



MINISTRY OF  
EDUCATION AND CULTURE  
FINLAND

# Basic Education 2045: For Life

A Vision for Finnish Comprehensive Schools

Publications of the Ministry of Education and Culture, Finland 2026:9

# Basic Education 2045: For Life

## A Vision for Finnish Comprehensive Schools

Ministry of Education and Culture Helsinki 2026

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## Basic Education 2045: For Life A Vision for Finnish Comprehensive Schools

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### Abstract

This discussion report *Basic Education 2045: For Life* presents and provides background to the vision for Finnish comprehensive education. The vision outlines the direction for the development of the education system in a rapidly changing global environment. Its purpose is to serve as a development framework for the comprehensive education and to encourage future dialogue.

The report explores the role of comprehensive school as a central future-oriented institution in society, with a goal to promote *bildung*, a meaningful life, hope, agency, and the common good. The vision is built around three complementary dimensions: a meaningful life, life together, and life on the planet. Key themes include the school's growing role as a community, the interconnection between learning and wellbeing, the ethical and human-centred use of technology, future hope and democracy, and ecological sustainability.

The vision outlines the strengths of Finnish schools – such as an equitable public school system, highly educated teachers, and strong trust in the education system – and explores how these strengths can provide a foundation for change. The vision is co-created by a delegation appointed by the Ministry of Education and Culture, in collaboration with the Ministry and the Finnish National Agency for Education. Co-creation engaged over 5,000 children, young people, and adults from across Finland.

<b>Keywords</b>	comprehensive school, visions, education and training, future
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## Peruskoulu 2045: Elämää varten Visio suomalaiselle peruskoululle

<b>Opetus- ja kulttuuriministeriön julkaisuja 2026:9</b>		<b>Teema</b>	Koulutus
<b>Julkaisija</b>	Opetus- ja kulttuuriministeriö		
<b>Yhteisötekijä</b>	Opetus- ja kulttuuriministeriö		
<b>Kieli</b>	englanti	<b>Sivumäärä</b>	129

### Tiivistelmä

Keskusteluraportti *Peruskoulu 2045: Elämää varten* esittelee ja taustoittaa visiota suomalaiselle peruskoululle. Visiossa kuvataan peruskoulun pitkän aikavälin kehittämisen suuntaa nopeasti muuttuvassa globaalissa toimintaympäristössä. Vision tavoitteena on toimia viitekehystenä peruskoulun kehittämiseksi ja kannustaa tulevaisuuskeskusteluun.

Raportissa kuvataan peruskoulun roolia yhteiskunnan keskeisenä tulevaisuus-instituutiona, jonka tehtävänä on edistää sivistystä, merkityksellistä elämää, toivoa, toimijuutta ja yhteistä hyvää. Visio rakentuu kolmelle toisiaan täydentävälle kokonaisuudelle: merkityksellinen elämä, elämä yhdessä ja elämä maapallolla. Keskeisiä teemoja ovat koulun kasvava yhteisöllinen rooli, oppimisen ja hyvinvoinnin vahva yhteys, teknologian eettinen ja inhimillinen käyttö, tulevaisuususkon ja demokratian vahvistaminen sekä ekologinen kestävyys.

Julkaisu korostaa peruskoulun vahvuuksia – kuten yhdenvertaista julkista koulua, korkeasti koulutettuja opettajia ja vahvaa luottamusta koulutusjärjestelmään – ja tarkastelee, miten vahvuuksien varaan voidaan rakentaa tulevaisuuden haasteisiin vastaavaa koulua. Vision taustalla on opetus- ja kulttuuriministeriön nimittämän neuvottelukunnan yhdessä ministeriön ja Opetushallituksen virkakunnan kanssa toteuttama yhteiskehittämisen prosessi, johon on osallistunut yli 5 000 lasta, nuorta ja aikuista eri puolilta Suomea.

**Asiasanat** peruskoulu, visiot, koulutus, tulevaisuus

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## Grundskolan 2045: För livet

### Vision för den finländska grundskolan

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#### Referat

Diskussionsrapporten *Grundskolan 2045: För livet* presenterar och ger bakgrund till visionen för den finländska grundskolan. I visionen beskrivs inriktningen för den långsiktiga utvecklingen av grundskolan i en snabbt föränderlig global verksamhetsmiljö. Visionens syfte är att fungera som en referensram för utveckling och att uppmuntra till framtidsdialog.

I rapporten beskrivs grundskolans roll som en central framtidsinstitution i samhället, med uppdraget att främja bildning, ett meningsfullt liv, hopp, aktörskap och det gemensamma bästa. Visionen bygger på tre ömsesidigt kompletterande helheter: ett meningsfullt liv, liv tillsammans och liv på planeten. Centrala teman är skolans växande gemenskapsbyggande roll, det starka sambandet mellan lärande och välbefinnande, en etisk och mänsklig användning av teknologi, stärkandet av framtidstro och demokrati samt ekologisk hållbarhet.

Publikationen lyfter fram grundskolans styrkor – såsom en likvärdig offentlig skola, högt utbildade lärare och ett starkt förtroende för utbildningssystemet – och analyserar hur dessa styrkor kan utgöra grund för att bygga en skola som svarar mot framtidens utmaningar. Visionen bygger på en samutvecklingsprocess som genomförts av en delegation i samarbete med undervisnings- och kulturministeriet och Utbildningsstyrelsen. Över 5 000 barn, unga och vuxna från olika delar av Finland deltog i processen.

**Nyckelord** grundskolan, visioner, utbildning, framtid

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# Contents

Vision summary: Basic Education 2045 .....	8
Preface .....	14
1 Introduction.....	16
Part 1. Purpose of the vision and drivers of the future .....	19
2 Goal of the vision.....	19
3 Why comprehensive schools need a vision.....	21
Part II: A school for life.....	34
4 Comprehensive school for life .....	34
5 A life of meaning and purpose as a goal of the school .....	45
6 A life together: Communities as builders of wellbeing and hope for the future ..	58
7 Life on our planet: an ecologically sustainable school supports wellbeing of the planet and the student .....	67
Part III. School culture of the future .....	70
8 Life in comprehensive schools of the future.....	70
9 Technology and artificial intelligence transform the foundations and practice of learning .....	73
10 The school strengthens social sustainability: High expectations and adequate support for learning and growth.....	77
11 A safe school ethos strengthens the community and creates roots.....	80

12	School is culturally and linguistically diverse.....	83
13	School is for every student: The student’s day.....	87
14	Schools and school buildings as meeting places for communities, services and nature.....	88
15	A meaningful school and career for teachers and other school adults .....	95
16	A future-skilled school: Leadership, evaluation and national collaboration .....	101
	Part IV. Pathway of co-creating the vision Methods used to develop the vision ..	110
17	How does Finland’s vision of comprehensive schools compare with international education goals? .....	111
18	Co-creation of the vision as part of building comprehensive schools of the future.....	114
	Attachment 1. Delegation members and acknowledgements .....	117
	Sources .....	120

## Vision summary: Basic Education 2045

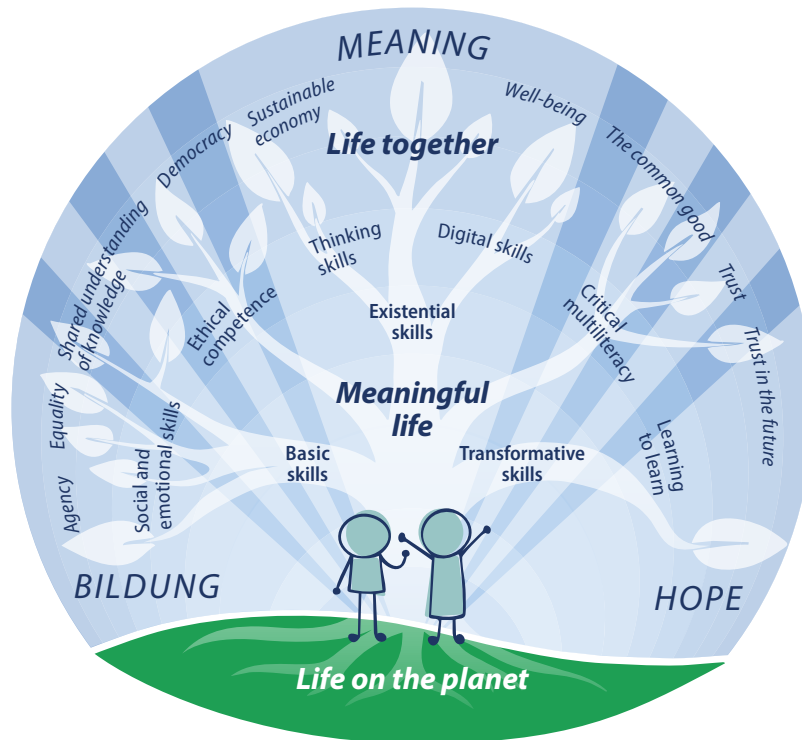
*Sivistys – Bildung, meaning, hope, agency, common good*

### Vision Summary

The *Peruskoulu* comprehensive school is Finland's most important future institution. Its purpose is not only to prepare young people for the changes ahead, but also to equip them with the capacity to change the world and to shape society.

The world surrounding basic education is undergoing profound transformation. The challenges and crises we face cannot be solved by technological innovation alone, but require strong human development. We must find ways to alleviate social polarisation, strengthen democracy, use rapidly advancing technology wisely, and live within the planetary boundaries. In our vision, basic education responds to this challenge by recognising that learning is humanity's opportunity to develop.

In our vision, school is for life: for a meaningful life, life together, and life on the planet. The future of basic education is built on *sivistys* or *Bildung*, meaning, hope, agency, and the common good. The most profound transformation envisioned for the future of basic education is to continue the learning journey from individual knowledge and skills towards shared agency and the co-creation of a meaningful life together.



## Meaningful Life

### *Sivistys*, Bildung as a force for change

Comprehensive school's definition of *sivistys* or Bildung, holds as its core the motivation to use one's knowledge and competence for good. School does not merely react to expected changes or future scenarios, but actively shapes the path toward a positive future.

### Learning and human growth

The goal of learning is human growth and flourishing, in which strong foundational knowledge and basic skills are combined with ethical competence, social and emotional skills, flexible thinking skills, metacognitive skills, and the ability to direct one's own learning. Teachers support students in strengthening transformative skills, existential and life skills, as well as their capacities for meaning-making. These include agency, the ability to understand oneself and others, and the ability to sustain hope in uncertain situations. Teaching is diverse: the importance of emotion, movement, imagination, and culture for the development of skills and human growth is recognised in basic education.

## Wellbeing as the foundation and outcome of learning

The interdependency between learning and wellbeing is recognised and nurtured: wellbeing is a prerequisite for learning, and learning enhances wellbeing. Wellbeing is understood as both a shared quality and an individual goal. The psychological, social, and physical wellbeing of the entire school community also supports the individual wellbeing of each student. A well-functioning and safe school is a place where it is possible to fail and try again safely and where everyone's success is shared and celebrated.

## High level of competence combined with social sustainability

School ensures equality in students' basic skills, learning, and human growth in an increasingly diverse society, even if social gaps in individual backgrounds and resources widen. Equality and equity are promoted by maintaining high expectations for each student and by providing systematically sufficient support to achieve learning goals. High overall competence strengthens Finnish society as students continue along the educational pathway to next levels of education.

## Sustainable skills in the age of technology

Future technologies exceed many limits of human capacity. In this context, learning cannot be based on the assumption that humans must master what machines cannot do. The comprehensive school ensures the sustainability of *sivistys* by placing human growth and human capabilities at the centre of learning — with technology used to complement human capacities. Thinking skills and ethical skills are seen as core goals, combined with diverse digital skills, the ability to regulate one's relationship with technology, and the wisdom to understand what humans should not do, even if it is technologically possible.

## Meaning and purpose are created every day

A meaningful life is woven throughout the school's educational mission. Teachers guide students toward personal purpose by helping them identify what is meaningful for them and what also contributes to the good of others. Meaningfulness is also connected to the experience of being meaningful to others. The school strengthens connections with other people and with nature, and guides encounters with humanity through the arts. A sense of meaningfulness in everyday life enhances learning; school does not motivate learning solely on the promise of a future, but is meaningful to students every day. A sense of meaning and purpose is also nurtured in the work of teachers and other adults in the school.

## Life Together

### School as a community aims for the common good

The comprehensive school positions itself courageously as a counterforce to developments that erode community, by nurturing communities that support participation and inclusion. Community does not require sameness, but accommodates diverse thoughts and world views. At the heart of the community lies a shared commitment to strive for the common good. Teachers and other adults in the school form the heart of the community, and pedagogy recognises that many of the most important future skills are learned together. A sense of belonging and responsible agency foster mutual trust in society and the capacity to face uncertain futures together.

### A future-competent school and student

The school is oriented toward the future at the level of the entire education system. Shared goals are negotiated and re-evaluated through broad national collaboration so that the education system can seize positive opportunities in a rapidly changing world. Shared and systematic national practices and research-based development increase resilience and equality. Students' future competences also develop at school: strong learning-to-learn skills, an identity as lifelong learners, and diverse democratic skills together with a shared epistemic framework for knowledge.

### Technology supports humanity

The school directs the continuously developing technologies to serve human growth. The selection and application of technology in school are pedagogically assessed and balanced. Technology is used to deepen human interaction and to enable guidance that takes into account students' individual characteristics, supports more equitable learning, and improves the use of data and knowledge in school practices. Practicing foundational knowledge and skills provides an essential basis for the thoughtful use of artificial intelligence and technology in support of the development of thinking.

### **Strengthening collaboration with homes**

In an increasingly diverse society, upholding trust and attachment to school requires consistent dialogue and cooperation. Skilfully led educational partnership with homes strengthen the school's capacity to fulfil its pedagogical mission. Through respectful collaboration, the school can also draw support from local communities and enhance students' equality by supporting families.

### **An ecosystem of learning supports the school**

The school builds connections with society and neighbourhood communities, and the strengthening network of actors such as public services, organisations, companies, and citizens supports the school in its purpose. The collaboration between actors is organised into a functioning ecosystem of learning coordinated by the school. The aim is for the school to receive strong, goal-oriented support from beyond its own boundaries, as students' needs diversify and challenges become more complex. At the same time, collaboration enables more meaningful experiences of learning, belonging, and accomplishment for students.

### **School buildings as meeting places for communities**

The role of schools as social hubs evolves: school buildings function as meeting places where different actors bring communities together and expand students' opportunities for hobbies and activities. School buildings also strengthen continuity in students' daily lives, safety, and bridge opportunities for exercise, hobbies, crafts and shared activities into the students' day.

## **Life on the Planet**

### **Education within the planetary boundaries**

The comprehensive school creates *sivistys* that promotes an ecologically sustainable life for the whole society. The scope of sustainability includes ecological, cultural, social, and economic sustainability, which are holistically present throughout both the curricular content and everyday school culture and practices. The school provides students with a systemic understanding of societal sustainability by integrating content across subjects. The school promotes agency that does not reproduce development exceeding planetary boundaries, but instead treats the planetary boundaries as its ethical foundation.

### **A deep relationship with nature**

The comprehensive school fosters a relationship with nature, characterised by joy and understanding of nature's importance for individuals and for society as a whole. At the same time, understanding deepens of humanity's place as part of nature and of ecosystems as the foundation of life: the planet is our only home. Learning forms a cognitive, experiential, and action-oriented whole that strengthens compassion and a sense of connection. Nature is present in schools through the design of spaces and schoolyards, as well as through nature excursions that experientially support wellbeing and learning.

### **Agency fosters hope**

The school's transformative capacity sustains hope and trust in the future. Hope does not mean the student's ability to wait passively for good things to happen, but an understanding of one's own agency and capacity to act for a better future, together with others. The school teaches students to imagine better futures and builds trust in humanity's ability to solve together even unknown challenges of the future.

As one young participant in the vision process expressed it: *'Don't be afraid of the future. Here, you'll learn for it.'*

## PREFACE

TäThis vision for Finnish basic education is being published amidst rapid global transformations. The importance of a vision built on shared dialogue is particularly clear at a time when we need a common direction to strengthen positive development in a changing environment.

I wish to express my gratitude to the thousands of friends of education who, from diverse backgrounds, participated in shaping this vision—both as contributors to the discussions and as sources of inspiration. A vision has power only when everyones voice is included.

Alongside new initiatives, the vision emphasises the importance of holding on to the strengths that have long underpinned the skills and wellbeing of our society. Finnish basic education remains strong by international standards, and year after year, Finland is recognised as one of the happiest countries in the world.

The strengths of Finland's knowledge-based society with strong *sivistys* or Bildung cannot be taken for granted. Achievements built over long periods can be swiftly eroded if their preservation is not actively safeguarded. *Sivistys*, equality, research-based and stable development of the school system, and the strong trust placed in teachers and schools are national assets to be nurtured.

Securing these strengths as the foundation for the school of the future requires partly new approaches. Technological, societal, economic, and ecological transformations challenge the conditions for equality and the role of education in unprecedented ways. Forecasts indicate that regional disparities—both within cities and across the country—will grow, and social diversification will increasingly shape schools' operating conditions. New educational innovations are therefore needed to ensure that all schools can provide equal opportunities for every student.

The vision also explores entirely new ways of defining the purpose of education in a world that demands both the skills to adapt to change and the capacity to act to bring about desired change. Students of the future will play a central role in building a democratic society, fostering new innovations, and promoting an ecologically sustainable way of life.

Rapid developments in technology and artificial intelligence also emerge as a significant factor, whose impact over the next 20 years is almost beyond our imagination. We have already witnessed how technology can accelerate societal and skills transformations—and how profoundly it can also increase disparities among people.

The vision places strong emphasis on human skills, ethical growth, and questions of living a good life. The aim of the school of the future is to place children and young people at its heart, to strengthen meaning in everyday life, and to equip them for building lives of purpose. Such a school is a community where one can experience participation in society and contributing to the common good, while also providing a safe space for human encounters and dialogue.

A successful basic school of the future is a prerequisite for Finland's overall success. It lays the foundations for knowledge, innovation, and the conditions for national development. Achieving the desired future for basic education requires investments not only in the school system but also in research and development. It also calls for society as a whole to support schools in the way this vision describes—a shared ecosystem for education. In a future-resilient system, development relies on sustainable economic practices and strong national and international collaboration.

I hope this vision serves as a starting point for dialogue, inspiring policymakers, teachers, researchers, officials, parents, students, and every member of the Finnish society and global network to work together for our shared future. The future of basic education will be shaped in the coming years through strategies, curricula, parent meetings, and the daily life of our schools. Welcome to join the work!

**Heidi Backman**

Permanent Secretary

Ministry of Education and Culture

# 1 Introduction

*Finland's comprehensive schools of the future are schools for life: meaningful life; life together; and life on the planet. The Finnish comprehensive school system is an institution that promotes a socially and ecologically sustainable society of education and culture. Its aim is to foster sivistys or Bildung – a deep set of values and knowledge rooted in culture and a goal for mutual flourishing – and knowledge and to equip students with the knowledge, skills and will they need to participate in society and work towards a positive shared future. Comprehensive schools help each student find their own way of living a meaningful life with others.*

The comprehensive school system is the only institution in our society that reaches the entire age cohort at a formative age and uniquely shapes our shared future. The unprecedentedly rapid technological, societal and ecological transformation in today's society currently requires schools to have an even clearer sense of direction and a capacity for renewal. We need a strong shared vision to ensure that our comprehensive schools do not evolve purely reactively and that development does not fragment into mere technical corrections.

In light of the crises threatening the survival of humanity and the stability of societies, the task of comprehensive schools in the future is not just to prepare young people to adapt to a changing world, but instead to build shared transformative capacities among young people to change the world. Technological innovations alone cannot solve problems rooted in social or cultural phenomena and practices. We need human development to use and develop technology wisely. Similarly, technological risks such as the threats associated with the rise of artificial intelligence do not stem from technology itself but from our human moral capacity to use, develop and regulate these technologies. Schools therefore play a key role in societal transformation: learning provides the human species the opportunity to develop.

The vision looks ahead to 2045 – a future built on the transformative power of education. Instead of adapting schools to projected futures forecast today, the purpose of the vision is to serve as a compass pointing towards a desirable future. In our vision, the comprehensive schools of the future are built on sivistys, meaning, hope, agency, and the common good. The vision can be summarised as the concept of a school perceived as a community that brings faith in the future by equipping



The vision is presented in Parts II and III of the report. The *second part* outlines the skills and qualities that will be necessary in the future, and that should be learned in the comprehensive schools envisioned here. This part also describes what school means for the individual, society and the planet as a whole. Together, these form the goals of the comprehensive schools of the future.

The *third part* focuses on the shape that schools should take to achieve these goals. It describes the key characteristics of the comprehensive schools and education system of the future, that is, the vision for how schools operate.

The *fourth* and final *part* of the report describes the methods used in the vision work, providing a background for the vision process.

# Part 1. Purpose of the vision and drivers of the future

## 2 Goal of the vision

This vision report presents a vision for transformative Finnish comprehensive schools, co-created by the Delegation for Futures Work in Comprehensive Schools appointed by the Ministry of Education and Culture and extensive Finnish and international networks. The vision is grounded in the voices of more than 5,000 people in Finland, collected through surveys, dialogues and statements. The written vision has been compiled by the Delegation, supported by an editorial group consisting of officials from the Ministry of Education and Culture and the Finnish National Agency for Education, who also bear responsibility for the final form of the vision.

*The purpose of the vision is to serve as a compass guiding schools towards the future: a description of the kind of schools and learning towards which we want to develop our education system, and of the role of the schools in societal transformation. The aim is to create a shared view of the future for all those interested in the education system and its development – one that inspires future-oriented efforts. For decision-makers, the vision provides support for more precise strategic and operational development in a rapidly changing environment.*

The vision is not intended to provide a detailed strategy-level description of school operations. Rather, it seeks to articulate the significance of education and the general goals around which future development should be built. At the same time, the vision process and this report emphasise the need for continuous refinement and renewal, encouraging future-oriented thinking and future skills development. *This vision is not intended to serve as a fixed target state for the coming decades but as an inspiring view of the future – a future of the present moment. It does not cover all areas of school operations; instead, it opens a dialogue on those themes related to the meaning and goals of schools that emerged as central in this work. The vision and its goals can be refined, reshaped and reoriented multiple times over the years as we continue to imagine better shared futures.*

*In the vision work, we describe new goals and what is changing.* In many respects, the vision is based on new perspectives and a description of future-oriented competencies and the evolving role of schools. In many areas, the goals of improving students' wellbeing and learning outcomes, responding to the challenges posed by drivers of the future, and actively shaping the future require new skills, emphases and interpretations in relation to previous objectives. Education must be genuinely reimagined if it is to meet the challenges of a changing world.

