

# Enhancing Education and Rethinking Pedagogy: The Twenty-First Century Teacher

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**Abstract**—Today's society offers many challenges to the teacher of the 21st century. Not only social dynamics are more intense, different and complex, with a focus on multiculturalism, interculturality, plurality and heterogeneity, as technological evolution has reached the highest and most challenging point for teachers, due to the speed of innovation, the vertigo of the changes in information and communication technologies, with reflexes in the new generations of students, more and more qualified for the technological gadgets (but probably not for the informational management). One can not fail to integrate all these changes in the classroom, in education and pedagogy, and of course in the teachers profile, who, aware of these changes, have sought answers to these challenges. In short, to meet the challenges of 21st-century education and pedagogy, we need to empower 21st-century teachers.

**Keywords**— Education, Pedagogy, Teacher.

The dawn of the twenty-first century has brought us very complex issues, due to the increasing interconnection between the nature of the pillars sustaining modern society, supported by information and communication technologies, the complexity of heterogeneous and constantly changing social relations, the endless flow of information transmitted to us through multiple channels and platforms, and in the urgent need for Education and Pedagogy to cope with these transformations.

It is no longer sufficient to incorporate technology into the classroom and the very concept of "classroom of the future" has also changed, given the constant dynamics in the information society. In pedagogical terms, the teacher remains essential to understand the mutations and bring them into the classroom. Although the European Union has placed the focus of the teaching-learning process on the student and on the acquisition of competences in an increasingly autonomous way, with the Bologna process, the teacher maintains his mission, no longer focused on the transmission of knowledge, but rather in leading the students to the discovery, the acquisition of skills, the discovery of the world.

This view of Bologna is also supported by the latest UNESCO and OECD documents, which highlight these theses and reiterate the need to invest in teacher training for this new century. Scott

(2015, p.2), quoting Leadbeater, in an investigation carried out for UNESCO, highlights precisely these challenges:

Leadbeater (2008) argues that the successful reinvention of educational systems worldwide depends on transforming pedagogy and redesigning learning tasks. Promoting learner autonomy and creativity is part of the solution. Technologies can be used to support efforts to transform pedagogy, but it is essential to recognize that twenty-first-century learning experiences must incorporate more than just technology. Leadbeater also emphasizes that learning strategies for this century will not be limited to school, but will also encompass learning through peers, inter-generational partnerships and community relationships. Learning may take place outside of school in libraries, museums, community centres, local businesses or nearby farms, among others.

In fact, Scott writes about the diversity of forms of learning we have today and the plurality of access to information and training sources, but recent research shows that some pedagogical strategies are more consistent and fruitful in students' acquisition of skills, such as is the case of personalized teaching strategies, collaborative teaching and informal teaching, problem-solving teaching and project work, encouraging communication and teamwork, motivating students, cultivating creativity and innovation, capitalizing on technological knowledge of students, developing activities closer to the real world, valuing metacognitive skills, promoting learning without borders, without space and without time. Nevertheless, she recalls the difficulties of perceiving the question:

Broad thinking around twenty-first-century education acknowledges the need for new 'forms and functions' of learning to be added to worldwide education goals to boost the quality of learning. However, despite the prevalence of arguments for transforming pedagogy to better support the acquisition of twenty-first-century skills, the question of how best to purposefully and explicitly teach these skills is largely overlooked (UNESCO-IBE, 2013).

The same author also points out that teaching practices that promote the creation of an effective learning community are centered not only on knowledge but also on the acquisition and development of intrapersonal and interpersonal skills, which leads teachers to constantly question their pedagogical practices and use student responses as a method to evaluate the process and perspectives such as deepening the acquisition of skills, grasping the opportunities for their personal

development, their inner growth, as a person, as a citizen and as a professional, evaluating ideas, problematizing, using critical thinking to filter out the information that is appropriate and accurate. Scott (2015, p.15) deepens these questions and points out a desirable path for the teacher:

If the main goal of twenty-first-century education is to build the learning capacity of individuals and support their development into lifelong, active, independent learners, then teachers need to become 'learning coaches' – a role very different from that of a traditional classroom teacher. Learning coaches may provide guidance to help students develop skills, but their main role is to offer the kinds of support that will help students attain their learning goals. Teachers as learning coaches will encourage students to interact with knowledge – to understand, critique, manipulate, design, create and transform it. Teachers will need to reinforce learners' intellectual curiosity, problem identification and problem-solving skills, and their capacity to construct new knowledge with others (Bull and Gilbert, 2012).

