NOTE ON DIGITAL EDUCATION IN AZERBAIJAN

A new perspective based on the use of EU digital education tool

Why a focus on digital transition?

Digital technologies have become closely integrated into modern economy and social life and it is difficult to imagine the world without these technologies anymore. Societies better prepared to digital life are certainly more successful than others in achieving their goals. This is true about individuals too. People with deeper mastery of digital skills grow faster in their career than those who have difficulties in using modern digital tools. In this respect, the digital transformation also presents challenges for our societies, our economies and for individuals that require clear state-wide interventions to ensure that digital technologies offer better conditions for all, ensuring rights such as privacy, non-discrimination and gender equality, reinforcing principles that put people at the centre, thus empowering individuals and fostering their active participation in the economic and democratic life of the country.

The mastery of digital competences opens citizens doors to knowledge, good jobs and active participation to the society, brings efficiency. In this respect, digital education, encompassing the pedagogical use of digital technologies to support and enhance teaching, learning and assessment and the development of digital competences by learners and education and training staff, plays an important role in ensuring everyone has the right to education, training and lifelong learning, in a position to acquire all basic and advanced digital skills.[1]

Digital education in legislation

The Laws of the Republic of Azerbaijan on Education, on General Education and on VET regulate the roles of the state and education institutions in delivering digital education. The state takes responsibility for creating an ecosystem for the application of innovation in education by using new educational techniques, delivering information and communication technologies (ICT) to public education institutions and for training (general education and VET) teachers. It creates opportunities for the application of modern educational techniques and innovations and the professional development of teachers. According to the legislation, education institutions develop learners' skills for living and working in an information society. Teachers have a duty to learn and to use modern interactive training methods and innovation.

Azerbaijan's NQF for Lifelong Learning outlines digital skills in all level descriptors. According to such level descriptors, students at primary school level are expected to use computers; at general secondary level, they are expected to use modern technologies properly and with minimal risk; and at upper secondary (full secondary) and VET levels, they are expected to be familiar with technologies in their field (occupation) and be able to assess the impact of technology on daily life.

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[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020XG1201%2802%2

How is digital education framed in digitalization policies in Azerbaijan?

Digital education is usually implemented in line with policies and strategies that relate to all levels and sectors of education. The National Strategy on Development of Education in the Republic of Azerbaijan approved in 2013, aims to the creation of an education infrastructure that is compatible with an ICT-based training methodology and distance education to meet modern requirements and ensure lifelong education, expanding access to digital education resources and ensuring the development of media and internet resources for the education sector [2].

> **Box 1: About SELFIE**
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> SELFIE is a free, customisable tool designed by the European Commission to help schools reflect on how they use digital technologies to support learning. It helps schools to develop their digital action plans through a participatory process based on findings of self-reflection exercise (https://schools-go-digital.jrc.ec.europa.eu; SELFIE resources | European Education Area (europa.eu)).

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[2] https://president.az/articles/9779

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SELFIE pilot in the Republic of Azerbaijan

The SELFIE pilot in Azerbaijan looked at the use of innovative (digital) educational technologies in general secondary and vocational education schools in the country. The objectives of the pilot exercises conducted in 2021 and 2022 were to help schools improve their digital capacity in teaching and learning by generating evidence on digital education through self-reflection, promoting coordination among SELFIE schools, finally developing an action plan for scaling-up SELFIE in Azerbaijan in 2023. Specifically, the SELFIE pilot was conducted on the basis of self-reflections of school leaders, teachers and students in 12 selected pilot schools, in two distinct rounds, the first in 2022 and the second one in 2023, with the same sample of schools. The issues encountered in the pilot exercises provided insights for future larger scale application of SELFIE in Azerbaijan and possible improvements to consider for improving digital education policies and their implementation.

Implementation of the pilots and development of the scale-up plan was conducted in consultation with system and school level stakeholders.

