

FUTURE OF WORK AND EDUCATION FOR THE DIGITAL AGE

Redesigning education landscapes for the future of work: third-space literacies and alternative learning models

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Abstract

Technology-driven transformations are redefining the role of education, the value of knowledge and skills. Non-formal learning, third-space literacies and alternative mechanisms for certification are emerging throughout the world, aiming to prepare youth for entering the job market.

If non-formal mechanisms continue to expand, the role of the State, other actors and the G20 in education also need to be reassessed. This includes dimensions such as regional and global articulation, regulation, certification of non-formal education, among others. The scope of the policy brief is to provide recommendations to bridge the gap between schooling, learning and employability at a global scale.

Challenge

Educational systems are facing diverse challenges worldwide. Some of those still respond to long-term needs such as increasing global access to education for all and across all levels; reducing dropout and securing completion of mandatory schooling. But there are many challenges that define a new educational landscape: the definition of the curricular priorities in a changing world, the development of new skills, the non-formal or third-space literacies (beyond school and home) in a digital decentralized environment, the role of the State promoting equity in the face of large inequalities and the digital divide.

The past two decades have also witnessed the cross-cutting transformation brought by ICT and the Internet first, followed by the integration of digital technologies across the economy and society. As automation and artificial intelligence increasingly permeate and transform the labour market, they redefine several areas. The role of education in human capital formation (World Development Report, 2018, p.40), is one of those, along with the structure, institutions and mechanisms that have been in place for addressing societal needs.

Across every region and regardless of countries' Human Development Index (HDI) or the Gross Domestic Product (GDP), knowledge, skills, learning and schooling are being redefined. Knowledge has an increasing value as a currency; however, its relevance is linked to what an individual is able to do with that knowledge. Critical skills in today's society are also facing an accelerated process of relevance and redefinition.

This landscape requires to analyse and address interrelated factors as the increasing distance between formal education (i.e. at secondary level) and the labour market



needs, the need to provide flexible and lifelong learning opportunities for upskilling and reskilling the workforce, as well as rethinking the relevance and future role of formal education, learning and knowledge.

In this context, non-formal learning, third-space literacies (beyond school and home spaces) and alternative mechanisms for upskilling and certification are emerging throughout the world, specially across technology-oriented areas such as coding, online services, technical support, etc. E-learning and blended learning services, as well as open educational resources and massive open courses are designed or implemented beyond formal education settings and as such, they do not necessarily issue traditional or recognized forms of certification (see Gibson et al 2015), technical or academic degree. While these models are not new, their popularity and relevance have exponentially grown. Moreover, the latter appear to be more effective than formal educational mechanisms for securing employability and preparing youth for entering a demanding and increasingly competing job market, especially in technology and ICT-related fields.

Proposal

The landscape of education is much more diverse, complex and dynamic than it was when the first alternative online learning models emerged. Although some of the third space literacy examples referred to in Table 1 are initiatives oriented to benefit those who are learning in deprived environments, others are not. Therefore, it is important to assess and understand if those opportunities can be considered as alternatives to formal education and what challenges they present for educational equity. The changing landscape briefly described here requires a redefinition of the role of the State and other actors in educational policy-making to guarantee an expanded vision of the right to education beyond formal and traditional learning.

Are these alternative forms of learning a threat in terms of equity and established educational traditions or an opportunity for expanding the right to education? Should the State use, control, regulate or replace new institutions that provide learning opportunities beyond the traditional context of education? How can the State guarantee educational quality in this context?

How should the State support these emerging opportunities of third space literacies as platforms that can upskill individuals without diminishing/affecting the role developed by existing formal education institutions?



Vision 1.a

These alternative forms of learning have the potential to facilitate innovation across the educational system and to close the gap between learning, schooling and employability. The State should expand what today is conceived as “educational system”; promote new collaborative, open policies and discussions gathering all stakeholders. G20 has the potential to act as an articulator, leading the process and promoting the adoption of holistic and comprehensive policies in this new landscape.

Recommendation 1.a

What is at stake is significant. According to McKinsey, “the global economy could face a potential surplus of 90 million to 95 million low-skill workers and a shortage of about 38 to 40 million high-skill workers by 2020”¹. If we take those figures into account, it is critical to facilitate, support and promote the diversification of learning, upskilling and reskilling opportunities along with flexible certification mechanisms. This requires a holistic approach focused on formal and non-formal education alike, -including but not limited- to promote a higher degree of harmonization of educational systems on a global scale and to foster the development of internationally recognized accreditation mechanisms for informal and non-formal education opportunities². G20 could encourage international organizations and national governments to provide more flexible ways of recognizing prior qualifications regardless of where they were developed.

