Flexible learning pathways in the Finnish higher education

Jonna Korhonen
Director for Higher Education Policy
1. Finnish higher education system
2. Governmental key projects 2016-2020
3. Current developments
Population: 5.5 million

Size: 338,440 km²

Languages: 88% speak Finnish, 5.2% speak Swedish, 0.04% speak Sámi

Education:
- Hold at least an upper secondary education degree: 87%
- Hold a higher education degree: 42%

Life expectancy:
- Men: 78 years
- Women: 84 years
EDUCATION SYSTEM IN FINLAND

Compulsory education until 18 years old

Liberal adult education
- Adult education centres
- Folk high schools
- Summer universities
- Centres of learning
- Study centres
- Sports institutes

Basic education in the arts
- Schools of architecture
- Circus
- Crafts
- Dance
- Media
- Music
- Literary art
- Theatre
- Visual arts

* Also available as apprenticeship training or by training agreement.
13 Universities
- BA
- MA
  Doctoral training
  Scientific research

158,000 students

22 Universities of Applied Sciences
- BA
- MA
- RTI

155,000 students

12 public research institutes

Universities, in 2021
- 1,840 Doctoral degrees / year
- 18,500 Masters degrees / year

1150 km

25% of population
Finnish education is characterized by:

- Flexible system, no dead-ends, life-long learning
- No standardized testing or ranking of schools, students or teachers
- Free for all, at all levels of education
- Decentralized decisions that complement national policies
- Highly trained and respected teachers
- Student performance among the world’s best
- Collaboration rather than competition
- Trust and equality
- Importance of the joy of learning and student welfare, no one is left behind
- Free for all, at all levels of education
- Highly trained and respected teachers
- No standardized testing or ranking of schools, students or teachers
- Collaboration rather than competition
- Trust and equality
- Importance of the joy of learning and student welfare, no one is left behind
Innovation Scoreboard 2021
Consistent Renewal of the System

- University reform 2010
- Comprehensive reform of state research institutes and research funding
- Reform of UAS 2014 - 2015
- Vision and roadmap for HE and research 2017
- RDI roadmap
- Common policies for reforming continuous learning
- Government report on Education and Research 2020
- Vision for Internationalisation 2035
- HE strategy for continuous learning 2022
- Common policies for reforming continuous learning 2020
- Vision for Internationalisation 2035
- HE strategy for continuous learning 2022
- Government report on Education and Research 2021
- Vision for Internationalisation 2035
- HE strategy for continuous learning 2022
- Government report on Education and Research 2021
2. Governmental key projects 2017-2020

”accessibility and flexibility through digitalisation and cooperation”
Freedom of education and teaching

• Universities have the freedom of research, art and teaching.
  • While universities enjoy freedom of research, art and teaching, teachers must comply with the statutes and regulations issued on education and teaching arrangements. (University Act 558/2009)

• Similarly, universities of applied sciences have extensive autonomy and freedom of education and research.
  • While universities of applied sciences enjoy freedom of tuition and research when carrying out their mission referred to in section 4, instruction shall comply with the statutes and regulations issued on education and teaching arrangements (Universities of Applied Sciences Act 932/2014)
Governmental key projects 2017-2020

- Key project 3: Accelerated transition to working life

- 65 M€; 36 projects focusing on
  - Student admission
  - Learning environments
  - Flexible studies
  - Learning analytics
  - Working life and continuous learning
  - Pedagogy in higher education

- Cooperation between the HEIs and projects was emphasised in the funding call and decisions