Key findings of the pilot

According to the analysis, insufficient digital equipment and unreliable or slow internet connection were identified as the main challenging factors for the use of technology at schools and low digital competence of families as the main negative factor for technology use at home (in blended learning). Experience of schools in the use of virtual learning environments, also triggered by COVID-19 crisis in recent years, was the main positive factor for technology use in blended learning. Findings of the two pilot exercises reflected the same trends in several fields

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Box 2: List of stakeholders involved in the pilot of SELFIE

Level (national/local)	Stakeholder	Description
National	Ministry of Science and Education, including its subordinate institutions:	Policy making and decisions
National	Bureau on ICT for Education	Coordination of the pilot
National	Education Quality Assurance Agency	Incorporating SELFIE to quality assurance policies
National	State Agency for Vocational Education	Coordination of the pilot in VET institutions
Local	Baku City Education Office	Discussions on scale-up
National	Education Institute	Discussions on scale-up in CPD
National	State Statistical Office	Discussions on combining SELFIE data with national statistics

Key elements identified by users

Question/statement	2021-2022
Is teaching and learning with digital technologies in your school negatively affected by the following factors?	Insufficient digital equipment
Is blended learning with digital technologies negatively affected by the following factors?	Low digital competence of families
Is blended learning with digital technologies, positively affected by the following factors?	School experience in the use of Virtual Learning Environments
If you have participated within the last year in any of the following CPD activities on the pedagogical use of digital technologies, please indicate their usefulness to you	Learning through collaboration
How confident are you in the use of digital technologies in the following areas?	Communicating with students and parents

Upscaling selfie to boost digital education in Azerbaijan

The Ministry of Science and Education and its agencies – Bureau on ICT for Education, Education Quality Assurance Agency, State Agency on Vocational Education, Institute of Education and Regional Education Departments – agreed to take actions for scaling-up SELFIE in 2023 through the following steps[3]

Steps	Key policy actions
Locate SELFIE in the E&T context	The following options can be considered for upscaling SELFIE in 2023-2024 school year: Conduct SELFIE self-reflection in all general education and vocational education institutions. Development of school digital action plans based on the results of SELFIE can start later - in schools involved to inspection. Implement SELFIE in educational institutions involved in inspection. In such case, educational institutions will be better prepared to developing School Development Plans. Combine SELFIE with STEAM and/or digital assessment projects and conduct it in educational institutions where those projects are implemented. In this case, educational institutions will be better prepared for self-reflection. Start the implementation of SELFIE in a certain region (e.g., in Baku city) in the 2023-2024 academic year, and then cover the entire country. Identify (in consultation with the State Statistics Office) a representative sample and start the implementation of SELFIE in selected educational institutions.

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[3] Methodology: Scaling up and integrating the SELFIE tool for schools' digital capacity in education and training systems | ETF (europa.eu)

Integration of SELFIE in the wider digital education context	Develop digital education strategy and incorporate SELFIE to the concept
	Introduce self-reflection and school action plan development to quality assurance policy and regulations, including internal QA mechanisms
SELFIE Governance	With a view to upscaling application of SELFIE in educational institutions, approve functions of the "Commission (working group) for Coordinating Digital Development in Education" consisting of representatives of the General Education and Statistics Departments of the Ministry of Science and Education, the Bureau of ICT in Education, the Education Quality Assurance Agency, the State Agency for Vocational Education and the Institute of Education
	Appoint SELFIE coordinators and in the Department of General Education of the Ministry of Science and Education, the Information and Reporting Division of the Department of Work with Enterprises of the State Agency for Vocational Education, the Center for Educational Technologies of the Institute of Education and Regional (city) Education Offices and identify their functions
	Identify SELFIE coordinators and proxies in educational institutions
	Configuration of the tool to the specific needs and ambitions, at school and system level (e.g., samples, common questions, analysis of results and development plans)
	Necessary improvements of the SELFIE eco-system and resources for upscaling
	Organise SELFIE community of schools in MS Teams platform and run the platform to promote coordination, communication and peer learning among SELFIE users in Azerbaijan
	Conduct training to SELFIE coordinators of the State Agency for Vocational Education, Educational Institute and Regional (city) Education Offices
	Conduct SELFIE information campaign, training for school user groups, including students
	Coordination of SELFIE rollout
	Conduct national level events on SELFIE, including action plan development. Consider to organise hackathons to boost creativity, ideas and practical solutions to specific challenges
	Piloting SELFIE in work-based learning in vocational education institutions
	Establish monitoring mechanism of SELFIE results and implementation of digital education action plans
Training needs, including CPD	Incorporate SELFIE to CPD of teachers and school principals, including school digital plan development based on SELFIE results
Annual review cycle	Introduce incentives to schools like support in implementing the action plan

