

Networks and collaboration in Spanish education policy

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Keywords:	networks, collaboration, education policy, educational systems, educational structure
Abstract:	<p>Background: Networks play an important role in today's societies. As a consequence, changes are apparent in the political, economic, cultural, educational and social agendas.</p> <p>Purpose: The main goal of this article is to map the situation of school networks in Spain. The research questions are focused on what forms collaboration and networking take in the Spanish education system; how policy and practice are providing a framework for the development of networks; and what the main barriers to fostering school-to-school collaboration in this context are.</p> <p>Methods: A mix of case studies and documentary analysis was used. Two regions located in the Southwest (Extremadura and the Canary Islands) were selected to examine their legislation about networks in education. The following aspects were considered: aims and aspirations, areas of interest, organizational structure, benefits and incentives, network project, and evaluation and improvement proposals. In this way, Spain is presented as an example of a country that is exploring the possibilities offered by networks.</p> <p>Findings and conclusions: There is no common state policy to support networking between schools. Rather, every local educational authority acts with different purposes and a variable extent of development. This particular situation offers a diverse map of education networks. The case studies show that networks are being developed bottom-up, through topics of interest, such as library, ecology, health-promotion, equality, emotional intelligence, educational research, enterprise and physical education. The paper concludes by reflecting on and discussing the current landscape of educational networks. Some barriers identified are related to: the networks' structures that could be more inclusive, the loose culture of collaboration, the weak mechanisms to link social and professional capital provided by policy makers, the importance of belief in the network society and community power by stakeholders, and also to the necessity to increase incentives for people involved, in terms of working-time conditions and resources.</p>



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Introduction

Networks play an important role in today's societies. As a consequence, some changes are apparent in the political, economic, cultural, educational and social agendas. This idea is directly interconnected with the growth of the networked society (i.e. the society we are in), and the prevalence of networks as modes of social practice in the Information Age (Castells 2010, 2016) – an age of complex skills, cultural diversity, and high-speed changes (Hargreaves and Ainscow 2015). In this sense, the new scenario in different environments (including education) is based on collaboration and networking.

A network is defined as: ‘groups or systems of interconnected people and organisations (including schools) whose aims and purposes include the improvement of learning and aspects of well-being known to affect learning’ (Hadfield et al. 2006, 5). On the other hand, there is a broader conception of networking as ‘at least two organisations working together for a common purpose for at least some of the time’; and collaboration as ‘joint activities between actors from different organisations within the network’ (Muijs, West, and Ainscow 2010, 6). Another recent view of the concept of networks in education is this: ‘an extended group of people with similar interests or concerns who interact and exchange knowledge for mutual assistance, support and to increase learning’ (Kools and Stoll 2016). This last definition, related to the idea of networks as contexts for collaboration among and between schools and their communities, sees them as an increasingly important conduit for educational change and development. This aspect coincides with the thinking of Sliwka (2003), who states that networks can represent vibrant motors of change in education.

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In looking at networks in education, this study therefore aims to delve into a relevant issue that has high currency within both education policy and research at present. The study's purpose is to map the situation of school networks in Spain, with a view to helping us gain insight into the structure and background of these networks, and how they relate to what is currently known about effective school-to-school networking internationally. In order to do this, we will explore policies about networking and collaboration in this country in more depth, addressing the following research questions:

1) *What forms of collaboration and networking are taking place in Spain?* 2) *How are policy and practice providing a framework for the development of networks in different parts of the country?* and 3) *What are the barriers to fostering school-to-school collaboration in this context?*

This paper is based on a mix of case studies and documentary analysis, focussing on two Spanish regions and their legislation on networking in education. This approach aims to develop new knowledge of policy on school networks in Spain by using a mapping approach. The study uses a macro and micro approach to bring both breadth and depth to the investigation. Using the macro lens, we scope out the ways that Local Education Authorities (LEAs) in Spain are responding to the policy context, in terms of the varied forms of networking and collaboration that are emerging. The micro focus on the particulars of two case studies allows detailed examination of the specific local practices that are emerging to be highlighted.

In this paper, we will explore some of the characteristics of collaborative networks and their potential for school improvement as well as inclusion. We will, in particular, focus on the case of Spain, as it represents a country that is developing the possibilities offered by networks. The following section presents the method used and

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includes an overall description of Spanish education policy. We will examine, in detail, the legislation of two local authorities: Extremadura and the Canary Islands (located in the Southwest of Spain). The final section concludes by reflecting on and discussing the current landscape of education networks.

