of learning programming (Lauri Malmi / Otto Seppälä)
- o Reflections of learning goals
- o What kind of problems are common and why?

10.00 (A208)
        Discussion and conclusions on teacher data collected in Druskininkai workshop in December. (Arnold Pears)

12.00
        Lunch

13.00 (A208)
        Discussion on pedagogical models of using different types of software tools in teaching and learning programming (Lauri Malmi & colleagues).

15.00
        Coffee break

15.30 (A208)
        Discussion and summary

16.15 (A116)
        Teaching computational thinking (Valentina Dagienė)
        Discussion

17.00
        Closing.

Joint dinner (time and place) can be agreed during the day for those who wish to participate.

Seminar for NordNice network partners on Saturday, April 23rd

Aalto University, Computer Science Building, Konemiehentie 2, Hall T4

9.00

      Discussion on teacher training activities. (Moderators Lauri Malmi & Valentina Dagienė)
- Practice and models of teacher training in partner countries. Reports from Estonia (Anne Vilems), Finland (Lauri Malmi), Latvia (Maris Vitinš), Lithuania (Eglė Jasutė & Lina Vinikienė), Sweden (Lennart Rolandsson & Arnold Pears)
- Needs for training in educating programming and computational thinking(brainstorming)

11.00

      Current web resource state. Required steps to improve (Bronius Skūpas)

12.00

      Lunch

13.00

      Teacher training (Lennart Rolandsson)

14.00

      Planning network activities in 2016.

15.00

      Closing

Note. The building doors are closed in the morning. Be there in time at the front door, or call Lauri Malmi (+358 50 577 2176), if you cannot make it. He comes to open the door.

The seminar and Friday workshop are free of cost for network partners. Network provides free lunches and afternoon coffees. The network also provides support for travel and accommodation for partner representatives.