With a view to facilitating the implementation of SELFIE and achieving good results in the 2023-2024 school year, it was suggested to start scaling-up in general secondary schools involved in quality inspection conducted by the Education Quality Assurance Agency. The inspected schools are digitally and organisationally better prepared to self-evaluation. 50 general schools in several regions of the country were inspected by the end of 2022 to improve quality of education, build school-student-parent relationship and form robust and qualitative leaning environment.

The suggested **timescale of the scale-up plan** is shown in the table below.

Key policy action	Implementing institutions	Implementing timeline

With a view to upscaling application of SELFIE in educational institutions, approve functions of the "**Committee** (working group) for Coordinating Digital Development in Education" chaired by the SELFIE National Coordinator and consisting of representatives of the General Education and Statistics Departments of the Ministry of Science and Education, the Bureau of ICT in Education, the Education Quality Assurance Agency, the State Agency for Vocational Education and the Institute of Education	MoSE	2023 (Q1-2)
Appoint of **Digital Education/SELFIE officer**/function in the Department of General Education of the Ministry of Science and Education, the Information and Reporting Division of the Department of Work with Enterprises of the State Agency for Vocational Education, the Center for Educational Technologies of the Institute of Education and Regional (city) Education Offices and departments and identify their functions	MoSE, IoE, SAVE	2023 (Q1-2)
Conduct **training** to Digital Education/SELFIE officers of the State Agency for Vocational Education, Educational Institute and Regional (city) Education Offices	BICTE	2023 (Q2-3) and beyond
Identify and appoint **SELFIE coordinators and proxies** in **educational institutions**	MoSE, IoE, SAVE	2023 (Q2)
Under coordination of the SELFIE National Coordinator, **configuration of the tool** to the specific needs and ambitions, at school and system level (e.g., samples, common questions, analysis of results and development plans), e.g., with a focus on digital skills in 2023	MoSE, IoE, BICTE, SAVE	2023 (Q2)
Under coordination of the SELFIE National Coordinator, necessary improvements of the SELFIE eco-system and resources for upscaling	MoSE, IoE, BICTE, SAVE	2023 (Q2)
Organise SELFIE community of schools in MS Teams platform and run the platform to promote coordination, communication and peer learning among SELFIE users in Azerbaijan	MoSE, SAVE, REO, BICTE	2023 (Q3)
Conduct SELFIE training / awareness raising for schools	MoSE, IoE, REO, SAVE	2023 (Q2-4) and beyond
Coordination of SELFIE rollout	MoSE, BICTE, REO, SAVE, Committee	2023 (Q4) and beyond
Conduct national level events on SELFIE, including action plan development	MoSE, IoE, REO, BICTE, EQAA, SAVE e	2023 (Q4) and beyond
Develop digital education strategy and incorporate SELFIE to the concept	MoSE, IoE, EQAA, SAVE, Committee	2024 and beyond
Introduce school action plan development to quality assurance policy and regulations	MoSE, EQAA, SAVE	2023-2024 and beyond
Incorporate SELFIE to internal QA mechanisms	MoSE, EQAA, IoE	2023-2024 and beyond
Incorporate SELFIE to CPD of teachers and school principals, including school digital plan development based on SELFIE results	MoSE, IoE, SAVE	2023-2024 and beyond
Introduce incentives to schools like support in implementing the action plan	MoSE, REO, SAVE, Ministry of Finance	2024 and beyond
Piloting SELFIE in work-based learning in vocational education institutions	MoSE, REO, SAVE, BICTE	2023-2024

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Acronyms

- MoSE – Ministry of Science and Education
- REO – Regional (city) Education Office
- BICTE – Bureau on ICT for Education
- EQAA – Education Quality Assurance Agency
- SAVE – State Agency on Vocational Education
- IoE – Institute of Education of the Republic of Azerbaijan

Picture 1 SELFIE Workshop Baku 2022

Picture 2 SELFIE Workshop Baku 2022 - hackathon