Exploring the potential of alternative learning models for raising human capital, upskilling and reskilling the workforce, requires all actors -from the State to private companies, civil society and academia- to discuss their respective roles; to generate quality-learning opportunities for acquiring new and market-related skills and knowledge; and to recognize new forms of learning that can eventually enrich future formal and informal education.

No single actor has neither the capacity nor the resources to address these issues by itself. Moreover, there is a clear risk of having obsolete educational systems unable to respond to societal needs, along with a growing number of low quality or unregulated training opportunities. From this perspective, exploring alternative forms of learning demands adopting novel models of accountability, monitoring and ensuring quality as a way to reconceptualise educational policy.

1 Sebastien Turbot, Education to Employment: Boost Skills, Bridge the Gap, 2018, [Website] <https://www.forbes.com/sites/sebastienturbot/2016/01/28/education-employment-skills-gap/#43ecb0c7641b> (accessed the 13th May 2018).

2 For more information see T20 (2017) Solutions for the G20, [Website] http://www.t20germany.org/wpcontent/uploads/2017/07/20_Solutions_for-the_G20_17-7.pdf (accessed the 19th June 2018).



The State can still play a key role in leading this process, facilitating and opening up its mechanisms and structures to include alternative models. Educational policy-making would need to assess whether regulatory mechanisms that respond to formal instruction would be suitable for alternative learning opportunities. This implies working with the “third space” in education (beyond formal school and home). The State could offer, promote and encourage the adoption of platforms, resources, courses and certificates. This more flexible understanding of what is conceived as education could be a valuable opportunity to expand learning possibilities for the population. The role of public entities should not be limited to “producing” contents, but making them available for a larger sector of the population. The State should redefine its role by mixing production of digital education, buying author rights of digital content to ensure equity and public access, and define long-term dynamic strategies that create platforms to circulate new forms of education and certification.

One of the key challenges is how to ensure that resources provided by the State as an expanded form of public digital education are high-quality and also relevant to support knowledge and skills development that address labour market needs. Top-down (e.g. government quality or certification agencies) but also bottom-up (e.g. employers’ associations, alumni association among other forms of crowdsourcing accountability) mechanisms of credibility and transparency are needed.

In this context, the G20 is well-positioned to act as an articulator, leading States through the redefinition process of education systems, employability and the labour market. The experience of the T20 since the German Presidency in 2017, highlights the need and relevance of promoting the adoption of comprehensive and flexible labour market policies; facilitating skills transfer, recognition and validation; fostering the development of alternative and non-formal education opportunities for youth; and closing the distance between formal schooling and employability (T20, 2017; IMF Annual Meetings, 2017).

Vision 1.b

In the 21st century it is essential to develop a broad set of skills and competencies. Flexible learning opportunities can respond to this need and easily adapt to a changing job market and rethink the role of education in an increasingly complex society. What kind of curricular vision and priorities should be promoted?

Recommendation 1.b

Broadly speaking but particularly in the most conservative educational models, most learning experiences have been primarily focused on the acquisition and memorization of contents (discipline-based), which only offer a reduced dimension



of learning experience. Only if a broader perspective is adopted, it will be possible to include a larger set of capabilities which play a critical role in terms of employability as well as an opportunity to enhance a more democratic citizenship.

Today's formal education should learn from the flexibility and adaptability that informal learning offers, otherwise the risk of obsolescence is significantly high. At the same time, informal learning is fragile and tends to be private-driven. The State should explore different paths to institutionalize new learning environments and to promote the principles of equity and inclusion in particular for securing quality educational interventions for underserved and under-skilled communities, as well as for youth who are outside formal education systems as stated by the work of the T20 in the area (T20, 2017).

At least, two possibilities should be explored simultaneously. For one side, it is required to diversify the public offer of educational resources and self-administered learning experiences in order to go far beyond the formal settings. On the other side, it is necessary to assess how the formal system promotes, updates and recognizes the so called 21st century skills in the curricular frameworks and implementation resources (platforms, courses, printed books, teachers' guides and training, etc). Additionally, it is critical to promote continuous skills development and a dynamic redefinition of curricular priorities in a changing world. Curriculum areas of ministries of education play a key role in this chapter.