*However, in the vision work, it is equally important to describe what does not change.* The Finnish school system includes several features that are progressive from a global perspective. When we aim to identify a desirable future, it is essential to recognise those elements in today's school system that we wish to preserve as part of that future. There are two reasons for this. First, the elements worth *preserving are the foundation on which future development and change can be built.* The identified strengths serve as the core of the envisioned future.

The second reason for the importance of identifying features to be preserved is that no aspect of our current system can be taken for granted in a world that is changing at an unprecedented pace. *If we do not actively safeguard the strengths of today's school system in the vision, they may be lost.* Societal changes – and even planned future reforms – may have unforeseen impacts on existing strengths unless those strengths are recognised and protected. A good example of the recent effects of societal change on Finnish comprehensive schools is the rapid decline in learning outcomes during the 21st century. The vision therefore also describes those features of the current school system that we wish to endure over time.

The vision's time horizon is set far into the future, to 2045. The horizon is long to encourage us all to look and imagine beyond the immediate concerns of the present and far enough ahead. At the same time, the aim is for start acting for the change immediately: *the future starts tomorrow.*

### 3 Why comprehensive schools need a vision

The primary motivation for developing the vision is the observation of rapid and complex societal change. The key drivers of this change include the rise of artificial intelligence and the phenomena of societal polarisation, along with the economic and ecological sustainability crises. The pace of change is so fast, and the scale of change so vast – for example, in relation to artificial intelligence – *that the changing world around us will also transform schools even if we do nothing. If these changes are to be beneficial for schools, we must consciously guide the development.* The transformations that profoundly affect the economy, work, society, democracy and ecosystems require a societal *redefinition of the goals of education* and learning. At the same time, the need for change in schools is driven by concern about the *declining levels of knowledge and skills among student.*

*To guide development, we need a clear vision of the desired direction. If the education system is developed amid rapid changes without a clear sense of direction, there is a risk that the system will evolve in a fragmented and reactive way.* The changes that shake the foundations of society, the economy and competence structures require an increasingly more deliberate choice of direction and purpose. The comprehensive school system must have a strong vision to guide collective efforts in fulfilling its mission.

Amid the ongoing transformations, the long-term vision must be grounded in a rethinking of the meaning and practice of education. Crises show that by continuing to do things the way we have done so far – even if we do them more efficiently – we cannot resolve the growing experience of lack of meaningful, declining wellbeing, the ecological crisis, or the weakening of democracies. Nor are technological innovations alone sufficient to address problems whose root causes lie in social or cultural phenomena and practices. Human evolution is required. Recent decades have been marked globally by extremely rapid technological development, but to use it wisely, we must rapidly gain an understanding of both the positive and negative impacts of technology on human beings, as well as its possibilities in solving human problems. Artificial intelligence or other emerging technologies cannot benefit humanity unless we understand where we are going and how technology can best serve human goals. Societal challenges and the

multifaceted potential of technology underscore the need for social advances. Schools therefore play a key role in societal transformation: learning is the human species' opportunity to evolve.

In an increasingly fast-changing global situation, foresight work is becoming ever more difficult – yet all the more necessary. Sustainable development requires a vision as a point of orientation, enabling action to be directed in changing conditions.

*A clear vision can help us seize unexpected opportunities in a rapidly changing world. The vision thus acts as a compass for development, helping us identify opportunities that might otherwise remain untapped. The vision is a tool that supports decision-making in changing conditions and helps shape a desirable future.*

## Life on Earth is changing – and needs protecting

In the vision, we seek to answer the question of what the purpose of education and the role of comprehensive schools might be in the Finnish society in future. *The vision's guiding principle is that the purpose of the schools is not only to prepare individuals for the future but also to influence what that future will look like.*

The vision work does not attempt to predict the future over a twenty-year horizon. Instead, it is based on identified factors that will drive significant change in the future and on the impacts of these drivers on the goals and implementation of education. In other words, *the vision has been created with an awareness of key drivers of the future, against which it has been constructed as a path of change.* The vision offers a view of a desirable future, and the identification of drivers of change facilitates navigation by describing the kinds of waves on which progress towards the goal may occur in a constantly changing situation, and the kinds of hazards that may lie ahead.

## Drivers of change affecting Finland and comprehensive schools

Both national and international research literature identify six interrelated global drivers of change affecting education:

- accelerating technological advances and the transformation of work;
- the ecological and economic sustainability crisis;
- the crisis of democracy and participation;
- mental health and wellbeing challenges;

- social polarisation and the erosion of cohesion and trust; and
- the fragmentation of experiences of meaningfulness and values.

These drivers place new demands on education while offering opportunities to strengthen the agency, responsibility and hope of a new generation. In an interconnected world, global drivers of change also strongly affect Finland in addition to the local characteristics of our society. For example, in Finland, Sitra has identified very similar local challenges in its analysis of megatrends of change, summarising them as:

- the depletion of nature;
- growing wellbeing challenges;
- an mounting struggle over democracy;
- accelerating competition for digital power; and
- an eroding economic foundation.

Alongside them, the Finnish Government Report on the Future emphasises, among other factors:

- the significance of an ageing population and the demographic challenges related to the dependency ratio and regionally diverging developments; and
- the new relevance of security, the transformation of globalisation and geopolitical uncertainty.

In Finland, a further driver that poses challenges is

- the long-term decline in learning outcomes and the simultaneous widening of disparities in competence.

The vision thus draws on international sources and Finnish sources, such as the Report on the Future by the Finnish Government and the Finnish Innovation Fund Sitra. By combining analyses focusing on Finland, the following key drivers can be identified that shape the environment in which comprehensive schools operate:

## **Accelerating technological advances and the transformation of work**

The accelerating advances in technology are a transformative global driver of change whose enormous impacts on working life, thinking and social relationships are difficult to fully assess. Technological disruption and the transformation of work it set in motion challenge schools to reshape their understanding of competence and to strengthen their capacity for continuous regeneration.

Artificial intelligence, automation and the increasingly ubiquitous digitalisation are changing the nature of work and require new kinds of competence and continuous learning. The World Economic Forum anticipates that different trends of change will already affect a very large proportion of jobs in the coming years. In earlier technological transitions, the primary aim of education has been to build the skills required to develop and apply new technologies. Success in future labour markets will increasingly require deeper and broader capacities for thinking, such as cognitive flexibility, creativity, critical information literacy and the ability to work alongside intelligent systems. Over recent decades, digitalisation has also profoundly shaped how we form identities, communication and conceptions of reality.

Education is therefore increasingly expected to produce skills that can be defined as incorporating information literacy, ethical use of technology, and inquisitive, enquiry-based thinking. Moreover, technology is not a neutral instrument; especially artificial intelligence involves significant transformative power in society, and schools provide the first tools for understanding and critically examining such power. The schools of the future must be able to combine technological understanding with a knowledge of the fundamentals of scientific thinking and robust ethical reflection.

## **The sustainability crisis: our ecological and economic future**

A second key challenge is the ecological and economic sustainability crisis. Both globally and in Finland, climate change, the loss of biodiversity and the overconsumption of resources constitute a major challenge to the survival of future generations and humanity as a whole. The mounting competition for scarce resources and habitable environments is increasingly reflected in the structures of the global economy, potentially deepening inequality, narrowing opportunities for life and increasing the risk of conflict in many societies. While many of these phenomena are global, their impacts are also immediate and tangible in Finland: enabling ecologically sustainable ways of life and safeguarding life on Earth are also necessary goals for future education in Finland.

Students completing comprehensive school already often have a fairly solid understanding of climate change, the depletion of nature and other ecological issues, as well as their causes and consequences. At the same time, their sense of having real opportunities to influence these phenomena is often weak. If education is to respond to the sustainability crisis, it is therefore necessary not only to teach environmental knowledge but also to support individual and collective agency of students and students, and embed sustainability into daily life through the values, principles and practices of schools and by fostering a personal relationship with nature, for example. From this perspective, comprehensive schools should help students and students to develop systems thinking skills and a mindset of creative solutions of moderation, which are part of the bedrock of a sustainable economy. However, comprehensive schools have the opportunity to nurture new skills that provide learners with a sound basis for honing the skills necessary to create a sustainable economy at later stages in their educational paths and through lifelong learning.

### **The crisis of democracy and participation**

The global crisis of democracy and participation challenges education broadly, including in Finnish society. Trust in institutions has weakened in many countries, disinformation is spreading rapidly, and young people are experiencing alienation from civic influence and decision-making. Alongside this, authoritarian movements and political polarisation are gaining ground. The acute nature of the crisis is reflected in the fact that the proportion of democratic countries is declining, and the number of autocracies surpassed the number of democracies in 2025.

Young people may easily be left without experiences of genuine influence and shared decision-making. Because of their developmental stage, they are also particularly susceptible to polarising influences and groups that offer a sense of belonging in ways that may be socially divisive. In this context, the role of education is to strengthen experiences of civic participation and to develop competencies for participation and agency while also practising democratic culture in daily life. This requires schools to have a stronger orientation towards participation and democracy than at present, as well as connections with the surrounding society and its institutions. Schools can offer young people experiences of participation, shared responsibility and constructive dialogue that build trust in society and in one's own ability to influence its direction.

## Security, the transformation of globalisation and geopolitical uncertainty

The crisis of democracy is closely linked to a shift in the global security environment towards greater instability. The competition between major powers, protectionism and the instrumentalisation of strategic resources challenge earlier assumptions about international cooperation and economic integration. These developments also extend to Finland, where security policy, security of supply and international networks are becoming increasingly important domains of political decision-making. In this context, the role of schools is not only to prepare young people for working life but also to educate them as citizens. In this work, the perspectives of scientific thinking, intercultural understanding and societal resilience are emphasised. For the resilience of a democratic society, it is essential that young people learn to understand global conflicts, command multiple literacies from traditional media literacy to digital literacy, understand how reliable information is produced, identify misinformation and disinformation, counter bias in their own thinking, and form their own well-reasoned views.

## The crisis of wellbeing and mental health

The crisis of wellbeing and mental health has grown rapidly in the 21st century. Young people's mental health issues have increased sharply in almost all developed countries. The underlying factors include loneliness, the erosion of communities, and a focus on individual abilities and performance. Such phenomena weaken experiences of wellbeing and, in education, diminish the joy of learning. In general, wellbeing and mental health problems constitute a significant issue as such, and form a challenge closely connected with learning. From the perspective of education, the phenomenon is alarming, as it also pushes people out of education and working careers, even when they have a high level of competence. The problem is grave for everyone affected by it, but it also serves as an indicator that education does not currently protect people against weakening in wellbeing.

The schools of the future must respond to this challenge by supporting students' psychological and social resilience while building communities that genuinely promote wellbeing by generating experiences of human connection and meaningfulness without narrowing individuality. In schools, this means efforts such as systematically teaching socio-emotional skills, creating space for the joy of learning and for play, and strengthening the spirit of community and safety through school structures. Schools cannot solve society's malaise alone, but they can be a place which actively supports the building of wellbeing, and in which students and students learn to care for themselves and for others.

## **Social polarisation and the erosion of cohesion and trust**

Social polarisation and growing inequality stem from complex societal and economic developments. Regional segregation, diverging learning outcomes and difficulties in responding to cultural diversity challenge experiences of educational fairness. At the same time, economic inequality, regional differentiation and social polarisation may erode social cohesion and trust in the fairness and stability of society. Increasingly, the perception of knowledge and its veracity has also become increasingly important in the evolution of polarisation. Looking ahead, there is no end in sight to the deliberate questioning or distortion of scientific knowledge and knowledge produced by societal institutions, which is generated as part of hybrid influence operations.

Historically, schools have played an instrumental role in promoting equality, forging relationships of trust and enabling social mobility. The importance of schools in sustaining these elements will become even more pronounced in the future, with comprehensive schools remaining a place where students, students and families from different backgrounds meet, acquire new knowledge and skills, and work together. In comprehensive schools, this means for example being able to provide sufficient support for students and students who need it, to value cultural diversity, and to shape a spirit of community and pedagogy in ways that ensure everyone experiences a sense of belonging. In an increasingly polarised world, the significance of schools in building a shared knowledge base and the skills to evaluate information will become ever more central. Polarisation is also linked to technological advances. If schools fail to narrow down the competence gaps between individuals, including in AI-related competence and the impacts of AI, technological change may deepen societal disparities and accelerate polarisation.

## **Declining learning outcomes and growing educational inequality**

The decline in learning outcomes and the growth of educational inequality visible in Finnish society are linked to social polarisation and several other phenomena, such as widening economic disparities and challenges in wellbeing. With learning outcomes having become poorer, the stagnation in the rise of higher education attainment among younger cohorts, and challenges in mental wellbeing having grown, this forms a combination from the perspective of young people that threatens both individual wellbeing and the development of society in a sustainable way.

As part of the trend of increasing educational inequality, it is alarming that according to PISA results, around one in four students in Finland now performs at a very low level (Level 2 or below) in assessments such as mathematics, and that the

gap between students from the majority population and those with an immigrant background is among the largest in OECD countries. Disparities have also increased both within and between schools. At subsequent levels of education, the share of young adults with tertiary education in Finland has fallen behind that of European peer countries. Schools must therefore be able to raise the levels of competence and support capacity and motivation to continue studying at subsequent stages of education in new ways. Overall, the significance of education is not limited to competence alone but extends more broadly to the holistic development, wellbeing and participation in society of individuals.

### Demographic structure and challenges

In Finland, the crisis of social polarisation and weakening societal cohesion is further intensified by changes in the demographic structure and demographic challenges, which are also leading to significant regional segregation. Finland is the third most rapidly ageing country in the world, and the decline in the working-age population will already begin to be tangibly felt in the latter part of the 2020s. This creates pressure to resolve how to sustain the welfare state and to secure both funding and adequate human resources for education. At the same time, regional differences in the provision of education are growing; the rural school network is becoming sparser and urban regions are being affected by pressures along with urban segregation, which all create conflicting development needs in different parts of the country.

This is partly a question of the sufficiency of resources in regions that are facing depopulation, and partly a question of the risks of intergenerational exclusion in increasingly more segregated urban areas. Immigration partly compensates for falling birth rates and offers an opportunity to respond to skills shortages, but it also requires schools to meet students from increasingly diverse backgrounds and to support the foundations for a meaningful life on equal terms in a society that is becoming increasingly more diversified. In particular, this challenges the structures that safeguard equality and inclusion in comprehensive school education. The provision of equitable and high-quality comprehensive school education requires strong financial investment at both national and municipal levels, and an adequate level of funding for the resources in education must be ensured. Ever widening differences between municipalities leads to new kinds of resourcing needs in comprehensive school education. As the number of children declines, society must commit even more strongly to ensuring sufficient resources for comprehensive school education. In addition, students must be given the support they need in ways that better recognise increasingly diverse needs.

## The fragmentation of values, meaning and future orientation

The challenge of the fragmentation of values and meanings ties in with the fundamental purpose of education as a builder of humanity and a meaningful life. In Finland, school has historically aimed to provide people with *sivistys* or *Bildung* – a broad-based knowledge, education and culture – which has been reflected in the effort to help people grasp these ‘big questions’, thereby building motivation for life and the capacity to navigate its changes. Today, rapid cultural, technological and societal changes have heavily challenged the earlier orientations on which people have built their understanding of a good life and of the future. The transformation of working life and paid employment careers gives this challenge a very tangible dimension. In many countries in the Global North, there has been growing disillusion with the idea that even a good education is insufficient to secure a stable upward career path, or even a steady income. The traditional future orientation of modern education – understood as a preparatory phase for a career in paid employment – is therefore eroding.

Young people are increasingly searching for their place in the world without clear answers or experiences of belonging. In these circumstances, the task of the comprehensive schools is to support new forms of meaningfulness and to generate motivation for learning in a situation in which the future is more uncertain than before, and the surrounding world constantly requires the construction of new interpretations. Philosophical thinking, reflection on the meanings of human existence, and cultural literacy offer students tools for building their identity and sense of purpose. Questions of meaningfulness are not only important for individuals, but they also lie at the heart of future social peace and psychological resilience. Comprehensive schools has a unique opportunity to be a place where young people can reflect on questions of meaningfulness, examine cultural worldviews, and safely build their own worldview and future orientation with multiple perspectives.

## Challenges identified in the schools and vision dialogues

In addition to the societal drivers of change, this vision work is underpinned by challenges identified in comprehensive schools, that is, challenges visible in teachers’ work, everyday school life and school communities. In the vision process, these challenges were mapped through an online forum (nearly 4,000 respondents), a survey of education professionals conducted by the Trade Union of Education in Finland (OAJ) (around 400 respondents), the Ministry of Education and Culture’s online consultation tools, eight futures dialogues (‘Futures Forums’

and 'Futures Dialogues') and teacher panel discussions. In total, around 5,000 respondents shared their views on the problem areas in the school, as well as positive images of the future.

Among the most significant challenges, also voiced by our Finnish participants, were the declining learning outcomes and the differentiation of skills. These were partly associated with weakening trust in education and an education narrative that has become negative. The phenomenon is also connected with increasingly divergent student backgrounds and family resources. These factors are reflected in differences in students' starting points for learning and in households' increasingly varied engagement with school. Teachers expressed particular concern about students from more fragile socioeconomic backgrounds, students with an immigrant background and the insufficiency of available support.

In their responses, teachers also emphasised the lack of financial resources in schools, the inadequacy of the existing support, and a pervasive sense of haste and insufficiency. Time pressures were highlighted as resulting not only in stressful daily routines but in a poorer development work and creativity. Teachers also raised concerns about the shortage of textbooks – another issue related to the lack of resources – and saw it as a factor that increased differences in skills between students.

Meanwhile, students experienced bullying, feelings of insecurity and loneliness as the most important challenges. A desire for a safe school and for inclusion recurred in the responses throughout the discussions. Teachers likewise highlighted bullying, a lack of respect among students and an increase in social conflict, including outright racism, as key concerns.

The growing challenges to students' wellbeing and mental health worried all respondent groups, including parents and school leaders. The phenomenon was also linked to an increasing emphasis on individualism and a competitive mentality in ways that weakened the joy of learning and the motivation for deep learning.

All these identified challenges, as well as respondents' hopes regarding the strengths of the comprehensive school system that should be preserved and their desires for future change, have informed the positive vision of the future and the related new narrative for the school created in the vision process.

## The growing significance of unpredictable change

The developments described as drivers of change are only part of the factors reshaping the world and education. A defining feature of our time and the near future is that changes are becoming deeper and faster, and that societies face a continuous stream of intertwined challenges or crises.

In addition to the identified drivers of change, the global situation is increasingly characterised by the abundance of unpredictable change produced by multiple simultaneous developments. Many researchers therefore speak of an era of ‘polycrisis’ (multiple crises) or even ‘permacrisis’ (a state of persistent crisis), which is expected to characterise the coming decades. In recent years, for example, the Covid-19 pandemic, Russia’s aggression against Ukraine and the rapid breakthrough of artificial intelligence have been ‘black swan’ events: unpredictable or considered extremely unlikely, yet dramatic in their impacts once they occurred. Their effects are rapidly spreading internationally, including to Finland; in an interconnected world, changes have immediate global reach.

*Changes that are difficult to predict underline that alongside plans based on foresight, we also need a strong sense of direction that can be pursued regardless of shifting circumstances. A vision helps orient action towards a desirable future even under changing conditions. At the same time, the importance of resilience and transformative skills as educational goals is emphasised, as is a focus on a life that remains meaningful even in an uncertain world.*

## What is the role of school in a time of continuous change?

The task of the school is neither to provide answers to acute crises caused by change nor to repair their aftermath. Nor is the school’s task to passively adapt to change. Instead, the school plays a crucial role in building the competencies that the change requires in students’ knowledge, skills and worldviews, strengthening relationships of trust in society and developing basic skills. Through these factors, Finland can succeed and punch above its weight in an era of rapid transformation.

In other words, schools can contribute to the creation of a positive future by acting with awareness of the key drivers of change and challenges affecting our time. *While schools cannot solve societal challenges on their own, it is essential that they recognise their potential to change the world as societal actors – both in their own right and through the competence of the new generation that passes through them – by educating young people who want to continue learning and develop solutions to shared problems.*

*Schools must also have their own vision of a good future – one that is not based solely on reacting to drivers of change but on a deeper reflection on the school's core purpose and the direction in which as humanity, we wish to develop.* The vision therefore seeks to articulate a clear synthesis of the task, meaning and direction of the school of the future and learning. This overall perspective supports the development of a comprehensive school system that can act as a continuously renewing shaper of the future.

*The aim is also for the vision to inspire society as a whole to support schools in striving for a positive future.* The vision challenges Finnish society as a whole to reflect on what kinds of skills and what kind of future we wish the school of the future to build. What is the role of comprehensive schools in protecting societal cohesion, ecological sustainability and democracy? What kinds of pedagogical solutions can strengthen students' capacity for collaboration, critical thinking and future orientation? How can we continue to safeguard strong human thinking skills?

Recent developments show how many truly significant choices we now face. For example, artificial intelligence forces us to take a position on what humans actually need to know and be able to do when machines already master a large share of the skills that were previously assumed to require human capability. What is the goal of human competence, and what is the role of the human being? Meanwhile, global education actors and advancing technology enable an increasing individualisation and the enhancement of individual academic strengths with the aid of AI tutors. Commercial providers or global actors operating through online communities rather than national school systems may enter the field of education more strongly. If the school could look entirely different from today – for example, as learning that is fully individualised, independent of location and guided by AI tutors – we have to ask, what kind of school do we truly want.

The diversification of society and the growing social polarisation also raise the question of whether the education system should offer an ever-increasing range of individual options resembling tailored education services, or whether we see the school primarily as a shared space for learning and growth in which students grow to be members of a school community and society, and which also seeks to narrow social divides. What is the school's relationship with the individual, democracy and society?