The growth of networking in theory and practice

One of the most omnipresent forms of educational reform internationally is the school network. According to Muijs et al. (2011), there is a set of theoretical reasons associated with the engagement of networking: constructivism, social capital theory, Durkheimian network theory, and the concept of New Social Movements. Nowadays, of course, these and other influences are changing paradigms, relations, communication, and ways of connecting people. In addition, these synergies are fostering coalitions formed by schools, families, communities and other stakeholders. Hence, networks of collaboration are transforming the traditional school boundaries, and creating another concept of ‘educational community’ (Bal et al. 2014; Díaz, Civiés and Guardia 2014). Research carried out by Iranzo, Tierno and Barrios (2014), for example, shows networking in education as something that helps actors to understand different points of view about similar problems in a shared context. In other words, networked learning organisations develop relationships, adapt to the environmental needs, and create links for building community.

Recently, a number of authors in the field of school improvement, as well as policy actors in a range of countries, have considered school-to-school collaboration as a powerful catalyst for educational change (Ainscow 2015b). Specifically, in the education field, school-to-school support is emerging in many places and there are innovative policies and practices which seek to respond to the demands of the current

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educational environment. Across both literature and practice, we can see that interest in school-to-school collaboration has grown (Chapman and Hadfield 2010; Engvik 2014; Sartory n.d.; Townsed 2015). Networking has become an inescapable strategy for school improvement (Muijs 2015a), and claims have been made that collaboration between high and lower performing schools can be an effective school improvement method (Ainscow 2015b; Muijs 2015b). In particular, in challenging urban contexts, networks and school-to-school cooperation are seen as improving collective efficacy, and student outcomes (Ainscow et al. 2012b; Dudley 2012; Moolennar, Slegers and Daly, 2012; West, 2010). In fact, school networks have been assessed positively as a way to incorporate educational improvement more deeply (Armstrong, 2015; House of Commons Education Committee 2013; Wohlstetter et al. 2003). Because of this, many countries are implementing networks to improve their education systems. However, it is important to evaluate critically the evidence in this area. For instance, while there are clear benefits from schools working together (particularly for staff development and shared resources), the evidence of direct impact on student outcomes remains far from clear (West 2010), which suggests that more research is needed. In respect to the current literature, it can be affirmed that the evidence base for inter-school collaboration remains underdeveloped, and it appears to be the case that policy in many countries has gone ahead of the actual evidence in this field.

There are various examples of network experiences in education around the world. For example, joining a network has become popular in Belgium, where the government has incentivized collaboration between schools with more public funding and additional resources (Feys and Devos, 2014). Austria also represents an example of how schools can operate in more collaborative scenarios through networks in education (Rauch 2016). In Australia, there is evidence of networks in which teachers, principals,

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educational researchers, policy makers and activists in the educational community all participate (Ladwig 2014). There are also initiatives related to cross-border collaboration for educational purposes between Danish, Norwegian and Swedish schools (Lundh et al. 2012). Reforms in Finland suggest that it is possible to improve education through networking (Sahlberg 2011). In summary, many governments are taking the lead with such initiatives and spending considerable quantities of money in order to set up networks of schools to improve education, as can be seen in the experiences of the countries cited above and others, such as Canada, New Zealand, United States and Uruguay, to name just a few (Fullan 2016). Undoubtedly, these investments are promoting a rich debate about the benefits generated by these forms of school organization.

The notion of networks and inter-school collaboration currently features highly on the educational policy agenda globally and perhaps nowhere more so than in England, where the concept of a self-improving system is underpinned by the idea that schools will work together as a means of educational improvement. Indeed, the move towards more collaborative practices and the development of networks in schools has been rapid in England (Chapman 2008). This country has been a forerunner in considering networks as an integral part of their policy in education and significant resources have been invested to develop collaborative approaches between schools (Katz and Earl 2010). This tendency has created incentivized networks, wherein schools collaborate in order to receive incentives (Chapman and Muijs 2014). In many cases, collaborative research and professional networks are being developed with the aim of improving inclusion, and there is evidence of good practice in this area (Azorín n.d.). Above all, in this specific context, Muijs, West, and Ainscow (2010) identify three benefits of school-to-school collaboration: school improvement; broadening

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opportunities; and sharing resources. These benefits have been discussed by educative and scientific communities and have appeared in most of the work done so far on educational networks.

