Reflecting upon the Greek state-school teacher's changing role in the 21st century: an 'ecosystemic' approach

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Abstract. In the 21st-century globalized context, education systems world-wide are challenged to respond to the increasingly rapid and often unpredictable demands of the globalized society in an interdependent way towards achieving common education goals on a transnational level. In this globalized space, the Greek state-school teacher's role has evolved and changed towards thinking and acting both locally and globally, as an active participant of the global ecosystem. The purpose of this article is to reflect upon the Greek state-school teacher's changing role in the 21st century, taking into consideration the global educational context in conjunction with the changing state-school context in Greece, as well as the characteristics, challenges and changes of the teacher's role internationally identified, both conceptual and practical, through an ecosystemic approach.

Key words: teacher's role; global ecosystem; global citizenship; global citizenship education

Introduction

In the 21st-century globalized world, the teacher's role is rapidly evolving and dramatically changing due to the growing interdependence of the world's societies, economies, cultures, and populations as a result of the cross-border trade in goods, services and technology, as well as the cross-border flow of people, knowledge and information (Pilon, 2010; UNESCO, 2013,2014a, 2016a, 2018; Xochellis, 2005).

The increasing interdependence and interconnectedness of people and places have resulted in a global community which functions as an 'ecosystem' where, inevitably, people, goods and services (economy, technology, trade, science, education) interact and interrelate on a

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transnational level to form a unified whole, a global ecosystem, a world that is interconnected as never before (Zhao, 2010).In this global ecosystem, there is a shift from a focus on nationalism in education policies, to global interconnectedness of education systems in order to foster global citizenship through global awareness, collaboration, empathy, peace and justice (UNESCO, 2015b, 2017). In the global ecosystem, local and national considerations of education systems tend to be outdated and replaced by global considerations and goals (Maastricht, 2002; UNESCO, 2013, 2014a, 2017, 2018). Recognition of global challenges, teachers' awareness of the increasing interconnectedness of people and nations and the need to act across national boundaries to develop solutions for global problems are all considered to be matters of global citizenship which is both a challenging issue and an imperative need (UNESCO, 2017; Zhao, 2010).

This global ecosystem affects other 'ecosystems' such as the education ecosystem where teachers traditionally and fundamentally play a vital role in students' learning and nurturing for adult life (Luksha, Cubista, Laszlo, Popovich, & Ninenko, 2018; Tzotzou, 2016; Zhao, 2010). In the ever-changing global landscape, traditional conceptions and ways of working as a teacher are being challenged and teachers are faced with new roles to fulfil as education professionals. The 21st-century teacher is required to be responsible in a global sense, as well as responsive to myriad problems and complex issues, both of global and local concern. This shifting global context demands that teachers today fulfil a new complex role and develop commitment to global citizenship throughout the educational process (Guo, 2014; Longview Foundation, 2008; Makrakis, 2017a; OECD / Asia Society, 2018; UNESCO, 2014c, 2018).

This article addresses the significance of the Greek state-school teacher's changing role from an 'eco-systemic' point of view by taking into consideration the new challenges and demands of the changing educational landscape in the global context and the increasing interconnectedness and interdependence of the world[1]. The paper is organized into three main sections and a conclusion. The first section, which consists of two subsections, outlines the framework of an ecosystemic approach and discusses the emerging challenges for the 21st-century education with specific reference to the notion of global citizenship. The second section aims at setting the context of the global educational ecosystem through a critical overview of the literature with specific reference to general 21st-century educational goals and strategies put forward and promoted by international organizations (European Commission, Council of Europe, OECD[2], UNESCO[3], United Nations). The second section is divided into two subsections which discuss the 'global citizenship education' vision, as well as the current situation of the Greek state-school context as part of the global educational ecosystem, taking into account the fact that Greece is a member state of European and international organizations(OECD, UNESCO, United Nations).The third section, also divided into two subsections, discusses the Greek state-school teacher's changing role in the 21st century through a literature review of the challenges and changes, both conceptual and practical, of the teacher's role internationally identified; first rethinking the Greek state-school teacher's role considering ecosystemic perspectives and then

[1]Since 2002, the Europe-wide Global Education Congress has stressed the international, regional and national commitments to increase and improve support for Global Education, as education that supports peoples' search for knowledge about the realities of their world, and engages them in critical global democratic citizenship towards greater justice, sustainability, equity and human rights for all *(Maastricht Global Education Declaration: European Strategy Framework for Increasing and Improving Global Education to 2015).*

[2]OECD abbreviation stands for 'Organisation for Economic Cooperation and Development'.

[3]UNESCO abbreviation stands for 'United Nations Educational, Scientific and Cultural Organization'.

redefining the Greek state-school teacher's role in the 21st century regarding the teaching strategies and pedagogical practices defined by the global educational ecosystem. The paper concludes with a brief discussion of the implications emerging from the changing role of state-school teachers in Greece in the era of global citizenship.

Towards an ecosystemicapproach

Why an ecosystemic approach?

The notion of ecosystem, initially used for ecology ecosystems to show how living and non-living organisms interact with one another and with their physical environment, lends its metaphoric potential to depict the complex interactions concerning people, goods, services, behaviors, responses, and actions influenced by a set of social, political, cultural, and economic conditions in the global community, across and beyond national boundaries (OECD, 2015c).

The ecosystemic approach of this paper lies on the developing dynamics and interactions of the global community due to the increasing interconnection and interdependence of populations on the basis of world-wide economic, geopolitical and social events, processes and relations, as already stressed by several scholars and international organizations (Luksha et al., 2018; Pilon, 2010; UNESCO, 2013, 2014a, 2016a, 2018; Zhao, 2010). The economic, political, and social systems have become interconnected to such a degree that they have resulted in a complex global ecosystem where populations constantly interact with each other through visible and invisible networks of communication, technology and transport. In such a context, the ecosystemic approach derives from a. the interplay between the individual and the surrounding globalized context (being a citizen of both the local and global community), b. the transnational interplay of populations all over planet (immigration, global labor market, etc), c. the transnational interplay of goods and services (economy, science, technology, education, information) and d. the global nature of 21st-century problems and concerns (terrorism, social inequalities, poverty, racism, human rights violation, climate change, etc). As Makrakis (2014) points out, humanity is increasingly confronted with complex problems, both locally and globally, as well as with a crisis of sustainability, not only due to environmental issues such as climate change, but also to serious economic and social issues, such as poverty, social inequalities, violation of human rights, terrorism, violence, etc.

The ecosystemic approach results from the international call for a better understanding of the 21st-century globalized world as a series of interconnected and symbiotic systems, and humankind as a singular entity interconnected across space and time, so as to highlight the need to take joint action to solve common problems and global concerns (UNESCO, 2017b; Zhao, 2010). The ecosystemic approach gives prominence to the widely acknowledged need to become globally aware and competent in order to be able to participate actively in the global ecosystem and contribute to the sustainable development of both the local and global community. The ecosystemic perspective also makes clear that in order to engage with global challenges and tackle problems locally and globally, people need to understand their interconnections with others, realize their individual and collective impacts on the global community, transcend ethnocentric bias, acquire awareness of the planet as an interrelated and holistic system and, thus, develop their global citizenship (UNESCO, 2016a, 2016b). As Carlos Alberto Torres clearly states, "Global citizenship is marked by an understanding of global interconnectedness and a commitment to the collective good" (UNESCO, 2014a).

In light of the above, within the aforementioned ecosystemic approach, the notion of 'citizenship' is broadened as a multiple-perspective concept to be linked with growing interdependency and interconnectedness between countries in economic, cultural and social areas (through increased international trade, immigration, communication, etc), as well as with our concerns for global well-being beyond national boundaries, on the basis of the understanding that global well-being also influences national and local well-being (UNESCO, 2014a). This means that global citizenship responsibilities apply to everyone: to people of all ages, nationalities, religions, races, with no exceptions or exclusions. Given that actions undertaken in some parts of the planet can affect the well-being and prosperity of millions in other parts, global citizenship stresses the political, economic, social and cultural interdependency and interconnectedness between the local, national and global arenas (UNESCO, 2018).In other words, the notion of global citizenship draws on the interconnectedness between the local and the global and refers to the common understanding that we belong to a broader community, the global community, sharing our common humanity beyond national boundaries (UNESCO, 2015b, 2016b, 2018).

