

Open Education 2030

Call for Vision Papers

School Education

All-Embracing Digitalization or 10 Things to be Done in School Education till 2030

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All-embracing school system and educational process digitalization, free choice of free open education e-resources in free collaborative e-environment will facilitate learners' critical thinking and reflection skills, enhance knowledge development, and improve learning outcomes.

School education in 2030 might be imagined as the scope of aggregate best teaching practices, solutions, policy documents, and technology implementations which would enable prospective changes in this field. Suitable usage of free open education e-resources in free collaborative e-environment to facilitate learners' critical thinking and reflection skills, enhance knowledge development, and improve learning outcomes, ought to be considered as a great possibility to achieve new qualitative levels in the field of school education. To gain these goals, we ought to discuss some issues to be done in school education till 2030; thus:

(1) An assertion, that “more schools” – means “better learning outcomes and quality of education”, is incorrect. Instead, the quality should be placed ahead the quantity:

- Definition of clear goals to be reached by K-12 educational organisations;
- Establishing uniform standards regarding educational goals to be achieved by schools;
- Motivation of teachers professional growth;
- Material motivation by learning outcomes results.

(2) Standardization of K-12 educational programs in whole Europe Union (EU) and European Economic Community (EEC). K-12 graduates should be competitive despite on institution and country where secondary education was acquired:

- Equal standards, equal requirements and equal opportunities for any pupil, secondary school leaver, to enter higher educational institutions in any EU or EEC country;
- More effective activation pupils' exchange program within EU or EEC.

(3) Implementation of the main idea of ADL (Advanced Distributed Learning) by means of distributing and redistributing of learning and teaching materials, sharing and reusing them. This ought to be applied for open education:

- Further development of SCORM (*Sharable Content Object Reference Model*) standards which would be implemented in different types of technology enhanced learning, the uppermost – in e- and m- learning;
- Development and use of open learning management systems which allow producing of SCOs (*Shareable Content Objects*), their copying, distribution, sharing, re-usage and re-making;
- Interoperability principles should be placed as prior ones.

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(4) Gaming would capture the teaching initiative of primary education. Some considerations which would defend this position:

- Learning by doing approach – allows kids better understanding of theoretical materials;
- Learning through gaming can remove barriers and help kids adaptation at school;
- Educational games might be used equitably at school, as well at home and outside.

Besides, based on research made in June, 2012 by Assessment & Information group of Pearson, there are additional five benefits of digital gaming in education. Digital games [1]:

- „Are built on sound learning principles,
- Provide more engagement for the learner,
- Provide personalized learning opportunities,
- Teach 21st century skills,
- Provide an environment for authentic and relevant assessment”.

(5) An implementation of the synergy of e-, t- and m- learning within school programs:

1. E-learning:

- Already exists but despite some progression there are still lack of useful open educational resources;
- A coloration of e-learning in 2030 will appear in its overtness, wide use of interoperable SCO modules in interoperable e-environment.

2. M-learning:

- Modern mobile phones wide screens, reach software, great network coverage and relatively low expenses make mobile phones (especially – smartphones) as the very powerful learning instruments; and m-learning – a great supplementing, and in some cases even basic, form of learning;
- Almost each pupil in EU or EEC holds at least one mobile phone. A number of smartphones booms. It could be expected that almost each pupil of secondary school in EU/EEC will have the smartphone by 2030.

3. T-learning:

- T-learning will revive by enriching its potential with availability to learn from watching video learning materials, accomplish corresponding tasks given during broadcasting, and tests, which would be possible to do by TV switchboard. This could be achieved by providing special school TV channels or coming to an arrangement with broadcasting companies to include t-learning materials into their broadcast program;
- Videoconferencing tools and recorded materials also ought to be considered as considerable learning enhancement instruments.

Thin borderlines between mentioned different forms of technology based learning will disappear by 2030. This melting process has already started.

Setting and further development of appropriate standards is essential. Some of these aspects were introduced in the 3rd paragraph.

(6) Facilitating critical thinking and reflection within ePortfolios:

1. The usage of ePortfolios in the form of a showcase, which could be used to show others pupils's achievements, will remain. This ePortfolio form could be used in cases when the demonstration of accomplished works becomes important (for instance, in drawing, botany etc. lessons). This form in a few years will converge with another form of ePortfolios – workspace ones.
2. Further development of competence enhancement systems equipped with variable assessment tools and collaborative environment. It might be used for both pupils and teachers: for pupils – to study, improve learning outcomes, assist classmates, make peer and self-assessments; for teachers – to tutor learners and monitor their progress, make assessment of study process and provide necessary steps to improve curriculum [2]. Advanced ePortfolio systems can establish an understanding of collaborative environment and group-working, allow pupils become responsible for own and classmates success.
3. Admittedly, ePortfolio system in the form of workspace (the second noted form of ePortfolios) will take the lead over ePortfolios as the showcases (the first noted ePortfolio form);

(7) Various kinds and types of summative and formative assessments will be provided within educational institution's information system. Such system may consist of e-content and learning part, on the one hand, and ePortfolio part, on the other hand. Both parts could be placed independently from each other or be tailored. They will have two main aims:

1. To assist teaching staff to monitor and analyse learners progress and knowledge acquisition change dynamics;
2. To help pupil assess own achievements, possible gaps and directions which ought to be improved.

(8) Traditional library approach will be shifted to mostly open information and educational resources' e-spaces. Educational resources ought to be free of charge for learners, especially when it applies on scholars in elementary and secondary education. It might be realized by:

- Digitalization of existing learning objects;
- Development further learning objects in digital way;
- Creating of school e-libraries and e-repositories (as an integral part of open source Learning Management Systems / Content Management Systems) within particular school common information system;
- Creating of elementary and secondary school consortiums at city / county / country / EU level which would unite and offer to pupils and educators available open educational resources;
- Providing appropriate open teaching and learning materials through municipalities' or/and independent organizations' web pages;
- Establishing of teaching / learning web-based communities where teachers can easily and free of charge share with colleagues their digital e-courses and other learning objects (for example [3], similar teachers' web-resource already exists in Latvian Republic - <http://skolotajs.lv/>)

(9) Digital classroom in digital ecosystem:

- Interactive blackboards in the classrooms;
- Total usage of digital text-books – anytime and anywhere;

- Wide implementation of videoconferencing tools – schools will be able to get top-lecturers and teachers, as well keep in touch with telecommuters and collaboration partners.

(10) And last but not least – logistics, environment and raising the productivity of teaching and learning issues. To ensure suitable conditions for better mastering of learning materials:

- Classrooms in 2030 will be equipped with climate control and ventilation systems;
- Governments / municipalities will provide necessary subsidies to ensure that every pupil receives balanced diet lunch.

Conclusion

It is imagined that by 2030 any pupil will have an access to free of charge learning objects tailored in common open information system. This system will ensure the synergy of different types of technology enhanced learning, such as gaming, e-, t- and m- learning, which will create prospective learner-friendly educational ecosystem with possibility to share and reuse learning objects. This will become an everyday occurrence. The ePortfolio system with its comprehensive assessment tools and collaborative environments will complementary perfect the knowledge acquisition process in secondary and even elementary schools. All-embracing digitalization will cover whole educational system and learning environment.

References

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