This vision work seeks answers to these questions. Its guiding thread is therefore the role of the school in sustaining life and the concept of a *sivistys* or *Bildung* that lies at the heart of the Finnish education system. This concept of *sivistys* as the goal

of the education means striving for the continuous development of thinking and the growth of humanity. It also means that there is no final or fixed understanding of what it means to be human, or what our relationship with the world around us is. This educational aspiration guides schools to support repeated updates and transformations of worldviews. These transformations concern not only knowledge but also the development of social, metacognitive and societal practices. Education thus builds transformative skills: the ability and the will to use one's competence for the common good in a changing world.

The pursuit of *sivistys* and transformative skills is particularly vital at a time when human understanding of itself and of its relationship with nature and biodiversity, as well as with artificial intelligence and technology, is undergoing change. In this situation, schools must help individuals find starting points and tools for seeking answers to the questions of who we are and how we should act as human beings throughout our lives. The most profound transformation of comprehensive schools envisioned here is therefore to continue the learning journey beyond individual knowledge and skills towards shared agency and the co-creation of purpose and a meaningful life.

## Part II: A school for life

### 4 Comprehensive school for life

*Comprehensive schools of the future are a school for life: a meaningful life; a life together; and a life on our planet. In 2045, Finnish comprehensive schools will equip students with civistics, and with the knowledge and skills necessary to participate in society, take responsibility and live a meaningful life with others. A school that builds societal trust is also an important community in itself, in which students grow and experience inclusion, and which opens pathways to societal agency.*

The goal is for our comprehensive school to be among the best places in the world to learn and teach. In both international and national assessments, students' competence levels, creativity, problem-solving skills and school wellbeing are excellent. Students' gender or family background does not translate into disparities in their skills, nor are there significant differences between regions or schools. All students attain the necessary knowledge and skills for life and for further education. In Finland, human capital is the foundation on which our society's competence, success and wellbeing are built. The comprehensive school strengthens each age cohort's capabilities for further studies and supports the conditions for achieving a high level of education as students move on to subsequent levels of education. Trust in education is strong, and educational and cultural rights are respected. Those who study and work in schools are valued.

The comprehensive school promotes equality, justice and wellbeing in society. It prevents social exclusion, and generates human and social capital. It transmits cultural heritage and fosters cultural competence. The future-oriented task of the school is to prepare individuals and communities to face societal change and make sustainable choices.

Within Finnish society, comprehensive schools contribute to continuity in education and culture, shared problem-solving skills, agency, and creative thinking. The school strengthens community, a feeling of belonging and mutual trust that support democracy. As an institution, comprehensive schools promote a socially and

ecologically sustainable society. The schools' goals emphasise cooperation with families in education, as well as broad collaboration with other professional groups and societal actors. We thus ensure that children and young people have a strong foundation for acquiring basic knowledge and skills, and growing as human beings.

In the vision, children and young people in comprehensive schools are referred to as students (*oppilas*), which highlights the historical continuity of comprehensive school and the student's role as a member of the school community. *At the heart of the vision is always the child or young person themselves – as an active learner* accompanied throughout comprehensive school by teachers and other adults on a lifelong learning journey.

Although the vision often speaks of 'the school' as an actor, the child or young person is not a passive object of action. The focus on the school emphasises that the vision addresses the responsibilities and operation of the educational institution itself. In other words, the vision highlights how the education system and school as an institution operate for the benefit of both students and school professionals. Nevertheless, a central premise of the vision is that the role of students in school is always active. In everyday school activities, the child or young person is always a key agent, and the school's task is to enable and ensure this. Students grow into agency with age-appropriate support provided by the school. Alongside students, teachers and other school adults are also at the heart of the school. They are the actors who most fundamentally define the school community and culture and carry out its essential educational mission. At the same time, the education system seeks to make their work meaningful and support their wellbeing.

Our emphasis on the role of the education system and school also underlines the importance of the entire educational continuum. Comprehensive schools are part of a broader whole, in which teaching, education and care support children and young people on their path towards broad-based education and lifelong learning. Each child's journey begins with early childhood education and care and continues through pre-primary, primary and lower secondary education to upper secondary education and further to tertiary education or liberal adult education, for example. Learning continues throughout life.

## A new orientation for education

The vision's proposals for change in comprehensive schools are grounded in global transformations that have led many countries to reconsider the meaning and purpose of education from new perspectives. It is clear that 'more of the same' is

insufficient to solve the challenges facing humanity and Finnish society. Schools must operate differently if our future is to be different. Technological development – especially the rapid advance of artificial intelligence – alongside the ecological crisis, social polarisation and young people’s experiences of meaninglessness, profoundly challenge what education is, and what it should seek to achieve. In our vision, the primary purpose of future education is to sustain comprehensive human growth and learning that aims for *sivistys*, a meaningful life and the capacity to change the world. *In light of the crises threatening the survival of humanity and the stability of societies, the task of comprehensive schools in the future is not merely to prepare young people to adapt to a changing world but also to equip them with shared capacities and responsible agency to renew it.*

The voices of the 5,000 Finns who contributed to the vision work also emphasise that the need for change in education extends beyond curricular content alone: it concerns how we view life and how we build experiences of a meaningful life. Global drivers of change and Finns’ lived experiences of current challenges demand a genuine redefinition of the purpose and goals of education. Mental health crises and deficits in wellbeing are not merely individual challenges; they affect society’s stability and economic sustainability as a whole. While schools cannot resolve societal challenges on their own, they can provide children and young people with the support they need to ensure equal opportunities, strengthen experiences of belonging and build competencies to act for the common good.

*‘The navigation of a complex world and an uncertain future requires broad general education and the willingness and ability to learn new things. This creates resilience, which is essential in a situation in which the future is exceptionally uncertain and unpredictable.’ -Participant in the online forum*

From the perspective of learning, the need for change in schools means that we must focus on supporting diverse forms of human growth: in other words, learning goals that extend beyond ‘basic’ academic skills. This shift also requires a stronger emphasis on growth towards agency and transformative skills such as the ability to use one’s knowledge and skills for good. The perspective on learning is also increasingly global, as many of the challenges affecting Finnish society are international, and solutions must be sought in an interdependent world.

*‘School is like a miniature society in which we learn the skills we need for life together. It’s important to make everyone’s opportunities for influence visible and to show each person’s role in the whole. It’s important to emphasise that we’re all important and capable of making a difference.’ -Respondent to the Webropol survey*

For example, in relation to environmental sustainability, a perspective that combines strong basic skills with human growth means that schools must both build students' knowledge base about climate change and develop their systems thinking, ability to assess the broader impacts of their lifestyle and capacity to participate in collective action. This includes not only the more efficient use of limited natural resources but also the development of sufficiency solutions and skills. What kinds of conditions create adequate wellbeing for all – and always – and how can they be produced without excess at the expense of nature or other people? At the same time, schools must offer spaces to discuss what is reasonable and sufficient from one's own perspective, that of others, future generations and nature.

One of the most prominent future choices facing education today concerns the relationship between human competence and technology. According to many researchers, we are living through a decisive moment in which we must fundamentally define the relationship between human intelligence and technology – particularly artificial intelligence – in ways whose consequences will extend for decades to come. For example, it has been suggested that certain human skills such as foreign language skills or broad general knowledge will become unnecessary in the future as AI surpasses humans in these domains. Such ideas continue the logic of modern conceptions of competence, which have emphasised the value of human skills in areas in which machines cannot perform, while skills machines can perform are readily deemed 'unnecessary' for humans.

However, the quantitative and qualitative speed of technological development raises the question of when technology will become so advanced that it can do almost everything humans can do. If human development and learning focus primarily on what machines cannot do, the risk is an irreversible narrowing of human competence. For example, foreign language proficiency is not merely a technical skill that can be replaced by AI translation; learning another language leaves lasting traces in our brain, develops our general cognitive capacities, and deepens our understanding of and empathy for other cultures and worldviews.<sup>85</sup> In the vision, human competence is not narrowed on technology's terms; instead, learning is fundamentally about human growth.

*'Thinking is something artificial intelligence can't do. It's important to develop it from a young age.'* -Participant in the online forum

*Rather than focusing on human competence as a complement to technology, the vision adopts the opposite approach: defining the goals of competence through human growth. At the heart of the vision is the student and the full breadth of*

human competence viewed through development as a human being and through education. Human competence is not merely what remains after technological development; rather, technological development highlights the intrinsic value of human growth and competence. *The ability to create meaningful solutions with technology also relies on the breadth of human competence.* When education enables individuals to grow into their full creative potential, humans are not an added value to technology, but technology is an added value to humans.

This goal guides schools towards human and students' success supported by AI that complements human intelligence. At the same time, it ensures technologically sustainable societal development and builds resilience in relation to unpredictable technological changes or potential disruptions. For humans to fully harness artificial intelligence and other technologies requires that they can guide their operation and development. If the development of AI and other 'intelligent' technologies continues rapidly, the human role will increasingly be to steer technology and evaluate its outputs and solutions. This goal requires very broad skills, ethical capacity and strong general knowledge. Artificial intelligence cannot help humanity reach its destination if we ourselves cannot define the right direction. *Narrow definitions of human competence would endanger human development by constraining competence and weakening our ability to govern technology.*

Comprehensive schools of the future therefore nurture diverse human skills. The core question of learning is what a human being must know and be able to do to be the best educated and most cultivated person and member of a community. Even if a skill is considered technically 'unnecessary' in society, it may be essential to teach in school if it supports human growth in ways that cannot otherwise be achieved. One of the guiding ideas in the vision is that learning is not oriented solely towards useful skills, but the focus is on a process of learning that supports human growth.

The changes in the labour market and the economy further highlight the need for broad-based human competence that does not merely aim to compensate for technological limitations. By cultivating broad human competence in school, students are provided with rich resources for actively shaping their own life paths. Finally, the importance of broad human competence is also underlined by the nature of technological risks: technological risks are primarily linked to our human and moral capacity to use technology wisely. As technologies such as artificial intelligence advance rapidly, *it is critical from a risk management perspective that the education system builds the foundations for the ethically sustainable use and governance of technology. This also includes the wisdom to understand what humans should not choose to do even if it is technologically possible.*

## What does the vision seek to preserve to protect a comprehensive schools for life?

The drivers of change that are transforming the operating environment of schools underscore the importance of identifying what should be preserved. If we wish to retain existing strengths, they must be recognised as core elements of the vision – elements that must be protected in the future.

One of the most important elements to preserve is comprehensive schools as a **schools that are common to and free of charge for all**, promoting *sivistys* or *Bildung* and educational equality. In such a system, the school's tasks include supporting not only the accumulation of students' knowledge and skills but also their healthy growth and development. These features make it possible to keep everyone involved, build communities and support democracy. From a global perspective, a comprehensive school common to all remains an advanced – even radical – innovation. In many other countries, researchers and education developers recognise such a system as critically important, yet unattainable given their circumstances. In education debates, the unity of the school system is seen as an important route to societal cohesion. Regarding these core elements of the comprehensive school, it is therefore fair to say that the future desired in many other countries is already here.

Another key feature of the education system is the **public funding** of schools. According to the vision participants, this strength needs protecting, as many participants in our online forum raised concerns about the adequacy of funding, and the experts involved in the vision work also emphasised the concern that the time allocated to teaching in Finland was relatively limited in international comparison. The most important elements to preserve also include the **principals** and teachers responsible for school operations. These elements also include **teachers' autonomy, pedagogical freedom within the curriculum, high-quality teaching and strong role** in guiding learning and growth; the **primacy of the pedagogical relationship between the teacher and the student** in learning; the **research-based nature** of teacher education, teachers' work and school development; and the **emphasis on neighbourhood schools**. Regarding neighbourhood schools, the **school building as a place** also plays a significant role; the physical school is a bedrock for community engagement and human interaction.

Finnish education has traditionally placed a **strong emphasis on supporting human growth**. Comprehensive school pedagogy has exploited a wide range of opportunities offered by **crafts and arts subjects**, physical activity, and embodiment. The **breadth of the school's activities** and features such as free school meals, student welfare services, and the treatment of accidents occurring

during the school day or on the way to and from school have also been recognised as factors that provide students with more equal opportunities. These successes are recognised as strengths to be safeguarded, strengthened and preserved – global assets on which the future can be built, and around which the vision’s proposed changes can be designed.

### **What changes when the school is for life?**

Some of the vision’s starting points are new. Others offer a new emphasis and perspective on phenomena that are already present in the curriculum or in schools, and that should be further strengthened. At the heart of this new perspective is the school as a community that is for life, and the goals focus on a life of meaning, a life together and a life on our planet. The most profound transformation of the comprehensive school system envisioned here is therefore to continue the learning journey beyond individual knowledge and skills towards agency and the creation of a meaningful life together. The following phenomena are new, redefined or emphasised in new ways:

### ***Sivistys*, Bildung as a force for change**

Comprehensive school’s definition of *sivistys* or Bildung, holds as its core the motivation to use one’s knowledge and competence for good. School does not merely react to expected changes or future scenarios, but actively shapes the path toward a positive future.

### **Learning and human growth**

The goal of learning is human growth and flourishing, in which strong foundational knowledge and basic skills are combined with ethical competence, social and emotional skills, flexible thinking skills, metacognitive skills, and the ability to direct one’s own learning. Teachers support students in strengthening transformative skills, existential and life skills, as well as their capacities for meaning-making. These include agency, the ability to understand oneself and others, and the ability to sustain hope in uncertain situations. Teaching is diverse: the importance of emotion, movement, imagination, and culture for the development of skills and human growth is recognised in basic education.

## Wellbeing as the foundation and outcome of learning

The interdependency between learning and wellbeing is recognised and nurtured: wellbeing is a prerequisite for learning, and learning enhances wellbeing. Wellbeing is understood as both a shared quality and an individual goal. The psychological, social, and physical wellbeing of the entire school community also supports the individual wellbeing of each student. A well-functioning and safe school is a place where it is possible to fail and try again safely and where everyone's success is shared and celebrated.

## High level of competence combined with social sustainability

School ensures equality in students' basic skills, learning, and human growth in an increasingly diverse society, even if social gaps in individual backgrounds and resources widen. Equality and equity are promoted by maintaining high expectations for each student and by providing systematically sufficient support to achieve learning goals. High overall competence strengthens Finnish society as students continue along the educational pathway to next levels of education.

## Sustainable skills in the age of technology

Future technologies exceed many limits of human capacity. In this context, learning cannot be based on the assumption that humans must master what machines cannot do. The comprehensive school ensures the sustainability of *sivistys* by placing human growth and human capabilities at the centre of learning — with technology used to complement human capacities. Thinking skills and ethical skills are seen as core goals, combined with diverse digital skills, the ability to regulate one's relationship with technology, and the wisdom to understand what humans should not do, even if it is technologically possible.

## Meaning and purpose are created every day

A meaningful life is woven throughout the school's educational mission. Teachers guide students toward personal purpose by helping them identify what is meaningful for them and what also contributes to the good of others. Meaningfulness is also connected to the experience of being meaningful to others. The school strengthens connections with other people and with nature, and guides encounters with humanity through the arts. A sense of meaningfulness in everyday life enhances learning; school does not motivate learning solely on the promise of a future, but is meaningful to students every day. A sense of meaning and purpose is also nurtured in the work of teachers and other adults in the school.

### **School as a community aims for the common good**

The comprehensive school positions itself courageously as a counterforce to developments that erode community, by nurturing communities that support participation and inclusion. Community does not require sameness, but accommodates diverse thoughts and world views. At the heart of the community lies a shared commitment to strive for the common good. Teachers and other adults in the school form the heart of the community, and pedagogy recognises that many of the most important future skills are learned together. A sense of belonging and responsible agency foster mutual trust in society and the capacity to face uncertain futures together.

### **A future-competent school and student**

The school is oriented toward the future at the level of the entire education system. Shared goals are negotiated and re-evaluated through broad national collaboration so that the education system can seize positive opportunities in a rapidly changing world. Shared and systematic national practices and research-based development increase resilience and equality. Students' future competences also develop at school: strong learning-to-learn skills, an identity as lifelong learners, and diverse democratic skills together with a shared epistemic framework for knowledge.

### **Technology supports humanity**

The school directs the continuously developing technologies to serve human growth. The selection and application of technology in school are pedagogically assessed and balanced. Technology is used to deepen human interaction and to enable guidance that takes into account students' individual characteristics, supports more equitable learning, and improves the use of data and knowledge in school practices. Practicing foundational knowledge and skills provides an essential basis for the thoughtful use of artificial intelligence and technology in support of the development of thinking.

### **Strengthening collaboration with homes**

In an increasingly diverse society, upholding trust and attachment to school requires consistent dialogue and cooperation. Skilfully led educational partnership with homes strengthen the school's capacity to fulfil its pedagogical mission. Through respectful collaboration, the school can also draw support from local communities and enhance students' equality by supporting families.

### **An ecosystem of learning supports the school**

The school builds connections with society and neighbourhood communities, and the strengthening network of actors such as public services, organisations, companies, and citizens supports the school in its purpose. The collaboration between actors is organised into a functioning ecosystem of learning coordinated by the school. The aim is for the school to receive strong, goal-oriented support from beyond its own boundaries, as students' needs diversify and challenges become more complex. At the same time, collaboration enables more meaningful experiences of learning, belonging, and accomplishment for students.

### **School buildings as meeting places for communities**

The role of schools as social hubs evolves: school buildings function as meeting places where different actors bring communities together and expand students' opportunities for hobbies and activities. School buildings also strengthen continuity in students' daily lives, safety, and bridge opportunities for exercise, hobbies, and shared activities into the students' day.

### **Education within the planetary boundaries**

The comprehensive school creates civistics that promotes an ecologically sustainable life for the whole society. The scope of sustainability includes ecological, cultural, social, and economic sustainability, which are holistically present throughout both the curricular content and everyday school culture and practices. The school provides students with a systemic understanding of societal sustainability by integrating content across subjects. The school promotes agency that does not reproduce development exceeding planetary boundaries, but instead treats the planetary boundaries as its ethical foundation.

### **A deep relationship with nature**

The comprehensive school fosters a relationship with nature, characterised by joy and understanding of nature's importance for individuals and for society as a whole. At the same time, understanding deepens of humanity's place as part of nature and of ecosystems as the foundation of life: the planet is our only home. Learning forms a cognitive, experiential, and action-oriented whole that strengthens compassion and a sense of connection. Nature is present in schools through the design of spaces and schoolyards, as well as through nature excursions that experientially support wellbeing and learning.

### **Agency fosters hope**

The school's transformative capacity sustains hope and trust in the future. Hope does not mean the student's ability to wait passively for good things to happen, but an understanding of one's own agency and capacity to act for a better future, together with others. The school teaches students to imagine better futures and builds trust in humanity's ability to solve together even unknown challenges of the future.

## 5 A life of meaning and purpose as a goal of the school

### Educational pathway towards lifelong learning and a life of meaning

In line with the guiding principles of the school, the purpose of education in fostering human growth and a meaningful life can be summarised as a learning pathway that unfolds in the school. Along this pathway, students make five educational transitions during comprehensive school:

- **A pathway to learning and civility:** strong general knowledge and thinking skills from basic skills to metacognitive skills
- **A pathway to a life of meaning:** identity, skills for meaningfulness and self-understanding
- **A pathway to community:** socio-emotional and ethical skills, and ways of cooperating and getting along with others
- **A pathway to agency:** agency skills for the common good; education as a force for action
- **A pathway to the future:** transformative skills, self-efficacy and a motivation for lifelong learning.

The idea of a pathway highlights the link between lifelong learning and the course of a person's life. The learning pathway begins in early childhood education and care, and comprehensive school anchors lifelong learning as part of a person's life by providing strong foundations, including learning-to-learn skills. Learning continues after comprehensive school in upper secondary education and throughout life.

The learning pathway emphasises the crosscutting nature of educational goals and the different phases and components of human development. Behind these components lies an effort to form an overall picture of what a person should learn to grow into a human being who can lead a meaningful life and contribute to the world. Understanding development as a pathway with different phases highlights students' age-appropriate developmental tasks and the school's

sensitivity to children's and young people's readiness to learn different skills. Age appropriateness is a central part of how school meets children and young people: for younger students, everyday goals are small in scale.

The key concepts are human growth and *sivistys*. *Sivistys* or *Bildung* means the multifaceted development of a person into an autonomous independently thinking individual. The qualities associated with a person carrying true *sivistys* include responsibility, active citizenship and the versatile development of abilities. The concept also concerns the relationship between the individual, society and culture, and the possibilities of cultural change. *Sivistys* is about growing agency, both as an individual and a wider community in a changing world. At the core of the educational idea of comprehensive schools is the will to use one's competence for good. *Sivistys* thus also answers the question of the purpose of education and schooling.

*'More important than skills is the school's value base and the worldviews it passes on to future generations. Comprehensive schools must be built on an ecosocial concept of sivistys and education.'* -Participant in the online forum

The goal of the transitions along the learning pathway is therefore an educated, responsible and compassionate human being who is motivated to continue learning and to use their abilities for the good of the world. A further goal of education is to build communities that support experiences of a life of meaning, collective action to build hope for the future and a pathway for individual growth into participation in a democratic society. The learning pathway thus moves from individual knowledge and competence towards agency and a meaningful life created together. The following chapters describe in more detail what kinds of skills and knowledge are sought under the educational goals of comprehensive schools.

## Key areas of competence

The skills that develop along the learning pathway can be grouped into different areas of competence. These areas are not hierarchical or fully mutually exclusive; rather, they function as lenses through which the key aspects of learning and human growth can be made visible. The key areas of competence and learning-related concepts include the following, in particular:

**Strong basic skills or foundational skills and broad general knowledge** prepare students to act ethically and wisely in changing situations in the future. Basic skills provide the foundation for developing thinking and knowledge – a framework

of general knowledge with which new knowledge and skills can be meaningfully connected. Basic skills form the basis for learning and participating in society. They include diverse literacies or critical multiliteracy, writing skills, mathematical skills and technology-related skills. They also include a sufficient level of general knowledge that helps students build and organise knowledge and evaluate the validity of different claims. In learning basic skills, the focus is not only on the mastery of specific skills and knowledge but also on their role in developing thinking.

**Learning and thinking skills** refer to broader transversal, or cross-curricular, competencies that support action in complex and changing problem-solving situations. The general learning and thinking skills developed in comprehensive schools include higher-order thinking and reasoning, problem-solving skills, creative thinking and innovativeness, critical thinking, and information management skills. This area also includes **metacognitive skills for guiding one's own thinking**, which are related to the ability to recognise, guide and evaluate one's own thinking and learning. They include skills such as self-regulation and self-reflection, and they enable **learning to learn**.