Emerging challenges for the 21st-century education

At the heart of this ecosystemic debate is the role of education which constitutes an ecosystem on its own affected by the broader global ecosystem, that is the global community, and vice versa. As the educational ecosystem[4]interacts with the global ecosystem, the importance of education lies in helping people realize their role as active members of the global community, their individual and collective responsibilities in the sense of engagement for social and economic justice to achieve sustainability justice[5] both locally and globally. According to Makrakis (2017a), sustainability justice should be perceived as a process which constructs knowledge, empathy, compassion, social solidarity and action competences. In this regard, the 21st-century education is challenged to equip young people with skills to enhance their lives and benefit the global environment through a new learning paradigm which gives rise to the 4 Cs-'super skills 'Creativity, Communication, Critical Thinking and Collaboration, the skills most in demand in the 21st century (Kivunja, 2015). Education in the 21st century is challenged to instill values, ethics, civic engagement, and citizenship in young people, transforming the way they think and act, so as to build more just, peaceful, tolerant and inclusive communities. The pursuit of sustainable peace and development in the global community requires solidarity, empathy, tolerance, and a sense of belonging to a common humanity which are core elements of Global Citizenship Education (UNESCO, 2018).

Global Citizenship Education (GCED) is both a vision and praxis, beyond national boundaries, seeking to empower people of all ages to become proactive contributors to a more just, peaceful, tolerant, inclusive, and sustainable world (UNESCO, 2016a, 2016b). The GCED

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[4]The notion 'educational ecosystem' refers to a dynamically evolving and interconnected ecosystem or network of educational / learning spaces, with individual and institutional learning providers, that offer a variety of learning experiences to individual and collective learners across the learning lifecycle (Luksha, et al., 2018).

[5]The concept of 'sustainability justice' introduced by Makrakis (2017a) reflects the four pillars of sustainable development: environment, society, economy and culture and is perceived as a process, which: 1) seeks fair (re)distribution of resources, opportunities, and responsibilities; 2) challenges the roots of oppression, exploitation and injustice; 3) empowers all people to raise their voice, and express their needs and rights; and 4) constructs knowledge, empathy, compassion, social solidarity and action competences (Makrakis, 2017b).

vision aims to create a sense of belonging to the global community and common humanity, develop respect for the universal values of human rights, democracy, equality, and tolerance; and educate students on learning to live together sustainably by empowering them to assume active roles to shape a more peaceful, tolerant, inclusive world (Makrakis, 2017a; UNESCO, 2015b, 2017). The GCED vision acknowledges the principal role of education in moving beyond the development of cognitive skills to build values, soft skills and attitudes that can facilitate transnational cooperation and promote social transformation in the global community (UNESCO, 2014a).

The GCED vision generates a set of challenges and new demands on the educational praxis, first and foremost, regarding the 21st-century teacher's role (Xochellis, 2005). At the heart of the GCED praxis is the teacher who has a huge role to play in helping students envision a common future with better life conditions for all, while connecting local and global perspectives. Xochellis (2002) stresses the need for a dynamic transformative process of teachers' interaction with the advancements and changes in the international socio-economic and multicultural context. The 21st-century teacher is challenged to make the GCED vision real and possible by reflecting critically on traditional teaching methodology and pedagogy matters, and by contributing actively to the revision of the traditional curricular content and approaches (Xochellis, 2002). The teacher is the dominant transformative force to help realize the six fundamental pillars of learning in 21st-century education: learning to know, learning to be, learning to do, learning to live together sustainably, learning to give and share, and learning to transform oneself and society in order to enable young people to find their way while living in a 'complex world in constant turmoil' (Makrakis, 2017a; Makrakis, Kostoulas-Makrakis, & Kanbar, 2013). In other words, the GCED praxis generates critical challenges for the 21st-century teacher whose role needs to be revised in order to adapt to the ever-changing needs of the global community, provide students with opportunities for transforming pedagogy and develop their knowledge, skills, values and attitudes addressing sustainability problems through learning environments, both physical and virtual, which inspire students to take action in an interactive, exploratory and innovative way (Makrakis, 2017a; UNESCO, 2016a, 2016b).

Setting the context of the global educational ecosystem

Towards a 'global citizenship education'

In an increasingly globalized and interconnected world, where human rights violations, inequality and poverty, as well as terrorism, violence and racism threaten peace and sustainability, there is growing interest in Global Education[6] (Maastricht, 2002), and more specifically in GCED, so as to be able to cope with the 21st-century challenges, not only as separate nations, but mainly and, most importantly, as a global community across national boundaries and beyond nationalistic perspectives (UNESCO,2015b, 2016a, 2018).

We are living in a highly connected and complex world, in a global ecosystem, benefitting from scientific and technological advances which have accelerated the rate of globalization due to the expanding networks of communication and transportation connecting people across borders and cultures. We are living in highly multicultural communities due to the movement of

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[6]"Global Education is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education; being the global dimensions of Education for Citizenship (Maastricht, 2002)."

millions of immigrants and refugees from one country or region to another (Zhao, 2010). We are living in a world where the majority of people suffer from persistent hunger, there is malnutrition, child mortality and a lack of basic services (UNESCO, 2018). In this globalized world, with more than 244 million people living outside their home countries (United Nations, 2016), and with the continuing marginalization or even displacement of indigenous people who are facing their own challenges to preserve their culture and traditions along the road to economic growth and development, there is an imperative need and a great challenge to think and act globally, as global citizens, to ensure sustainable and inclusive development with shared prosperity for all people (UNESCO, 2018;OECD / Asia Society, 2018).

In this global ecosystem, no person or country can cope by themselves with problems, concerns and challenges that are global in nature. As Donella Meadows[7](2001) advocates, "no part of the human race is separate either from other human beings or from the global ecosystem", and so it is impossible "for the global economy to succeed if the global environment fails" (Luksha et al., 2018, p. 70).GCED is UNESCO's response to the global problems, concerns and challenges[8]. GCED aims to empower students of all ages to understand that 21st-century concerns are 'glocal' (both global and local), as well as to help them become active members of more peaceful, tolerant, inclusive, secure and sustainable communities (OECD / Asia Society, 2018). It aims to enhance values, attitudes and behaviours that support responsible global citizenship such as critical thinking, innovation, and commitment to peace, human rights and sustainable development (Maastricht, 2002; UNESCO, 2016a, 2016b).

The mission of GCED lies in developing soft skills and attitudes for social change inculcating mostly non-cognitive learning outcomes such as values, ethics, social responsibility, civic engagement and global citizenship (Tawil, 2013; UNESCO, 2013, 2015b, 2018; Xochellis, 2005). GCED aims to make people of all ages feel a sense of belonging to the global community, a common sense of humanity and thereby a sense of community towards global well-being. Due to the political, economic, social and cultural interdependency and interconnectedness between the local, national and global contexts, GCED aims to transform the way we think and act in an attempt to build more just, peaceful, tolerant and inclusive societies (UNESCO, 2015b, 2018).

GCED is essentially oriented towards inclusive and equitable education, as well as lifelong learning, highlighting that literacy, numeracy and technological skills, although significant, are not sufficient to enable21st-century citizens to lead healthy and fulfilled lives, to make informed decisions and respond to local and global challenges (OECD, 2015b, 2016a). GCED aims at quality education to develop the skills, values and attitudes that are essential for sustainable development, as well as human rights education and training to achieve the United Nations Education 2030 agenda (Kivunja, 2015; UNESCO, 2015b, 2016a, 2016b). In this sense, the power of education has no boundaries and can be transformative, enabling people to understand the links between their own lives and those of people all over the world, while realizing the economic, cultural and political influences which shape their lives. GCED aims to foster social cohesion, mutual respect and tolerance of diversity against prejudices, ethnocentrism, racism, xenophobia, nationalism, discrimination and violence. GCED aims to enable people to act

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[7]Donella Meadows was founder of Global Future Education Institute (http://global-future-education.org/). The Global Future Education Foundation is a not-for-profit corporation dedicated to promoting and spreading a civilization-level shift from 'educating' our kids to 'empowering' them - an alternative emerging around the globe that better fits the kids of the 21st century.