There are networking initiatives involving collaboration between schools on various topics and with multiple connection points (Boylan 2016). Chapman and Muijs (2013) collected the different types of federations in the English education system as a model of school-to-school collaboration:

- (1) Networks where highly effective schools supported weaker schools for school improvement purposes.
- (2) Networks where small schools collaborated to share resources, broaden the curriculum, and ensure survival.
- (3) Networks in which schools collaborated across phases (e.g. primary and secondary schools) to ensure smoother transitions across these phases.
- (4) Networks of schools in which mainstream schools collaborated with special schools to improve inclusion and provision for students with special educational needs.
- (5) Academy chains, where schools similar to charter schools in the United States are run by a single sponsor.

This classification defines what is happening in school networks and what collaborations are being provided in England. Networks may be established for a range of reasons: for example, to support coordinated development in local authority school clusters; or as a result of participation in particular projects or initiatives (Chapman and Sammons 2013). Other authors identify three primary characteristics associated with networks (Lin et al. 2015):

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3 (1) *Network composition*: a focus on the composition of networks, including
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5 organizational actors and the resources they bring to the group.
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7 (2) *Network structure, governance and coordination*: a focus on the network
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9 structure or the pattern of connections among actors, and also the processes and
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11 strategies employed to govern collective action.
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13 (3) *Network performance*: considering performance as the extent to which networks
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15 are able to connect resources and expertise to schools and classrooms in ways
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17 that enable educators to learn and enact productive practice.
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21 Additionally, Hargreaves and Fullan (2012) insist on the necessity of investing
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23 in professional and community capital, collaborating with competitors; and being
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25 pragmatic. The idea of professional and social capital as well as collaborative inquiry
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27 for educational equity and improvement is considered elsewhere (Ainscow 2015a;
28
29 Chapman et al. 2016). In this respect, Ainscow (2016a) admits that a major factor in
30
31 determining success in promoting equity in education is our ability to strengthen social
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33 capital, using collaboration as a strategy for this. The *Ecology of Equity* approach
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35 advocates undertaking changes for greater inclusion from a triple perspective: (1) within
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37 schools, (2) between schools, and (3) beyond schools (Ainscow et al. 2012a). This
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39 means that schools can find ways to work together and with their communities through
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41 networks (Azorín 2016). Therefore, some of the challenges of networks between
42
43 schools are: working with colleagues from different institutions to foster new
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45 connections, developing avenues for collaboration, and linking the community
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47 resources of the environment (Mulford 2007). Other researchers focus on school-led
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49 activities, which explicitly aim to build positive relationships, social networks, and a
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51 sense of cohesion and pride within communities (Kerr, Dyson, and Gallannaugh 2016).
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In terms of inclusion, these collaborative associations allow the sharing of experiences, generate knowledge, and stimulate other ways of thinking about responding to diversity in more inclusive schools (Miles and Ainscow 2011). Consequently, the influence on networks within the framework of inclusive education, as well as collaboration beyond the school itself, have been widely studied (Ainscow et al. 2016; Dyson and Kerr 2011; Dyson and Todd 2011). In summary, the main implication about networks between schools through collaborative partnerships is probably that this structure creates opportunities to learn from differences (Deppeler and Ainscow 2016).

Networking and collaboration in Spain

In recent years, the education system of Spain has been influenced by the international context. At present, networks between schools are a powerful research theme in the literature. However, this country does not have the sophisticated school networks that exist in some of the other places mentioned above, such as England. Nevertheless, there are some interesting Spanish studies about networks, collaboration and inclusion. These contributions focus on: (1) *the good results of schools which are participating in educational networks and local improvement plans* (Arnaiz and Azorín 2014; Arnaiz, Azorín, and García 2015; Muñoz et al. 2011; Navarro et al. 2013; Parrilla, Muñoz, and Sierra 2013); (2) *the question of how inclusive education can become a community project supported by networking processes* (Parrilla, Martínez, and Raposo 2015); and (3) *how to promote support networks in the framework of an inclusive school* (Echeita et al. 2012). We will therefore present what is currently known about networks in Spain, drawing from a review of Spanish literature in this area, which has, in most cases, attempted to classify existing networks.

