

MINISTRY OF EDUCATION AND CULTURE FINLAND

Flexible learning pathways in the Finnish higher education

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Governmental key projects 2016-2020
Current developments



EDUCATION SYSTEM IN FINLAND









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



Innovation Scoreboard 2021



Source: European Commission - European Innovation Scoreboard 2021

Consistent Renewal of the System



2. Governmental key projects2017-2020

"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

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

Admission reform for universities in 2016-2020: before and after



Admission reform for universities of applied sciences in 2016-2020: before and after

UAS fall 2016



Goal 2020



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



Platform for joint education



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 projcet and CampusOnline.fi

One key aim was also the development of **crosslearning 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 quality criteria consist of **11 themes and** related characteristics of quality implementation.

- 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.



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 VIRTA - 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.



	●1. I completely disagree ●2. I disagree ●3. I neither agree nor disagree ●4. I agree ●5.	. I completely agree
Finnish Bachelor's Graduate		
Survey (HowULearn themes)	Overall, I have been systematic and organised in my studying.	
	I have organised my study time carefully to make the best use of it.	
Survey year	The things I need to learn have seemed so complicated that I have had difficulties in u	
2021	Ideas and perspectives I came across during my studies have made me contemplate th	
2021	I feel a lack of study motivation and often think of giving up.	
Theme	I have often had to repeat things in order to learn them.	
	I believe I will do well in my studies.	
Kaikki 🗸	I feel overwhelmed by the work related to my studies.	
	I have planned my studies so that I can fit everything in.	
Funding model question	I have put a lot of effort into my studies.	
Kaikki 🗸	I can see the relevance of what we have been taught.	
	I have learned to apply theoretical knowledge to practice.	
Organization	I have often had trouble in making sense of the things I have to learn.	
Kaikki 🗸	I used to expect I would achieve much more in my studies than I expect now.	
· · · · ·	It has been easy for me to find study information.	
Field of education, HE stee	Much of what I have learned seems nothing more than unrelated bits and pieces.	
	The feedback I received from the teaching staff has helped me with my studies.	
Kaikki 🗸	There has been sufficient guidance available for the organisation of my studies.	
	I feel comfortable at my university.	
Name of education	I have carefully looked for evidence to reach my own conclusions about what I am stu	
Kaikki 🗸	I often have feelings of inadequacy in my studies.	
	It has been clear to me what is expected in the assessed work (i.e., final exam, exercise	
Gender	The pressure of my studies causes problems in my close relationships with others.	
Kaikki 🗸	I am continually wondering whether my studies have any meaning.	
	I feel that I am losing interest in my studies.	
Age group	I often sleep badly because of matters related to my studies.	
Kaikki 🗸	The teaching has been, to a large extent, of good quality.	
· · · · · · · · · · · · · · · · · · ·	There has been sufficient guidance available for the preparation of my bachelor's thesi	
Prior education	During my free time I worry over matters related to my studies.	
		 % 50% 100%
Kaikki 🗸	U	70 30 76 IUU 76

Distribution of responses

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

Low-skilled □ Medium-skilled High-skilled 100 % 90 % 80 % 70 % 60 % 50 % 40 % 30 % 20 % 10 % 0 % Iceland Germany HOWAY France inland Sweden Italy OECD United States United Kingdom Denmark

Lähde: www.oecdskillsforjobsdatabase.org

...and declining cohorts of young adults

Average size of 19-21 years-old cohort (Statistic Finland 2019)



25 | 28.10.2022

48000

2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040

Key objectives for higher education and research



Digitalisation

MINISTRY OF EDUCATION AND CULTURE

DIGIVISIO

Digivisio 2030 -Building the future of learning

2

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.



DIGIVISIO

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.

DIGIVISIO

A vision shared by all higher education institutions

300,000+

higher education students



Finnish higher education institutions 10

years

27,000 higher education institution employees 320 working on the programme budget (02/2022) by the programme budget (02/2022) The programme is founded on equal and open decisionmaking VISIO

DIGIVISIO

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



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

DIGIVISIO

Continuous and flexible learning tray - The first implementation of Digivisio

DIGIVISIO

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

Digivisio services and technical solutions

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.

My Data enables a **Educational offering** AI-based guidance Joint application and enables the presentation personalized service **services** form the tray's registration services and comparison of the recommendation engine improve the experience and Key elements of the offering transactions by tapping to promote the alignment implementation of tray: identification, of supply and demand. conversions: uniform into personalization, display of the registration **Identity management** guidance and the learner's existing process and payment enables authentication via registration knowledge and options for the learner, the learner's national, supplementing it in the attaching oneself to an user-centric identity. institution or crossprocess. institutional studies. A joint knowledge base retrieves data from source systems where The data platform collects the data required by the continuous and flexible learning tray from source systems and returns updated information to them. transactions are stored Data stored on the platform can also be used by other actors and software. and where data is returned or redirected for different uses. Source systems describe the offering and store the master data

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



DIGIVISIO

Timeline (Digivisio 2030 services timeline)



Definition	Technical development	
	Co-design and piloting (technical, qualitative and operational)	Expansion

National level continous 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



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



Vipunen - Education Statistics Finland

Also in universities of applied sciences





Vipunen - Education Statistics Finland

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?