[8]GCED is a strategic area of UNESCO's Education Sector programme and builds on the work of Peace and Human Rights Education.

together to bring about change and take control of their own lives towards achieving a more sustainable world in which power and resources are more equitably shared (UNESCO, 2014a). In this perspective, global citizenship represents the knowledge, competences, values and attitudes that develop a global awareness and the human agency to empower local and global action towards a more peaceful, equitable and sustainable world (Makrakis et al, 2013; Pilon, 2010; Reade, Reckmeyer, Cabot, Jaehne, & Novak, 2013; UNESCO, 2015b, 2016a; 2018).

Global citizenship is essentially a matter of knowledge and learning that can be fostered in schools by the teachers, the curriculum and the education system as a whole (UNESCO, 2015b; 2016a). Several scholars highlight the need for an understanding of global complexity and interconnectedness and stress the importance of teachers' role in helping young people develop their global awareness that is crucial for the global ecosystem sustainability in the 21st century (An, 2014; Guo, 2014; Loomis, Rodriguez, & Tillman, 2008; Rapoport, 2015; Townsend, 2011). In the same vein, UNESCO (2018)[9] and the Longview Foundation (2008) emphasize the critical role of teachers in education, and more specifically in GCED, as key players in transferring appropriate global values, knowledge, and skills to their students. According to UNESCO (2018), besides transferring knowledge content to students, the 21st-century teacher is expected to create an environment that is conducive to learning to prepare students to be productive, ethical, moral, and responsible citizens in a rapidly changing and interconnected world. UNESCO (2014c, 2018) emphasizes that the 21st-century teacher needs not only to have strong subject and pedagogic content knowledge but also to possess effective classroom management skills, to readily utilize digital technology and be both inclusive and sensitive to the diverse needs of all students. In this regard, the 21st-centuryteacher is expected to be the key player who can transform GCED vision into practice.

The Greek state-school context as part of the global educational ecosystem

The Greek state-school context, as part of the global educational ecosystem, inevitably shares similar problems, challenges and demands with schools worldwide, and is challenged to equip the entire student population with the knowledge, skills and values considered essential to live in the 21st-centuryglobalized society as active and responsible global citizens.

- Multicultural classrooms

To start with, in Greece, as in other countries of the Western world, the increasing flows of immigrants and refugees have created a new multicultural social context which unavoidably is reflected in the state-school context. Greek state-school classrooms are no longer monocultural or homogeneous as they used to be in the past. They display an increasing heterogeneity, mainly due to the national and cultural diversity of the student population which necessitates new teaching paradigms related with differentiated teaching practices and intercultural awareness (OECD, 2015a; UNESCO, 2018). The last two decades, linguistic, cultural and racial diversity has become a salient feature of the Greek state-school context because of a rapid increase in immigrant families and, especially, because of the dramatic increase of refugees in Greece. According to UNICEF[10], in January 2019, an estimated 11,500 refugee and migrant children of school age (4-17 years old) were enrolled in formal education, out of the estimated total of 28,000 refugee and migrant children in the whole of Greece.

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[9]With support from the Korean Funds-in-Trust, one output of the project is this guide: *Preparing Teachers for Global Citizenship Education: A Template.*
[10]https://www.unicef.org/media/76281/file/Refugee-Migrant-Crisis-Europe-SitRep-March-2019.pdf

The changing educational landscape in Greece places critical demands not only on the Greek general public education system[11] but, most importantly, on state-school teachers themselves who must be didactically and pedagogically competent in addressing issues of globalization such as diversity, social justice and respect for all, and in creating an equitable and inclusive learning environment for all students (Banks, 2001; Dantas, 2007; Guo, 2013; Florian, Young, & Rouse, 2010; Maastricht, 2002; OECD, 2015a; UNESCO, 2018; Xochellis, 2002). The increasing multicultural composition of the student population in Greek state schools[12] makes it necessary not only to reconsider teaching methods and read just school curricula, but also to redefine the teacher's role in managing multicultural classrooms in a pedagogically appropriate and inclusive way (Palaiologou & Evangelou, 2003; Rentzi, 2017; Taylor & Sidhu, 2012; Xochellis, 2005). The cultural pluralism of the Greek state-school context, which reflects the cultural pluralism of the local and global society, urges for more pluralistic teaching and pedagogical approaches, as well as differentiated teaching strategies to prevent educational inequalities, racist discrimination and exclusion due to the national and cultural heterogeneity in state-school classrooms in Greece (Androusou, 2000; Bereris 2001; Damanakis 2005; UNESCO, 2018; Xochellis, 2002).

- School bullying

Violence, or otherwise violent extremism[13], is another serious social phenomenon of both global and local concern which threatens social cohesion and harmony and is commonly reflected in the global education context in the form of school bullying (UNESCO, 2011b, 2016c). On the one hand, the crucial role of education in coping with violent extremism, which is not confined to any age, sex, group or community and is considered to be among the most pervasive challenges of globalized society, has only recently garnered global attention (UNESCO, 2016c). Young people who are particularly vulnerable to the messages of violent extremists and terrorist organizations need relevant and timely learning opportunities to develop the knowledge, skills and attitudes that can help them build their resilience to such propaganda (UNESCO, 2016c). On the other hand, bullying[14] which, according to the literature (Olweus, 1999; Rigby, 2005), is the activity of repeated, aggressive behavior intended to hurt another individual, physically, mentally or emotionally, has been recognized as a huge widespread, persistent and serious problem of school life across different national contexts over the last two decades. Greek state

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[11]All children in Greece, including refugees and asylum seekers, have the right to enrol in public schools. From the age of four, refugee and asylum-seeking children can attend pre-primary school, which is compulsory after the age of five. Since 2010, Educational Priority Zones (ZEP) have been in operation in certain public primary and secondary schools in Greece and offer classes that are integrated in the mainstream educational system, which students attend alongside Greek students.

[12]As for June 2019, 12,867 asylum seekers and refugees were enrolled in primary and secondary schools in Greece: 1,506 in pre-primary schools, 2,267 in Reception/Preparatory Structures for the Education of Refugees (DYEP) in primary schools and 804 in Reception Structures for the Education of Refugees (DYEP) in lower secondary schools; 1,774 in primary schools, 807 in lower secondary schools and 1,469 in upper secondary schools with reception classes; and 3,246 in primary schools, 687 in lower secondary schools and 289 in upper secondary schools without Reception Classes (Leivaditi, Papatzani, Ilias, & Petracou, 2020).

[13] According to UNESCO (2016c), the 'push factors' leading individuals to violent extremism are related to marginalization, inequality, discrimination, limited access to quality and relevant education; the denial of rights and civil liberties; and other environmental, historical and socio-economic grievances. The role of education in preventing violent extremism and de-radicalizing young people has only recently gained global acceptance.

[14]Children may be more vulnerable to bullying if they live with a disability, express a sexual preference different from the mainstream, or come from a minority ethnic or cultural group or a certain socio-economic background. Bullying sometimes leads to fatal physical attacks (UNESCO, 2011b).

schools need to cope with bullying phenomena similar to those recorded in schools in Europe, America, Canada, Australia, Japan, Southern Africa (Berthold & Hoover, 2000; Harris & Petrie, 2004; Pereira, Mendonça, Neto, Valente, & Smith, 2004; Psalti & Constantinou, 2007; Rigby, 2005).

According to research findings bullying phenomena have increased in the Greek state-school context and they usually include a set of socially deviant behaviors such as racism, aggressiveness and violence expressed among students, both in primary and secondary education (Kalliotis, 2000; Pateraki & Houndoumadi, 2001; Psalti, 2012; Sapouna, 2008; Smith, Nika, & Papasideri, 2004). Increasing phenomena of bullying have led state-school teachers to rethink their role by reflecting critically on their views, attitudes and pedagogical strategies to be able to cope with them (Kochenderfer-Ladd, Pelletier, & Ladd, 2008). The crucial role of teachers in preventing bullying phenomena that students may encounter in the school context is underlined and emphasized by several researchers in Greece and abroad (De Luca, Nocentini,& Menesini, 2019; Didaskalou & Millward, 2001; Psalti & Constantinou, 2007; Rigby, 2004; Sapouna, 2008).