**Agency and agency skills** refer to students' willingness, skills and opportunities to make decisions and plans that have an impact on real life, understand their consequences, pursue them with perseverance, and take responsibility for their choices and actions. Agency involves the ability to direct one's own actions and collaborate with others, as well as beliefs about one's capacity to bring about change. These agency skills and other **transformative skills** are multidimensional goal-oriented capacities that enable individuals to shape their own lives and play an active role in communities and society. When combined with emotional, interaction and ethical skills, agency and transformative skills are the foundation of communities' shared capacity to address humanity's major challenges. **Hope** is understood as a form of capability: the ability to see a better future as possible and to act for it in practice.

**Meaning-making skills and life skills** refer to the ability to reflect on and build meaningfulness and construct purpose, as well as to agency for the common good – an individual's capacity and willingness to make active efforts for the benefit of others and the community. Virtues are ethical qualities such as courage, wisdom, justice and compassion that guide thoughtful and morally sustainable action. **Life skills, or existential skills**, are the human capacity to face, understand and deal with fundamental questions of life such as meaningfulness, one's identity

and sustaining hope. **Ethical skills and ethical deliberation** refer to the ability to evaluate situations and make reasoned decisions based on what promotes the good.

Community skills, and **socio-emotional skills** develop in a safe and accepting school environment in which students feel they belong. Socio-emotional skills include the ability to recognise and regulate emotions, understand others and cooperate constructively. Psychological safety, which underpins a positive community, is the experience that one can be oneself, make mistakes and express unfinished ideas without being ridiculed, and that conflicts are resolved constructively. A safe school community nurtures ‘positive friction’. In other words, it values and enables difference without requiring uniformity in a community held together by an agency for the common good. **Democratic skills** are strengthened through democracy education, which develops students’ readiness to participate, influence and act as responsible citizens.

**Holistic wellbeing** consists of the social, physical and mental wellbeing. These strongly predict not only how schooling proceeds but also a positive life course. The relationship between the different dimensions of holistic wellbeing is reciprocal and dynamic. A student’s holistic wellbeing is reflected not only in the absence of symptoms of distress but also positively – for example, in enthusiasm for learning, positive peer relationships, and sustained alertness and energy.

The key areas of competence identified in the vision work are partly built on one another and partly intertwined in parallel. General knowledge and basic skills form a foundation for practising learning and thinking skills, agency, meaning-making and life skills, and interaction, emotional and collaborative skills, and for building holistic wellbeing. All skills develop together in interconnected ways, and practising them in parallel is important as part of students’ age-appropriate development.

As a foundation for the development of skills, **brain plasticity, wonder and learning** are closely linked. Learning is a tangible change in the functioning and structure of the brain, and this kind of plasticity is at its highest in childhood. The sensitive periods related to learning certain skills such as language are times when environmental influence is particularly strong and brain plasticity increases, making learning more effective. Plasticity can also increase outside the sensitive periods. Wonder and awe are emotions that enhance learning and more comprehensive changes in knowledge structures by increasing brain plasticity. In a curious state of mind, the brain structures related to learning are more active than is otherwise the

case. Comprehensive schools of the future nurture children's natural curiosity and capacity for wonder and applies pedagogy that draws on an understanding of brain plasticity and practices that support it.

*The following chapters describe the development of these key skills from different perspectives, in parallel and as part of the school pathway.*

## Broad general knowledge and basic skills

The goal of the comprehensive school of the future is to support students' growth as human beings and as ethically responsible members of society, and to teach them the knowledge and skills necessary in life. The comprehensive school provides equal opportunities for all students to develop their general knowledge and basic skills. During comprehensive school, students' strong mastery of academic basic skills such as reading, writing and mathematical skills is ensured. Basic skills support the many other forms of knowledge and skills required in life. Comprehensive schools provide positive learning experiences that support an individual's motivation for lifelong learning. The joy of learning arises from curiosity, insight, enthusiasm and experiences of meaningfulness, as well as from powerful and aesthetic experiences.

Comprehensive schools have a broad **mission for *sivistys***. *Sivistys* together with strong basic skills prepare students to act ethically and wisely in the changing situations of the future. *Sivistys* is reflected in an individual's values and agency in ways that enable them to understand emerging challenges and demands over time. This builds both the capacity and the will to use one's knowledge and skills to advance the common good. *Sivistys* also involves the ability to value life and to live in balance with other people and nature. *Sivistys* is a driver of change which evolves over time, and which people can rely on to serve humanity.

*Sivistys* requires **cultural understanding and participation in culture**. In addition to transmitting culture, the task of the comprehensive school is to create a foundation of the creation of a new culture in society through science, the arts, powerful experiences and lived events. The comprehensive school of the future strengthens students' awareness of both Finnish culture and cultural diversity in Finland and globally, and provide abilities to express themselves through language, the arts, crafts, music and movement, for example. Comprehensive schools serve as a meeting place of languages and cultures, where students from different backgrounds enrich the school community and strengthen society's competence. Linguistic and cultural diversity is seen both as a national asset and as part of

international connectedness. The strong mastery of **basic skills** enables learning and participation in society. In increasingly multicultural comprehensive schools, everyone acquires strong basic skills, including proficiency in the language of instruction. Academic basic skills include reading, writing and mathematical skills.

**Reading and writing** are the foundation of learning. They provide the basis for all other learning and make an individual's development and further education possible. These skills also play a central role in individuals' self-expression, wellbeing and equal participation in society. Reading and writing lead to a deeper understanding and processing of information. Through literacy, individuals can acquire knowledge and critically assess the reliability of information sources. As its core tasks, the comprehensive school must ensure students' strong reading and writing skills, continuously strengthen multiliteracy, and sustain motivation to read.

**Mathematical skills** provide a foundation of **logical thinking, problem-solving and the ability to understand complex phenomena** in a world in which information, data and technology are increasingly intertwined with daily life, work and solutions that guide the functioning of society. Mathematical skills support both **scientific thinking** and everyday decision-making. Their significance is emphasised in fields that shape the future. In comprehensive schools, strong mathematical skills equip students to learn new things, understand rapidly changing technologies and apply knowledge in situations for which there are still no ready-made answers. Through practising mathematical thinking, students also develop perseverance, precision and confidence in their own thinking – along with routines and certainty built through practice and repetition, which are essential skills for facing an uncertain and complex world.

**Basic skills also include a sufficient level of general knowledge** that helps students make sense of knowledge structures in different disciplines and assess the validity and reliability of information. For example, scientific knowledge and the skills for scientific thinking together form systemic understanding of the Earth's processes and the interconnectedness of natural phenomena and human activities. What counts as essential content changes over time, but artificial intelligence and other technological innovations do not make the knowledge base of learning unnecessary. Even as the technologies for combining and producing information advance, students must retain an independent capacity to build knowledge, understand it and weigh epistemic questions. The mastery of basic skills builds the base of general knowledge to which new knowledge and skills can be meaningfully connected.

In the school of the future, **arts education and arts and crafts subjects** play a central pedagogical role because they promote comprehensive human growth and the development of its components such as socio-emotional skills, compassion, reflection and the ability to create meaningfulness. At the same time, arts education and arts and crafts subjects also support the achievement of other learning goals, including the development of strong basic skills. Strong arts and cultural education supports the holistic growth of as human beings: through a relationship with art, a person encounters themselves, humanity, and diverse ways of seeing and understanding the world. Arts and crafts subjects also develop cultural literacy such as an understanding of the arts and history. Arts education and drama education, for example, can also help nurture curiosity, inspiration and self-knowledge through the use of multiple senses, bringing together sight, hearing, touch and movement. They also provide opportunities for collaborative learning, developing agency, practising emotional skills and aesthetic experiences. Crafts subjects also play a significant role in developing motor skills and manual dexterity, as well as coordination, bodily control and physical fitness.

The capacity to think with hope, anticipation and creativity grows on the foundation of strong basic skills. Students can thus find alternative solutions in collaboration with others, even in difficult situations. In comprehensive schools of the future, thinking skills and skills for evaluating information are increasingly important. Although technological development offers effective tools for processing, combining and drawing inferences from information, understanding and using knowledge rely on human thinking and interaction between people – through which *sivistys* continues to evolve.

## Learning and thinking skills

Alongside strong basic skills and general knowledge, the comprehensive school of the future develops students' learning and thinking skills. These refer to broader transversal competencies. After comprehensive school, learning and thinking skills play a major role in succeeding in further studies and meeting the changing demands of future working life. They also provide the foundation for becoming an active and responsible citizen. A core task of comprehensive schools is therefore to foster the development of these skills as part of all learning.

The general learning and thinking skills developed in comprehensive schools include (1) higher-order thinking and reasoning skills, (2) problem-solving skills, (3) creative thinking and innovativeness, (4) critical thinking skills, (5) information management skills, and (6) skills for steering one's own learning process. The

development of these skills requires self-regulation, emotional and interaction skills, and curiosity and perseverance. **Higher-order thinking and reasoning skills** are basic capacities of scientific thinking that can be applied both in contexts typical of a particular discipline or subject and at a more general level. These basic capacities include logical deductive reasoning and the ability to recognise patterns from individual observations. These skills are required to form hypotheses about how the world around us works and to test their validity. In comprehensive schools of the future, higher-order thinking and reasoning are practised particularly in subjects that develop linguistic and mathematical thinking, in natural sciences and in interdisciplinary learning modules.

Higher-order thinking and reasoning are an essential part of **problem-solving skills**, which are developed in comprehensive schools of the future both within subjects and as a general transversal competence. Problem-solving refers to the versatile and deliberate application and combination of reasoning and thinking skills in situations in which the solution leading to the goal is not immediately apparent. The problems solved in the comprehensive school are often clearly defined, which enables students to systematically practise and apply different problem-solving strategies, as well as the analysis of errors that occur during the thinking process in a safe interaction environment that is tolerant of errors.

In the comprehensive school, students also learn to solve more ill-defined problems typical of everyday life – that are also highly important from the perspective of resolving societal crises – that require the examination of problems from new perspectives and the abandoning of familiar solution patterns. Such problem-solving situations promote students' **creative thinking and innovativeness**, which are also practised for example through philosophical debate and creative projects. Creative thinking and innovativeness strengthen students' ability to combine knowledge, cooperate and apply what they have learned in everyday life and in society.

As technology advances and societal challenges become increasingly complex, a key task of the comprehensive school of the future is to strengthen students' **critical thinking skills**. Critical thinking requires the active conceptualisation, application, evaluation and contextualisation of acquired or produced knowledge in relation to one's own belief systems. It is important for students to recognise the limits of their knowledge and to be able to update their understanding and competence. The **basic skills of knowledge-building** practised in the comprehensive school of the future, including critical literacy, the seeking, evaluation and applying of information, statistical thinking, the management of bias in one's own thinking, and the ability to distinguish reliable knowledge from unreliable information are closely

connected with critical thinking. Without the capacity to build knowledge and understanding, there is no capacity to evaluate knowledge produced by others and its validity or reliability.

The ability to synthesise information is also a key thinking skill built on a knowledge base, and an essential component of flexible thinking and creative problem-solving. The comprehensive school of the future helps students understand what is true and experience a shared understanding with others of how reliable knowledge is built. **Basic knowledge-building skills** thus support both the individual and society as a whole.

Critical thinking and creative problem-solving require students to guide and manage their own learning process, which involves metacognitive skills, meaning skills for understanding and steering one's own thinking. Comprehensive schools support the development of these self-regulation skills in line with the age and developmental stage. The **skills for guiding one's learning process** include the ability to set goals, commit to them and direct one's actions towards those goals. They also include planning and evaluation skills, and the ability to select appropriate working methods and strategies. Motivation and attachment to studies are central to guiding one's learning process, along with beliefs that support learning, which comprehensive schools of the future strengthen intentionally by paying attention to learning environments, ways of working and learning materials, for example.

*The focus on developing the skills for thinking and guiding one's own learning also emphasises the importance of consciously considering which tasks are worth doing with the aid of technology, and which students should practise themselves.* Teachers help students understand that the purpose of different tasks is not only the end product like a correct test answer or a finished essay. For example, producing a synthesis from fragmented information is a central part of the learning process and should not be outsourced to AI for the purpose of practising test answers because the creation of the synthesis itself supports learning to understand and organise information and grasp connections between ideas. Similarly, the purpose of essay writing is not the final text, but the practice of skills such as developing multifaceted thinking about a topic, understanding, evaluation, organising knowledge, justifying ideas and writing.

The development of learning and thinking skills is based on brain functions that enable self-regulation, the processing of information, the acquiring of knowledge, and acting on its basis. The development of these functions continues throughout childhood and adolescence into early adulthood. In comprehensive schools of the

future, learning goals and pedagogy are designed to match children's and young people's age and developmental level based on up-to-date research evidence, while also considering individual differences, support needs and emotions.

The attention to the developmental stage in learning and thinking is also reflected in the choice of working methods, learning materials and tools. For example, the impact of technology on executive functioning is understood in comprehensive schools of the future, and technology is used in ways that strengthen these skills. The pedagogy of comprehensive schools of the future is based on robust research evidence about what best supports learning diverse knowledge and skills. It is already known that learning is made more effective by a personal sense of meaning, collaborative learning approaches, learning close to real-life situations, diverse and multisensory processing of information, and bodily movement during learning. The emotions experienced during learning may also affect learning.

## Agency in building a sustainable future

*'Don't be afraid for the future. Here, you'll learn for it.'*

*-Young participant in the online forum*

For a meaningful life and trust in the future, it is essential that students learn to influence their own actions, make considered choices and take responsibility for them, and participate constructively in the life of the community. This requires active **agency**. Agency refers to an individual's willingness, competence and opportunities to make and evaluate their own choices and plans, influence matters independently and with others, and experience a sense of their own capability. Besides individual agency skills, an important goal of the school is to practise agency in collaboration with others, meaning agency as a collective competence. In the comprehensive school of the future, students learn responsible and active agency throughout their school pathway. This strengthens their trust not only in their own ability to act but also in the community with which they can advance matters.

School is a key environment for practising the skills of active agency necessary for life. Students' agency is not limited to being consulted; students actively shape their own learning and contribute to developing the school community. The guiding principle is that students are supported in agency in age-appropriate ways. Agency requires thinking skills, including executive functioning and self-regulation, that develop over a long period. Younger children still need considerable teacher support in skills such as self-reflection, planning and evaluating the consequences

of their actions. Agency is therefore not a prerequisite for coping in the school community; instead, it is a skill that is learned and develops over the course of the school pathway.

Agency and participation are realised through multiple channels: for example, through the student body and peer-support student activities, and in everyday school life, digital environments and virtual communities. This requires critical media literacy, digital-ethical understanding and an awareness of an individual's possibilities and channels for influence in a technological society. Age-appropriately designed opportunities to influence learning content and ways of working strengthen students' sense of competence, possibilities for influence and responsibility.

An understanding of agency as genuinely shared community-based agency is also central. Collaboration also motivates and supports the growth of agency for those whose agency skills require more practice. Agency is motivated by experiences of meaningfulness and a desire to act for good. Emotions, imagination and culture also guide the capacity to set direction: for students to act for a better sustainable future, they must first be able to imagine it. Schools therefore use creative methods broadly as ways to explore and create possible futures. Agency is actively developed and trained also through philosophical and ethical deliberation and discussion on world views, which are essential on directing and informing agency and its moral base.

The supporting of students' agency is also a central part of schools' work for equality, which becomes increasingly important in a diversifying society. It is essential to support students' equality as social differences may grow in the future, and contexts of learning outside school may become more differentiated due to several future drivers. From the perspective of agency, differentiation also affects key early childhood experiences, the care received and social relationships, which shape the brain-based foundations of agency. In addition to developing pedagogical practices that support agency, it is therefore necessary to ensure that pedagogies are inclusive and sensitive to social differentiation and segregation, which affect students' opportunities and experiences outside school. Students who lack certain experiences that are important for agency – before school or outside school – require special support to develop their agency skills. *Support for equality is required in all areas of learning, but it can be emphasised especially in relation to agency, as it has not traditionally been seen as an equally significant question in terms of agency.* The continuation of intergenerational inequalities in relation to

agency is not only an individual-level risk; it also weakens collective agency – the ability to act together – which will be necessary in the future to find solutions to the new and increasingly complex challenges facing humanity.

## Meaningfulness and life skills

A key goal of the comprehensive school of the future is a meaningful life arising from students' education and growth as a whole and from their development into wise individuals who act for the good of the community. The most important components of meaningfulness are considered to be a curious and enthusiastic relationship with the world, the identification of one's strengths and values that matter personally, a sense of connection and belonging, and an opportunity to contribute for the benefit of others. *The school takes these dimensions into account in its different objectives, subjects and activities; in this vision, too, the elements that generate meaningfulness are described in the different chapters. Meaningfulness is therefore a goal that runs through the school's entire educational mission and activities. Its realisation is less about a single measure than about how the whole school operates.*

*'In school, it's important to have conversations about what constitutes a good life, what really matters, and what doesn't.'* -Participant in the online forum

In comprehensive schools of the future, students develop the capacities to build a meaningful and fulfilling life. Experiences of meaningfulness support students' wellbeing, strengthen their commitment to schooling, increase perseverance and reinforce trust in the future. Lasting meaningful relationships based on trust, as well as a connection with other people, are central elements of a good life. The comprehensive school of the future supports the development of students' **identity** and strengthens their relationship with the community. Students practise the identifying and building of their strengths, as well as ethical skills, including ethical reasoning and the ability to recognise values that are important to themselves and others. They are supported in finding their place in the community and in creating meaning both independently and with others. Seeing the value of one's actions for someone else strengthens one's sense of self-worth, deepens experiences of meaningfulness and increases one's understanding of mutual dependence.

Meaningfulness is present in multiple ways in the school's goals and daily activities. Alongside other pedagogical methods, culture and the arts, as well as nature experiences, play a particular role in sparking discussion and in reaching states of wonder and experiences of meaningfulness. **Feelings of awe and curiosity**

are awakened through the arts and as experiential ‘states’, they increase the effectiveness of learning. Arts- and drama-based methods support mentalisation, that is, the ability to grasp other people’s perspectives and place oneself in their position, and deepen understanding of the depth and diversity of human experience: how other people see the world, act within it, make meaning of their experiences and find purpose in their lives. The school meaningfully encourages this understanding, building bridges between the individual and others, and connecting the basic skills, creativity and emotions that support learning. Meaningfulness is also explored through science and wonder of the natural world, and through encouraging enthusiasm for knowledge and insight.

In the quest for meaningfulness, **emotions and the ability to experience and recognise them** also play a key role. Emotions such as curiosity and amazement are connected with more effective learning, and they are emphasised especially in activities that enable self-directed exploration, playfulness and surprise. In comprehensive schools of the future, these experiences are sought not only through arts and crafts subjects, insights related to knowledge and creative activity but also in nature.

The unifying premise behind the goal of meaningfulness is that a *meaningful life is found at the intersection of what matters personally and acting for the good of others. Meaningfulness therefore does not mean turning only inwards but also towards the community. Experiences of meaningfulness also require a sense of belonging.* Comprehensive school helps everyone find experiences of meaningfulness that strengthen belonging and the ability to shape a personally meaningful life path. Every student is helped to understand and experience meaningfulness.

In the school, questions that link belonging and a meaningful life include:

‘What matters to me, and what creates an experience of meaningfulness?’

‘Where can I shine and feel that I belong?’

‘What can I contribute to my community and the common good?’

In addition to the school’s own teaching, community and activities, opportunities for meaningfulness can be sought with other actors in the surrounding learning ecosystem, including cultural organisations, companies and civil society organisations.

## 6 A life together: Communities as builders of wellbeing and hope for the future

*'School can foster a sense of community and responsibility, which are cornerstones of Finnish society. When children learn to act together, respect nature and value their own culture, they grow into strong individuals who can take responsibility both for themselves and for our shared future.'*  
-Respondent to the Futures Work Webropol survey.

### School as a community teaches us to live together

*The school community and the sense of belonging to it create the foundation of students' wellbeing and experiences of a meaningful life, hope and agency for the common good. Focus on the community and human interaction supports motivation for learning by reorienting learning from individual success to questions on what we can do together, and what each student can contribute in their own role in the community. In the school of the future, learning is also understood as a process that happens in a community, through interaction with others: while the core of learning many skills is an internal human process, education and human growth require communal learning in interaction with others. The school creates a physically, socially and psychologically safe, inspiring and welcoming community for students and school professionals.*

*'Genuine encounters require time, an unhurried environment and listening skills. Such encounters support the recognition of students' individuality, a spirit of community and the development of interaction skills.'* -Participants in the futures dialogues

The community of comprehensive schools of the future does not require sameness for individuals to belong to it. Instead, it draws on the idea of positive friction: the community makes room for different personalities and voices, and what matters is the shared will to act with others for the common good. Occasionally, there is also friction between individual students and the community – moments when the interests of the community and the individual do not fully meet. In the comprehensive school of the future, every student learns to reconcile their wishes and actions with the surrounding community, and to consider how both their own needs and those of others can be taken into account. At the same time, this

strengthens the community's capacity to respect individual differences and make space for diverse ways of thinking and opinions. The most important 'glue' of the community is everyone's will to act for the common good.

Community is built and supported intentionally, and teachers know how to strengthen the psychological safety that underpins it. Psychological safety is visible in positive interaction, experiences of respect and the feeling of being accepted as oneself within the community. Comprehensive schools are a safe place where every student feels accepted and valued. Psychological safety does not mean an absence of conflict; it means trust that conflicts will be resolved together.

*'School should generate a sense of community. Within school but also as a value – and it should be carried into homes as well.'* -Participant in the online forum

It is important that every student **belongs to the school**. This is strengthened by doing things together and intentionally building a collaborative operating culture in which everyone can experience belonging and contribute to the common good. In a strong school community, daily activities are characterised by positive and appreciative interaction, support from teachers and peers, collaborative pedagogical approaches, and adherence to jointly agreed rules. The school community is also realised through close multiprofessional cooperation among teachers, student welfare services and students' guardians. Teaching emphasises safety skills, digital safety, media education and the development of interaction skills, empathy and responsibility. Investments in community-based approaches strengthen everyday safety. Safety skills are part of life management and resilience. In the school, the sense of community and human connection are understood as essential prerequisites for the students' ability to build a meaningful life.