In the Spanish scenario, five types of networks for educational innovation have been defined (Fernández-Enguita 2007):

- (1) *Institutional*: networks formed by organizations and state services (e.g. local authorities, schools, health and cultural centres). The author differentiates between *intra-service partnerships*: i.e. schools that share the same interest; and *inter-service partnerships*: i.e. one or more schools working with other institutions in order to respond to similar issues, demands or needs.
- (2) *Professional*: alliances formed by professionals working in a particular service. These can be professionals from a school (teaching and leadership teams); from different schools (professionals of a specialty); several professions (staff united by a common goal); a single profession (teachers); or professions specifically related to the educational context (psychologists, social workers).
- (3) *Community*: organizations, groups or individuals in the community (e.g. companies, associations, non-governmental organizations and citizens' initiatives) with common goals related to education.
- (4) *Training*: other institutions of teaching and learning (e.g. organizations of extracurricular activities (inside and outside schools), sports clubs, music institutes), in which the link is the school.
- (5) *Technological*: networks where information is transformed and managed through digital systems. The technological infrastructure revolves around the Internet. Support elements for communication can be blogs, web platforms and other virtual spaces where teachers interact.

Along with this, there are many types of learning networks. Taking this into account, Murillo (2009) presents an alternative classification:

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(1) *Networks of innovation in the classroom.* Groups of teachers from different schools that share learning experiences, and use the new knowledge to improve the teaching and learning process.

(2) *Networks seeking to improve certain schools.* Teachers and leadership teams, from several schools with a common organization or structure that want to learn and generate ideas to transform their schools.

(3) *Networks whose purpose is to impact on education through broader changes.* These are formed by teachers, leadership teams and researchers who try to develop innovative approaches and paradigms for school improvement.

According to the above, there are a great variety of networks and forms of collaboration. In this respect, Catalonia (located in the Northeast of Spain) is an interesting example of collaboration between institutions as a response to the challenge to increase social and educational inclusion (Civís and Longás 2015). In this local authority, there are collaborative network initiatives where schools and communities are working together. The study of Longás et al. (2008) explored the local educational networks, and concluded that these associations allowed for a greater openness of schools to their environment, provided social capital, and developed the values of horizontality (i.e. with respect to the pedagogical intervention that allows the school to be open to the community without using vertical mechanisms of coordination, which implies a shared leadership), transversality (i.e. associated with the attention to socio-educational needs from a community perspective), territoriality (i.e. socio-educational action based on the context in which the activities of the network are carried out), and co-responsibility (i.e. educational responsibilities shared among all stakeholders and institutions that are part of the social and community environment). The study by Díaz et al. (2016), which is based on the experience of Barcelona, presents educational

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collaborative networks that emerge at the local level, in connection with the actions of collaborative partnering between schools and community organizations.

A school networks study in Andalusia (located in the South of Spain), concluded that participation in these alliances implied the following aspects (Hernández et al. 2013):

- (1) Networks allowed organizations to *increase the capacity for greater actions* and exceed individual and sporadic achievements.
- (2) Networking participation *was horizontal*, surpassing vertical decision-making.
- (3) Networks *fostered a sense of community* membership.
- (4) Networks members *became aware of their ability to participate*, adapt and improve a specific situation, overcoming the barriers of exclusion and inequality.

As we can see, breaking down barriers is one of the essential aspects that these networks provided. Other Andalusian authors focus on networks to exchange pedagogic experiences and to carry out collaborative projects (López et al. 2013), as well as focussing on the cooperation processes and networks between universities and schools (Mérida, González, and Olivares 2012a, 2012b). Nevertheless, there are critical voices in this respect because, sometimes, the university is skewed towards research and the school towards teaching, so there may be insufficient exchanges between them (Alvarez and Osoro 2014).

Methods

We used a combination of a *case studies method* and *documentary analysis* in order to look at both the ‘macro’ case of Spain, and two ‘micro’ case studies within Spain. This qualitative approach is often the chosen option for empirical inquiry that investigates a

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phenomenon within its real-world context (Robson and McCartan 2016; Yin 2014). In this work, the meaning of ‘cases’ refers to the country as a whole (Macro) and to the Spanish regions selected (Micro). One advantage of using this method is that it allows us to focus on the legislation of two particular regions of Spain. Through this, we can study, in detail, what type of collaboration and networking is promoted by the law in these places. However, it is important to bear in mind that it is not possible to generalise the findings to all of Spain. Furthermore, our subjectivity, as researchers, in the interpretation of and commentary about the legislation should be taken into account. The descriptive case studies offered here proceed through documentary analysis of secondary data sources – in particular, laws and policies.