Westman 2018
<table>
<thead>
<tr>
<th>Development projects of Government’s key project 3</th>
<th>Starting year</th>
<th>Coordinator</th>
</tr>
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<tbody>
<tr>
<td>Open RDI activities, learning and the innovation ecosystem at universities of applied sciences</td>
<td>2018</td>
<td>Seinäjoki University of Applied Sciences</td>
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<tr>
<td>A project to develop student admissions to universities of applied sciences in 2017–2019</td>
<td>2017</td>
<td>Metropolia University of Applied Sciences</td>
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<tr>
<td>AnalytikkaAly: Learning analytics to support studies, guidance and leadership at universities</td>
<td>2018</td>
<td>University of Oulu</td>
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<td>Automation in Network</td>
<td>2018</td>
<td>Seinäjoki University of Applied Sciences</td>
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<td>BioDigi – Digital bioanalytics portal</td>
<td>2017</td>
<td>Metropolia University of Applied Sciences</td>
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<td>DEFA – Digital Education for All</td>
<td>2018</td>
<td>University of Helsinki</td>
</tr>
<tr>
<td>DigiCampus – A shared digital learning environment, pedagogy and services for higher education institutions</td>
<td>2018</td>
<td>University of Eastern Finland</td>
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<tr>
<td>DIGI-JOUJOU – Flexible learning of Finnish and Swedish and guidance for future labour market needs</td>
<td>2017</td>
<td>Aalto University</td>
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<td>Digitally together</td>
<td>2017</td>
<td>Metropolia University of Applied Sciences</td>
</tr>
<tr>
<td>DLB – Natural resources for bioeconomy through digitalisation / Modernisation of the natural resources sector education in cooperation between higher education institutions and the Natural Resources Institute Finland</td>
<td>2017</td>
<td>Häme University of Applied Sciences</td>
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<tr>
<td>eAMK – A new ecosystem for learning</td>
<td>2017</td>
<td>JAMK University of Applied Sciences</td>
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<tr>
<td>Finnish Design Academy – Development of higher education in the design sector for the competence needs of the future</td>
<td>2018</td>
<td>Lahti University of Applied Sciences</td>
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<tr>
<td>Flexible paths towards working life – Development of educational cooperation in the biomedical and medical fields (Jobitti)</td>
<td>2018</td>
<td>University of Turku</td>
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<tr>
<td>Competence in circular economy for universities of applied sciences</td>
<td>2018</td>
<td>Lapland University of Applied Sciences</td>
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<tr>
<td>KIVAKO – Improving language resources in higher education institutions</td>
<td>2018</td>
<td>Haaga-Helia University of Applied Sciences</td>
</tr>
<tr>
<td>KOPE – A development project of higher education pedagogy linking universities of applied sciences and universities</td>
<td>2017</td>
<td>Oulu University of Applied Sciences</td>
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<tr>
<td>Building up the pedagogical and digital teaching and guidance competence of higher education institution staff</td>
<td>2017</td>
<td>University of Turku</td>
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<tr>
<td>LITO – A national online study unit on business skills</td>
<td>2017</td>
<td>University of Turku</td>
</tr>
<tr>
<td>MEDigi – Digitalisation and harmonisation of teaching in medical fields</td>
<td>2018</td>
<td>University of Oulu</td>
</tr>
<tr>
<td>Multidisciplinary digital learning in sustainability challenges – flexible study paths to working life</td>
<td>2018</td>
<td>University of Helsinki</td>
</tr>
<tr>
<td>OHOI – Promoting ability to study, wellbeing and inclusion in higher education</td>
<td>2017</td>
<td>University of Jyväskylä</td>
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<tr>
<td>Reform of the university admissions system</td>
<td>2017</td>
<td>University of Helsinki</td>
</tr>
<tr>
<td>Learning analytics – the key to better learning at universities of applies sciences</td>
<td>2018</td>
<td>Tampere University of Applied Sciences</td>
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Admission reform for universities in 2016-2020: before and after

Fall 2016, universities

- Matriculation exam: 15% (fall 2016)
- Combined: matriculation exam + entrance exam: 49% (fall 2016)
- Entrance exam only: 34% (fall 2016)

Entrance based on credits in open higher education

Goal 2020

- Matriculation exam results: Places reserved for applicant seeking first placement
- Entrance exam: Same exams used in multiple fields of study
- Entrance based on credits in open higher education

Fall 2016, universities

- Entrance exam only: 34% (fall 2016)

Goal 2020

- Entrance exam: Same exams used in multiple fields of study
- Entrance based on credits in open higher education
Admission reform for universities of applied sciences in 2016-2020: before and after

**UAS fall 2016**

- Combined: matriculation exam + entrance exam: 31% fall 2016
- Entrance exam: 69% fall 2016

**Goal 2020**

- Matriculation exam OR Vocational degree grades
- Places reserved for applicant seeking first placement
- Entrance exam: A single entrance exam for all fields from fall 2019!
HE admissions after the reform 2020

• Both general and vocational secondary education grants eligibility. There is no “field specific” eligibility in legislation!