Vision 1.c

It is time to adopt new parameters and tools for validation and recognition. It is necessary to move away from traditional forms of classifying and certifying learning (formal, non-formal, informal)³ towards new ways of valuing learning.

Recommendation 1.c

“Formal” and “informal learning” should gradually evolve and transition towards mechanisms that help us understand the difference between “learning to live” and “learning to earn a living” set of skills. From this perspective, secondary and postsecondary education can be shaped more closely to specific employment outcomes (i.g. work-study programs, early job-oriented counselling, internships, and apprenticeships). Rather than distinguishing between critical and non-critical capacities (e.g. 21st century skills are usually considered as valuable capacities), the emphasis could be placed on what kind of learning experiences is able to reinforce

3 For more information on formal, non-formal and informal learning see Patrick, W. (2010). Recognising non-formal and informal learning outcomes, policies and practices: Outcomes, policies and practices (Vol. 2009, No. 35). OECD publishing.



learners' employability level (regardless if s/he is a student or a worker). This could also show how learning experiences are able to improve learners' working opportunities. Having this in mind, alternative and more flexible credentialing and licensing tools can be issued regardless of the settings in which learning happens. This can enrich contexts, and encourage flexibility and mobility of those who want to acquire a new knowledge/skill without sacrificing its recognition.

Vision 1.d

Third-space literacies and alternative learning models have the potential to enhance innovation in education for the digital age. However, this can only be achieved if education inequalities are addressed. Digital education offers a path towards that goal.

Recommendation 1.d

Education as a basic human right requires having access to the same -at least basic- learning opportunities for all individuals across the globe (World Development Bank, 2018). Education enables societies to reduce inequalities, raise human capital and promote social mobility. Equality is enshrined in the scope of education, as well as the main pillar for the role that the State has played in it. While access to critical knowledge generates wealth and potentially increases economic opportunities, its lack of, generates exclusion and dependence.

'Third space literacies' are generally defined as the area between official curriculum and informal knowledge, with skills and dispositions brought in from outside culture (Potter and McDougall 2017). Alternative and non-formal models in education are likely to increase inequalities by favouring a few while affecting others. As the Matthew effect indicates, those already advantaged are more likely to benefit first and most from additional resources. For instance, during the first years of expansion of MOOCs, evidence suggests that the most active learners (as well as those who completed the courses) were those who had previous academic degrees or were already enrolled in university. Similarly, as it was documented during the emergence of open courses at OCW MIT in the previous decade (DeMillo, R. A., & Young, A. J., 2015), those who had already had access to education and/or to the required "social capital" were those who benefitted the most when knowledge became open and available (Losh, E., 2014).

At large, many countries and regions are in a situation of profound education inequality that negatively impacts their possibilities to reach quality education. The expansion of learning through digital tools can favour -first and foremost- those who have the access to technical infrastructure (Internet access, digital skills, etc.) as well



as to 'social capital' needed to pursue their own learning interests or needs. In order to overcome these learning inequalities, it is essential that public and private entities create regional alliances to promote and enable not only access to digital basic resources (connectivity and devices), but also the needed proficiency to use digital platforms and online resources. G20 should continue the push to enhance international efforts to develop accredited non-formal education, providing accelerated learning opportunities for youth who are not eligible for formal schooling (T20, 2017).

Hence, it is important to adopt comprehensive and flexible approaches that provide basic access to resources -technological, digital and educational-, and also foster the development of metacognitive capacities of learners, enabling them to pursue and develop their own learning. Otherwise the risk is -once again- to benefit only a few who are probably in a better condition to develop their own lifelong learning strategies.