Twenty-first-century teachers will not be proficient in every topic on the curriculum, but must become experts in figuring out, along with their students, 'how to do something, how to find out something or how to use something to do something new'. A key part of their role will be to model confidence, openness, persistence and commitment for learners in the face of uncertainty (Bull and Gilbert, 2012).

Education in the 21st century thus implies a new school, a new teacher, but also a new global vision of Education itself regarding pedagogical strategies. It is important for schools to know and recognize that they must change their conceptions and philosophies. The reinvention of schools depends on the reinvention that countries must also make about this remodelling and transformation of paradigms. This process is both global, of change and adaptation, but also local, knowing that we must respect the choices of each country and its principles, so change requires global guidelines and local adaptation. Another dimension is to view learning as a lifelong process, which must go along with changes almost naturally and be inherent in the system itself. We reinforce this thought with the words of Scott (2015, p.16):

Teachers will remain, but their roles will be extended as mentors, mediators and guides, facilitators, learning coordinators, assessors, and designers and compilers of learning tools. Testing will most likely continue, but assessment will become more individualized and formative. Learning will become more personalized and customized to reflect students' individual needs and interests, and informal learning opportunities will become recognized alternatives to traditional formal education. Transformed learning

environments will encompass customized learning for each student, wider availability of diverse sources, and collaborative group learning (students will learn together as they work collaboratively on authentic, enquiry-oriented projects). Real-world experience will permeate learning activities. Most likely, schools will remain but classrooms will become more open to diverse learning experiences and instruction will likely move out into the community. Education providers will still offer face-to-face learning, but this will be supplemented by informal and virtual opportunities. Self-responsibility for learning will be essential and learners can expect to determine what their learning profile will look like. New tools for learning will be developed. Technology will support personalized learning processes and facilitate inclusion and equity. With the emergence of lifelong learning as the paradigm for the future, it is reasonable to expect that learning strategies and pedagogical approaches will undergo drastic changes and create new pathways for learners of all ages and abilities.

In January 2017, on the 24th and 25th, the Ministers of Education of Latin America and the Caribbean met in Buenos Aires, Argentina, dedicating this meeting to the topic "E2030: Education and skills for the 21st century", resulting in one of the most recent UNESCO reports on the challenges for 2030 in the area of Education.

This meeting had as main points: **Priorities in line with E2030** (Quality learning, Equity, Improving teacher policies and teacher training, Literacy, Student-centred learning, Providing learners skills for the 21st century, Enhancing the value and quality of technical professional training), **Reforms, strategies and actions** (Secondary education reform, National common core curricula, Flexible curricula and training pathways), and **Challenges** (How to support teachers and provide them with the necessary motivation, knowledge and tools that make them conscious of the transforming power that they have, How to best train teachers on ICTs and other emerging themes, Finding mechanisms to work closely with countries, agencies and organisations). During this meeting, emerged the following key policies and strategies in preparing teachers to teach in the 21st century:

- Reforming teacher careers: ensuring that teacher career structures are shaped so to value, motivate and professionalize teachers; establishing a career based on meritocracy through continuous evaluations; flexibility in teacher careers, allowing positions at the managerial level;
- Professional development of teachers through improving teacher education programmes, the quality of teacher education and school leadership;
- Teacher quality through quality training: providing teachers with continuous training;

identifying school and teacher training needs and aligning teacher training curricula; training teachers to be educators, interiorizing behaviours and attitudes that are valued in societies and for sustainable development; making good use of ICTs in the training of teachers;