• In universities, admission is usually for 1st+2nd cycle together. In UAS separately.

• Multiple paths to HE: a share of placements filled based on

  1. **Upper secondary matriculation exam results** (mostly 50-70% of placements)

      • In UASs a subshare based on vocational qualification results

  2. **Entrance exams by HEIs** (mostly 30-50%, mostly open for all applicants with a degree from secondary education)

      • Since 2019 UAS have a single “SAT-like” admission exam agreed upon by the institutions autonomously! (excluding art, design, music, etc.)

      • In universities, around 180 different exams (excluding art, design, music, etc.) in some fields a common field specific exam for all HEIs (medicine, engineering, business administration)

  3. **Other paths**, for example studies open university education (some percentage points depending on field)
HE admissions after the reform 2020

Covid-19 and its impact on the admission

• UAS more resilient due to their digital entrance exam system which could be organised also without physical attendance

• Universities had problems, increased use of certificate selection, other arrangements, some also used UAS digital entrance exam -> push to develop their own admission system further

Current developments

• Now UAS are further developing their digital entrance exam for Finnish, Swedish and English degrees. Conducting also research on the impact of the admission reform.

• Universities continue to develop their admission system reform. Aim to diminish the number of different entrance exams, look into the current certificate selection criterion and develop also a digital entrance exam(s).
DigiCampus

- The goal of the DigiCampus project was to produce a common digital learning platform for higher education institutions, which would serve both individual higher education institutions and joint education of higher education institutions.

- The reason behind was the increased cooperation between the HEIs in providing education. Therefore, it would be easier if there would be a common platform for networks, shared courses / MOOCs / etc.

- This way courses would be easier to find, create and access as there would be a already known (Moodle) platform to use incl. technical support.

- Digital-Physical learning spaces; Multilocation ClassRoom and tips how to use it; Design of the physical learning spaces at the campuses
EXAM – electronic exam software for higher education

EXAM is a modern software, developed and used by a consortium of Finnish Universities and Universities of Applied Sciences (28) to be used for organizing electronic exams in higher education.

Its primary purpose of use is in electronic exam studios monitored by cameras, but also other means of electronic exams can be carried out (e.g. BYOD).

Electronic exams offer flexibility to teaching and studying. Student can take the exam also as a visitor in another higher education institution in Finland.

In addition, they allow the use a diverse range of assessment methods, and make writing and assessing answers easier incl. check for plagiarism and reduce the need for paperwork.
The virtual UAS project and CampusOnline.fi

One key aim was also the development of cross-learning between universities of applied sciences and digital pedagogy, as well as strengthening the link to working life.

CampusOnline.fi brings together the online study courses of Finnish universities of applied sciences making it possible to complete study courses 100% online - wherever suits the student. It is available all year round and free of charge.

Quality criteria for online implementations and an evaluation tool were produced to improve the quality of online studies.

- The criteria describe how these characteristics appear during design and implementation.
- The quality criteria can be utilized in many ways, e.g., in the planning and developing implementation and collecting student feedback.

- The quality criteria consist of 11 themes and related characteristics of quality implementation.
Learning Analytics

• As learning and teaching is taking place increasingly with the help of digital content and systems in different digital interactions, there has been an increasing interest in using the data stored in this context e.g. to support personal learning processes or to develop and organize teaching.

• Besides digital footprints created in the learning environments, Finland has rather good student registries and dataware houses which can be used for developing new services e.g. student feedback or used for other purposes such as student discounts in services provided by third party.

• National level working group was established to ensure the compatibility and interoperability of data from different sources. This included all education levels and sectors starting from early childhood education.

