

Case study:

Improving digital competence - Digi Path as a city-level framework

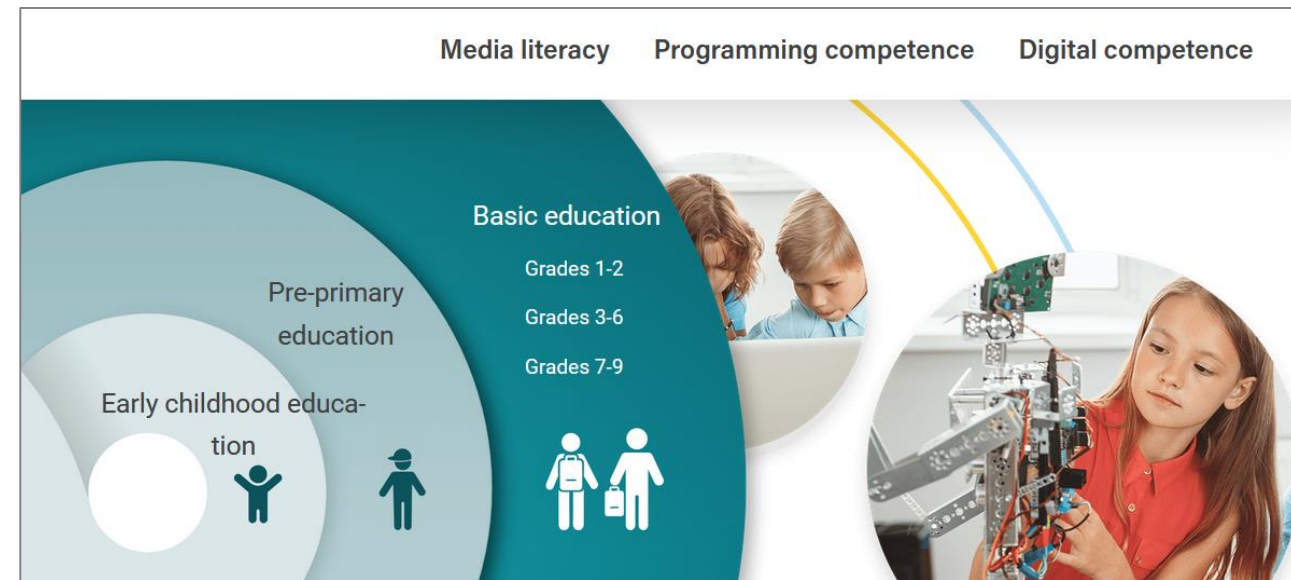
The webinar programme on ICT IN PEDAGOGY

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Background: National program of New Literacies in Finland - ● ● competence requirements and descriptions for early childhood and basic education

- “The descriptions of **ICT competence, media literacy** and **programming skills** ... to promote the realisation of equity when teaching digital skills and competence to children and young people.”
- <https://uudetlukutaidot.fi/en/>
- Built on the national core curriculum.
- Funding for local educational authorities to implement the New Literacies competence description in local contexts.



● ● An example about Digital competence

Media literacy, Programming competence, **Digital competence**



Digital competence and ICT competence as a whole consist of four main areas:

- Practical skills and personal production
- Security and responsibility
- Information management and inquiry-based and creative work
- Interaction.

In English: <https://uudetlukutaidot.fi/en/digital-competence/>

An example for of requirements for grades 3-6,

Practical skills and personal production

Production



Grades 3-6

...is able to find saved or shared content. The pupil understands about the folder and file structure when this is required by the operating system.

...knows how to store and share content in a cloud service. The pupil knows how to send files if necessary.

...knows how to edit images, videos and sound and, this way, complete a work.

...knows how to produce text in digital environments. The pupil knows how to produce text for different purposes (multimodal texts).

...masters the basics of a word processing application.

...knows how to produce a simple animation.

...understands the potential of 3D modelling and printing.

...masters the basics of spreadsheets. ...knows how to draw up a table and convert it into a diagram.

...masters the basics of presentation graphics. The pupil is able to draw up a presentation.

...knows how to edit content in a digital environment together with others.

...is able to comment and give feedback.

Local application: Digi Path framework in Porvoo city



- The competence requirements on national level are quite demanding and extensive -> need to adjust them to local schools. The aim in Porvoo was to create competence definitions and pedagogical support material for teachers and students to apply the New Literacies framework.
- Two expert teachers constructed the local level Digi Path in Finnish and Swedish (the city has two official languages). The expert teachers have also given lectures about the Digi Path generally and separately in each school.
- As a result, detailed descriptions for grades 1-9 about ICT competence, media literacy and programming skills constructed with Miro application + additional teaching and learning material and examples: e.g. how to learn the skills with tools that are in use in Porvoo schools.

