

Pedagogical Innovation and Literacy Teaching

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Abstract—Pedagogical innovation is at the heart of XXI century learning and teaching. The multiple changes in society, culture and knowledge are driving schools and universities to rethink the classroom and the skills for the future professions. With this context, we aim to point out some of the main priorities in learning and teaching and first of all we have literacies, not only needed for our students but also for our teachers.

Keywords— Education, Pedagogical Innovation, Literacies.

I. INTRODUCTION

Our society is defined by the level of information we receive, produce and understand. This main challenge modifies schools and universities priorities regarding learning and teaching, not only because students are totally immersed in technology but also because teachers need to cope to this reality in a classroom that is very different from those we knew some years ago. And the keyword is Literacy. As H.R.H. Princess Laurentien of the Netherlands, Chair of EU High-Level Group of Experts on Literacy wrote:

Literacy is about people's ability to function in society as private individuals, active citizens, employees or parents. Children need skills to learn, adolescents need them to get a job and shape their futures positively. Citizens won't be able to pay their taxes online or vote if they're not literate. Employees need to be able to read safety instructions. And how can patients use their medication properly if they cannot read the instructions or lack the confidence to ask others? Literacy is about people's self-esteem, their interaction with others, their health and employability. Ultimately, literacy is about whether a society is fit for the future. (2012, p. 6).

Europe has gained conscience about the need to act now so that the teaching system can follow these changes and the latest recommendation of the European Union Council about key competences for lifelong learning (22 of May 2018) clearly focus on several guidelines for the European states and Literacies are essential for this effort to define the skills for the future:

Literacy is the ability to identify, understand, express, create, and interpret concepts, feelings, facts and opinions in both oral and written forms, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to

communicate and connect effectively with others, in an appropriate and creative way. (...) Individuals should have the skills to communicate both orally and in writing in a variety of situations and to monitor and adapt their own communication to the requirements of the situation. This competence also includes the abilities to distinguish and use different types of sources, to search for, collect and process information, to use aids, and to formulate and express one's oral and written arguments in a convincing way appropriate to the context. It encompasses critical thinking and the ability to assess and work with information. (2018, p. 8)

The European Union Council also emphasizes the need to favour digital skills that are crucial to pedagogical innovation and to engage the technological advances with success giving the future professionals and citizens the tools for understanding this new world:

Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and skills related to cybersecurity), intellectual property related questions, problem-solving and critical thinking. Individuals should understand how digital technologies can support communication, creativity and innovation, and be aware of their opportunities, limitations, effects and risks. They should understand the general principles, mechanisms and logic underlying evolving digital technologies and know the basic function and use of different devices, software, and networks. Individuals should take a critical approach to the validity, reliability and impact of information and data made available by digital means and be aware of the legal and ethical principles involved in engaging with digital technologies. Individuals should be able to use digital technologies to support their active citizenship and social inclusion, collaboration with others, and creativity towards personal, social or commercial goals. Skills include the ability to use, access, filter, evaluate, create, program and share digital content. Individuals should be able to manage and protect information, content, data, and digital identities, as well as recognise and effectively engage with software, devices, artificial intelligence or robots. Engagement with digital

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technologies and content requires a reflective and critical, yet curious, open-minded and forward-looking attitude to their evolution. It also requires an ethical, safe and responsible approach to the use of these tools. (2018, p. 9)

The present context is also characterized by UNESCO and ALA/ACRL emphasizing the importance of teaching training with information literacy skills and in Information Literacy Standards for Teacher Education, the role of the teacher is decisive to capacitate students to understand and decode information. UNESCO also published guidelines concerning Media and Information Literacy (MIL) with Media and Information Literacy: Policy and Strategy Guidelines and Global Media and Information Literacy Assessment Framework: Country Readiness and Competencies.