To prevent bullying and violent extremism phenomena, Greek state-school teachers are challenged to ensure inclusive and equal education for all students, not only by applying global values such as empathy, equality, justice, tolerance and respect inside the classroom, but also by inculcating these global values in their students throughout the educational procedure in order to allow them to live in a peaceful and sustainable global ecosystem both as future adults and as global citizens (OECD / Asia Society, 2018; UNESCO, 2014c, 2018; Xochellis, 2002). To this end, UNESCO (2011b) puts forward a daily school practice of a human rights-based approach towards the creation of a 'rights-based school'; a safe environment conducive to learning, where all students enjoy and fully benefit from the educational process accomplishing their social and emotional development as well.

- Digital school

The Greek state school, as part of the global education ecosystem, is also challenged to optimize the educational process by fostering students' digital competence which is defined as a key competence across Europe so as to enable them respond to the new challenges and demands of the digitalized world (Council of Europe, 2017b; European Commission/EACEA/Eurydice, 2019b). As digital technologies and social networks constitute an integral part of our life in the 21st-century globalized society, young people are faced with a whole new series of digital challenges and opportunities to live and act both as global and digital citizens. According to the OECD (2016a), developing digital competence within a globalized context facilitates dealing with global and intercultural issues critically, as well as engaging in open, appropriate and effective interactions with others from different backgrounds on the basis of a shared respect for human dignity. Similarly, UNESCO (2013) promotes digital literacy as an essential 21st-century literacy empowering people, communities and nations to participate in and contribute to global knowledge societies. The notion of digital citizenship education[15] encompasses a range of competences, attributes and behaviors that harness the benefits and opportunities of the cyber world while building resilience to potential harms (Council of Europe, 2017b, 2019). Makrakis

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[15]In 2016, the Steering Committee for Educational Policy and Practice (CDPPE) of the Council of Europe launched a new intergovernmental project on Digital Citizenship Education to reshape the role that education plays in enabling all children to acquire the competences they need as digital citizens to participate actively and responsibly in democratic society, whether offline or online (Council of Europe, 2017b).

(2017a), stresses the role of ICTs in an education for sustainability justice to prepare students to contribute to a just growth-oriented global society.

According to the European Commission/EACEA/Eurydice (2019b), Greece has already developed curriculum approaches through which digital literacy is addressed both as a compulsory separate subject and as a cross-curricular theme in primary and secondary education[16].Primary schools have already been in the process of implementing ongoing curriculum changes especially in the last decade[17]. Furthermore, just as the majority of European countries Greece has already developed top-level plans to invest in schools' digital infrastructure which is clearly indicated among the objectives of the national digital education strategy, while at the same time the development and availability of digital learning resources[18] (including digital textbook material and Open Educational Resources) seems to be an ongoing process (European Commission/EACEA/Eurydice, 2019b).

The need to integrate digital technology into teaching and learning proved to be imperative or more urgent than ever before during the Covid-19 pandemic, when the total closure of schools all over Greece, as in other countries of the Western world, did not entirely stop education, but certainly changed it. To reduce the negative impact of school closures, Greek state schools deployed digital technology to provide access to education through home schooling (the so-called distance school education), based on the use of digital learning resources as well as of synchronous and asynchronous e-learning platforms, tools and methods. The Greek School Network (GSN)[19] was the official national network to provide services and technical support to all public primary and secondary schools during Covid-19 period. GSN provided state-school teachers and students with teleconference-services and e-learning services ensuring safe access to the internet and protection against inappropriate content as well as protection of data[20].

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[16] It is worth noting that, according to the European Commission/EACEA/Eurydice report (2019b), Information and Communication Technologies (ICTs) is a compulsory subject in primary education with the highest number of recommended hours (around 150 hours).

[17]It is also worth noting that Greece covers learning outcomes related to collaboration and communication through digital technologies (European Commission/EACEA/Eurydice (2019b).

[18]The Computer Technology Institute and Press 'Diophantus', a research and technology organization focusing on research and development in ICTs, developed digital material (ebooks) for all school textbooks that are taught in public primary and secondary schools in Greece (https://dschool.edu.gr/). It was an attempt to 'digitalize' the school textbooks by offering all the textbook material online and /or supplementing it with extra audiovisual aids and software (Tzotzou, 2018). The Ministry of Education has developed educational software for all school subjects both in primary and secondary education since the beginning of the 2000s. Extra digital educational content is also available in the National Aggregator of Educational Content ('Photodentro') to supplement the textbook material (http://photodentro.edu.gr/).

[19]GSN (http://www.sch.gr/) has been the official network and services provider for all public primary and secondary schools since 2000. It is the national network of the Ministry of Education which safely interconnects more than 14,000primary and secondary schools, a community of about 1,022,864learners and151,639teachers. The GSN provides teachers, learners and parents with useful information to ensure safe internet access following the guidelines of the Ministry of Education which promotes the 'Safer Internet' program (saferinternet.gr) in collaboration with the Greek Centre of Safe Internet and the European Commission (Tzotzou, 2018).

[20] During the Covid-19 pandemic, the electronic classroom service (http://eclass.sch.gr) assisted teachers provide students of primary and secondary education with online course material and tasks in an asynchronous way, while the teleconference service WebEx meetings by Cisco (https://webex.sch.gr/) provided to the certified members of GSN (both teachers and students) the ability to take part in

Distance learning was a great challenge for the Greek educational system and state schools, for the Greek students and their families but, most importantly, for the Greek state-school teachers who were abruptly obliged to adapt themselves and their teaching practices to the new, challenging as well as urgent and demanding distance learning reality.

- *Community-oriented learning*

In the increasingly globalized landscape where there is undoubtedly a heavy GCED focus (Eurydice, 2012; UNESCO, 2014a, 2015b), the Greek state-school system faces significant challenges due to the fact that the educational environment is not confined within the school classroom walls but, instead, extends into both European and global community. Up to now, Greece has already planned and implemented initiatives, strategies and actions related to the European and international dimension in education through European projects, such as Erasmus+ and e-Twinning[21]. These projects provide teachers and students in Greece with opportunities to be more open to global challenges by joining learning environments and networks that promote links, not only to the European and global community but also to real-world experiences and real-life skills through community-based activities and mobility programmes that can be alternative or complementary paths of learning.

For instance, since 2005 teachers and students in Greece have joined the 'eTwinning' community[22] to interact, explore, make decisions, respect each other and learn 21st-centuryskills while working with partners from different countries across and beyond Europe. Since 2011, a number of schools in Greece have also joined another European learning network, 'Teachers4Europe'[23] (T4E),which aims to create a cross-border, sustainable and long-lasting teachers' network, which promotes social and civic competences of students and advocates democratic values, fundamental rights, intercultural understanding and the ownership of them. The implementation of international teacher exchange programs and international school partnerships has broadened the notion of 'citizenship' to a multiple-perspective concept, linked with growing interdependency and interconnectedness among countries in economic, cultural

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synchronous online courses in virtual (class)rooms. For GSN the safe access of students to the Internet and their protection against inappropriate content is a fundamental principle. Since 1999, GSN operates a content control service on the web and applies a secure content policy, in line with international practices and legal requirements.

[21] The promotion of the European dimension in education and training levels is one of the Greek educational policy objectives. To this end, measures have been adopted and actions implemented that target the objectives of the strategic plan "Education and Training 2020" (https://eacea.ec.europa.eu/national-policies/eurydice/content/mobility-and-internationalisation-27_en).

[22]'eTwinning' is the community for schools in Europe which aims to promote school collaboration in Europe using Information and Communication Technologies(ICT) by providing support, tools and services for schools. The eTwinning community engages hundreds of thousands of teachers who learn from each other, share practices and ideas and make eTwinning the biggest teacher network in the world involving 44 countries across Europe and beyond (https://www.etwinning.net/en/).

[23]The project 'Teachers4Europe: setting an Agora for Democratic Culture' (2018-2021) is being developed as a European learning network involving additional schools, teachers, policy representatives and community stakeholders that are committed to act in favor of EU values. In this way, not only is the role of teachers being upgraded, but also inclusive and democratic learning environments are being established. The project further exploits, expands and scales up the T4E which has proven quite effective at national and local level implementing successful projects about EU in Greece since 2011 (https://www.teachers4europe.eu/en/).

and social areas. It is also linked with the 21st-centuryconcern for global well-being beyond national boundaries, by understanding that global well-being affects national and local well-being and vice versa (UNESCO, 2014a, 2016a, 2016b).

