

Finland's Future of Education 2045 vision, talk by Anders Adlercreutz (Finland's Minister of Education). May 2025.

Dear friends,

Finland has been drafting a national vision for the future of education for some time now. That work is not yet fully finalized, but our thinking has come to rely on two foundational building blocks: equality and human skills – the latter encompassing things like human growth, knowledge and ethical responsibility.

To us, equality is both an important value, as well as a tool for ensuring that we make use of the entire potential of the society. We believe that equality is a prerequisite of a prosperous future. There is no individual flourishing without the flourishing of others, after all.

Our aim is to create a future vision as a fast point in the horizon for navigating among uncertain futures. The world is changing rapidly, in very profound ways. Technology advances at a constantly accelerating pace. We cannot only try to react to this change with fragmented reforms. Instead, a cohesive and long-term vision is needed to address both the challenges and the opportunities brought about by the digital transformation.

In Finland's vision of the Future of Education 2045, schools are seen not as passive recipients of change, but as active shapers of a sustainable, democratic, and inclusive future. One of the underlying questions in the vision is: *What must humans learn in an age where machines will be able to outperform us in most things?*

Finland's answer is to invest in human capacities that cannot and should not be automated; things like empathy, creativity, ethical reasoning, and democratic agency. We need to be and uphold the human factor in the age of machines and artificial intelligence. At the same time, we must ensure that everyone gains both digital competencies and foundational literacies. The goal is to maximise our human potential, whilst ensuring no one is falling behind.

Technology does pose a clear challenge to equality. Socio-economic background has a large impact on pupils' learning outcomes in core skills such as literacy or maths in all countries, and the role of social background has actually increased in Finland. This gap may grow even larger when it comes to applied skills needed to harness new technologies like AI; families with high socio-cultural capital may be able to transfer these skills to their children more effectively than others.

If our school systems cannot facilitate the needed skillsets, individual backgrounds may start to play a larger role in educational success and life paths. This is a risk also in the Nordic societies, which have traditionally enjoyed a high level of equality in opportunities.

In Finland, our aim is to combine advances in technology and AI with equity. We want to use AI to increase both individual capacities as well as equality within the communities. In our vision, school should narrow the social gaps in AI skills, and utilize AI to support students with different learning challenges, all the while encouraging the development of individual strengths. In this model, *equity supports excellence*.

Finland remains committed to the model of a common comprehensive school that serves all learners, regardless of background. This model is quite rare in a global context, and appears to

be increasingly valued: it resists tracking and socio-economic segregation, and fosters both social trust and a shared civic identity; two things that seem to be in increasingly short supply these days.

Technology cannot be seen as merely a tool for innovation; it is also a potential equalizer. Our policies must support the strategic use of AI and digital platforms to offer pedagogical support such as distant learning opportunities to rural schools and to personalize support for learners who struggle with the pace. The strategic use of AI could also be used in regards to the content; to reduce administrative burden on teachers and free more time for human interaction, as well as to support multilingualism and inclusive pedagogy in increasingly diverse classrooms. Our policies must support the strategic use of AI and digital platforms to offer pedagogical support such as distant learning opportunities to rural schools and to personalize support for learners who struggle with the pace. The strategic use of AI could also be used in regards to the content; to reduce administrative burden on teachers and free more time for human interaction, as well as to support multilingualism and inclusive pedagogy in increasingly diverse classrooms.

Our approach seeks to avoid techno-solutionism. Technological implementations are evaluated not just for efficiency, but for their impact on student wellbeing, sense of belonging, and pedagogical depth. The use of technology in schools must be pedagogically sound, and take place in communal learning environments to encourage the human core of education.

Finland's education system has for a long time made use of teachers' broad professional autonomy, relying on well-educated teachers, as well as strong public trust. We wish to further strengthen these strengths in the future by; investing in teacher wellbeing and continuous professional development; by integrating technology to amplify rather than displace teacher expertise, and; by supporting pedagogical innovation in both digital and hybrid learning environments.

Finland's future vision sets to develop curricular goals around *technological literacy*. Finnish children are already performing very well in technological and media literacy, and this cross-curricular focus will continue to receive attention. All students need to understand how algorithms work, their limitations and biases, and learn how to use them responsibly. The ability to navigate through a sea of misinformation, deepfakes and hidden algorithms is quickly becoming an absolutely vital civic skill for everyone.

Students will also need to many meta-skills like learning how to learn, how to constantly adapt, and how to think critically in complex environments. Social competencies are needed just as much – or perhaps even more – than before, as collaboration, empathy, and cultural understanding are crucial for working together productively with people and machines. At the same time, the importance of motor and embodied skills does not disappear anywhere; Physical activity, handwriting, and manual work as well as arts and crafts education for cognitive and emotional development remain important for all students.

Rapid digitalization carries real risks, including the widening of digital divides, the overreliance on AI in skill development (such as the idea that we would not need to learn foreign languages in the future); and the erosion of attention, memory, and social skills in over-digitalized environments. The last-mentioned issue is perhaps the most visible of these challenges at the moment, and many countries have recently taken measures to limit the use of digital devices in schools. Finland is no exception.

In order to mitigate the negative effects of global digital transformation, Finland's future vision work puts emphasis on human development-centered learning goals (such as the need to know languages for our cognitive development and cultural and empathy skills), as well as educational resilience (such as the need to have social capacities to foreign languages in case

technology fails). It is important to ensure that human competencies, local expertise, and institutional control are not undermined by our dependency on global tech infrastructures.

In addition to learning to learn, it is vital that everyone learns how to interact socially with others and their ideas. While we are still in the early days of the digital transformation, rapid technological change has already made it clear just how important it is to foster students' social skills, and allow them to grow into truly well-rounded individuals.

If there's one takeaway from all of this that I want to impart on all of you it's this; it takes a community to create wellbeing. Future education must view the school and the students as a whole, as a community of teachers and learners who all contribute towards a common goal. All too often, we take wellbeing to be an individual trait or good, forgetting that it is created only through social interaction with others. Members of a community or society that is well are far more like to be well themselves. Things like an individual's identity or the feeling of self-worth, purpose, and meaningfulness can only exist within that social context. And the feeling of place and belonging can only be achieved as part of a community.

This is why it is so essential that school culture encourages and fosters positive social interaction, providing the students with necessary social goods like safety, support, acknowledgment and accomplishment, friendship – all the ingredients of well-being. Physical activity, naturally, has its own place as well, as do creative subjects.

This does not mean that learning should be easy and entirely stress-free; indeed school needs to challenge the students to constantly improve their knowledge and skills, and to grow as persons, in every sense of the word. School is a place for learning the value of hard work, and to learn to cope with inevitable failure. A place to get to know one's own strengths and weaknesses, and to find the right paths to success. School is a place where everyone learns to believe in themselves, as well as to trust in their community.

So, this is our vision. Finland's idea of education in the future. In a world of overarching digitalization, we believe that there's a need to put greater focus into teaching the most profound of skills; the things that make us human. And not only that, but *better* humans. It's not a simple task, I know. But it is a necessary one.

Thank you.