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Integrating Digital Tools into the Education System

Hila Axelrad*

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This is a short summary, for the full paper (in Hebrew) see https://www.idc.ac.il/he/research/aiep/pages/policy-papers.aspx.

* Dr. Hila Axelrad is a senior researcher in the Aaron Institute for Economic Policy at the Interdisciplinary Center Herzliya.

Aaron Institute for Economic Policy

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Contact details:

The Interdisciplinary Center Herzliya - IDC, P.O. Box 167, Herzliya, ISRAEL 4610101

Phone: 972-9-9602431

Email: aaron.economics@idc.ac.il

Website: https://www.idc.ac.il/en/research/aiep/pages/main.aspx

Integrating Digital Tools into the Education system

The quality of education is one of the most important factors affecting the course of our lives. The education system is responsible for shaping the values and beliefs of its graduates, and for the extent of their integration into society. At the same time, the education system also has a responsibility to provide adequate skills and abilities for entering the job market and coping with the challenges of employment in the modern world. In a world undergoing a digital revolution, which is manifested in rapid technological changes, digital skills are an indispensable part of the skillset that the education system must impart on its graduates. In addition, the adaptation of the education system to the digital era carries additional importance as a means to enrich and expand the learning experience and the acquired skills in all subjects, not just computer proficiency classes. Therefore, as computers continue to have a central role in our personal and professional lives, students who fail to acquire the necessary skills for digital environments would not be able to fully participate in the economic, social, and cultural realities surrounding them.

In this study, we examined the existing research literature on educational application of digital tools and on the evaluation of the effectiveness of educational intervention programs, and also conducted conversations and interviews with policymakers and professionals in this field. We found that a strategic digital program should include measures in four aspects:

- **Schools: Investment in communication infrastructures (Internet, broadband, cloud services) as well as end devices (desktop/laptop computers) in schools.** The ICT Coordinator in each school would be tasked with maintaining the system, ensuring accessibility of applicative infrastructures and digital contents, and providing targeted training to teaching staff on the operation of the various systems.
- **Teachers: Provision of end devices (desktop/laptop computers) and teahcer training in the use and educational utilization of information and communication technology (ICT)**. Computers should be recognized as essential tools, and the Ministry of Education should ensure each teacher has a personal computer for their daily routine work.
- **Programs**: **Development of suitable educational programs (including software applications, lesson plans, courses).** School staffs should be further equipped with software applications and ICT-based programs, while focusing on continuous development of digital learning environments, digital contents, and platforms for sharing of programs and contents among teachers. And finally-

- **Students**: **Availability of end devices (computer, mouse, keyboard, etc.) in students' homes.** However, since a computer is not strictly an educational device, and may be used for various purposes by all members of the household, we do not see a justification for indiscriminate financing of computers for the entire student population; rather, targeted assistance should be provided to students in need. Inasmuch as the Ministry of Education determines that a computer is a required learning aid for all students (like textbooks or stationary), assistance should be provided by the social services and the Ministry of Education to students who do not have a computer at home, according to clear criteria.

In conclusion, it would be advisable to evaluate and measure the impact and the benefits of using digital tools – ICT in schools, infrastructures, teacher training, educational programs, and providing children with computers – in order to determine which measures were effective and what should be implemented or improved. Only evaluation and measurement of results would make it possible to assess the effectiveness of intervention programs and to plan ahead for effective resource allocation.