In the light of the above, the Greek state school seems to be in a process of restructuring itself, following new paradigms and guidelines put forward by international organizations (Council of Europe, European Commission, UNESCO, OECD, etc), in order to respond to the dramatic 'transformation' of education prompted by the dramatic 'transformation' of the global landscape due to a revolution in knowledge and information technology, as well as the global demand for social cohesion and peace. In this regard, there is a call, both locally and global, including Greece, to reconsider the teaching profession on the basis of certain European and international standards aiming at teacher professionalism (European Commission, 2011; Guo, 2014; Longvew Foundation, 2008; UNESCO, 2003, 2018; Xochellis, 2005; Zhao, 2010). The new professionalism entails revisiting and redefining traditional teacher roles through realizing new roles for them (Xochellis, 2002). To this end, state-school teachers in Greece are challenged to rethink their role by reflecting critically on their pedagogical and teaching practices regarding, on the one hand, their relationship with students, colleagues and the community, as well as the teaching tools and methods they employ; and on the other hand, their potentials and responsibilities; their lifelong professional development; and their overall attitude towards the rapid changes and new challenges emerging both in the local and global community.

The Greek state-school teacher's changing role in the 21st century

Rethinking the Greek state-school teacher's role: ecosystemic perspectives

In the 21st-centuryglobal educational context, the teacher's role is recognized as one of the most challenging and significant factors, absolutely vital to the social, cultural, and economic progress both of countries and the global community as a whole (Guo, 2014; Loomis et al., 2008; Rapoport, 2015; Townsend, 2011). Living in the global ecosystem requires global awareness and action consistent with a broad understanding of humanity, the planet and the interconnected world (Zhao, 2010). In this regard, the 21st-centurystate-school teacher in Greece is challenged to think and act, both locally and globally, as an active educational practitioner in the local and global community so as to empower students with the knowledge, skills and values that can assist them in living and taking action to address the interconnected social, political and cultural reality of the 21st-century global ecosystem (Longview Foundation, 2008; Luksha et al., 2018; UNESCO, 2014c, 2015b, 2018).

State-school teachers in Greece need to be globally competent teachers and acquire a sense of the state of the world by developing their global awareness as regards the existing political, social and economic interdependencies and conditions. A teacher's global competence refers to a set of skills and knowledge needed in order "… to be aware of the global nature of societal issues, to care about people in distant places, to understand the nature of global economic integration, to appreciate the interconnectedness and interdependence of peoples, to respect and protect cultural diversity, to fight for social justice for all, and to protect planet earth – home for all human beings" (Zhao, 2010, p. 426). As several scholars advocate, 21st-century teachers' global competence refers not only to knowledge of the interdependency of world issues but also to specific pedagogical, intercultural and adaptability skills to face the increasing diversity and heterogeneity in their classrooms, as well as to their commitment to encourage their students

become responsible global citizens (Guo, 2013; Holden & Hicks, 2007; Larsen & Faden, 2008; Longview Foundation, 2008; McLean & Cook, 2011; Pike, 2008; UNESCO, 2013). In other words, state-school teachers in Greece need to develop their own global competence and become globally competent themselves first in order to be able to teach for 21st-century global citizenship (Rapoport, 2015; Rothwell, 2005).

Taking into consideration the GCED goals (UNESCO, 2014b, 2015b, 2016a), the Greek state-school teacher's role is crucial for democratic citizenship and in developing skills for democratic participation, at all levels, from local to global action, in order to ensure social justice and citizen learning about human rights[24] (Andreotti, 2006; Council of Europe, 2017a; Ibrahim, 2005). The 21st-centuryteacher in Greece is challenged to take responsible and ethical action against power relations that maintain inequality and injustice in the globalized world developing a sense of responsibility and respect towards 'otherness' (Andreotti, 2006; UNESCO, 2014b; Xochellis, 2002). In this regard, the 21st-centuryteacher in Greece is challenged to be an important agent for social and global change who realizes that structures, systems, institutions, attitudes, and beliefs need to change; and that we all need to be shareholders of any action for global change as we are all both local and global citizens (Longview Foundation, 2008; UNESCO, 2018).

The Greek state-school teacher needs to fulfill the role of a culturally competent educator in order to meet the GCED challenges and demands (UNESCO, 2014b, 2016a). This entails an awareness of, and sensitivity to cross-cultural differences and conventions, in order to be able to cultivate in students' competences, dispositions and global values through a pedagogical approach that can help them navigate and thrive in the 21st-centurylandscape (European Commission, 2013). Knowledge about cultural diversity is imperative to meet the educational needs of ethnically and culturally diverse students and to increase understanding and tolerance of diversity (Florian et al., 2010; Paleologou & Evagelou, 2003; Taylor& Sidhu, 2012; Xochellis, 2002).As a culturally competent educator, the state-school teacher in Greece is expected to realize the need for mutual communication, respect and understanding of the various groups and communities beyond racist discrimination and social exclusion (Dantas, 2007; European Commission/EACEA/Eurydice, 2019a; UNESCO, 2014b).

As Peterson, Clark and Dickson (1990) argue, the 21st-centuryteacher is challenged to be a model of critical thought having a deep understanding of the surrounding world, while developing skills of adaptability to new educational contexts. Flexibility and adaptability skills tend to be critical 21st-centuryskills for the Greek state-school teachers to be able to respond to global trends, challenges, demands, and often, the unexpectedly changing circumstances of the global ecosystem (UNESCO, 2013, 2018). Adaptability is crucial to help the Greek state-school teachers become more sensitive to social demands and classroom dynamics, and flexible to find solutions when they have to cope with problems in complex and' problem-based' heterogeneous classrooms. Adapting to educational contexts characterized by multi-level dynamics with cross-influences[25]is critical for state-school teachers in Greece to be able to foster meaningful learning and reinforce students' sensitivity in the real world perceived as a global community (European Commission, 2013; Luksha et al., 2018).

The new GCED context requires the Greek state-school teacher to abandon the role of 'Sage-on-the-stage', to become 'Guide-on-the-side' and, most importantly, 'Meddler-in-the

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[24]Council of Europe, Living Democracy Manuals for Teachers: www.coe.int/en/web/edc/living-democracy-manuals(Council of Europe, 2017a).

[25]From the macro level of government policies to the meso level of school contexts, and the micro level of classroom and student dynamics (European Commission, 2013).

middle' (McWilliam, 2009). The traditional role of school teachers is outdated and fundamentally challenged towards facilitating students' learning and creating productive classroom environments in which students can experience and develop the real-life skills they need at present and in future to enter the 21st-century workplace as global citizens, as active, responsible and thoughtful participants of the global ecosystem (OECD / Asia Society, 2018; UNESCO, 2015b, 2016a, 2016b). The teacher's role, nowadays, includes much more than teaching in classrooms and has expanded to designing new learning environments as well as collaborating and networking with others, inside and outside the school and classroom boundaries, as an active participant of the global educational ecosystem (Luksha et al., 2018; UNESCO, 2015b).

Bearing in mind the GCED goals, the 21st-centuryteacher in Greece is challenged to shift from the teaching of content knowledge and memorization skills to equipping students with a more 'holistic' education that emphasizes real-life and real-world skills demanded by the globalized society, such as innovative, collaborative, critical thinking, and cross-cultural skills (Ananiadou & Claro, 2009; Kivunja, 2015). In this regard, it is no longer sufficient to teach students 'what' to learn, it is essentially important to teach them 'how' to learn. Focus on core content knowledge through an exclusively 'transmissive' mode of teaching in which pre-digested knowledge is mechanically transmitted from an authoritative source, such as the school teacher or textbook, to students was a key feature of the 20th century state-school classroom that needs to be abandoned to equip students with 21st-centuryskills and global values (Dede, 2010; Luksha et al., 2018; OECD, 2015b, 2016b; Teo, 2019).In other words, it is no longer sufficient to teach Greek students hard skills such as literacy or numeracy; instead, what has become vital are the higher-order thinking skills that help students identify, evaluate, create, manage and apply knowledge that is relevant and necessary for them to take action in the 21st-centuryinternational landscape as global citizens (Dede, 2010; OECD, 2015b, 2016b; UNESCO, 2014a).