References

1. DeMillo, R. A., & Young, A. J. (2015). Revolution in higher education: How a small band of innovators will make college accessible and affordable. Mit Press.
2. Eliana Osborn, "Edublocks" Could Change How We Learn by Adapting Bitcoin Model to Continued Education, 2018 [Website], <https://www.goodcall.com/news/edublocks-change-learn-adapting-bitcoin-model-continued-education-06554> (accessed the 13th May 2018).
3. Gibson, D., Ostashewski, N., Flintoff, K., Grant, S., & Knight, E. (2015). Digital badges in education. *Education and Information Technologies*, 20(2), 403-410.
4. IMF Annual Meetings (2017). Group of Twenty G-20 Report on strong, sustained and balanced growth, [Website] <https://www.imf.org/external/np/g20/pdf/2017/100617.pdf> (accessed the 19th June 2018).
5. Losh, E. (2014). The war on learning: Gaining ground in the digital university. MIT Press.
6. Macià, M., & García, I. (2016). Informal online communities and networks as a source of teacher professional development: A review. *Teaching and Teacher Education*, 55, 291-307.
7. Patrick, W. (2010). Recognising non-formal and informal learning outcomes, policies and practices: Outcomes, policies and practices (Vol. 2009, No. 35). OECD publishing.
8. Sebastien Turbot, Education to Employment: Boost Skills, Bridge the Gap, 2018, [Website] <https://www.forbes.com/sites/sebastienturbot/2016/01/28/education-employment-skills-gap/#43ecb0c7641b> (accessed the 13th May 2018).
9. T20 (2017). Solutions for the G20, [Website] http://www.t20germany.org/wpcontent/uploads/2017/07/20_Solutions_for-the_G20_17-7.pdf (accessed the 19th June 2018).
10. World Bank (2018). World Development Report 2018: Learning to realize education promise. Washington DC: World Bank. doi:10.1596/978-1-4648-1096-1. License: Creative Commons Attribution CC BY 3.0 IGO.



Appendix

Table 1.

There is an increasing variety and number of third space literacies, digital and/or non-formal learning opportunities. The cases mentioned below, represent well known examples and alternative opportunities for training, upskilling and certification.

- **Digital and/or non-formal learning or training opportunities:** there is an emergence of alternative forms of learning which run parallel to the formal education. They offer different venues for learning and skilling, going from experiences that take place outside formally structured, institutionally sponsored, classroom-based activities (Macià & García, 2016¹). Some remarkable examples worldwide are: Agastya International Foundation (**India**), School 42² (**France and USA**), Alison³ (**Ireland**), Distance Learning in the Amazon Forest (**Brazil**), Generation you employed (**several countries**), Jóvenes a Programar (**Uruguay**), Coursera, Udacity, SkillShare, Lynda and similar (**online**).
- **Social (peer-based) recognition of uncertified knowledge:** These alternative certificates represent different forms or indicators of an accomplishment, skill, competency, or interest. They can be used to represent online and offline achievements, communicate successes, or mastering certain skills. They can support learning that happens beyond traditional classrooms such as alternative and flexible credentials that substitute traditional certification, demonstrated outcomes /validated competencies that are tailored to the desired output from a variety of learning contexts. They provide a reputation framework for peer validation, capturing technical skills along the path of program completion, document the learner's ability to use a piece of equipment or demonstrate knowledge of a particular topic. Badges, for instance, are becoming novel currencies that provide verified, specific information from trusted sources about the skills, competencies and knowledge. Samples are: Open Badges, Blockcerts, Edublocks, etc⁴.

1 Macià, M., & García, I. (2016). Informal online communities and networks as a source of teacher professional development: A review. *Teaching and Teacher Education*, 55, 291-307.

2 42 is a free of charge computer training program, open to anyone -whether they possess an academic degree or not-. Candidates are selected through a highly competitive selection process. Students have a leading role in their learning experience through project-based learning challenges. For more information visit www.42.fr (accessed the 13th May 2018).

3 Alison provides over 1,000 free courses to eleven million registered learners over the world, reaching 1.5 million graduates of its courses. Alison offers free learning, certification, learning management and publishing to anyone interested. For more information visit www.wise-qatar.org/sites/default/files/2018_wise_awards_brochure.pdf (accessed the 13th May 2018).

4 The Institute of the Future and ACT Foundation shed their view on how employee-centered



learning might look like. The concept involves Edublocks -one-hour chunks of learning from virtually any source or context. These blocks are held in individual accounts. Learners can share and trade these Edublocks once acquired using some a cryptographic system (like the digital currency Bitcoin). Eliana Osborn, “Edublocks” Could Change How We Learn by Adapting Bitcoin Model to Continued Education, 2018 [Website], <https://www.goodcall.com/news/edublocks-change-learn-adapting-bitcoin-model-continued-education-06554> (accessed the 13th May 2018).

Grech, A., & Camilleri, A. F. (2017). Blockchain in Education (No. JRC108255). Joint Research Centre, Seville site publications.jrc.ec.europa.eu/repository/bitstream/JRC108255/jrc108255_blockchain_in_education%281%29.pdf (accessed the 15th May 2018).

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