All the documents for analysis were found in the public domain and selected after an initial online search of the legislation on networks in every Department of Education of each Spanish LEAs. As a consequence, we observed that the Canary Islands and Extremadura were pioneers in networking legislation. This differentiated them from the rest of the country, which is why we chose to study them in more detail. Some key aspects were linked to the network policies studied here and the theoretical perspectives and existing classifications reviewed in the scholarly literature. To that end, some study categories have been identified, in order to help with the analysis of Spanish education legislation. They take account of the key aspects to which other authors have turned their attention (see Figure 1 and the explanation below).

[Figure 1 here]

Information has, thus, been organised in light of the aspects that form the analytical framework that was used to examine the data from the document analysis and the case studies:

- (1) *Aims and aspirations.* This question is related to aspirations, concerns, purposes, intentions and challenges, which arise in the alliances of school-to-school collaboration (Kools and Stoll 2016).
- (2) *Areas of interest.* Networks may be established as a result of participation in particular projects or initiatives in a specific area where schools share the same interest (Chapman and Sammons 2013; Fernández-Enguita 2007). In general, networks can be organised around different topics or areas: that is, in practice, what is happening in Spain as a result of the current legislation.
- (3) *Organizational structure.* This refers to the organization of people who are involved in the network project (such as committees, coordinators or support groups). This structure has to be clear (Lin et al. 2015).
- (4) *Benefits and incentives.* In many cases, schools receive incentives for participating in a network (Chapman and Muijs 2014). These may include things like training credits, certificates, fewer teaching hours and financial assistance.
- (5) *Network project.* A network project is created (by schools) that includes action plans, working groups, resources and organization. This type of project is usually realised through a community approach, to improve the school relations with the local environment (Civís and Longás 2015).
- (6) *Evaluation and improvement proposals.* Evidence about efficacy and evaluation of networks is important in ensuring impact, and the extent to which this is required and happens is therefore a relevant aspect of network functioning (Rincón-Gallardo and Fullan 2016).

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Understanding the Spanish education policy context

Before presenting the case studies, an explanation of the Spanish local authorities' structures and the consequences of this for education policy will be provided. Spain has a total of 17 LEAs (Local Educational Authorities) and two autonomous cities, so the legal education framework of this country is diverse. There is a common state education law: 'Ley Orgánica 8/2013, de 9 de diciembre, para la mejora de la calidad educativa' (called the *Law to Improve Educational Quality*, and popularly known by the acronym LOMCE). This educative legislation states that a more open, inclusive and participatory society requires alternative ways of organization and management through collaboration and teamwork, but does not specify the obligation to create support and cooperation networks between schools. Schools therefore have autonomy to decide about the implementation, or not, of networks. Besides this general law, every LEA establishes legislation introducing small innovations. It is at the local level that networks have been expanded, with each community developing these to a greater or lesser extent. The local level is, therefore, a suitable focus for the study of networks.

Findings

The macro view of the Spanish education networks

To know what forms of collaboration and networking are being developed in the Spanish education system as a whole, and in order to answer our research questions, we performed a thorough online search, looking for information on the official education websites of each LEA. In Table 1, the findings of this search are presented, showing the networks by LEA.

[Table 1 here]

As Table 1 shows, Extremadura (with 8 networks), Canary Islands (with 7 networks), and Navarra (with 6 networks) were the LEAs with the most networks. In total, we identified 18 topics of interest in the Spanish networks, which are shown in Table 2, where they are sorted in order of frequency: library (14), ecology (9), health-promotion (6), sustainability (5), learning communities (4), solidarity (3), equality (2), emotional intelligence (2), gardening (2), innovation (2), cooperation (1), educational participation (1), educational research (1), enterprise (1), peace (1), and physical education (1). Table 2 gives a brief explanation of each of these.

[Table 2 here]

The micro focus on two particular Spanish LEAs

This study focused on the LEAs with the highest number of networks: Extremadura and the Canary Islands, due to the recent legislation on networks in these places, promoting reflection about what the intention of the law is and what networks have been formed in these two LEAs, in the context of their regional policies. Furthermore, the micro analysis gave the opportunity to compare some of the similarities and differences between them in this regard.