The role of the Greek state-school teacher has today become undoubtedly more multifaceted, shifting from traditional and conventional teaching perspectives in the local context to innovative and pluralistic teaching perspectives in the global context. The traditional role of transmitting information is outdated and has been broadened to include facilitating students' learning through a constructivist teaching paradigm in a challenging ecosystemic way, opening their eyes and minds to the actuality of the globalized world. The 21st-centurystate-school teacher needs to be both able and willing to integrate a 'glocal' (both global and local) mindset into the classroom (Luksha et al., 2018). The Greek state-school teacher is challenged to instill in students a sense of their place and role in the larger world, not simply by introducing them to the global world, but most essentially, by inculcating in them a sense of their own power to bring about change in the world by urging them to be active participants in it, contributing to a world of greater justice, equity and human rights for all (Longview Foundation, 2008; Luksha et al., 2018; UNESCO, 2015b). To this end, they essentially need to start developing global mindsets for themselves first (Barker, 2000).

Inevitably, the Greek state-school teacher's role is in a process of continuous evolution, precisely because of the need to adapt to the new requests and demands of the globalized community both as individuals and as professionals (European Commission, 2013; Xochellis, 2005). They have a new complex set of roles to play defined by their position both in the local and global society to confront the challenges opened up by globalization which essentially affect their teaching aims and methods (UNESCO, 2018). In this regard, Greek state-school teachers have to see themselves not only as specialists, practitioners and pedagogues but also as global

intellectuals and global educators, who design and implement, think and act according to the challenges, demands and changes in the global landscape.

Redefining the Greek state-school teacher's role in the 21st century

In light of the above, the changing educational landscape in Greece urges us to redefine the state-school teacher's role regarding new didactic and pedagogical practices that acknowledge both the art and science of learning in the 21st century as determined by the GCED vision and the global ecosystem challenges as a whole (Longview Foundation, 2008; Luksha et al., 2018; UNESCO, 2015b).

- The facilitator

As the Greek state-school classrooms of today need to shift from a teacher-centered to a student-centered learning environment, the state-school teacher today is expected to be a *facilitator* of learning than instructor or transmitter of information in order to fulfill the GCED goals (UNESCO, 2014a, 2014c). As a facilitator, the state-school teacher is challenged to break the invisible wall, communicate with students, and create an interactive as well as supportive learning environment where learning activities can be performed smoothly and efficiently. The teacher-facilitator regards learning as a learner-driven process and a student's responsibility (Luksha, 2018). In this regard, the teacher-facilitator facilitates not only students to take charge of their own learning and eventually become autonomous and independent learners, but also the communication process between all participants in the school classroom. To accomplish the facilitator's role, state-school teachers in Greece need to be open-minded, collaborators, and mediators between their students and what they need to know (Xochellis, 2005). Nowadays being a good facilitator also means enabling a learning environment where students can develop the 21st-centuryskills that are relevant and applicable to the globalized society (Luksha, 2018; OECD, 2015b; UNESCO, 2014a).

- The developer of skills

The role of the Greek state-school teacher has changed from being a supplier of knowledge to being a *developers of skills*. As the Greek education system faces new GCED challenges in re-evaluating goals, functions and content according to global changes, the role of teachers has been upgraded to enhance students' real-world skills by educating them to be more innovative, adaptive and responsive to the real-life demands of the 21st-centuryglobalized society (Tzotzou, 2016; UNESCO, 2014a; 2015). It is worth noting that both the global and local labor market requires highly qualified specialists with professional flexibility and high personality qualities, able to respond to ever-changing critical conditions quickly and effectively (OECD, 2015b, 2016a, 2016b).There is a European and international call for Greek teachers to prepare students for the 21st-century'super skills' to help them navigate an increasingly interconnected and interdependent world in the global landscape (Kivunja, 2015). This has created a need for Greek state-school teachers to equip students with global skills including cross-cultural communication, collaboration and critical thinking: skills that are deemed crucial for 21st-centuryglobal citizenship (Ananiadou & Claro, 2009; European Commission, 2013; Kivunja, 2015; UNESCO, 2014a, 2015a).As a developer of skills, the state-school teacher is challenged to focus on assisting the students to learn how to develop their abilities to think critically, solve problems, make informed decisions as well as create knowledge that will benefit them as future global citizens (UNESCO, 2016a).

- The innovator

The 21st-centurystate-school teacher in Greece is challenged to be an *innovator*. A teacher's innovative role is an important factor for sustainable student learning as there is a shift from broadcasting content into creating engaging learning opportunities by searching out and

constructing meaningful educational experiences that allow students to solve real-world problems while developing powerful skills and participating in the creation and extension of new knowledge (OECD,2016b; Russell, 2016; UNESCO, 2014c, 2018).The actualization of innovative teaching practices is related to novel strategies and methods to offer more meaningful learning to students which stimulates and optimizes the innovative abilities of students themselves (OECD, 2016b). Students' innovative abilities will increase if teachers are innovators, if they utilize technology and assign complex collaborative tasks that enhance students' critical and creative thinking (European Commission/EACEA/Eurydice, 2019b; Makrakis, 2017a). Being an innovator requires changing strategies, techniques, tools, and materials and searching for better ones so as to provide a substantive learning experience for all students (OECD, 2018). According to Parry (2018), as people experience the 4th Industrial Revolution, which has given rise to truly incredible innovations accelerated by a globalized interconnected world thanks to the internet revolution (robotics, nanotechnology, artificial intelligence), there is a great challenge for 'teacher-led' innovation. In this regard, the Greek state-school teacher is challenged to make students passionate participants in the instructional process by providing project-based, participatory, educational adventures, and by stimulating them to truly take responsibility for their own education through innovative learning activities which trigger their natural curiosity and creativity while promoting their innovative skills which are considered essential for young people to thrive in the21st-centuryworld (European Commission, 2013; OECD, 2015b; UNESCO, 2018).

- The collaborator

The 21st-centuryteacher in Greece needs to fulfill the role of *collaborator* inside and outside the classroom walls in order to respond to the GCED challenges (UNESCO, 2014a). On the one hand, the teacher's role has changed from being an authority, an expert or a task setter for individual learning, to being a collaborator who establishes a context for collaborative learning. The teacher as collaborator focuses on students themselves by encouraging them to share learning experiences all together (UNESCO, 2015b). Collaboration occurs when the teacher and students are viewed as coequals, or as co-learners, and are engaged in a process of communication and interaction through problem-solving and experiential activities towards achieving common learning goals (Daws, 2005). As a collaborator, the teacher develops a trusting relationship with students encouraging shared responsibility in decision-making. On the other hand, Greek state-school teachers also need to collaborate with other colleagues, both locally and globally, within and beyond the classroom boundaries, by joining interdisciplinary, European and international projects, and sharing good teaching practices to make their students' learning more motivating and effective (European Commission, 2011; Forte & Flores, 2014; UNESCO, 2003). Fewer individual teaching practices which are classroom-centered and more collaborative ones which are community-centered would serve global education and promote global citizenship in an experiential way (Luksha et al., 2018). The 21st-centurystate-school teacher needs to be part of a collaborative network engaging and involving, on the one hand, all actors in the local school context (students, teachers, parents and other educators), and on the other hand, external partners from foreign school institutions. This is a shift from a static institutional point of view to a 21st-century school which is bound to be an open and living system within both the local and global educational context (European Commission, 2011, 2013; Forte & Flores, 2014; Longview Foundation, 2008; Luksha et al., 2018).

- The decision-maker

Greek state-school teachershave been challenged to become *decision-makers*, able to make thousands of choices regarding learning tools, methods and techniques, on the basis of non-

prescriptive, holistic, and bottom-up processes, by which the teaching goals focus on values and skills, not on performance and assessment as in the previous century (European Commission, 2011 2013; UNESCO, 2003).In this regard, the role of the Greek state-school teacher has changed from being a curriculum implementer to being a curriculum developer and decision-maker whose teaching and pedagogical decisions are guided not only by every specific classroom and the students within it, but also by global demands and challenges (European Commission, 2013; Kirkwood-Tucker, 2002; Xochellis, 2005).Teaching in today's globalized education landscape is complex and requires decision-making skills also related to designing quality learning experiences for all students; developing specific learning and teaching resources appropriate for changing classroom contexts; observing individual learners to assess their needs and providing appropriate resources to foster a positive classroom atmosphere that is conducive to learning (Boschman et al., 2014; Kirkwood-Tucker, 2002; Schoeppach & Nissen, 1992). Teachers as decision-makers need to develop their autonomy and plan from classroom activities to general school management tasks that are coherently integrated in a school development plan fulfilling new global trends in education in consonance with the GCED vision (Xochellis, 2002, 2005).