• National level framework for learning analytics to support teachers and educators, planners, leaders and other staff how to develop and use learning analytics in their work.
Student feedback system

About the questionnaire

AVOP feedback questionnaire asks graduating students to evaluate and provide feedback on their education. The findings are used locally by institutions to improve their institutional processes and practices and nationally to inform performance-based monitoring and funding. All graduating degree students from universities of applied sciences are requested to fill out the questionnaire.

Collected personal data is used to fetch information related to person’s study right from VRRTA - higher education achievement register as background information to create a respondent ID and enable the use of electronic graduate feedback questionnaire. The collected personal data is not transferred to the AVOP-survey and your answers to the survey are handled anonymously.

Avop.fi

Microsoft Power BI
KOPE – A development project of higher education pedagogy linking universities of applied sciences and universities

• Increase higher education pedagogic cooperation between universities of applied sciences and universities

• Improve the quality of learning, teaching and guidance, as well as the student-orientation of teaching

• Renew operating methods and learning environments

• Peer learning, hackathons, policies, blogs, development of skills and competences (open badges)
3. Current developments

”Continuous learning and Digivision 2030”
Our strength and challenge: highly-skilled workforce

Share of employment in shortage, by skill level

Lähde: www.oecdskillsforjobsdatabase.org
...and declining cohorts of young adults

Average size of 19-21 years-old cohort
(Statistic Finland 2019)
Key objectives for higher education and research

- 50%
- 60%
- 75%
- 4%

Digitalisation
Digivisio 2030 – Building the future of learning
Digivisio 2030 is a joint programme of all Finnish higher education institutions whose aim is to create a future for learning that benefits higher education institutions, learners and our society.
Finland thrives on its diverse expertise

As the world changes, learning and expertise will take forms that we are not yet able to imagine. But, we still understand that we will need more and more experts in the future.

We can’t just stand on the sideline, looking on, while others show the way - We’ve got to have the courage to build the future ourselves.
A vision shared by all higher education institutions

300,000+ higher education students

38 Finnish higher education institutions

10 years

27,000 higher education institution employees

320 working on the programme

44 M€ programme budget (02/2022)
The programme is founded on equal and open decision-making
Joint programme of all **Finnish higher education** institutions

**Steering group**
strategic management
- strategic management within the boundaries of action plan and budget
- stakeholder cooperation
- Led by Ilkka Niemelä (Aalto University)

**General Assembly**
highest decision-making body
- approves the action plan and budget
- consists of representatives of higher education institutions

**Programme office**
implementation
- planning and implementation of the programme’s practical activities
- Programme Director Hanna Nordlund
Scenario

Finland has an internationally esteemed open learning ecosystem that widely benefits society as a whole.
The objective is to create, as mutual and stakeholder cooperation

1. A national digital service platform
2. Guidance based on digital pedagogics, the learner’s path and shared data
3. Support for change management for higher education institutions
Digivisio’s operational target state for 2030

- Each learner has one identity. All education uses a shared authentication service.
- The learner can use the higher education institutions' open e-learning offerings.
- The national My Data portal provides the learner with access to their lifetime personal learning and competence-related information. The information provides a basis for guidance, identification of competence and, if desired, job-seeking.
- Shared data pools. The data models have been agreed on, and the information can be used by private, public and foreign actors.
Implementation

Continuous and flexible learning tray - The first implementation of Digivisio
Digivisio services and technical solutions

The data platform collects the data required by the continuous and flexible learning tray from source systems and returns updated information to them. Data stored on the platform can also be used by other actors and software.

Source systems describe the offering and store the master data.

Educational offering enables the presentation and comparison of the offering.

Identity management enables authentication via the learner’s national, user-centric identity.

My Data enables a personalized service experience and transactions by tapping into the learner’s existing knowledge and supplementing it in the process.

AI-based guidance services form the tray’s recommendation engine to promote the alignment of supply and demand.

Joint application and registration services improve the implementation of conversions: uniform display of the registration process and payment options for the learner, attaching oneself to an institution or cross-institutional studies.

The continuous and flexible learning tray retrieves and presents the educational offering from the data platform, enables comparison and selection, and displays the transaction to the learner.