**Socio-emotional skills** support learning, wellbeing, agency and societal participation. They are key to understanding oneself and others, creating and maintaining positive relationships, and acting together. In comprehensive school of the future, students learn to recognise and regulate their own emotions and actions, share their thoughts and listen, understand others' different ways of thinking, relate compassionately to themselves and to others, and function in groups and cooperate. At school, students practise maintaining personal boundaries and resolving social problem situations constructively.

Comprehensive schools of the future strengthen students' emotional and interaction skills in many ways, supporting their ability to use them constructively both in relationships and in cooperation throughout the years of comprehensive school. This takes place through varied interaction with different people and

in different groups, situations and roles, and with teachers and other school professionals. The potential of arts subjects and team sports in developing emotional and interaction skills is recognised. For example, playing music together, performing plays and doing sports with others are natural and often highly engaging forms of cooperation that require, and thereby develop, the ability to interpret and coordinate with others' emotions, intentions and thoughts. High-quality interaction is also modelled in school between students, school adults and guardians.

*'An important skill developed at school is social skills. The fact that the working environment in many comprehensive schools is often violent shows that we must invest more precisely in these skills. Everything starts from respect for another person.'* -Participant in the online forum

### Community fosters democracy skills and participation

The school community also fosters democracy skills. Students' learning of **democratic citizenship** is built on reliable knowledge, a will that supports democracy and democratic action. Reliable knowledge is a cornerstone of democracy. A shared understanding of the world based on reliable knowledge is necessary for people to participate and act in society. The role of comprehensive schools is central not only in transmitting such knowledge but also in building a knowledge-based worldview. In comprehensive schools, students develop an understanding of how to evaluate information and read knowledge in ways that enable shared discussion and counter the risks of knowledge fragmentation and polarisation. In addition to knowledge, democracy requires will. Democracy is based on people's will to build a free, equal and pluralistic society. For a democratic society, it is important that knowledge and will translate into tangible actions that maintain and develop society. By strengthening responsible participation and agency, comprehensive school educates students for democratic citizenship.

The skills of participation and influence necessary in a democratic society are learned throughout comprehensive school. The need for democracy education is widely recognised, and it is particularly important in environments in which adult participation such as voting is low. In everyday school life, students practise the skills of responsible and participatory democratic citizenship. This happens through age-appropriate participation in decision-making concerning themselves and the school community, in planning activities, implementing them and evaluating them – in different roles. Schools identify the ways in which all students can participate, and that strengthen their experience that it is genuinely possible to influence school matters and the functioning of society. This helps prevent deficits

in wellbeing, social problems, loneliness and exclusion, and increases students' attachment to schooling and their experience of school as a meaningful part of their lives.

**Participation** was also clearly emphasised as a key task of the school in the futures dialogues conducted as part of the vision work. Children and young people highlighted the need to remove barriers, lower thresholds and diversify practices so that all students can participate meaningfully. They saw participation not only as a right but also as a means of increasing students' motivation and commitment to learning. In the school of the future students participate in multiple ways within the school community, also by helping each other in organised and non-formal ways. As part of democracy education and the goal of participation, students practise negotiation, listening to different views and opinions, agreeing on matters together, and making compromises. Through participatory community engagement, the school supports individuals' experiences of meaning and wellbeing. At the same time, it offers students from diverse backgrounds an important sense of belonging. Students learn to influence issues that matter to them and later the development of society as a whole. Teachers and other school adults reflect the principles of democratic, participatory and community-based citizenship in their own actions.

## Holistic wellbeing is both the prerequisite and outcome of learning

*'To lead a good life, people need knowledge about how to be well in their daily lives. People must also experience belonging, and that they can influence their lives.'* -Participant in the online forum

The building of the holistic **wellbeing** is a central goal of the comprehensive school of the future that is closely connected with fulfilling the school's pedagogical core mission. Students' wellbeing is built in everyday school life through the school's pedagogical work as part of learning, studying and teaching. The school's socio-pedagogical practices support students' social, physical and mental wellbeing, as well as high-quality learning in line with the objectives of the curriculum.

*In the comprehensive school of the future, the relationship between students' learning and wellbeing is reciprocal. Wellbeing is the starting point for learning, and learning itself increases wellbeing. Students' holistic wellbeing supports smooth schooling, and smooth schooling increases their wellbeing.*

Research shows that physical activity is associated with learning. Good basic fitness helps students cope with the school day, and more broadly, physical activity is one of the most important factors behind brain health and healthy childhood development. Physical activity also improves resilience to stress. At school, every student is supported in finding a suitable way to be physically active – one that maintains motivation over the long term and helps develop physical skills. The emphasis is not on assessing athletic skills but on creating daily practices and habits for independent physical activity.

Alongside physical education and exercise, the role of movement in enhancing learning is also taken into account. The pedagogy of comprehensive schools of the future draws on an understanding of the significance of movement, activity and exercise for learning.

*A key perspective on wellbeing is also the recognition of the interconnection between individual and community wellbeing. A thriving community is a prerequisite for individual wellbeing, and schools know how to support the conditions for the wellbeing of the whole community. In wellbeing support, practices directed at individuals and those directed at the whole group are balanced. Teachers and other school professionals are at the heart of the school, and their wellbeing is central to the students' wellbeing.*

In its daily activities, the comprehensive school uses pedagogical practices and participatory teaching methods that support high-quality learning and holistic wellbeing. Schools invest in strong teacher–student relationships and students' peer interaction, practise wellbeing skills, build a communal operating culture, and create an everyday school life that includes physical activity. The comprehensive school responds to individuals' basic psychological needs by providing a sense of belonging and experiences of competence, autonomy and agency – factors that in turn promote learning and wellbeing.

The school's pedagogical choices support not only learning and improved learning outcomes but also students' social, physical and mental wellbeing. The school's operating culture promotes a thriving school community in cooperation with families. Through its daily activities that support wellbeing, the comprehensive school strengthens students' wellbeing competence and builds shared practices. In addition to knowledge and skills related to health and physical activity, key wellbeing skills include self-regulation, perseverance, and emotional and interaction skills.

*'A good life is a beautiful expression and a guiding vision worth pursuing by all possible means. The foundation of all good is safety – a safe emotional state that every actor in the school can access during the school day.'* -Participant in the online forum

The **skills of self-care and self-regulation** create the foundation for building a good life. The recognition of one's basic needs such as sufficient sleep, healthy food and physical activity and taking care of them form the basis of self-care. Self-regulation skills help in setting wellbeing goals and their achievement. The maintenance of physical fitness is learned together in schools' daily activities that emphasise the joy of movement while also encouraging physical activity outside the school. Self-regulation also includes the awareness and management of one's own thinking and states of mind. The practice of concentration, calming down, and recognising and shaping one's thought patterns strengthens mental health resources and improves the learning atmosphere.

**Emotional and interaction skills** have been found to reduce bullying, problems in peer relationships and psychological symptoms while improving learning outcomes and increasing perseverance and positive emotions such as joy and enthusiasm.

**Perseverance** helps students work towards their goals and search for meaning and pathways for change in a world where ready-made paths are not always available. It enhances enthusiasm for learning, protects against depression, improves school achievement and increases life satisfaction. Perseverance is also a prerequisite for agency and hope for the future, realised as a readiness to act independently and with others for a good future.

*In a school that supports wellbeing, effort is valued, challenges are appropriately proportioned, and failures are seen as opportunities for learning. Students are allowed to fail safely and try again. At the same time, everyone's successes are noticed and celebrated together. Schools also ensure that every learner has adults with sufficient capacity to meet and listen. In a wellbeing-supportive school, students build a relationship with nature consistent with a sustainable way of life and learn to use nature as a resource for wellbeing.*

Professionals in education, teaching and student welfare work in close cooperation to promote students' wellbeing. Teachers, student welfare staff and other school professionals ensure together that students have meaningful opportunities and the support they need to find a peer group, and to form and maintain friendships at school.

**A sense of safety** is a prerequisite for wellbeing and learning, and active work to ensure it is carried out between school and student welfare staff, students and their guardians. The school's collaboration with families and other local actors also promotes the attractiveness and safety of the neighbourhood while preventing exclusion and disruptive behaviour. In turn, this increases wellbeing and community engagement, both in the school and the surrounding neighbourhood.

A school that supports holistic wellbeing and builds the conditions for learning is grounded in the joint development of everyday practices. Effective measures to develop wellbeing are implemented based on needs and research evidence. They are connected systemically to the implementation of the curriculum, and the full span of the student's school day is considered in carrying out the measures. All actors in the school, especially teachers, students and student welfare professionals, participate in the planning and implementation of development measures. The expertise of the whole school community is used in identifying solutions.

## The common good and hope for the future

*The goals of a communal school are encapsulated in the agency of the school community's members for **the common good**. A core goal of comprehensive schools of the future – **hope for the future** – strengthens into trust in the future through the common good and the community's shared agency.*

The values and virtues of the school community play a central role in the goal of teaching students to weigh ethical questions and act for the future of the community and the common good. Virtues thus lie at the heart of transformative skills and support not only the community but also the school's goal of being an agent for change. However, virtues are not only for the community; they are also for each student as an individual. A person's ability to do good for others is an important component of a meaningful life, a positive identity and experiences of happiness. Virtues also connect people to the community by helping them understand the mutual dependence between all people and creating a shared sense of what is worth pursuing in life.

Since the late twentieth century, a highly individualistic interpretation of values and happiness has been prominent in public debate; a frequently repeated view is that everyone should be free to be and do anything as long as they do not harm others. Yet global problems and societal and wellbeing crises indicate that the pursuit of one's own interests in ways that are 'neutral' towards others does not produce

the balance necessary for a socially and ecologically sustainable life. Communities and societies do not function unless people are willing to act for others, guided by virtues. Each individual's contribution to the common good is also a core element of social trust. At the same time, recent research on happiness increasingly shows that the use of one's abilities for the benefit of others produces happiness, wellbeing and a sense of belonging. *The common good and students' own meaningful lives are thus linked in the school's goals.*

The comprehensive schools of the future actively search for values that support the common good, and their practices emphasise discussions about meaningfulness and the good life. These discussions take place not only with students but also with parents and guardians as part of building the community. These activities draw on research in virtue ethics, philosophy, psychology and pedagogy, for example. In addition to the classical Aristotelian virtues of wisdom, courage, justice and temperance, Finnish research has highlighted virtues such as kindness, love, social intelligence and compassion. School teaches students to reflect on virtues, develop them in themselves and in the community, and live them out in everyday life.

The learning of virtues is not about adopting ready-made answers given by adults. Rather, teachers help students learn to think critically and reason independently about what virtuous action means in a given situation. Virtues thus differ fundamentally from rules. Whereas adherence to rules in one's actions is based on internalising rules set by others and complying with them, acting in accordance with virtues always requires the actor's own judgement and independent reasoning. The comprehensive school of the future therefore emphasises the practice of **ethical skills** as part of education for the common good.

**Hope**, meanwhile, is understood as the skill to act for the common good and a better future. Hope does not appear as students' capacity to wait passively for something good to happen; hope grows from action. The comprehensive school of the future seeks to awaken hope for the future based on the idea that hope always includes agency – the ability to influence matters. The school offers students experiences of their own agency and tools for influencing matters in collaboration with others. Goals are always age-appropriate: the goals of the youngest students are small in scale, and they grow as students grow. Such experiences of agency generate trust in one's own ability to act, as well as trust in the community with which it is possible to advance matters. Hope is connected with virtues through the will and skills to promote the common good.

In schools' daily activities, students practise how to act responsibly and work together for the good of the community. They learn to weigh different perspectives, reconcile conflicts, take responsibility for decisions and influence matters. They learn to act for the common good in diverse situations – from classroom learning to shared school activities and to situations outside school enabled through cooperation networks. Students also learn how to support their peers and act ethically towards each others.

The emphasis on the common good does not diminish the value of the individual or the importance of diversity; rather, it makes the school an environment in which everyone supports each other's active taking of responsibility and individual growth. These skills are necessary not only in building one's own life and influencing society but also in economic activity. The efforts to strengthen agency for the common good also extend into digital environments and international interaction, building trust. Ecological education, awareness of planetary boundaries and understanding sustainable development are central parts of students' active agency. At school, students learn that their choices and actions can influence the environment and help build a more sustainable world.

Virtues, agency skills and experiences of participatory agency sustain and support hopefulness, and later in life, hope becomes a prerequisite for agency: hope nurtures trust in the future. *A key skill connected with hope is **perseverance**: the ability to work for good even when success is uncertain.* Together, agency, the common good and hope reinforce one another and build trust in the future.

## 7 Life on our planet: an ecologically sustainable school supports wellbeing of the planet and the student

*'For example, in 2045, the competencies developed through sustainability education and intercultural education will be basic skills that must form a central part of teaching.'* -Participant in the online forum

### Finland's comprehensive schools as a leader in global sustainability

Comprehensive schools of the future promote an ecologically sustainable future and operate in balance with the environment. In this respect, the most important change compared to the current situation is that comprehensive schools do not reproduce today's ecologically unsustainable developments. Instead, they build *sivistys* that enables a society that is grounded in overall sustainability.

Scientific research shows that 'planetary boundaries', meaning the limits within which we can operate safely to maintain the Earth's system processes, are being exceeded as a result of the overuse of nature. These boundaries were defined scientifically in 2009. By then, three of the nine identified boundaries had been exceeded. In 2025, the number of exceeded boundaries has already risen to seven. The gradually worsening ecological crisis is difficult to notice and grasp amid everyday life, and despite warnings from the scientific community, societies have not felt compelled to seek more sustainable ways to build social and economic sustainability within planetary boundaries – no country or society is currently planetarily sustainable. Even countries that have advanced social sustainability, including Finland, have built their wellbeing in ecologically unsustainable ways. As boundaries are exceeded, the functioning of many natural systems changes, creating new and increasingly severe challenges for societies and, at worst, an existential threat.

As a leading country in achieving the UN 2030 Agenda Sustainable Development Goals, Finland can be a global leader in achieving genuine overall sustainability – and in this process, Comprehensive schools of the future play a key role. Through

education, comprehensive schools have a central position in shaping a new kind of society in Finland that is both ecologically and socially sustainable, and this can serve as an example worldwide.

### **Towards a systemic understanding and a sustainability transformation**

To safeguard humanity's wellbeing, a major system-level change in societies, a transformation, is required. A sustainable future is built around planetary responsibility and overall sustainability. A central knowledge-based premise of comprehensive schools of the future is that the wellbeing of ecosystems is tightly linked to human wellbeing: by supporting the wellbeing and balance of ecosystems, humanity has an opportunity for a better life. This interdependence – and an understanding of humans as part of nature – is one of the school's core starting points and the foundation of a balanced relationship between humans and the rest of nature. Comprehensive schools of the future guide learners towards a transformation in ways of thinking and system-level action. Students acquire better competencies to understand the interactions and systemic nature of ecological, social, economic and cultural sustainability. This enables students' transformative agency and generates a sustainability 'handprint' throughout society.

### **A strong relationship with nature grows through learning, experiences and daily actions**

In Comprehensive schools, the building of a diverse relationship with nature and ecological sustainability is grounded in the latest scientific knowledge, also relying on interdisciplinary systems thinking. Students' growth into sustainable ecological agency is strengthened in all teaching and educational work; it becomes part of the school's shared operating culture. Sustainability-related competence goals and themes are translated into practical classroom activities in ways that support students' growth as actors in a democratic society.

Ecologically sustainable agency is based both on knowledge and a strong relationship with nature and meaningful experiences in nature – on building a personal emotional connection with nature and strengthening an ecological identity. A passionate and emotionally strong relationship with nature, and a sense of belonging to it, supports students' wellbeing and hopefulness, which increases their motivation and capability to act on behalf of our shared environment.

*'The ability to get along with others. Expanding circles of compassion also include people living far away and in the future, as well as other species.'*  
-Participant in the online forum

The school aims for what is learned to become ways of acting and transformative skills. Sustainability thinking is embedded in the entire operating culture of the school. In daily school activities, students experience and see what ecological sustainability can look like and learn to orient their actions towards ecologically sustainable choices. Everyday sustainability is learned through shared agency: the school itself operates sustainably, and as students participate in planning everyday school activities, both their conceptual and practical understanding of the foundations of sustainability – and their hope and trust in the meaningfulness of their own agency – grow stronger. As students' knowledge, skills and actions expand, society's overall capacity to pursue good and solve complex systemic, or 'wicked', problems gradually increases as well.

### **Agency and collaboration create a sustainability handprint**

The school also offers learners opportunities for varied conceptual, experiential and action-based learning about overall sustainability beyond the school premises, in cooperation with various stakeholders. In an interdisciplinary way, the school develops ecological awareness, systems-thinking capacities, an understanding of sustainable lifestyles, everyday operating models, the transformative skills required for change and democratic participation.

Place-based learning is a key means of strengthening responsible citizenship and a relationship with the environment. Various local communities such as municipalities, organisations, resident communities and companies form a learning ecosystem that extends beyond the school and supports the learning of sustainable and responsible citizenship in practice.

The values, attitudes, knowledge base and opportunities for action adopted in school create the foundation of lifelong ecological agency and its development. The communal and socio-emotional dimensions are a significant part of the goals of ecological sustainability and of growing to be a sustainable, responsible citizen. Through intergenerational interaction, students also generate an immediate sustainability handprint in society as a whole, which accelerates the sustainability transformation.

## Part III. School culture of the future

### 8 Life in comprehensive schools of the future

*The operations of comprehensive schools of the future are guided by the idea that the school is the most important future-oriented institution in our society and the most meaningful community shaping the sivistys and growth of children and young people. An essential aspect of the school's orientation is the idea that school does not have 'customers' to whom services are provided; rather, comprehensive schools are a learning community into which students enter and grow as members of. Teachers, principals and other adults of the school guide them along their paths of learning and human growth in close pedagogical partnership with families, guardians and local communities.*

*The task of the school of the future is to promote sivistys for all equally and justly in accordance with the neighbourhood school principle. Comprehensive schools are a free educational fundamental right, equally accessible to everyone. Comprehensive schools also serve as a centre that strengthens community life in the neighbourhood. A shared comprehensive school takes all students into account so that no one is left outside the community. Every student experiences genuine belonging in the school community.*

The operations of comprehensive schools envisioned here must be understood as part of Finnish society's broader educational pathway from early childhood education and care to higher education. Within this continuum, comprehensive schools are the stage of education that includes all children and young people in compulsory education. In addition to teaching basic skills, the role of comprehensive schools is to lay the foundation of *sivistys*, human growth and wellbeing, and to support students' growth as members of communities and a society capable of change. The societal significance of the comprehensive school is evident in its role as the most central institution shared by all people in Finland; after comprehensive school, students' paths diverge in different educational directions.

Yet learning continues beyond the comprehensive school. All vocational and societal roles require further study that builds on comprehensive school education, and compulsory education continues at upper secondary level. Upper secondary and tertiary education enable specialisation and the deeper development of specific areas of competence. It is therefore essential that comprehensive school provides a strong foundation for life-long learning and genuine motivation for later more specialised studies. The importance of learning to learn is particularly pronounced: the comprehensive school equips students with the capacity to deepen their competence and expand their education and human growth throughout life.

As tangible system-level elements, legislation and the national core curriculum define the purpose of comprehensive school education: the school educates students for humanity, ethical responsibility and active citizenship, and provides the knowledge and skills necessary in life. The best interests of the child, equality and community engagement guide development efforts. For the best possible comprehensive school to be realised, schools' resources must be sufficient and at least comparable to those of neighbouring reference countries. When resources are sufficient, and comprehensive schools are developed systematically through broad collaboration, Finnish comprehensive schools can become the best possible schools in the future.

*'Ultimately, a child's growth into a balanced and wise adult requires the same things from one era to the next: basic knowledge about the world; the experience of being valued and entitled to receive help while also being obligated to act in accordance with shared rules and for the benefit of others; learning to take pleasure in effort and work; tolerating negative emotions at times; and the ability to interact with different kinds of people. These are essential now and in the future.'* -Participant in the online forum

Comprehensive schools already possess strengths that have long supported the wellbeing of people in Finland and produced strong learning outcomes in international comparisons. At the same time, the identified global and local changes, as well as the aspiration to build a positive future, require changes in ways of thinking and operating. The following chapters describe the key elements and changes in the operations of comprehensive schools of the future. The discussion highlights both the opportunities and challenges that future drivers bring to schooling and the need for the development of comprehensive schools. The school is also presented not merely as an institution reacting to change but as a builder of the future. The central question is what comprehensive schools should be like

for the achievement of the desired goals related to competence, humanity and community development, and to enable the school to function as a positive force for change.

A significant crosscutting theme in the operation of comprehensive schools of the future is the emphasis on the school's communal role: human growth and agency skills require learning in a community. The school of the future does not operate as an isolated island but opens itself more clearly to society. At the same time, society supports the school in its key future-oriented task – both by ensuring adequate resources and genuinely participating in everyday collaboration. A diverse learning ecosystem is mobilised to support students and schools in strengthening the school's pedagogical core mission, meaningful learning and students' growth as members of society. Cooperation with other organisations and with homes and families deepens. School buildings function as important community hubs and meeting places, where the growing presence of nature also supports wellbeing in multiple ways.

In an increasingly diverse society, the school also takes on the task of ensuring that every student has the opportunity to acquire sufficient knowledge and skills and to develop themselves as a human being. The school pays greater attention to cultural and linguistic diversity as a force that sustains culture, including safeguarding the development of the national linguistic diversity. Rapidly developing AI-based technologies, one of the most significant near-future drivers of change, are integrated into school operations. This work ensures their pedagogically justified role and their positive impact on the development of thinking, human growth and socio-emotional skills.

## 9 Technology and artificial intelligence transform the foundations and practice of learning

Future technology surpasses the limits of human information processing in many ways. In such a context, learning can no longer be based on the principle that humans must only know what machines cannot do. Comprehensive schools of the future ensure the resilience of education; the capacity for independent thinking, empathy and moral judgement must remain valuable and under human control, even as the boundary between humans and technology is blurred. Humans must still understand, know, remember and be able to do things to live well and lead meaningful lives. The goal is a thriving individual with the capacity to regulate their own relationship to technology, and to guide technological development ethically for the common good.