- The critical thinker

Greek state-school teachers have been challenged to undertake the role of *critical thinker* about global, national, and local issues, as well as about the interconnectedness and interdependency of different countries and populations (UNESCO, 2015b). The role of teachers' role is no longer static, mechanical and executive, applying mass curricula and mass teaching strategies in a passive and docile way. They are challenged to activate their professional critical thinking and open-mindedness to examine, reconsider and change precedent and current school practices so that they can respond to the educational challenges and demands emerging from the global ecosystem (UNESCO, 2016a, 2018; Zhao, 2010). They need to develop their critical thinking skills to be thoughtful classroom practitioners able to prepare the state-school students for a more complex and interconnected world, as well as to be able to impart critical thinking skills to their students which are essential for living in the global ecosystem (Ananiadou & Claro, 2009; European Commission, 2013; UNESCO 2014c; Xochellis, 2002). As critical thinkers, teachers have become able to distinguish between reliable and biased information sources, forms an opinion and makes judgments about the global situation and conditions (European Commission, 2013; UNESCO, 2018). State-school teachers in Greece need to be critical thinkers themselves first so that they can then facilitate and encourage their students on a journey of critical thinking and self-discovery about the world around them (UNESCO, 2018).

- The problem-solver

Greek state-school teachers need to be *problem-solvers* working, inevitably, in 'problem-based' heterogeneous classroom environments, to ensure the appropriate learning conditions for all students overcoming obstacles, difficulties, limitations or even conflicts (UNESCO, 2003). State-school teachers need to apply effective problem-solving techniques to help students avoid any conflicts with their classmates in the school setting, and in their everyday lives as well, to promote students' empathy skills and help them learn more positive attitudes towards diversity (Banks, 2001; Barker, 2000; UNESCO, 2014b). The majority of state-school teachers in Greece are increasingly confronted with classes of considerable national and cultural diversity (European Commission/EACEA/Eurydice, 2019a). The huge pedagogical difficulties encountered in teaching require problem-solving techniques for arranging social interaction and coping with negative school behaviors such as racism and bullying (Clarke & Drudy, 2006; De Luca et al., 2009; UNESCO, 2009, 2011b, 2014b).True problem-solving includes the pedagogical process of applying a method and a course of action to a classroom problem that is subject to a specific set

of conditions so that the expected learning outcomes can be achieved in such a way that all students can profit irrespective of their background (UNESCO, 2014a, 2015b, 2018).In this respect, the state-school teacher's role as problem-solver is crucial in coping with the ever-changing and complex school environment, local and global (European Commission, 2013; Luksha et al., 2018). Since the state-school context is dynamic and changes rapidly, teachers need to be flexible in their teaching activities and able to cope with the increasing heterogeneity of the population in the state-school classrooms through problem-solving techniques to offer equal learning opportunities both to Greek and immigrant students (OECD, 2015a; UNESCO, 2014a).

- The reflective practitioner

Greek state-schools' teacher are being challenged to fulfill the role of the *reflective practitioner* to achieve increasing professional self-awareness which is a key component for developing a better understanding of the globalized world (Townsend, 2011; UNESCO, 2003, 2016a, 2018). Reflective teachers take responsibility for their teaching practices and search for ways to improve and develop their professional practice (European Commission, 2011, 2013; Tzotzou, 2016). As Hatton & Smith (1995) maintain, "Reflective teaching is deliberate thinking about action with a view to its improvement" (p. 40). According to Xochellis (2005) and Fykaris (2010), 21st-century teachers need to activate their professional reflection to revise and, probably quit their past or current teaching practices so that they can respond to the 21st-century educational challenges. Teacher's ability to reflect presupposes elaborating their perception of the global educational reality and developing the skill of both understanding and interpreting its contradictions, malfunctions, abnormalities and predicaments so that they can reconsider and readjust their educational interventions (Larrivee, 2000). In the 21st century, Greek state-school teachers are challenged to be the reflective practitioners who reflect on the globalized society to realize the changes they have to incorporate into their educational practice by critically reflecting upon the 'regularities' of the local education system up to now to ensure an upgraded and globally oriented educational prospect (Vavrus, 2002). According to Fullan (1993), the teacher as a reflective practitioner undertakes the main role of the social change agent towards strengthening the intercultural dialogue and interaction in the multicultural school context. Reflective teachers can make decisions about what to do in their own classrooms, seek answers to questions and solutions to problems that enable them to help their students to learn (European Commission, 2011, 2013; Kirkwood-Tucker, 2002).

- The change agent

Taking into consideration the GCED vision, the Greek state-school teacher's transformative role as *change agent* is a key defining feature as it brings an 'activist' dimension into the ecosystemic approach to teaching (Luksha et al., 2018; Makrakis, 2017a; UNESCO 2018). The state-school teacher's contribution to the 21st-centuryglobalized society goes beyond transmitting knowledge and preparing students for the existing world (Makrakis, 2017a). They are expected to contribute to social change and prepare their students to contribute to change in society (European Commission, 2013; Fullan, 1993; Longview Foundation, 2008; Sachs, 2003; Xochellis, 2005). In the 21st century, teaching is expected to be a transformative activity challenging the status quo to bring about a fairer education system, where inequalities both in the local and global society are to be addressed, and where global social change can be stimulated (Cochran-Smith, 2004; Robertson, 2008; Zeichner, 2009). In this transformative perspective, teachers as change agents are expected to develop their own beliefs, values, attitudes and actions towards achieving social justice, cross-cultural respect and tolerance through education (Clarke & Drudy, 2006; Nagda, Gurin, Lopez, 2003; UNESCO, 2018).Because Greek state-school teachers

are challenged to engage with highly diverse classrooms which are becoming more international and cultivate solidarity with the local and global community, teaching is no longer a technocratic endeavor but an evolving commitment to action and service to community while responding to the 21st-centurystudents' needs and contextual factors across boundaries to transform both the local and global community (UNESCO, 2016b; 2018).

- The digital teacher

Greek state-school teachers in the 21st-century must be a *digital teacher* due to the integration of technology in every sector of human life, in agreement with the GCED goals (Council of Europe, 2017b, 2019; Luksha et al., 2018; OECD, 2016a; UNESCO, 2018).Digitalization and high technological advancements have essentially penetrated the orientation of 21st-centuryeducation,challenging teachers to adapt to the practice of e-learning utilizing digital technology and web 2.0 tools in the learning process (Ananiadou & Claro, 2009; UNESCO, 2014c). State-school teachers in Greece need to seize the power of technology themselves and be able to respond to the clear need for the enhancement of digital citizenship through the purposeful use of digital potentials in the learning process (Council of Europe, 2017b; OECD, 2016a; Tzotzou, 2015; UNESCO, 2011a, 2014c). There is a need to pay more attention to the use of technology in the learning process, not only through e-learning or technology enhanced learning implementation which stimulates and motivates learners' active participation, but mainly as a link to real-life problems by using active learning methods to empower students' digital competence (OECD, 2016a; UNESCO, 2014a, 2018). The 21st-century teacher is challenged to use ICT tools in a pedagogically appropriate way to advance concepts, principles and methods that are conducive to transformative learning towards sustainability both locally and globally (Makrakis, 2014, 2017a).