For now, we can conclude that teachers must be prepared to master and teach literacies, or as Sanches noticed:

(...) teachers seek to facilitate the reuse of content, allowing access to a variety of sources and enhancing the development of critical thinking and the creation of more complex ideas, as they encourage students to use and reinterpret resources [29]. Students and teachers use information resources to carry out much of their activity, which implies the capacity to understand, access, evaluate, use and manage a vast range of documents. Hence teachers need to devote some time to learning new information organization, management tools and ways to present academic work. (...) The literature review and observation of practices converge towards the same conclusions: the key importance of information literacy in teacher education and how teachers themselves are aware of it. (2018. p. 9)

So, for all this, school must change or better yet, we must change schools. As Chagas (2000) wrote, the mechanisms of change imply a deep understanding of innovation and its impact, and that's why several theoretical models have emerged (Rogers, 1995; Fullan, 1991; Sarason, 1982) since the '80s and the 90's to identify school as an institution with a singular culture that affects all changes, so any type of pedagogical innovation designed by and for teachers must be understood, in first hand, inside the whole school to promote inclusion and assimilation. A program for scientific literacy, for instance, must be well prepared and built upon solid ground because it needs to produce several strong results, as Chagas notices:

– Allow the recognition of the range of forces of change in our society. Such changes are, for example, the emergence of the information age, the birth of the global economy, and the new means of communication (the cyberworld);

– To promote civic competences, implying a rational approach to science with regard to personal, economic problems and issues that each person may have to face throughout life;

– Consider cognitive competences that allow the use of scientific and technological knowledge in

human affairs and in social and economic progress;

– Enabling students to adapt to a world of changing science and technology and their impact on personal, social and economic activities. (2000, p. 6)

Moreover, pedagogical innovation demands different types of change from several key elements in school:

In the curriculum, conceiving programs suitable for new purposes, which may imply a significant decrease in the contents to be studied, leaving free time for students to... Learn!; In the evaluation strand, creating and applying diversified methodologies, in accordance with the multiple objectives set out, which may imply a greater emphasis on formative evaluation; In the resource strand, providing the laboratory, computer, audiovisual and bibliographical resources that serve to support the creation of different learning environments; In an initial and continuous teacher training strand, allowing a systematic scientific and pedagogical update and a critical and reflective approach to educational practices; In the school, whose culture can facilitate or prevent any attempt to change. (2000, p. 10)

The European Commission EU High-Level Group of Experts on Literacy. Final Report clearly stated in 2012 that teaching literacies were vital for Europe's future. Not only for children or teenagers, but also for adults and all these required well-trained teachers, prepared for these variables and different types of students. This requires government guidelines for teacher training so that universities can carry out training programmes for these new teachers:

Creating more demand for literacy instruction will require an increase in the supply of high-quality courses. Improving the quality of adult education and training means improving all the components that shape it, including institutional ethos, teacher recruitment, teacher training, pedagogy and curricular strategies. It also means being clear about the level of commitment required to produce long-term literacy improvements. (...) Teaching adults requires qualified teachers, trained to deal with the specific challenges of adults. These adults have a long history of struggling in school and managed to leave compulsory education without developing good reading and writing skills. They need high-quality teachers who treat learners as adults and give them individual attention. However, at present, very few tutors have specific qualifications in adult literacy pedagogy. (2012, p. 41)

These trends in teaching and learning are so important for Europe's future that this High-Level Group of Experts on Literacy defined several actions to be undertaken by Europe decisionmakers so that the gap between the lack of literacy knowledge and the needs for strong literacy knowledge could be diminished as soon as possible, creating a well prepared Europe. We highlight the following recommendations made by these experts:

3. RAISE THE LEVEL OF LITERACY

TEACHING

AND PROVIDE MORE READING SUPPORT

- Include a wide range of literacy-specific teaching strategies, including digital aspects, assessment techniques, methods for diagnosing problems in reading and writing in initial education and professional development of teachers of primary, secondary and adult education, and improve their capacity to communicate with families in order to inform and complement school work; Improve and raise awareness of the early diagnosis of sensory, language and learning difficulties in order to provide more effective educational support addressing all reading and writing difficulties; Give incentives and support for the creation of organisation-wide literacy strategies in schools, explicitly committing the whole school community to raise the level of achievement in reading and writing.