The school of the future provides technology with a safe and pedagogical framework. An active, exploratory and curious approach to technology helps students see themselves as makers of the future and find their place in a changing world. When the opportunities, problems and risks of technology are made visible, a foundation is created for the responsible and thoughtful use and development of technology. In this vision, comprehensive schools of the future neither blindly chase individual trends nor fear new developments. Instead, they build a learning environment in which children can safely explore, experiment with and use technology to participate in solving the major challenges facing our planet. Teachers play a key role in supporting the development of students' judgement, ensuring that they do not grow into passive subjects of technology but become active agents who master it.

In the school, technology must be examined simultaneously as a tool, a societal phenomenon and a structure. In this vision, technology plays three roles in the school: as support for learning; as an object of learning; and as a means for organising teaching.

*'Digitalisation and artificial intelligence will continue to develop in the future, regardless of whether we want it or not. Teaching and studying are becoming less about learning facts and increasingly about learning interaction and working together.'* -Participant in the online forum

## Technology as support for learning

Educational and learning technologies refer to all tools, systems and solutions used to support teaching and learning. Radio, television, intelligent tutoring systems, multimedia applications, virtual worlds, massive online courses, learning analytics and AI tutors have each been presented in their time as solutions that revolutionise learning. Each development has left its mark, but in the daily practice of the comprehensive schools, the fundamental nature of learning has remained largely the same.

As the most recent learning technologies, AI tutors promise to offer personalised instruction and guidance for every student, adapting to individual skill levels, motivation and emotional states. One limitation of students' independent acquisition of learning content has been that they are still learning to regulate their own learning processes: teachers are needed to structure content, guide practice and support motivation – in other words, to scaffold learning. In comprehensive schools of the future, teacher-guided learning technologies are also capable of providing such scaffolding. They can break learning content into smaller units, adapt tasks individually, provide timely feedback and offer encouragement as part of a teacher-led learning process. Because learning regulation skills are themselves a key educational objective, the support provided by technology gradually decreases as students' skills develop, transferring the responsibility for learning progressively to the learner.

Given the broad goals of education, merely supporting the acquisition of instructional content is a limited aim for learning technology. In a changing world, learning is above all the ability to think, act and create something new. The goal of technology should therefore be to strengthen the human capacity to ask questions, interpret the world and construct meaning with others. Technology should support the development of students' thinking, identity and agency – for example, by helping them explore their own thoughts, life choices and alternative futures through interaction with AI-based systems.

In the comprehensive school of the future, technology also strengthens the school community. It creates new communities and opens windows to diverse ways of thinking, helping students see the world from others' perspectives. The algorithms used in schools not only amplify the loudest voices but also bring forward quieter ones and support everyone being heard in the school community. At its best, technology helps the school community function together even in times of crisis or uncertainty, strengthening its resilience. Technology can also help students understand global interdependences, imagine alternative possible worlds, and recognise how individual and collective choices are linked to the planet's wellbeing.

## Technology as an object of learning

Artificial intelligence and technology are not merely tools. They also shape how we understand the world, act within communities and influence shared issues. Technological understanding and a broad digital or technological literacy is part of general knowledge, and comprehensive schools of the future provide students with sufficient knowledge and skills to maintain their agency in relation to technology, participate in decision-making concerning technological development, and use technology sustainably in ways that support their own, society's and the planet's wellbeing.

The internal functioning of AI technologies in particular is often difficult to understand, and even developers may not always be able to fully explain it. Meanwhile, these technologies are widely used and affect everyday life, easily leaving individuals to be passive recipients rather than active agents. One task of the comprehensive school of the future is therefore to provide students with a sufficient understanding of how technologies function while strengthening their capacity to maintain agency, even in situations in which technology cannot be understood in a fully transparent way.

People not only relate to technology cognitively but also emotionally. Emotions associated with AI and other technologies, including curiosity, excitement, fear and suspicion, influence how willingly technology is adopted, how agency develops in relation to it, and how regulation is perceived. If technology appears threatening, distant or incomprehensible, both teachers and students may withdraw from active use and from participating in shaping the technological future. Conversely, when the relationship with technology is based on understanding and a sense of control, it creates trust and increases readiness to engage in developing and evaluating technology. It is crucial who participates in defining this future. In the future school development is inclusive, based on understanding that when people of different genders, ages, linguistic groups and cultures are broadly involved in shaping the direction of technological development, that development reflects societal diversity and serves the common good.

By guiding technology use nationally through norms, resources, information-based guidance and continuing education for teachers, we can ensure that students have equal opportunities to learn the digital and technological knowledge and skills essential for the future. Principals and teachers are responsible for ensuring that the use of technology is genuinely inclusive. Every student must have equal access to technology, and teachers must know how to apply tools in ways that support diversity and individual learning pathways, in ways that strengthen equity.

## Technology in organising teaching

Technology makes it possible to reduce the workload of teaching staff and the school administration. Time-consuming processes can be automated, allowing more time to be directed to teaching. An increasing amount of data is available to support resource allocation and the monitoring of activities in a knowledge-based and learning-oriented way across administrative boundaries.

Technology also enables new teaching methods and arrangements. For example, education providers can enhance educational equality by collaborating and making a wider range of learning opportunities accessible to all through the use of remote connections. As technology evolves and regional needs diverge in different parts of the country, the possibilities of remote connections are continuously developed and assessed.

The planning, personalisation and assessment of teaching increasingly take place with technological support, freeing teachers' time for more meaningful interaction with students. Digital tools provide teachers with a comprehensive overview of students' progress and needs, enabling more precise and timely support. Technology helps identify both learning strengths and areas in which students benefit from personalised guidance or additional resources.

At the same time, the planning of teaching becomes increasingly data-informed: teachers can design learning modules that adapt to students' individual skills, interests and pace of progress. This makes teaching more flexible and learner-centred.

Assessment becomes more diverse and transparent. Students can track their own development in real time and better understand which areas they should focus on. Guardians also gain a clearer picture of learning progress, which helps strengthen the cooperation between home and the school. However, technology-supported assessment does not replace teachers' pedagogical judgement; rather, it supports it by providing reliable information and freeing time for human interaction and for making learning meaningful.

## 10 The school strengthens social sustainability: High expectations and adequate support for learning and growth

Comprehensive schools of the future build a socially sustainable society grounded in equal opportunities and a meaningful, safe community for every child to grow in. The comprehensive school envisioned here aims to break negative statistical predictions related to students' backgrounds or other factors, and to ensure that that every child and young person learns and becomes empowered to participate. The most important principle here is that the school maintains high expectations for every student and provides sufficient support to help them meet those expectations. In the comprehensive schools of the future, this goal matters not only in terms of equality but also in terms of raising overall educational attainment and competence levels. Students' achievement of ambitious learning goals, readiness for further studies and learning-to-learn skills in the comprehensive school is essential if the goal of a highly educated society is to be realised. At the level of the education system, efforts are also made to effectively prevent the growth of social differences between schools.

In pursuing social sustainability, the school draws on a research-based understanding of how individual and background-related challenges affect the starting points for learning, and it directs support accordingly. This means that the most central factor in social sustainability is to meet each child as a whole person at school. The school can meet children and young people from different socioeconomic, linguistic and cultural backgrounds as both individuals and members of the school community. School staff also have the competence and sensitivity to recognise particular needs arising from students' social backgrounds or other factors, and to provide the necessary support so that equal opportunities for learning and participation are realised for everyone. The school thus treats each learner as a unique person while also understanding, based on research, the sensitivities related to children's individual characteristics and growth environment that may create learning barriers that should be identified.

*'At school, teachers have time to meet every single student.'*  
*-Participant in the futures dialogues*

The expected increase of societal diversity and possibly deepening segregation challenge social sustainability and highlight the role of the school of the future in equalising students' opportunities. Internationally, the link between socioeconomic and immigrant backgrounds and disparities in competence is currently strong in Finland, and the learning gap between students with an immigrant background and the majority population is also particularly significant in OECD comparisons.<sup>163,164</sup> Future drivers are expected to increase pressure for greater diversity and widening gaps, and phenomena such as artificial intelligence may further deepen the competence disparities through cumulative effects. In addition to growing individual challenges, social disparities and digital divides, the increasing pressure towards greater regional differences – both within cities and between different parts of the country – further differentiates the starting points from which learners pursue competence and wellbeing.

A socially sustainable comprehensive school safeguards every student's right to learn and belong and participate in their communities. The principle is that expectations of competence remain high for each student, and that adequate support ensures that students reach at least the knowledge and skills required for further studies and full participation in society. For the student, this is manifested as a safe and trusting relationship with teachers and school staff, who see them as they are and know how to provide appropriate help and support. The fact that needs for support are identified is not a stigma that labels a student as weaker; rather, the student also understands that the support is intended precisely to help them grow to their full potential.

*'For me, it's important that school feels safe and teachers are trustworthy, so that you can tell them if something is worrying you!' -Participant in the online forum (student)*

Comprehensive schools of the future also support and encourages students who have special skills and motivation, and who progress especially quickly in their studies or in a specific domain. The starting point is that enthusiasm, intrinsic motivation and strengths are valuable qualities to be encouraged and nurtured throughout schooling. Every student's strengths are also important as resources for the community. Schools have the time and capacity to identify those who need additional challenges to further develop their strengths. They are challenged to grow, and technology is also used to provide upward differentiation and deeper learning opportunities.

Schools' support for social sustainability also means the recognition of every student's equal right to grow as human beings and as full members of society. Alongside the development of basic knowledge and skills, the school therefore invests in supporting broader goals of **sivistys** and human growth. The school is a place where everyone gains access to humanity's rich tradition of culture and arts, and is guided towards inclusion and a meaningful life. The comprehensive school ensures that all students' socio-emotional and ethical skills develop in a balanced way, and that a focus on a special area of strength – or, conversely, challenges in learning support – does not lead to narrower support for the student's holistic growth.

A socially sustainable comprehensive school educates students through a positive approach: school is meaningful and inviting for the child every day. Each student is seen as having developing strengths, and everyone is encouraged to contribute to the common good. Students also come to school because of valuable social encounters. At the heart of students' attachment to school are safe adults and good relationships with other children. A key element of social sustainability is also the relationship between students and teachers as safe adults.

## 11 A safe school ethos strengthens the community and creates roots

Safety is one of the core qualities of the comprehensive school of the future. In the data collected for the vision work, the importance of feeling safe during the school day was especially emphasised in students' and their families' views. A sense of safety is the starting point and prerequisite for wellbeing and learning. Safety requires active work for students to have a feeling that they are accepted, and that there is no threat of discrimination, bullying or exclusion of any kind. In a safe school, everyone behaves respectfully, and a calm environment for learning is protected.

*'A safe learning environment is built on trust, clear routines and safe adults.'*  
-Participants in the futures dialogues

Safety is also connected with schools' daily activities and with the design and monitoring of school buildings and grounds. Staff competence is updated regularly, and different situations are rehearsed proactively. In new construction and renovations, safety perspectives are considered comprehensively alongside ecological sustainability.

An absolute requirement for safety is that no one is bullied at school. Schools have clear anti-bullying procedures, including a strong preventive element. At the heart of bullying prevention are the school community, a sense of belonging to it, safe adults and friendships among students. These are supported by the school's values and virtues, which encourage everyone to act against bullying and include everyone. The prevention of bullying takes both the community and individuals as its perspective: to prevent bullying, the interaction within the whole community must be based on respect and inclusion. In the comprehensive school of the future, teachers have the skills to support the wellbeing of the entire student community and a social dynamic that prevents bullying.

*'An important skill developed at school is social skills. The fact that the working environment in many comprehensive schools is violent shows that we must invest more precisely in these skills. Everything starts from respect for another person.'*  
-Participant in the online forum

More broadly, a sense of safety also requires an active experience of being accepted as a whole person. This includes the idea that the school is a place where one does not have to be a certain kind of person to be safe. The school therefore works deliberately to build an inclusive community.

*'There must be a safe and accepting atmosphere at school in which all students can be themselves and participate actively.'* -Participants in the futures dialogues (young people)

A sense of safety is also nurtured in relation to students' success and learning. *Fundamentally, the school is a place where one can fail safely and always try again.* A sense of safety is also supported by strengthening students' perseverance and resilience. Strong cooperation between school and home outlined in the vision is essential to the goal of safety. When parents get to know the teacher and one another, communication and cooperation, both in building the school community and in possible bullying situations, become easier and more fruitful.

## School culture strengthens a sense of community and identity

Comprehensive schools of the future intentionally build a school ethos that includes shared traditions, practices that bring life to daily routines, celebrations that strengthen intergenerational connection, and various commemorative days.

The weakening of communities described among the future drivers is visible in the fact that people are less attached to events and traditions that bring people together, for example. The school of the future creates inclusive practices and procedures in which the school itself becomes a community that nourishes belonging and identity. Among others, shared practices, traditions connected with the cycle of the year and schools' own songs unite students and create an experience of meaningful belonging.

The school of the future is a community and a place that young people remember as they move on to the next stages of education. It provides them with roots that create a sense of safety along the path of lifelong learning and an identity as a learner. School culture is also nurtured within the deepening cooperation between the school and home. The involvement of parents and guardians in some school events and in building a shared ethos also strengthens the educational partnership and students' attachment to the school.

*'I remember pea soup day as something shared by everyone.'*

*-Participant in the futures dialogues (young person)*

The Finnish school has a long history that can be used to strengthen a sense of belonging and community. In data collected for the vision, young people themselves highlighted intergenerational experiences and the need to belong as valuable. For example, school celebrations and even smaller everyday traditions and practices such as pea soup day represent a positive cultural continuity available to all and provide a natural point of connection with Finnish society.

Culture changes and evolves, and in the future school, it is actively developed together. The school's identity is shaped especially by its teachers and staff, who pass on the experience of a shared community to the next generations of staff and students. A sense of roots and continuity, and participation in renewing school culture, also increases students' trust in the future.

## 12 School is culturally and linguistically diverse

Finnish society will be multicultural and multilingual in the future. Alongside the national languages and cultural traditions, Finnish society will become more diverse, due particularly to immigration and the growth of the population with an immigrant background. At school, students living in many different cultural spheres are met as individuals, and cultural diversity is understood as a strength that broadens society's competence and cultural capital. The school nurtures both its shared educational goals and the diversity of individuals and communities. The comprehensive school of the future also recognises the challenges related to multiculturalism and the need to facilitate positive encounters or to support language development, for example. From the perspective of social sustainability, multiculturalism is connected with Chapter 10: the need for research-based sensitivity to recognise students' support needs linked to their social background also applies to questions arising from linguistic and cultural diversity.

*Sivistys* also includes an awareness of cultural diversity, both in Finland and globally. The school promotes this awareness through the learning content and experientially, including as part of cultural education. At the same time, the school supports students' knowledge of the national minority languages and cultures as part of a shared culture and identity that is increasingly built on diverse identities. In addition to Finnish- and Swedish-language education, the language and cultural background of Sámi-, Romani- and sign-language students are considered in comprehensive school education.

Linguistic and cultural diversity is understood both as the diversity of Finnish society and as strengthening global connections and internationality. This diversity is used as a school strength and as an opportunity to support students' varied backgrounds and identities as part of the school community. Different backgrounds and cultures are also taken into account in everyday school practices and in cooperation with families.

## Swedish-language school as a force for identity and culture

Finland's official bilingualism and Swedish-language education are a central part of Finnish culture. Swedish-language education is a prerequisite for the country's bilingualism, and the school is an important unifying force for Swedish-speaking communities in Finland. It forms a cultural and linguistic educational continuum. The Swedish-language school plays a significant and multidimensional societal, cultural and linguistic role in the bilingual Finland of the future.

Swedish-language education will remain attractive and competitive in the future, and it will be a natural choice for both monolingual and multilingual families. The attractiveness of Swedish-language education is also strengthened for those whose home language is neither Finnish nor Swedish. Swedish-language education continues to evolve over time alongside the Finnish-language education system.

As part of developing the school of the future, the good availability of high-quality Swedish-language learning materials, as well as qualified teachers and early childhood educators, will also be ensured. The Swedish-language educational pathway and the influences it brings, including through Nordic networks, constitute a particular strength in Finland's overall education system.

In the future, a growing share of students in Swedish-language schools will speak another language such as Finnish or other languages at home, and it will be common for students to have multiple home languages and to define themselves as bilingual or multilingual. The language of instruction is decisively important for future language use. The increasing diversity of identities is recognised, and the opportunities offered by Swedish-language culture are actively seized in both Swedish- and Finnish-language schools.

## Diversifying linguistic and cultural starting points

### Sámi languages and culture

The Sámi languages and culture are a significant part of Finland's national diversity and rich cultural history and present. In the future, it will become increasingly important that a growing majority of Sámi children live outside the Sámi homeland. The protection of the vitality of the Sámi languages requires long-term solutions to pay attention to the changing conditions and students' needs.

The use of technology is not merely a practical means of organising instruction; it is also an opportunity to strengthen linguistic identity and cultural participation. Remote connections make it possible to form teaching groups by age or language proficiency level, and to provide mother-tongue instruction even when teachers are not available in every school. Students can participate from their local school, making instruction more accessible. In addition, digital solutions make it possible to develop diverse learning materials that support both language learning and the transmission of cultural heritage. The Sámi languages can thus remain living and meaningful for future generations.

The situation of Sámi languages also highlights the importance of developing the pedagogy and didactic solutions of distance learning, as well as social models that support not only schools' local communities but also the building of remote communities. Technologies that enable the crossing of distances will be even more important in the future, and their development is central to ensure equality and quality in education.

### Support for differentiated linguistic starting points

Strong language skills are the foundation of all learning and have a significant impact on integration, wellbeing, studying and employment. The need for teaching both the language of instruction and other national and foreign languages will continue to grow in the future, and it is also connected with students' increasingly differentiated starting points in other ways. Language learning is enabled more broadly through the use of technological solutions and teaching methods, and investments are made in developing new and versatile methods for language teaching.

*'A well-functioning multilingual and multicultural school is a place where every student and student can feel valued and part of the community. This requires a safe and accepting environment, diverse language support, respect for cultures, and the active participation of everyone in the school community.'*

*-Participants in the futures dialogues*

Alongside artificial intelligence, digitalisation and game-based pedagogy, the pedagogy of language teaching is developed especially by drawing on experiences from language immersion pedagogy and language-aware pedagogy. Language learning and language learning support are also understood as necessary in students' first language among those in the 'majority population': for example,

social and spatial segregation in cities may create situations in which special attention must be paid to first-language development, even when supporting learners who speak the language of instruction as their mother tongue.

## 13 School is for every student: The student's day

'The student's day' brings together the school's goals and operations into a holistic approach. At the centre is the student, who comes to school as a whole person and grows as part of the school community and the networks of their local community. The school views the student holistically, and school activities are consciously structured as part of a student's day and year that support growth. The student's perspective embedded in the idea of the student's day also serves as a reminder that school must be meaningful to the student every day.

*'Teachers make it feel meaningful to come to school every day.'*  
*-Participant in the online forum*

*The school cannot coordinate every area of students' lives, but it recognises the essential elements of a student's life and development and seeks to enable activities that are important for the student's holistic growth.* In other words, the school is not an isolated island separate from the student's home, cultural background or hobbies. The school acknowledges the significance of growth that happens outside the school and its connection with the student's day, and the school's role and opportunities in supporting the student's life beyond the school day are also recognised. School days are bridged to students' hobbies and free time possibilities, and the importance of these contexts in supporting learning is recognised in the school.

In addition to emphasising the whole of the student's life, the student's day also highlights the importance of the student's perspective in the school. The school is for students and for every student. The student's voice is heard at school, and the student knows they matter. Through belonging, meaningful learning and agency, school is meaningful to the student every day. The orientation of the school is therefore not merely the promise of a better adulthood as a reward for effort but also a meaningful life at school, day by day.

## 14 Schools and school buildings as meeting places for communities, services and nature

The education system of the future opens itself to society; and in turn, society begins to support the school. The school develops and leads collaboration with families and guardians to strengthen students' growth and shared trust. School buildings serve as important meeting places for communities, various actors and the relationship between people and nature.

### Stronger collaboration between school and home

In the comprehensive school of the future, the building of school–home collaboration into a strong educational partnership is essential for supporting students. Effective models of collaboration can increase trust in the school among children and families arriving from diverse backgrounds. They also enhance the sense of a shared purpose and increase parents' and guardians' willingness and capacity to support their child's schooling and the school community as a whole.

Negative attitudes towards the school are a growing challenge in many population groups, and the feeling that the school is on the side of the child – and the family – is not automatically shared. A well-functioning collaboration with families is the most important way to build this trust and create a connection that also endures in situations of disagreement. The wish for increased school–home collaboration was also frequently expressed in the vision work's futures dialogues held in different locations: both students and teachers hoped schools would offer more opportunities for parents and guardians to participate, thereby strengthening community engagement.

*'There should be more open dialogue between parents and teachers about the school's role and the importance of parents in supporting the school's educational mission.'* -Participant in the online forum

Closer collaboration between the school and the home does not mean a weakening of the teacher's role – quite the opposite. The purpose of strengthening this collaboration is to clarify the foundations of the educational cooperation and to

improve the conditions for students' equal opportunities. Above all, it is about creating shared expectations and communicating the school's practices and values to families. The need for school-led pedagogically guided collaboration is increasingly evident in a society in which families' perceptions of the school, expectations and resources to support their child's learning are becoming more diverse. If a shared understanding of and expectations for roles does not emerge between the school and the home, students' support may remain insufficient, and their attachment to the school may weaken.

A well-designed collaboration between the school and the home makes it possible for the school to support families and guardians in their efforts to sustain their children's conditions for a good life and schooling. Such collaboration also enables the support that families can offer the school. In all kinds of school communities, families have the potential to support the school despite varying socioeconomic, ethnic and cultural backgrounds. *When parents and guardians come to trust that the school is always rooting for their child, and that supporting the child's schoolwork leads to good outcomes for the student and the course of their life, their trust in schoolwork deepens.* An effective collaboration with the parent community builds resources that also help those students whose parents or guardians, for one reason or another, cannot participate fully in the cooperation with the school or in supporting their child's learning.

Parents' and guardians' support for the whole school community and their understanding of their own role as part of that community are a key part of the comprehensive school of the future. The underlying principle is that the school does not have 'customers' to whom services are provided; rather, comprehensive schools are a learning community into which students enter and grow as members. From the perspective of wellbeing, belonging, participation and meaningfulness, it is therefore essential that parents and guardians also understand the school as a community. From this perspective, the functioning and shared wellbeing of the whole community is also of central importance for one's own child. Instead of a fragmented relationship with the school that is isolated into purely individual concerns, or a passive expectation of service provision, the comprehensive school fosters a strong community in which parents understand that investing in the wellbeing of the entire school community and all students is a key way to support their own child's learning conditions and future.

