

# Conclusions and recommendations of the National Audit Office of Finland

## Digitalization of teaching and learning environments in general education

The audit was targeted at how the digitalization of teaching and learning environments in general education is steered and managed, particularly in central government. The aim of the audit was to evaluate the capabilities of different actors to promote the digitalization of teaching and learning environments in such a manner that learning is reformed and the reform is supported by the steering and management of the digitalization, which form a well-operating, balanced and developing whole. The audit aims at encouraging public administration to develop the ways they operate and provide support and thereby to promote the digitalization of teaching and learning environments.

### The steering and management of digitalization are complicated by a weak knowledge base and unclear premises for the steering

The digitalization of teaching and learning environments is a complex phenomenon, operation and target for regulation, which weakens the management of digitalization-related information in two ways:

1. It is difficult to anticipate, ensure and evaluate the appropriateness, efficiency and effectiveness of the goals and methods related to the steering and financing of the digitalization.
2. Material information on the conditions in which digitalization as such benefits teaching and learning and when new kinds of structures or processes or other kinds of investments in intellectual or physical capital are needed is still superficial and insufficient.

The basic premises of the steering and management of the digitalization of general education remain unsettled, fragmented and partly also contradictory, as the basic solutions and methods used in the management of digitalization have so far not been systematically collected and defined, and the actors have not been committed to them. This makes it difficult to direct the acquisition of information to serve the steering and management, and other information and knowledge management. The risk is that the weakness of the knowledge base related to digitalization and the unclarity of the basic premises of digitalization will intertwine to form a complicated problem that is difficult to manage and that only makes it more difficult to manage either of them.

The management of central government finances is impacted by the fragmentation of the financing targeted at the digitalization of teaching and learning environments, which weakens the cost-effectiveness of the operations and the evaluation of efficiency. The fragmented financing model has led to overlapping development work by different actors and to growing administration costs.

### The promotion of digitalization requires clarifying the basic premises and direction, experimenting, and well-functioning steering instruments

In successful management of digitalization, information and communications technology is integrated with the entity consisting of

different learning environments and the different components of teaching and learning environments through all available information and experiments. As digitalization and its management are controlled and regulated by many factors that still remain insufficiently known, it is impossible to achieve digitalization solutions by simply following best practices, utilizing research data or results, or evaluating the impact. Solutions are often achieved only through experimenting and testing different options in practice.

The management of the whole works to a certain extent and has developed gradually during the past few years, for example in the preparation and implementation of the Government's key project. However, as the steering and management of general education are decentralized to several, mutually relatively independent actors, the development of digitalization lacks a uniform and consistent structure, long-term strategic steering, and such steering instruments as utilize and support the strategic steering of the development and make it concrete. Development takes place at project level, while development of the whole is still on the starting blocks. The development of digitalization thus lacks a clear starting point and direction. In this situation, digitalization and its development have also failed to efficiently implement the goals of the key project.

#### **Recommendations by the NAOF**

The Ministry of Education and Culture and the Finnish National Agency for Education should compile and clarify the responsibilities and duties of the actors participating in the digitalization as well as the operating and financing models to be pursued in the digitalization of basic education and its steering.

This requires that the Ministry of Education and Culture and the Finnish National Agency for Education should

- confirm those guidelines and minimum quality criteria for the digitalization of teaching and learning environments and its development that are currently being prepared with different stakeholders, and ensure that the national development activities and guidelines are linked to the everyday operating and financing practices of schools, teaching and learning,
- coordinate the guidelines for the digitalization of basic education that are currently being prepared and the national curriculum in such a manner that information and communications technology is structured and defined in greater detail both as its own learning environment and as a means of support for learning in other learning environments,
- monitor, evaluate and anticipate the impacts and risks related to the instruments for steering digitalization both nationally and regionally, and improve the information and knowledge management related to the digitalization.