Example of Digi Path descriptions about media literacy (in Miro)

The screenshot shows a Miro board interface. At the top, the Miro logo and the board title 'Porvoon digipolku, j...' are visible. Below the title bar, there is a red arrow pointing right with the text '5.-6. lk.' inside it. Below the arrow, there is a blue note titled 'Oppilas' with the following content:

Oppilas

- harjoittelee kuvien ja äänimaailman tarkastelua. Oppilas osaa esimerkiksi tutkia kuvakulmia ja rajauksia tai ponna musiikin käyttötarkoitusta esitysyhteydessään. <https://elokuvapolku.kavi.fi/alapolku/>
- tuntee ja osaa nimetä useita sisältöjä, jotka pyrkivät vaikuttamaan ja osaa kuvailla niiden piirteitä, kuten mainoksissa toisto tai huumorin käyttö. Esimerkki: [tutkikaa tuotesijoittelua s.16](#)
- harjoittelee lukemaan ja tulkitsemaan kuvaajia, taulukoita ja diagrammeja ja hyödyntää osaamistaan mediasisältöjä kuten uutisia tarkastellessaan

The student

- practices the examination of pictures and sound. The student can, e.g., interpret angles of views or image cropping, or discuss the use of music in its presentation context. <https://elokuvapolku.kavi.fi/alapolku>
- knows and can name examples of media content that aim to influence audience, and can describe their features, such as repetition in advertisements or using humor. For example: ...
- practices reading and interpretation of figures, tables and diagrams, and applies the abilities in examining media content such as news.
-

Example of Digi Path descriptions about programming (in Miro)

miro | Porvoon digipolku, j... | Continue collaborating using your real name.

5.-6. lk.

Oppilas

- kehittää loogista ajatteluaan; hahmottaa yhteyksiä eri kokonaisuuksien välillä. Lisäksi oppilas löytää ja kuvaa asioiden välisiä syy-seuraussuhteita.
- käyttää ongelman ratkaisuun erilaisia tapoja arvioi ratkaisuja hyödyntäen jotakin kriteeriä, kuten toimivuus, luettavuus tai tehokkuus esim. [Arvaa mikä s.15](#)
- käyttää graafista ohjelmointiympäristöä ja osaa laatia sillä oman ohjelman, animaation tai pelin Esim. [Musikkiluopi s.20](#), [Pöytäkirja s.21](#) ja [Vuorovaikutteinen esteelmä s.32](#)
- hyödyntää tuotoksissaan omia havaintoja, mittauksia tai antureita sekä yhdistää niihin automaatiota ja robotiikkaa (esim. iPad) Esim. [Arduino Science Journal](#)
- etsii ja korjaa virheitä toimintaohjeissa sekä ohjelmakoodissa

The student

- ...
- uses different methods to solve a problem and evaluate the solutions using some criteria like functionality, reliability or efficiency, for example ...
- uses a graphical programming environment and can make a computer program, animation or game with it. For example ...
- ...

Further development at school level: Creating pedagogical ideas in collaboration between two schools

Two elementary schools participate in an EU-project and within this project, the schools had two aims: 1) to increase the collaboration between these two schools which are located in the same building but have different languages, and 2) to start creating pedagogical ideas for school level Digi Paths, so that all teachers participate in the process.

The design of the process was organized by the “digiteams” of these schools, supported by two external mentors.

The process consisted of the following activities:

- 1) A pre-assignment for teachers to choose two themes from the Digi Path that they want to try in their own teaching.
- 2) A f2f workshop of 1.5 hours organized for all teacher in one of the schools
- 3) A reflection meeting after about three months.

● ● Joint workshop for the teachers of both schools

An online PowerPoint template for writing pedagogical ideas, shared through Team channels.

The content:

- A short introduction (program, goal, some pedagogical viewpoints, instructions)
- Division into teams according to grades (1-2, 3-4, 5-6), teachers from both schools in each team
- First each participant wrote their own ideas (10 minutes), one idea / slide (ideas from the pre-assignment)
- Then all ideas were presented and discussed together in the team.
- A joint meeting at the end: each team reported their team work results shortly.

● ● Examples of pedagogical ideas

In the following slides we have translated some examples of the pedagogical ideas that the teachers created in the workshop for applying the Digit Path in their teaching.

Title: Story writing

Grade: 2

Topics from the Digi Path: word processing

Writing fairy tales with Word. Writing both alone and in collaboration and at the same time practising touch-typing and using Word.

Collaborative writing is organised so that the same file is shared and everyone writes one sentence with their own computers. In this way, students also practice the sharing of a file to others.

Title: Writing poems

Grade:5

Topics from the Digi Path: content production

We wrote poems, which were published in Padlet. The Padlet wall was linked to Teams and students found it in the Team area of the class. On the Padlet wall it was possible to publish poems without the author's name which decreased the pressure to read one's own poem aloud to others.

In Padlet, students could also comment on and give feedback to others. The duration was 1-2 hours.

Title: A podcast about a history chapter

Grade: 6

Topics from the Digi Path: making podcasts

Students make alone or in small groups a podcast about one chapter of the history book (e.g., a summary about the chapter). They use GarageBand application or some other DAW-application (Logic Pro, Audacity).

To support the recorded speech, students use free sound material from sound libraries; this is for enliven the sound world of the podcast. (In OneDrive, there are links to pages about effects or ready-made voice files.)

The revised and finished versions of the bodcasts are shared for peers through OneDrive folders of the class.

Title: Introducing oneself in Swedish

Grade: 6

Topics from the Digi Path: digital presentations

Students make a PowerPoint presentation or a blog post about themselves in the Swedish lesson.

Skills to practice: language mastery at your own level, features of PowerPoint like copy-pasting a picture etc.

Title: Make a short video film

Grade: 6

Topics from the Digi Path: making videos

Duration: 5-6 lessons

A video film in conjunction with the Film Week.

The students were divided into groups of 4-5 people.

The video was planned first: the instruction was that there should be some lesson to teach in the video. Students were asked to think about filming from different angles. The students presented a simple script to the teacher before they were allowed to start filming.

The films were filmed with Ipad. Max length about 3 minutes.

The students edited the film together using iMovie. They practiced editing as well as adding sound effects and texts.

We watched and evaluated the videos with the whole class.