*'I'd genuinely like to know my students and their families because that is how we can get to teaching that truly benefits the student.'* -Participant in the online forum (teacher)

The aim of the collaboration with homes is to strengthen the educational partnership and thereby increase the support students receive from home for their schooling. When it works well, this collaboration builds families' trust in the school, increases the support that families' networks can offer the school community, and improves the school's ability to support families. The main goals in organising such work are:

- Teachers and other school staff commit to collaboration and understand the importance of taking students' whole life context into account.
- The school supports families, and families support the school – the collaboration strengthens both.
- Parents trust the school's goals and support their child's schooling.
- Students commit to the school and its ethos, and they are encouraged in this by their guardians
- The cooperation between school and families also supports the students, whose own family or guardians are not able to actively participate.

Stronger school–home collaboration is guided by the principle that the school must be aware of families and the significance of the school's social context, yet this collaboration does not steer the school; the school leads the collaboration. In other words, the school advances its core goals, and the shared dialogue about values seeks to identify shared aspirations and to commit parents within the framework of the school's pedagogical goals. To support this work, shared national operating models are developed. They are based on activities such as joint discussions, meetings, events and celebrations that schools adapt to their needs. They may also include research-based methods developed to build dialogue, trust and community engagement, and the involvement of different professional groups within the school.

## Learning ecosystem supports the school

In addition to homes, the school of the future also reaches out into its surrounding neighbourhood, and other communities and institutions. The goal expands to society as a whole and around the school: *the significance of the comprehensive school of the future is understood in society, and different actors begin to support both students and the school.* At the same time, schools increasingly understand the comprehensive school as part of a diverse learning ecosystem, which the school intentionally helps coordinate to guide students along a pathway to lifelong

learning and meaningful participation. The learning ecosystem includes various institutions and actors, as well as the communities and neighbourhoods around the school. The school acts as a local node in which multiprofessional cooperation strengthens learners' and families' possibilities.

The school's relationship with other actors will become even more important in Finland as society diversifies, and trust in the school is no longer as self-evident as before. At the same time, diverse support needs and effective learning require a broader range of actors. Strong connections with the surrounding community and a developed network of multiprofessional cooperation both in and outside the school are a key way to build trust in the school and to join forces with other essential actors.

Important partners in the learning ecosystem may include other public institutions, organisations and companies that can contribute to supporting a well-functioning school day and a thriving community. The learning ecosystem also extends beyond national borders, and international organisations and actors are increasingly recognised as partners. International cooperation is increasingly important in addressing complex global challenges and in developing the school's pedagogy.

*'Absolutely! More networking – people should be familiar with youth work, the library and other services. In particular, the school nurse, school social worker and psychologist should be made part of the community so they are easier to approach when necessary. Multiprofessional cooperation should be used much more, and we should invest together in the wellbeing of individuals and the whole school community.'* -Participant in the online forum

The recognition of the learning ecosystem around the school and its forms of cooperation aims *to combine the strengths of different actors to support the school's work, enable reciprocal support between the school and other actors and communities through the school's operations, strengthen students' meaningful participation and diverse learning, and support students' pathways into society.*

Examples of models developed together within the learning ecosystem include closer cooperation with libraries and cultural institutions to deepen experiential and diverse learning. Equally, it includes cooperation with local companies to create new learning environments and learning content. Through civil society organisations, the contribution of neighbourhood community members and other willing participants can be expanded to support the school. Practices such as 'homework grannies' and 'library granddads' are strengthened as forms of support

for schools. Other types of volunteer activities are also used – for example, to introduce students to culture after the school day, run clubs or assist in organising school events.

Such cooperation also enables the provision of support by the school to other actors and supports students' pathways into society. As part of the idea of mutual help and learning, students learn to engage in voluntary work, including helping in the local community, cleaning and protecting the environment, or helping in care homes. The experience of agency and being able to help is a central part of growing as a human being and of supporting students' self-esteem and experiences of meaningfulness. Collaboration can thus also be used to support meaningfulness by helping students discover their strengths and sense of participation, including those whose strengths are not always related to the school's core activities. If the school does not always provide experiences of success, action for the benefit of the local community or nature can offer those experiences. Helping others is also empowering: one is not always only the recipient of help.

Schools develop activities that strengthen the school's role in the learning ecosystem and enable the use of other actors' contributions in ways that are justified and in line with the school's goals. It is essential that cooperation does not increase the burden on school staff; rather, it should provide additional opportunities and resources to open up students' world and pathways into society.

## School buildings as meeting places between people and nature

School buildings are an important part of the comprehensive schools of the future: a physical place is a key factor in building the school community and enabling encounters. The comprehensive school of the future is therefore also a place that supports learning, strengthens students' experiences of belonging, safety and connection with nature, and creates a strong memory of a shared school that sustains a lifelong joy of learning. For example, in the vision work's futures dialogues, participants described their ideal future school as a multiprofessional and multicultural oasis of wellbeing that also functions as an active local hub after the school day.

The comprehensive school of the future understands how physical spaces affect learning and information processing in multiple ways. For example, the soundscape and the amount of visual stimuli influence concentration and the sensory and

cognitive load. Spaces can also enrich information processing: the brain areas connected with spatial processing also process concepts and their connections. For example, moving from one space to another helps students structure events and wholes, and the linking of knowledge to physical places – even only mentally – strengthens memory.

In addition to pedagogical suitability, school buildings also reflect the school's other roles. School design supports children's aesthetic and social growth. School buildings are nodes of encounters that emphasise the comprehensive school of the future's role at the centre of the learning ecosystem and the school's significance as an actor that brings communities together. The idea of the school as a hub of the learning ecosystem thus extends to the design and use of school buildings. School buildings also build students' connection with nature: they enable encounters between people and the natural world. In addition, the design of school buildings is guided by the school's strong commitment to nurturing wellbeing.

*'The school should be more open, creating new community engagement and serving residents as a freely accessible space. Different communities should be better recognised as part of the school community.'*

*-Participant in the online forum*

In schools, nature is present as a foundation of learning, calming down and experiencing connection. In terms of architecture and planning, this goal reflects a key principle of comprehensive schools of the future: ecological sustainability is not merely content in the curriculum but also part of the school's deep practices and ethos. In the school buildings of the future, nature's presence is multisensory and holistic: spaces are designed so that the environment, seasonal change and landscape become part of everyday life.

The design and use of the school grounds extend broadly into daily school activities and all subjects. The grounds offer opportunities to learn through observation and action: to grow, investigate, write, play, imagine and rest. Planning emphasises ecological solutions, authentic natural materials and living nature, which provides children and young people with wellbeing and learning experiences, as well as health-promoting microbial exposure. Experiences of nature are brought indoors as well, including through plants and other aesthetic and functional elements that strengthen the connection with nature.

Alongside the connection with nature, the school's role in promoting wellbeing is supported through other design solutions. Wellbeing is understood both as an individual experience and as a communal phenomenon, and its physical,

psychological and social dimensions are given attention. Planning emphasises pedagogical suitability and solutions that promote a calm learning environment. School buildings and grounds also provide spaces for shared play, movement and activities. The design of both school grounds and indoor spaces enables versatile physical activity as part of wellbeing.

The connection with nature and wellbeing is also intertwined with the school's broader role as an actor that brings communities together and as a local centre of everyday life. The school building may function as a shared neighbourhood space in areas where distances make this possible. When school facilities are designed to be multipurpose and easily accessible, they provide a platform for evening use, hobbies, cultural activities and gatherings. Libraries, kitchens, sports halls and grounds remain active beyond the school day, strengthening a sense of belonging, supporting family life and increasing social sustainability.

*'My dream school grounds would be a community garden where students and residents could care for plants together.'* -Respondent to the online forum

These solutions reflect a renewed understanding of the school: seeing the school as part of a learning ecosystem, in which learning is part of a meaningful and sustainable life. In a society with fewer shared institutions and fewer spaces that bring all members together, the school's role also becomes particularly important through its physical space, and how that space can be used.

## 15 A meaningful school and career for teachers and other school adults

Besides teaching, teachers' work is essentially about meaningfully enabling and guiding children's and young people's learning and human growth. Teachers' wellbeing at work and pedagogical wellbeing can be enhanced by supporting their sense of meaningfulness at work and systematically managing their working conditions. In our vision, teachers can focus on teaching and supporting holistic growth of students, develop continuously in their profession, receive support for professional growth, and belong to the school's pedagogical and multiprofessional community. The meaningfulness of work is recognised, and resources, structures and leadership ensure that the working conditions do not create ethical stress through a mismatch between requirements and possibilities. The comprehensive school of the future is therefore an attractive workplace, and it also increases the appeal of teacher education.

Teachers can also rely on the support they receive from the school leadership as diversifying technologies and societal changes create new challenges in schools' daily activities. Teachers' wellbeing is a precondition for the wellbeing of students and the entire school community. Where appropriate, the goals of meaningful work also apply to other school staff: the vision assumes that multiprofessional work to support children's learning and growth will increase in the future, and that the school must be a good and meaningful working community for all the adults in the school.

*'Teachers will remain important for sharing knowledge, and they are needed to guide young people towards reliable information.'*  
-Participant in the online forum

A teacher's task is to plan and implement learning and to reflect on pedagogical processes that support the development of students' knowledge and skills, and their social and human growth. The purpose of teaching encompasses both learning and the ethical dimension of education: supporting growth into responsibility, agency and membership in communities. In this sense, a teacher's work is also about meaning-making, that is, supporting students' knowledge, identity and making sense of the world.

Especially in an era of rapid societal change driven by artificial intelligence, teachers play a decisive role in defining what counts as meaningful knowledge, and what a broadly educated relationship with the world is like. Teachers guide students on a pathway towards becoming active and responsible thinkers who can act with others and steer AI in a changing world. Technology cannot replace the human role in building meaningful competence and participation. Strong relationships with other people are a central part of the learning process and constructing meaning in life.

In the vision process, teachers themselves highlighted the opportunity to meet learners as whole persons and to spark the joy of learning as the most important sources of meaningfulness in their work. Their responses emphasise the human, pedagogical and intellectual dimensions of teaching, and together they form a hope that teachers can fulfil their vocation as well as possible, in support of learning and growth.

*'Authentic encounters with students – and recognising their significance for a student's growth – make my work meaningful.'* -Participant in the teacher survey (comprehensive school teacher)

The meaningfulness of teachers' work is strongly reflected in their focus on students: the teacher's joy in seeing a student progress, grow and develop is at the heart of the work. Meaningfulness cannot therefore be sought only through external rewards; above all, it arises from a school that enables the pedagogical and human purpose of the work to be realised as well as possible while respecting every student. This also highlights the school's resourcing as a condition for meaningful work: resources must be sufficient to do the work well and to respond to each student's needs.

Teachers also identify collegial community and collaboration, professional competence and skilled colleagues, appreciation of the work, and experiences of unhurried daily activities as factors that support meaningfulness. In all our data, a sense of haste appears as a critical factor that reduces meaningfulness and causes ethical stress. A central aim for the school of the future is therefore also a school without haste. *In a school without constant haste, there is time to meet everyone, and space for thinking.*

In addition to educating individuals, the teacher's role includes supporting the future of society through the growth of a generation. A key task of education systems is to strengthen students' capacity to act as members of society in a

complex and rapidly changing world. Teachers cultivate the necessary skills, including ethical and critical thinking. This work is one of the core tasks of democracy: fostering participation, scientific thinking and the common good.

*'The fact that I contribute to building society through my work with young people is meaningful. I'm proud of my work.'* -Participant in the teacher survey (comprehensive school teacher)

The meaningfulness of teachers' work is supported through three key dimensions:

**Human interaction and supporting learning and growth:** The school of the future supports meaningful teaching by emphasising teacher–student interaction as one of the school's most important core tasks. As technology advances, the value of human presence and authentic interaction becomes even greater. The teacher recognises and supports students' joy of learning and holistic growth process, and is a genuinely significant adult in the student's life. The teacher is also a key pedagogical actor in the school community. The teacher sees students as individuals while also guiding communal development, and the social dynamics and growth of the community of peers.

**Agency and professional autonomy:** Teachers have strong agency and can influence pedagogical decisions and school structures to support meaningful work. Teacher autonomy does not mean working alone; it means active participation in a shared, reflective professional culture in which teachers are respected and trusted. School development seeks to create a strong communal school ethos in which the importance of the teachers' professional community is also highlighted.

**Resources, the absence of haste and impact:** The realisation of meaningful teaching requires sufficient resources for school operations so that the work can be done well and without excessive haste. In the envisioned school, there is time for the creative development of the work and for doing it effectively with the whole school community. For the teacher of the future, meaning also arises from the opportunity to influence the wider learning ecosystem and to develop the school community as part of positive change.

## Teachers' responsibilities and career

Teachers' teaching and educational responsibilities are closely intertwined throughout comprehensive education. The good performance of these duties requires effective teaching and learning interaction, good teacher–student relationships, and the wellbeing of all the actors in the school community. Teachers

guide the development of students' competence, agency, wellbeing and sense of community in collaboration with students, guardians and multiprofessional colleagues. Teachers are capable of critically reflecting on their own practices and developing teaching, learning environments and the school's operating culture with colleagues and stakeholders. The induction, active agency and sense of competence of newly qualified teachers are supported through systematic, long-term and professionally trained peer mentoring.

Teachers' occupational wellbeing is supported throughout their careers. The school's operating culture promotes teachers' wellbeing at work, work engagement and commitment to work. These factors contribute positively to teaching interaction and thereby affect students' motivation, commitment to learning and learning outcomes.

In a rapidly changing society, initial teacher education is connected more seamlessly than before to continuing education that supports the continuous development of professional competence. At the same time, lifelong learning strengthens schools' operating culture focused on continuous learning and development.

The attractiveness and retention of the teaching profession and teacher education are actively supported. Teacher education ensures the profession's appeal and accessibility to students from diverse backgrounds. Teachers are offered varied career paths that allow deeper specialisation or development for new areas of responsibility during their careers. This helps strengthen retention throughout teachers' careers. Teachers may already obtain several qualifications during their initial education and throughout their careers, enabling the education system to respond to changing staffing needs.

## Teacher education

**Teacher education** provides comprehensive school teachers with the capacity to keep up to date with the latest research and supports the development of professional agency and the ability to apply knowledge in their work to develop their professional competence and the school. Teacher education is grounded in a strong multidisciplinary research base. Research-based tools are used in teaching practice to deepen student teachers' reflection on their own teaching situations and skills.

Teacher education ensures that all teachers working in comprehensive schools acquire the knowledge and skills required for their work. Based on this, they can function flexibly as comprehensive school teachers, collaborate with colleagues and teach students with diverse needs. Teacher education strengthens teachers' knowledge of the learning and developmental tasks of different age groups, understanding of participation and inclusion, emotional and interaction skills in diverse in-person and remote teaching situations, and collaboration skills in multiprofessional teams and with families. The training includes language- and culture-aware pedagogy, special education expertise, wellbeing competence, societal literacy, understanding of social inequalities and skills related to shared leadership.

*'Teachers' didactic competence is strengthened and emphasised – learning is not about textbooks or digital devices but rather about teaching and the teacher's ability to manage instruction and understand learning.'*

*-Participant in the online forum (teacher)*

In universities, the initial and continuing education for comprehensive school teachers form a systematic whole to support professional development. Development is grounded in the latest research evidence and material such as the future visions published by the Teacher Education Forum. The foundational elements of the teaching and principal professions are retained: a master's-level education based on educational sciences, the qualifications derived from it, teacher autonomy and pedagogical freedom. The practice of the teacher's or principal's profession requires a high level of education, broad professional autonomy, societal trust and appreciation, and ethical accountability primarily to society.

The content of teacher education programmes is developed based on the future needs of comprehensive school education and to better respond to changes in the teaching profession, society and competence demands. Initial and continuing teacher education remain research-based, with their content clearly integrated. Teachers are research-informed developers of their own work and teaching, and initial teacher education therefore continues to be at the master's level and builds strong scientific thinking skills.

Initial and continuing teacher education strengthen schools' operating culture focusing on continuous learning and development in a rapidly changing society. During their initial education, teachers acquire up-to-date technological and pedagogical competence. The initial education also provides the necessary knowledge and skills for educational technology and teaching that uses remote connections. Teacher education ensures that all teachers working in comprehensive

schools acquire the necessary knowledge and skills so that they can work flexibly as teachers, collaborate with colleagues and teach students with diverse needs. Collaboration among teachers is fluent, and all teachers possess strong skills in co-teaching and team teaching. Co-teaching and team teaching are already practised during initial education through teaching practice in university training schools and partner schools.

*'In dialogic teaching, the teacher listens sensitively to students and supports constructive discussion. Personal interaction is irreplaceable and requires sufficiently calm teaching situations and reasonable group sizes. This can't be replaced by digitalisation – some other things perhaps can, but this requires resources (teachers' time and energy).'* -Participant in the online forum

### Mentoring and continuing education

**In the envisioned school, teachers' participation in continuing education** is mandatory, statutory and systematic, and it is supported by school leadership. The forms and content of continuing education are in line with teachers' self-defined goals as part of continuous learning that is connected with the school's daily activities and advances both the professional competence of teachers and the development of the entire school community in response to changing societal needs. Long-term continuing education programmes aimed at strengthening teachers' competence and renewing pedagogy are connected with teachers' tangible teaching practice and the collective development of the school. Short-term training sessions – delivered both in person and remotely – address acute challenges or introduce new ideas through interaction with experts and colleagues.

Continuing education focuses on areas that cannot be explored in detail during initial teacher education. It also responds to societal and regional changes. Newly qualified teachers are offered mentoring during their transition into working life, guided by trained mentors. Opportunities for mentoring are also available later, as diverse mentoring models are continuously developed for mid- and late-career stages, paying attention to changing working conditions.

## 16 A future-skilled school: Leadership, evaluation and national collaboration

### National governance

In comprehensive schools of the future, the implementation of the vision's goals is enhanced through national, local and school-level leadership. The legislation and norms guiding comprehensive school education form a coherent and forward-looking whole that safeguards free comprehensive school education for all children as a fundamental educational right. This framework is based on long-term parliamentary cooperation that extends beyond government terms and ensures the stability and continuous development of the education system. Legislation is renewed systematically in collaboration with various stakeholders so that it responds to the needs of a changing society, increasing learner diversity and the challenges of a sustainable future. At the core of all efforts is the best interests of the student: education is adapted to students' developmental stages and individual capacities in cooperation between home and school. The prevention of regional segregation and the enhancement of equality are crosscutting objectives in legislative guidance, ensuring the school's social role and students' wellbeing in sparsely populated areas as well.

At the local level, comprehensive school education is governed in accordance with the neighbourhood school principle, and the primary responsibility lies with municipalities. The provision of comprehensive school education is non-profit-making, but it is supported by legislation that enables flexible cooperation among different actors, particularly in regions with declining numbers of schoolchildren. Funding ensures high-quality and equal comprehensive school education in both national languages throughout the country, paying attention to demographic changes, regional differences and socioeconomic challenges. National quality criteria complement the legislative framework, ensuring that education remains effective and of high quality across Finland. In addition to legislation, funding and shared operating models, leadership in the field of education has been and continues to be developed systematically at different levels of the education system so that leadership structures, roles, tasks and responsibilities are clearly defined.

## School leadership

### The principal is responsible for the school's operations

In the future as well, the principal is responsible for the overall functioning of the school. The principal's task is to ensure that comprehensive school education is provided lawfully, safely and with high quality. Leadership is understood as a systemic and collaborative process in which the principal acts as a pedagogical, administrative and community leader. The primary objective of leadership remains the promotion and safeguarding of students' learning, development and wellbeing. The principal is responsible for the development of school operations, the quality of teaching and the professional development of staff. The principal leads the school holistically, promotes students' wellbeing and supports the work of staff. School leadership is a comprehensive role that integrates administrative responsibility with operational leadership.

To lead schools, principals are required to have both teacher education and training in school administration and leadership. Leadership development is research-based. High-quality leadership and supervisory work are foundational to education and require sufficient time. Adequate resources are allocated to school leadership, paying attention to differences in school size and the expanded collaboration taking place in various networks. In the future, school leadership is an attractive and competitive position.

### Leadership is a joint effort

Finnish society has undergone rapid change in recent years, with social and regional segregation increasing and expected to continue. The uncertainties and risks in the operating environment require systematic and continuous collaboration between municipalities, schools and national-level actors to ensure that solutions are coherent and sustainable. At the same time, school staff structures are becoming more diverse, which changes the nature of personnel leadership by principals, requiring the ability to lead the work and cultures of different professional groups.

Future-oriented leadership requires systemic understanding and a holistic pedagogical perspective. From leaders, this demands commitment and the continuous reflective development of both their own leadership and the school community's operating culture. Leadership is not merely reactive but also anticipatory and actively shapes the future with the school community and stakeholders. Development is grounded in research-based and future-oriented practices that strengthen the school community's collective agency and capacity to learn and renew under changing conditions. Leaders are expected to possess both

general leadership skills and deep pedagogical expertise, enabling them to act as pedagogical leaders and create structures that support learning, wellbeing and communal development.

Competence is also built through problem-solving and learning situations encountered in daily work, as well as through dialogue between individuals and teams. Leadership is understood as a collective process in which knowledge and leadership develop through shared activity. At its core is a culture of trust that supports the co-construction of knowledge and strengthens commitment. Such leadership reduces workloads and creates the conditions for a shared building of the future.

### **Shared setting and achievement of goals**

Schools' goals are formulated as part of a strategic and continuous process in which shared leadership strengthens commitment to common goals and necessary change. Leadership emphasises participatory decision-making and the creation of structures that enable agency, learning and influence. The setting, promotion and evaluation of shared goals are seen as an interactive process realised in multiprofessional teams that draw on their members' diverse strengths. A jointly constructed interpretation of a desired future increases the meaningfulness of work and strengthens the community's wellbeing and hope.