- The mediator

Greek state-school teachers are challenged to undertake the role of *mediators* to manage conflicts, such as bullying, racism and xenophobia, constructively and effectively (Lane-Garon & Richardson, 2003). Due to the pluralistic and multicultural school context, teachers are challenged to mediate among students from different social and cultural backgrounds to help them develop their empathy, tolerance, and respect towards the otherness (Terpollari, 2014; Xochellis, 2002, 2005). To this end, teachers are challenged to become a mediator of values improving students' social interactions with their peers through collaborative techniques which promote the global values of equality, democracy, and solidarity (Selepe & Moll, 2016; Xochellis, 2002). The 21st-century teacher is also a mediator between the students and the new learning environment through real-life learning experiences related to the networked society by turning the traditional classroom into an open and global space adding to it a virtual dimension (Klein & Godinet, 2000). Teachers in the21stcentury are mediators between students and knowledge as they have to process the vast amount cyber information into stimulating knowledge, thus encouraging their students to use online resources while forming a critical community of users (Klein & Godinet, 2000). Teachers are challenged to play the role of mediator between the school and society which is to be perceived in a broader sense, as a global community, by designing authentic real-world learning environments which promote the GCED vision. In this regard, the teachers have a responsibility to act as 'critical mediators'(Mason, 2000) who mediate the global concepts and practices of knowledge, skills, values and attitudes to their students as well as new understandings related to the notion of global citizenship.

- The lifelong-learner

The Greek state-school teachers are expected to be *lifelong learners* pursuing continuous professional development to strengthen their professional self-confidence and develop their decision-making skills. They must also motivate themselves to appropriately readjust their teaching techniques as required by the GCED framework (European Commission, 2013;

Longview Foundation, 2008; UNESCO, 2003, 2018). Greek state-school teachers need to gain more confidence in using essential 21st-century competences through a process of lifelong learning to develop the essential adaptive and reflective skills needed in the ever-changing global educational landscape (European Commission, 2013; UNESCO, 2018). Several scholars stress the need to develop teachers' reflective skills and their intrinsic motivation for lifelong learning to enable them to become self-reliant and reflective practitioners towards reflecting, experimenting and take initiatives in their school practice (Mavrogiorgos, 2011; Papanaoum, 2005; Xochellis, 2005). The 21st-century teachers need to always update their competences to be able to develop innovative, adaptive, and responsive professional skills to fulfill the GCED goals. This can be achieved by participating in, local and global online learning communities to exchange ideas and share experiences, and to get insights for further professional development (European Commission, 2013; Luksha, et al., 2018). Becoming a critically reflective lifelong learner can enhance a teacher's professional identity by empowering crucial professional traits within the concept of reflective teaching which is a fundamental goal for a better and enduring professionalism in the 21st-century (European Commission, 2011). Greek state-school teachers as lifelong learners will be able to develop global awareness about socio-economic, ethical and legal aspects regarding the triadic relation between technologies, education and society; to understand the ever-changing local and global societal issues and responsibilities in order to exhibit safe, legal and ethical behavior in their professional practices (UNESCO, 2014c, 2018).

- The global educator

Last but not least, the 21st-centurystate-school teacher, as member of the global education community, needs to undertake the role of *global educator* by communicating with students and colleagues from different contexts, countries and cultures (European Commission, 2011, 2013; Forte & Flores, 2014; Longview Foundation, 2008; Luksha et al., 2018). In other words, state-school teachers in Greece are challenged to interact in a borderless, interconnected, and networked global educational landscape, thinking, behaving, and acting as global teachers (Luksha, 2018; UNESCO, 2018; Xochellis, 2005). They are expected to teach the global values, develop global awareness and digital literacy in a globalized world without borders, fulfilling the GCED goals (Maastricht, 2002; UNESCO, 2015a, 2015b). They are expected to integrate GCED into their teaching to empower students in Greece to address global challenges and become active participants of more peaceful, tolerant, inclusive, secure and sustainable societies (OECD / Asia Society, 2018; UNESCO, 2014a, 2017b, 2018). They are challenged to promote inclusive, equitable and quality education by focusing on GCED ideals such as human rights, gender equality, culture of peace and non-violence, global citizenship and respect to cultural diversity (Council of Europe, 2017a; UNESCO, 2011b, 2014b). They are challenged to develop global mindedness and global consciousness to achieve intercultural understanding and intercultural competence deemed to be prerequisites for developing students' intercultural competence (Perry & Southwell, 2011; Tawil, 2013; UNESCO, 2014b, 2017b). Nevertheless, the state-school teacher's role is not to alienate Greek students from the sense of their nation, but to foster a balance of levels of cultural, national and global identifications by encouraging them to maintain attachments to their cultural and ethnic community, while at the same time helping them to attain the knowledge and skills needed to participate in the globalized community, the so-called global ecosystem (Banks, 2001).

Concluding remarks and implications

In response to the GCED vision towards global sustainability, Greek state-school teachers are challenged to fulfill an active, dynamic, transformative, self-reliant and mediating role in the 21st-century global educational context as an agent of local and global social change.

The changing role of state-school teachers in Greece, due to the growing demands and expectations of the global ecosystem, requires and presupposes high quality teacher education, both pre-service and in-service (Vergidis, 2012; Xochellis, 2002, 2011). Their changing role depends essentially on continuous teacher education[26]to ensure that they are adequately prepared and supported to meet the challenges of 21st-century state-school classrooms in consonance with the GCED goals. The new multifaceted role of teachers today presupposes their professional development towards their critical and reflective empowerment to be able to undertake increasing educational responsibility and develop autonomous educational action in the complex and ever-changing educational context (Xochellis, 2005). Several scholars point out the need to revise the goals, the content and process of teacher education programs in Greece to encourage teachers' autonomy and self-motivation (Mavrogiorgos, 2007; Papanaoum, 2005; Tsakiri, 2003; Vergidis, 2012; Xochellis, 2005). Therefore, it is worth investigating to what extent the current pre-service teacher education[27] (curriculum units/modules, internship)a. prepares student teachers appropriately and adequately to cope with the GCED challenges by making them realize their own responsibilities in a world of increased knowledge, technological advances, poverty, violence, prejudice and social injustice and b. empowers them with knowledge, skills, values and attitudes required for a sustainable world of global citizenship. In the same vein, it is also worth investigating whether in-service teacher education in Greece promotes teachers' professional development as a dynamic lifelong process towards individual and professional growth through reflective and transformative processes which trigger teachers' critical thinking about the complex global reality by encouraging them to become active global citizens and change agents (Makrakis, 2017a; Mavrogiorgos, 2011; Xochellis, 2002, 2011).

Rethinking and redefining the role of the state-school teacher in Greece, inside and outside the school classroom, can essentially result in a sustainable local and global community. Nevertheless, both teachers and other education stakeholders in Greece are also challenged to

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[26]Several scholars argue that teacher education policy in Greece needs to be reformed (Mavrogiorgos, 2007; Vergidis, 2012; Xochellis, 2002, 2011). They point out the structural weaknesses of teacher education in Greece, especially regarding the gap between theory and practice, as well as its fragmentary character, and they stress the need for teachers' continuous and cohesive teacher education (initial and in-service) underlining the international trends in the 21st century. They also maintain that teacher education needs to be reformed after meticulous research, continuous assessment and critical reflection on the content and process of teacher education programs to foster teachers' continuous professional development throughout their career.

[27]Xochellis (2002) criticizes the inadequacies of pre-service teacher education highlighting the need to revise curricula and internship practices to enable future teachers to become autonomous and reflective practitioners towards the qualitative improvement of school education in accordance with the demands of the 21st-century globalized world. Internship should be directly linked to the existing socio-economic and multicultural context by promoting modern teaching methods, the use of digital technology, intercultural awareness and international trends in modern pedagogy. Makrakis (2017a) also stresses the need to develop pre-service teachers' sustainability justice literacy placing emphasis on critical pedagogy through praxis-oriented curricula to be able to foster the transformative role of education for a fairer society and more sustainable world and puts forward the DeCoRe plus methodological approach, developed and used in pre-service teacher education courses, which aims to embed sustainability justice in school curricula.

rethink their roles in education to provide teachers with the support, freedom and trust they need to feel confident and able to do the demanding job of educating young people in a holistic and innovative way as future global citizens, fostering learning both within and beyond the classroom walls. The great 21st-century challenge for the state-school system in Greece is to respond to the demands of the global ecosystem through educational policies that are globally sensitive by assisting all students in becoming global citizens able to live and work in an increasingly competitive and highly interconnected global environment.

To conclude, as the Greek state-school context forms part of the global educational context and interacts with the complexity of the ever-changing and demanding global ecosystem, the state school teacher in Greece is challenged to be aware of the demands of the global educational ecosystem and an asset to both the local and global community fulfilling the GCED vision.

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