- School autonomy: providing incentives, such as pay bonuses, for good teacher performance;

- Development of a regional qualifications framework, identifying learning outcomes for all teacher qualifications, including teacher certification (CARICOM);

- Development of regional standards for teaching practices which regulate teacher certifications and facilitate licensing for the teacher profession (CARICOM);

- Working across sectors in order to ensure that teachers are learning and able to teach about critical topics for society and that resources are at good use;

- Including citizenship training as criteria for accreditation of teacher training institutions: there is a need to revise teacher training curricula; aligning school curricula on citizenship and teacher training curricula on citizenship.

This report identifies a set of guidelines that include responsibilities of states, organization of renewed educational policies, coordination between global guidelines of intervention and adaptation to local characteristics, valuing the central mission of the teacher to renew Education and Pedagogy.

The OECD, as early as 2013, highlights the urgency of starting this whole process with the appraisal of teachers. In the report on this subject, several stakeholders related to Education emphasized a general idea that translates into the appreciation of the teaching profession and its positive repercussions on the quality of teaching, on the continuous development of careers, knowing that this recognition also affects the students' results. This recognition for teachers career will certainly change the image they have, the attractiveness of the profession and performance in the teaching-learning process. In this document, it is emphasized that the quality of education must be based on a set of interrelated policies (OECD, p.13):

- making teaching an attractive career choice in order to draw in the best possible candidates;

- ensuring high-quality initial teacher training and providing induction and mentoring programmes once a teacher has entered the profession;

- basing teacher professionalism on an evidence-based understanding of effective learning, providing teachers with a rich repertoire of teaching strategies, and fostering collaborative practice;

- offering effective in-service professional development to update and renew skills and

knowledge;

- establishing attractive employment conditions, compensation systems and career structures in order to retain good teachers and provide a stimulating context for professional growth;

- supporting teachers with effective school leaders; and

- engaging teachers as active agents in educational reform and innovation.

Given this framework, how can we glimpse the profile of the teacher of the 21st century?

Faulkner and Latham (2016, p 12) analyzed teachers' testimonies and teaching experiences and systematized their findings by highlighting a central feature - curiosity:

Curious teachers who lead adventurous lives have developed resilience and are creative problem-solvers. These are the teachers who can propel those engines. They are able to model and develop the skills that help students build capacity and pleasure in both finding and solving problems. If current educational practices are to change (and they must), the ways in which pre-service and in-service teachers are selected must change. (...) Teachers' adventures dare them to go beyond their comfort zones. As adventurers, they playfully explore life in childhood and beyond. They have lives filled with wonder, curiosity and discovery. They are also adventurous travellers, literally or metaphorically, border crossing at the side of characters in literature and through life itself in order to experience other cultures, other landscapes, other selves, their teacher identities and home. As new discoveries are made, these teachers often generate new pedagogical questions of promise and possibility.

Tsisana Palmer (2015), in an article on the fifteen main characteristics that the teacher of the 21st century must present, begins by saying that we live in a world of drastic technological advances that affect all aspects of our lives, including communication, work and teaching. These changes have led to the creation of designations as digital natives (Prensky, 2001), digital immigrants and leading the discussion to a central aspect: the teacher of the 21st century and what are his characteristics. In summary, she highlights the following: Learner-centered classroom and personalized instruction, Students as producers, Learn new technologies, Go global, Be smart and use smartphones, Blog, Go digital, Collaborate, Use Twitter chats, Connect, Project-based learning, Build positive digital footprint, Code, Innovate and Keep learning. This means that the teacher is axial in a new paradigm that is flexible, changeable, technological, inclusive, cooperative and innovative. It's a huge challenge.