### **Trust and respect in interaction**

Interaction and dialogue are central in building strong and sustainable relationships between school actors. These relationships are grounded in trust and mutual respect, which create psychological safety and enable the realisation of professional identity and participation in community development. In a systemic operating environment characterised by continuous change, dialogue functions as a tool for interpreting change, anticipating developments and co-creating solutions. The school's operating culture evolves towards a model in which autonomy develops through interaction, and the best solutions emerge through collaboration. Leadership is not merely administrative guidance; rather, it is a situational and dialogic process that supports the community's capacity for change.

### **A developing and learning organisation and sustainable development**

Leadership promotes the development of the school community as a learning organisation capable of continuous renewal and adaptation. This requires structures that support learning at the individual, team and organisational levels.

Its success is based on a shared vision for the comprehensive school, effective collaboration and a holistic understanding of the interdependences in school operations. Mistakes are viewed as valuable learning opportunities, as they reveal tensions and development needs and create space for collective reflection and new solutions. Through this orientation, leadership also models safe learning space with a possibility to fail and try again for the whole school community, including students.

Leadership also builds long-term relationships with external actors that support learning and wellbeing, enabling activities that not only respond to current needs but also anticipate future opportunities. Within this framework, the school building functions as a hub for a broader ecosystem of learning and wellbeing involving families, communities and other partners. The leadership of this broader ecosystem of learning is defined separately and does not fall directly under the principal's responsibilities. This allows the school's pedagogical and administrative leadership to focus on supporting students' learning and developing the school community.

## Learning diagnostics and assessment support learning and the development of the comprehensive school

The comprehensive school of the future places primary emphasis on assessment that **supports learning**, promotes the **equality of opportunity for students** and **enhances the quality of the system**. At the individual level, the purpose of assessment is to enable students to deepen their self-knowledge and learning, that is, to support their development of learning to learn. The assessment of students is equal, transparent and reliable.

Advances in artificial intelligence make it possible for formative and summative assessment to become more diverse. The focus of assessment is primarily on the *learning process and the genuine understanding and thinking skills that emerge from it*. In the school of the future, assessment supports such understanding by shifting the emphasis to identifying and nurturing the process of thinking. The teacher's role in guiding the assessment process and providing feedback remains central, but teachers have more tools to support their implementation.

At the level of the education system, assessment and diagnostics are developed with the aid of technology to identify ways to strengthen students' learning and the equality of outcomes. Advanced technological methods enable a better identification of learning difficulties and increasing support needs linked to

students' background factors or other circumstances. Assessment and monitoring are thus actively developed to improve learners' opportunities and to ensure progress in learning.

Assessment also evolves to support the quality of the education system. The system seeks to systematically ensure schools' consistent institutional quality and high standards of operations. Assessment is therefore understood primarily *as a tool for strengthening and improving the system's performance*. It enables the identification of gaps in institutional equality of opportunity and related development.

*Schools also actively develop ways to define and monitor areas of competence that have traditionally been considered difficult to measure.* This is important at the system level, as learning increasingly emphasises capabilities such as creative problem-solving and ethical skills alongside basic skills. At the same time, assessment and monitoring must be implemented in a way that does not reduce learners' internal motivation or steer learning narrowly towards only what can be measured with precision. A key element of assessment is its role in clarifying learning goals and supporting learning: the aim is not to maximise points through mechanical performance but to reflect on one's learning in relation to goals and to develop tools for deepening one's understanding. When skilfully implemented, assessment also reduces opportunities to succeed through mechanical memorisation alone and can increase motivation to learn.

From the student's perspective, assessment is primarily coaching: it helps students understand their own learning process, encourages them to continue, and provides information about the direction in which to develop their learning.

## A foundation of competence and a resilient society

As many future challenges such as technological problems or societal crises are impossible to predict, future education must strongly emphasise resilience and a society resilient in terms of knowledge. The need for knowledge- or competence-related resilience concerns all forms of competence that are essential for society to function in unexpected situations of, for example, technological failures. *The principle of competence resilience is that individuals and society possess such a strong foundation of knowledge, skills and civility that together we can face any kind of future.*

In particular, the development of technology and AI increases the risk that an increasing number of processes will be automated, and that human skills in those areas will erode. The comprehensive school must therefore help ensure that human competence remains at a level at which it is sufficiently independent, including from technology. Alongside its goal of supporting students' diverse learning and growth, the comprehensive school of the future ensures that reliance on technology does not become excessive.

Competence must also sustain society during technological failures, conflicts or crises. Competence resilience also concerns the knowledge base necessary to navigate everyday life without significant technological assistance. This includes an understanding of the functioning of society, processes in the global and Finnish environment, food production, and interdependences.

A practical example of an area currently threatened by the technology-driven erosion of competence security is languages. The study of foreign languages in the comprehensive school has declined during the 2000s, and in the future, technology will increasingly enable automatic translation in all communication situations. In principle, it is possible that language skills will continue to weaken, and that the competence gap does not receive public attention, as long as translation technology functions and fulfils practical needs. 'Linguistic security of supply' means that society can communicate multilingually both with its own population and with the wider world. In the comprehensive school of the future, languages and other areas of knowledge and skill will therefore also be approached more explicitly than they are today from the perspective of societal resilience. In this respect, some knowledge and skills that may appear of limited importance in everyday life in a technological society may in fact be crucial for both the development of individual thinking and society's knowledge resilience.

A similar perspective of resilience is also applied in comprehensive school in other areas of knowledge and skills. The knowledge and competences required for resilience are best ensured by the school's commitment to supporting holistic human growth and the development of *sivistys*, without forgetting practical and manual skills. At the same time, the knowledge and skills required for sustainability evolve over time, and the inclusion of the idea of competence resilience in the development of the school and curricula helps ensure that changing needs are recognised. *The goal is to identify the foundational knowledge and skills necessary both for students' educational development and thinking skills and for the knowledge resilience of society.*

*From the perspective of a sustainable society, the school's role is also important in relation to social cohesion – a sense of belonging. Society needs a sufficiently shared knowledge base to enable people's commitment to common goals. If conceptions of knowledge and ways of knowing become too fragmented, it is impossible to have shared goals. The comprehensive school's most significant role as a foundation of national capacity to function and resilience is therefore to strengthen students' knowledge-based understanding, collaboration skills, democratic participation, conflict resolution capacity, ethical skills and critical literacy, including information literacy and technological literacy. In the future, societal resilience against threats such as hybrid influence operations will require citizens to have stronger information literacy and a better understanding of influence mechanisms, as well as the ability to defend against manipulation and maintain mutual trust.*

## **A future-competent school: Systematic national practices support the continuous development of the educational system and regional equality**

*In a rapidly changing and globally interconnected world, the school's operating environment, competence needs and technology change ever faster. This vision does not describe a future realised in 2045 but the future for which we are aiming at the time of writing. Our future direction and the strategy for reaching it must be continuously reassessed and refined. A central element of the comprehensive school of the future is therefore the possession of continuously developing future skills at the level of the entire education system.*

The development of the school aims for more active collaboration in which key questions are identified and addressed through broad-based dialogue. An essential element of a future-skilled system is the pursuit of shared solutions based on the best available knowledge and an awareness of development needs and anticipated challenges.

Systematic national practices are emphasised as the foundation of the development of the comprehensive school of the future in terms of students' equality and national strategic development. Amid rapid changes, it is increasingly important that school development is systematic, and that changes in competence needs and challenges affecting school are addressed through solutions based on the best possible national and international evidence.

The rapid development of technology is one change that underlines the need for national solutions. For example, the solutions concerning AI require shared approaches, as many functioning practices require an extensive evaluation of research evidence and the mapping of international practices. The development of AI tools and tutoring models for daily school use cannot be achieved purely at the local level. Fully localised development would also waste resources if each municipality were forced to create its own strategies, models, tools and information systems. Similarly, the prevention of school segregation requires national and local multi-actor solutions so that the efforts to counter school segregation can be coordinated in different phases from regional and urban planning to school operations and resource allocation.

The development of the school of the future therefore increasingly relies on anticipatory, systematic and research-based national development work carried out in dialogue between multiple actors. This is not about increasing hierarchical development but about multilevel collaboration coordinated nationally. Such development identifies all relevant participants and involves future-oriented cooperation between different levels of administration and networks. The national practices are applied to multiple areas of school development, leadership and evaluation. The quality and availability of pedagogical materials are also increasingly developed through shared models, ensuring access to high-quality materials everywhere.

Through systematic national operating methods, the school of the future can ensure that equal conditions for learning are maintained despite the growing regional differences in the operating environment. The key drivers of societal change indicate that social and economic disparities are likely to grow, both between municipalities and within urban regions. For equality, it is essential that schools' economic and social resources do not diverge as regions diverge, including as a result of growing differences in municipal resources or the differences in community resources resulting from neighbourhood segregation. A key means of safeguarding schools' institutional equality amid regional differentiation is to increase the role of shared national solutions and national resources.

*In other words: the greater the local disparities are in organising the provision of education and in the social conditions in which the provision takes place, the more important are shared national practices and the equalisation of the conditions for development and access to knowledge. The fast pace of global change further increases this need, as responses to it require increasingly specialised expertise.* National solutions ensure that complex global challenges do not have to be solved with local capacities and resources.

At the same time, these solutions also take local differences into account. Systematic national development does not mean that every municipality or school must operate in the same way. On the contrary, it means that local solutions are situated in a carefully considered national development framework, and that *locally varying solutions are nevertheless grounded in the best shared knowledge* and institutional resources. The achievement of equality may therefore mean solutions such as the current equal opportunity funding mechanism (*tasa-arvoraha* or *tarveperusteinen rahoitus* in Finnish) that allocate greater resources to schools in which students have greater support needs due to the local socioeconomic context. The achievement of equal goals requires an analytical, system-level understanding of the factors influencing learning and the local and school-level resource needs they generate.

National solutions are not critical solely from the perspective of students' equal opportunities; they also arise from the need to coordinate the national situation. Many areas of knowledge and competence require national coordination so that the overall competence base does not become narrower. The vision therefore emphasises the *growing importance of national decision-making and systematic practices, both for student equality and for national strategic development. A future-skilled school of our educational vision ensures resilient education, and our sustainable ability to reorient the practices for nurturing civistys in a changing world.*

## Part IV. Pathway of co-creating the vision

### Methods used to develop the vision

This vision was developed in a way that was itself in line with the idea of a future-skilled and sustainable school. In other words, the vision process, which was developed in dialogue throughout the work, was deliberately designed to be part of the vision itself with the aim of strengthening future skills and democratic processes more broadly.

The process was built on collaboration and the combination of broad-based expert knowledge, research evidence, experiential knowledge and community knowledge to strengthen future-skilled orientation. Through different channels, more than 5,000 people were heard, and the vision was designed in interaction with them.

A core feature of the approach was co-creation throughout the formulation of the vision. The hearing of stakeholders therefore not only took place before the writing phase; key syntheses and contents were discussed with teachers, education leaders and young people themselves using co-creation methods. The process itself was also improved in dialogue with participants. At the same time, the process sought open exchange with international actors and other education systems, as the Finnish vision of comprehensive schools sits within an international context of shared challenges and ongoing development.

The various perspectives were brought together by the Delegation for Futures Work in Comprehensive Schools and an editorial group consisting of officials from the Ministry of Education and Culture and the Finnish National Agency for Education, who also bear responsibility for the final wording of the written versions of the vision.

## 17 How does Finland's vision of comprehensive schools compare with international education goals?

The Finnish vision of comprehensive schools is Finland's own. However, in a globalised world, the goals and purpose of education must be examined in dialogue with others, as culture, economies and labour markets are tightly interconnected. Shared dialogue helps identify key challenges and assess the impacts of different solutions.

The background of the vision work was a review of the international research and vision literature. The objectives of the work were also considered in dialogue in particular with the OECD project High Performing Systems for Tomorrow: Education for Human Flourishing. Finland's vision work has also influenced the OECD project's interpretations and objectives through this dialogue. The guiding idea of the OECD project is to refocus the purpose of education on human flourishing, that is, on the development of people's diverse capabilities, sense of meaning and ethical agency.

The project emphasises that this goal does not conflict with education's economic role. On the contrary, a person who is well, experiences life as meaningful and is ethically mature is also well positioned in the changing environment of work and the economy. At a time when the structures of working life are undergoing rapid transformation, education that builds creative thinking, shared problem-solving capacity and ethical capability also provides the most economically sustainable foundation as young people enter fundamentally new labour markets.

The project has outlined five new competencies as goals. The starting point is that these competencies are not separate skills but broader capabilities that enable human flourishing:

- **Adaptive problem-solving**  
The ability to apply competence in new situations, develop solutions in conditions of uncertainty and learn continuously. The characteristic features include creativity, metacognition and the ability to collaborate, including collaboration between humans and AI.
- **Ethical reasoning**  
Moral judgement, the ability to recognise how one's actions affect

others, shared responsibility and ecosocial understanding. The emphasis is not only on knowledge but also on the quality of judgement and its underlying values.

- **Understanding the world**  
The ability to make sense of the world from multiple perspectives and to reconcile conflicting views. This competence builds cultural literacy and the ability to navigate a global reality.
- **Appreciating the world**  
Through aesthetics and experiential understanding, this competence fosters empathy, sensitivity to values and the ability to find meaning. It connects art, nature and humanity in a holistic experience.
- **Acting in the world**  
Finding one's purpose, showing initiative and participating actively. The emphasis shifts from performance to impact, meaning and lifelong learning.

Adaptive problem-solving refers to the ability to act in conditions of uncertainty, learn new things and design solutions for situations one has not practised in advance. Ethical reasoning highlights responsibility, the capacity to examine issues from multiple perspectives and action for the common good. Understanding the world entails cultural and historical literacy and the ability to reconcile conflicting worldviews. Appreciating the world refers to aesthetic sensitivity, the experiential dimension, and the ability to perceive beauty and meaning in both art and everyday life. Finally, acting in the world means that individuals find purpose, make choices and make their mark – not only through work but through all forms of human participation.

These competencies are not separate additions to education, nor do they diminish the importance of basic skills. On the contrary, these broader competencies require strong basic skills such as literacy and mathematical thinking, and they also support their development. At the same time, they reorient basic skills and create new meanings based on them. The competencies also rely on social and emotional skills, wellbeing, and experiences of belonging and participation. The OECD framework is based on the idea of refocusing education to support meaningful and multifaceted human flourishing: the goal is not to teach more but to deliberately seek meaning in teaching. Another OECD vision initiative, the Learning Compass, similarly highlights creative thinking, socio-emotional skills, transformative skills and agency as key competencies for the future.

Several other international processes have highlighted similar goals, and for example UNESCO proposes a new social contract for education in its report *Reimagining our futures together*. It calls for a broad rethinking of foundations: what kind of future does education build, and on whose terms? UNESCO's vision is built on the following principles:

- **Quality education is a human right throughout life.** Everyone's right to high-quality, relevant and accessible education must be ensured and protected. Exclusion and discrimination must be eliminated.
- **Education is a shared public endeavour and a common good.** Education should enable individuals and communities to flourish together. It must be sufficiently supported as a public endeavour and protected from commercialisation and profit-seeking.
- **Education is grounded in protecting and enriching a shared knowledge base.** Education should reflect the broad spectrum of humanity's ways of knowing, living and being. Many measures of educational attainment have been too narrow but also inadequate in relation to today's complex challenges. We need a much broader reliance on the diverse perspectives, histories and sources of knowledge in our interconnected world.

The core message of UNESCO's report is that every society must develop its own versions of this new social contract for education based on democratic debate, the shared imagination of the future and courageous action.

Finland's vision draws on ideas developed in the OECD project and in other collaboration and research reviews, emphasising creativity, asking the right questions about the meaning of learning, and broad-based human development. International discussion also highlights that people should not compete with AI or robots; instead, we must work together to become better humans through the development of basic knowledge and skills, human capabilities, socio-emotional skills, and learning to exercise agency.

Internationally, Finland's starting points for meaningful renewal are excellent. Historically, the Finnish comprehensive school has been an institution in which equality, wellbeing and education have met, and which has provided students with a shared space for developing themselves. In many ways, our comprehensive school institution is already a leader in international development that aims to support children and young people in reflecting on and understanding themselves, others and the world, in developing solutions to planetary crises, and in using shared agency to address problems we do not yet even recognise.

## 18 Co-creation of the vision as part of building comprehensive schools of the future

This vision of comprehensive schools of the future was developed through co-creation methods, engaging more than 5,000 people in Finland in various ways. The aim was for the process of creating the vision to reflect the very future that is our aspiration for the Finnish comprehensive school system. The idea guiding the work was that the open and co-creative approach to developing the vision was itself part of the vision's core: the future is built together, and genuine dialogue makes it possible to highlight seeds of the future that exist in communities. At the same time, the broad-based co-creation of the vision itself aimed to generate a shared future-oriented narrative for education.

The aim for the vision development process was to create an inclusive method for the work, and to include a diverse group of participants. It emphasised research-based knowledge while listening to researchers, experts from different sectors of society, teachers, education professionals, parents, grandparents and – most importantly – students. A shared direction for the comprehensive school was sought by listening to and reconciling diverse voices, values and needs. The vision process began in early 2024 and concluded at the end of 2025.

At the outset, the work did not begin with predefined content or report headings. All the key emphases of the vision were jointly explored and articulated. The only elements defined at the beginning were the themes derived from three major future drivers: competence and future skills; artificial intelligence and technology; and ecological and social sustainability. These themes were used to structure future-oriented discussions, but the main emphases of the vision were identified through online surveys, seminars, research literature and other methods of knowledge-gathering used in the vision work. The different themes arising from the initial surveys and discussions were then further developed in a co-creation process with different stakeholders.

The vision process was led by Ministers Anna-Maja Henriksson and Anders Adlercreutz, and Permanent Secretaries Anita Lehikoinen and Heidi Backman from the Ministry of Education and Culture. At the heart of drafting and shaping the vision was the Delegation consisting of 46 members, representing a wide range of professional groups and fields of expertise. The diverse backgrounds of the

Delegation members made it possible to view the school from both the inside and outside, helping articulate future needs and aspirations from the perspective of society as a whole. The group's work was additionally supported by a parliamentary monitoring group of the Finnish Parliament, with representatives from all political parties.

The members of the Delegation are listed at the end of the report. The Delegation was supported by a secretariat composed of officials from the Ministry of Education and Culture and the Finnish National Agency for Education. During the vision process, the Delegation organised five seminars that explored emerging drivers and scenarios of the future, reflecting on the central themes of the vision. One of these seminars, focusing on meaningful education, was open to all interested participants. In addition, the Delegation met dozens of times in smaller working groups and virtual meetings.

The voices of people in Finland were gathered through an online forum created by Fountain Park oy at the initial stage of the vision work in the autumn of 2024, after the Delegation had formulated key questions for open public discussion. Subsequently, people in Finland were heard throughout the vision process via an open consultation service and a more targeted online survey. More than 4,000 participants were reached through these online channels.

In addition, students and school staff were engaged through three futures dialogue events organised jointly by the Ministry of Education and Culture and the Finnish National Agency for Education using the Timeout (Erätauko) method (held in Vaasa, Oulu and Helsinki), as well as through five futures dialogues organised jointly by the Opinkirjo development centre, the Oppiva Network and the Finnish Parents' League. The Vaasa dialogue focused on Swedish-language education, the Oulu dialogue on Sámi-language education, and the Helsinki dialogue on multicultural schools. Altogether, approximately 330 participants participated in the Vaasa, Oulu and Helsinki forums, and the other dialogues reached more than 300 participants.

In addition to the digital platforms and the open seminar, the general public was also able to participate through events such as a public discussion held at SuomiAreena in 2024. Teachers' and school staff perspectives were further gathered through a survey conducted by the Trade Union of Education in Finland (OAJ) in September 2025, which received responses from approximately 400 participants.

The co-creative nature of the vision process is particularly evident in the fact that the hearing of stakeholders was not limited to collecting views at the preparatory stage. Instead, the vision's emerging ideas and emphases were repeatedly brought

back to discussion in meetings and seminars. For example, the vision's key ideas were discussed in municipal education directors' meetings, teachers' trade union gatherings, professional teacher networks, municipal and civil society seminars, and other events. In addition, two teacher panels were held in the autumn of 2025, involving approximately 60 teachers, who were presented with the core emphases of the vision and invited to reflect on its strengths and important considerations from the teacher's perspective. Their feedback was used to further refine and refocus the emphases.

In addition to the broad engagement of Finnish society, the vision work has drawn on international dialogue. A meeting of the OECD project Education for Human Flourishing, referred to in the previous chapter, was held in Helsinki in January 2025, at which representatives of the education systems of Estonia, Germany, the United Kingdom, Canada (British Columbia), Singapore, Australia and others discussed Finland's draft vision. International research dialogue also took place at various conferences, seminars and bilateral meetings with ministries and education developers from different countries.

The final vision text was produced through the collaboration between the Delegation and the editorial group consisting of officials from the Ministry of Education and Culture and the Finnish National Agency for Education. The co-created vision does not describe a future realised in 2045 but rather the future for which we are aiming at the time of writing through the key emphases identified in the work. Even at its best, a single vision is an invitation to dialogue, which we hope will be continued throughout society. The goal is for visioning to remain an ongoing practice in a future-skilled education system. In future discussions, society may again reimagine itself and inspire ever wiser generations of students to create better futures together.

## Attachment 1. Delegation members and acknowledgements

The Delegation for Finnish Futures Vision Work included during the period 2024–2025 the following persons:

Saarikivi Katri, Turun yliopisto, neuvottelukunnan puheenjohtaja  
Toikkanen Tarmo, Suomen itsenäisyyden juhlarahasto Sitra, teknologiateemaryhmän puheenjohtaja  
Vainikainen Mari-Pauliina, Tampereen yliopisto, oppimisteemaryhmän puheenjohtaja  
Käyhkö Jukka, Turun yliopisto, kestävyysteemaryhmän puheenjohtaja  
Damlin Inger, Finlands svenska lärarförbund FSL  
Grundström Camilla, Svenska Finlands folkting  
Harvio Jari, Digikilta  
Heinonen Olli-Pekka, International Baccalaureate IB  
Hellas Arto, Aalto-yliopisto  
Huotilainen Minna, Helsingin yliopisto  
Järvelä Kristiina, Tampereen kaupunki  
Järvenkallas Satu, Helsingin kaupunki  
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Pyhältö Kirsi, Helsingin yliopisto  
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P.O. Box 29 FI-00023 Government, Finland  
Tel. + 358 295 16001 (switchboard)  
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