4. ADOPT A COHERENT LITERACY CURRICULUM

- Develop a coherent literacy curriculum from early childhood education to adult learning; Cover the full range of reading materials, from electronic to print, from canonical literature to newspapers and comic books; Set age-related standards and provide assessment tools to help teachers measure progress and identify extra support needs – and make sure this support is available; Include instruction in reading strategies as useful tools for every student; Allow adequate time for reading instruction and for free reading activities, where students choose their reading material and set their own pace while reading; Mainstream reading literacy across the curriculum, addressing reading aspects in the curricula for other subjects throughout secondary education, whether academic or vocational; Develop a curriculum for adult literacy. For adults, curricula should focus on acquiring literacy skills through practical, real-life and/or workplace examples. (2012, p. 45)

As changes become more and more common in the classroom, teachers need to be prepared to face questions and difficulties that can no longer be anticipated due to the faster learning environment that surrounds the student's outside and inside the classroom. As for technology, it is more and more a part of our classroom, so we need to see it as an ally, not an enemy. So teachers have to be flexible and open to diversity, constant changes and be able to adapt. Parsons wrote about the need to adapt:

Researchers associate adaptive teaching with teacher effectiveness (Anders et al., 2000; Corno, 2008; Darling-Hammond & Bransford, 2005; Fairbanks et al., 2010; Gambrell et al., 2011; Pearson, 2007; Snow et al., 2005). Although this position resonates with educators' understandings of instruction and learning, there are limited data connecting teachers' adaptations and student outcomes. Studying this relationship is a necessary

next step in the research on adaptive teaching. One particularly valuable approach to studying teacher adaptations and student outcomes would be to examine the effect of adaptations on students' self-regulated learning. (2012, p. 166)

Teachers of the XXI century believe in technology and use it in the classroom to bridge the gap from their students. There is a solid ground for the use of technology-based innovation pedagogies and teachers must have contact with them before becoming professionals, while they are studying at university, but also when they are teaching. Picton states that recent studies show what are the main teachers' beliefs about using technology to support learning:

Research indicates that teachers' pedagogical beliefs, knowledge and experience are important factors in technology integration (Graham, 2008; Avramides, 2016; Ertmer, 2016). Furthermore, there is a consensus that teachers play a key role in supporting pupils to use technology effectively, as "...despite familiarity with personal technologies, learners are generally poor at deploying their digital skills in support of learning" (Beetham et al., 2009; see also Butterworth, 2009; Green and Gordon, 2014; McQuirter et al., 2017). Indeed, as Considine et al. (2009) have suggested, "In order to best meet the needs of digital natives, educators must 'build a bridge' connecting knowledge and skills students already possess to the academic content and skills required for success". This is further illustrated in a review by Delgado et al., (2018), who noted that studies indicate that simple methodologies (such as writing keywords summarising text when reading on-screen) can engage pupils with in-depth processing, mitigating the "screen inferiority" otherwise noted in relation to comprehension. This demonstrates the significant role that pedagogy has to play in helping students develop skills that support a "thoughtful approach to digital information". Such approaches recognise that, rather than replacing teaching, "technology's main classroom role is to complement and enable good learning practices" (Walton, 2017) (2019, p. 22).

In conclusion, we can really say that pedagogical innovation is at the heart of XXI century learning and teaching and that Literacies are essential for teachers, during the training period and in the classroom.

Innovation and technology walk side by side and universities have the responsibility to enhance curricula in order to give future teachers the best literacy skills to understand our changing world, our web-connected students and our information society. We must bear in mind that there are three key features of the UNESCO' definition of literacy, as described by Montoya: "Literacy is about the uses people make of it as a means of communication and expression, through a variety of media; Literacy is plural, being practised in particular contexts for particular purposes and using specific languages; Literacy involves a continuum of learning measured at different

proficient levels. “ (2018, p.2) and most important of all:

Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts.

Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society (UNESCO, 2004; 2017). (2018, p. 2)

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