A user interface that brings the services together in one place and presents the offering.

Key elements of the tray: identification, personalization, guidance and registration.

A joint knowledge base retrieves data from source systems where transactions are stored and where data is returned or redirected for different uses.
Learners

Objective
The learner knows where to find educational offerings that correspond with competence needs

In practice
• An AI-based service that helps to identify competence needs based on one’s own goals, prior learning and the competence needs of working life.
• The learner finds possible learner paths in one service and can easily compare them.
• Comparison and selection are supported by intelligent recommendations based on the learner’s existing knowledge and labour market data.
Higher education institutions

Objective
The educational offering reaches a wider public and is more effectively targeted

In practice
• A new joint channel for presenting the offering will be opened for higher education institutions
• A new view shared by higher education institutions for presenting and sharing educational offerings
• E-learning offerings can be more easily found
• Analytics helps in the planning and targeting of offerings
Timeline
(Digivisio 2030 services timeline)

1.0 Pilot
- Data platform MVP
- Identity management MVP

2.0 Pilot
- Data platform
- Identity management
- My Data MVP
- AI-based guidance services MVP
- Registration MVP

3.0 Pilot
- Data platform
- Identity management
- My Data
- AI-based guidance services MVP
- Registration MVP

4.0 Launch
- Data platform
- Identity management
- My Data
- AI-based guidance services
- Registration

2022
2023
2024

Definition
Technical development

Continuous and flexible learning tray - first implementation of Digivisio
National level continuous learning strategy of higher education institutions (draft)

Starting points

- Research and R&D know-how as the basis for continuous learning
- From individual learning to community competence and renewal
- For the common good
  - anticipatory approach
  - raising the level of competence and education of the entire nation
  - building Finland's sustainable competitiveness and well-being
- Openness and cooperation
- Activity in building demand
3+1 targets

A clear path of development and qualification as an expert

R&D solutions for the renewal of learning work communities

Digital service environment as a meeting place

The openness of higher education increases the accessibility of continuous learning
Microcredentials driving the development of continuous learning offer

- New attractive and understandable continuous learning offer
- Before, during and after degree education
- High-quality, reliable and valued small sets of expertise (microcredentials)
- EU Council recommendation and EHEA / MicroBol framework as a starting point
  - clearly defined criteria and definition for the introduction of microcredentials, as well as possible link to the national qualification framework
  - The strong educational brands that will renew working life will be built on this basis
  - The national level implementation will look into the platform economy in such a way that the supply and conditions for operation of both the public education system and the private sector are taken into account.
- Need for common rules: QA, ECTS, LOs, digital certificate based on standard
- Also cross-border cooperation and interoperability between different systems
Covid-19 and its impact on learning and teaching

• “HEIs decide independently on the curriculum and on the ways they organize their teaching, incl. distance education”. The government decided **temporary changes** to University Act and University of Applied Sciences Act to ease the rule that requires HEIs to arrange tuition and study guidance so as to enable full-time students to complete their degrees within the prescribed normative time.

• “The transition to distance learning should take place only if absolutely necessary based on a regional epidemiological assessment carried out by the health authorities”. In practice, **HEIs moved from face-to-face teaching and learning to distance education over one night and continued that several months**.

• The learning and teaching did not stop at all. The challenge was however that even though the basic infra and facilities were in place, **many courses were not planned to be given in a distance mode**. Greater emphasis on digital pedagogy and the wise use of digital tools!
The number of credits done actually increased during the pandemic
Also in universities of applied sciences
Final remarks

• The COVID-19 pandemic and current war and geopolitical situation has increased the concern on wellbeing of students and employees.

• At the same time increasing re-understanding also on the role of education in the democracy.

• Higher education is more than credits points – it is also a meeting place, a community.

• Different needs and expectations for learning and teaching – distance, face-to-face, hybrid – at the same time the student population is more heterogenous.

• Challenges with the skills and abilities to conduct higher education studies. Need for more guidance and tutoring.

• Quality of higher education must be assured.

What does this mean for the learning and teaching in higher education?