In 2010, the British Educational Communications and Technology Agency highlighted some key areas and characteristics of the 21st-century teacher. Let us return to this

document, centred on the approach to technology:

1. Learning and Teaching (21st century teachers use ICT to deliver greater flexibility and choice of lessons and teaching techniques, communicate information and concepts clearly with high quality lessons and resources, make learning exciting and engaging for all learners, provide adaptive solutions for learners with special needs create a learning environment where learners feel safe and secure, extend learning and work in partnership with parents, families and the community.

2. Planning and Administration (21st century teachers use technology for all administrative processes, enabling them to save time, they use technology to help them with planning teaching and learning across a broad and balanced curriculum, reusing, adapting and sharing documents, storing and analysing pupil data for formative and summative assessment identifying and addressing their professional development, including their own ICT training, needs responding to emerging technologies and practice. 21st-century teachers take account of learning outside school. They make use of this in planning for learning inside the classroom.

3. Assessing and reporting (21st-century teachers have a modern assessment and reporting systems in place. These help them understand, identify and meet the needs of the learner. They use technology regularly and consistently to support their professional judgement track pupil progress monitor learners to ensure their use of technology is safe, legal and responsible communicate with parents/carers, sharing information through online reporting.

In conclusion, it is undeniable that the challenges of today's society inevitably lead to a reflection and concerted action among international, national and local organizations to establish lines of thought and intervention that can respond with quality and adequacy to the enormous challenges that our century brings to Education, Pedagogy and Literacies necessary for the teacher to be empowered, trained and prepared for our students. We, teachers and researchers, must build this approach in a way so that our common future of development, progress and innovation knows new ways to look further and further into the changing horizons of knowledge. As highlighted in the OECD report *Envisioning the future of education and jobs* (2019):

The future will be about pairing the artificial intelligence of computers with the cognitive, social and emotional capabilities of humans so that we educate first-class humans, not second-class robots. It is our responsibility, as concerned adults, to acknowledge and understand the trends that are shaping this industrial

revolution, and to impart that understanding to our children as early as possible. It is our responsibility, in other words, to help our children get ready for their future.

## REFERENCES

- [1] British Educational Communications and Technology Agency (2010) *21st-century teacher: Are you ready to meet the challenge?*. Coventry: Becta
- [2] Bull, A. and Gilbert, J. (2012) *Swimming Out of Our Depth: Leading Learning in 21st Century Schools*. Wellington, New Zealand Council for Educational Research
- [3] Faulkner, J., & Latham, G. (2016). *Adventurous Lives: Teacher Qualities for 21st Century Learning*. Australian Journal of Teacher Education, 41(4) <https://doi.org/10.14221/ajte.2016v41n4.9>
- [4] OECD (2013), *Teachers for the 21st Century: Using Evaluation to Improve Teaching*: OECD Publishing
- [5] Scott, C. (2015) *THE FUTURES of LEARNING 3: What kind of pedagogies for the 21st century?* UNESCO Education Research and Foresight: Paris. [ERF Working Papers Series, No. 15]
- [6] Tsisana Palmer (2015), *15 Characteristics of a 21st-Century Teacher*. Edutopia - George Lucas Educational Foundation [<https://amp.edutopia.org/discussion/15-characteristics-21st-century-teacher>]
- [7] UNESCO-IBE (2013) *Statement on Learning in the post-2015 Education and Development Agenda*. Geneva: UNESCO International Bureau of Education
- [8] UNESCO (2017) *E2030: Education and skills for the 21st century*. United Nations Educational and the Regional Office for Education in Latin America and the Caribbean (OREALC/UNESCO Santiago)
- [9] OECD (2019) *Envisioning the future of education and jobs. Trends, data and drawings*. Paris: OECD
- [10] Prensky, M. (Outubro de 2001). *Digital Natives, Digital Immigrants*. On the Horizon, Vol. 9 (Nº 5) <https://doi.org/10.1108/10748120110424816>
- [11] Prensky, M. (Dezembro de 2001). *Digital Natives, Digital Immigrants, Part II: Do they really think differently*. On the Horizon, Vol.9 (Nº 6) <https://doi.org/10.1108/10748120110424843>



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