To progress this work, documentary analysis was carried out, as a form of qualitative research that requires readers to locate, interpret, analyse and draw conclusions about the evidence presented (Fitzgerald, 2007). In particular, the documents consulted were: ‘Decreto 75/2015, de 21 de abril, por el que se regula el funcionamiento de las Redes de Apoyo Social e Innovación Educativa en los centros educativos sostenidos con fondos públicos de enseñanza no universitaria de la Comunidad Autónoma de Extremadura’ (that is, educative legislation about the operation of social and innovation support networks in Extremadura); and ‘Resolución

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de la Dirección General de Ordenación, Innovación y Promoción Educativa por la que se convoca la selección y renovación de centros docentes públicos no universitarios para su participación durante el curso escolar 2016-2017 en redes educativas' (i.e. in relation to the networks legislation of the Canary Islands). These are open access documents for the free consultation of citizens and both are in the public domain. The first, created by the Department of Education and Culture of Extremadura, was published in the '*Diario Oficial de Extremadura*' (the local journal of this territory which reports regulations and legislation). The second, written by the Department of Education and Universities of the Canary Islands, was published on the official webpage of the government of this LEA. In the next subsection, the legal framework reviewed is discussed in relation to the questions mentioned above.

Case study 1. Extremadura

The '*Ley 4/2011, de 7 de marzo, de educación de Extremadura*' (i.e. the local education law in Extremadura) exposes the importance of: opening schools to their environments; networking for more effective management of community resources; collaboration with other local, social and health institutions and associations; coordination with the council; support between teachers; volunteering and active participation of families; cooperation between neighbouring schools, and the implementation of research and innovation projects with universities. In this context, the regulation about networking is developed in the '*Decreto 75/2015*' cited above. In the following paragraphs, we will discuss several aspects of it according to this specific legislation about networks and collaboration.

In terms of organisation, the school networks participate and cooperate with their environments in a process of educational change. They are interested in the

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transformation, innovation and development of a particular topic. For example, schools whose interest is the implementation of emotional intelligence projects, and that are part of this network, would organise teaching and learning workshops focused on this area for teachers and students. Psychologists and educators contacted by the leadership and coordination teams conduct these activities. Parents, volunteers and local associations of the neighbourhood are invited to join. In this context, schools share the same innovation and improvement priorities. In addition, these alliances promote the exchange of experiences. In the main, as is intended in the introductory framework of this legislation, networks can explore connections beyond the school itself, create links and increase community engagement.

Some aspects that these networks have in common are their global aims, such as: creating cooperative working teams; implementing an action research methodology; and exploring the neighbourhood (promoting stronger ties of collaboration between schools, families and communities). However, the aims formulated within each network seem too broad, as is clear from reading the legislation (e.g. to ‘promote changes and improvements in schools driven by stakeholders’ but not specifying exactly what will be changed. These purposes do not map clearly onto tangible proposals).

The networks have been formed in a ‘bottom-up’ manner in seven areas of interest: -ecology ($n^1=25$), health ($n=16$), equality ($n=10$), emotional intelligence ($n=34$), physical education ($n=18$), enterprise ($n=24$), and research ($n=15$)- with different numbers of schools in each. At the same time, Extremadura has another library schools network in which all the schools participate.

¹ n = the number of schools involved in the network (2016-2017 academic year data).

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Regarding the structure, there is a coordinating committee, a group of trained facilitators for each network and an evaluation committee. The coordinating committee in schools is formed by a member of the leadership team; a coordinator teacher; two representatives of families; two representatives of children; and one representative of each institution, association or enterprise involved in the network (networks include organizations from the local area that commit to collaborate in the network project). The group of trained facilitators includes people who receive training by the LEA to specialize in a particular topic (e.g. ecology or emotional intelligence). It also refers to the working group that collaborates and participates in the implementation of actions (other teachers and collaborators). Finally, the evaluation committee is composed of administrative staff in the local authority. In relation to the networks agenda, school committees have to organize three meetings per year with all the people involved in the network. In addition, the legislation recommends meetings between schools to exchange experiences and improvement proposals, and to foster links. The agenda (timetable and spaces) is not well defined, at least not to the same extent, as we will see in the case of the Canary Islands. On the other hand, this LEA has created a virtual space for the presentation of the networks information (<http://www.educarex.es/redes-escuelas.html>), but there is no specific platform for communication between actors or for the dissemination of the activities of each network.

In terms of incentives, teachers and leadership teams obtain: *training credits* – for participation in and coordination of activities-; *fewer teaching hours* (one hour free per week); and *economic help* to buy resources and invest in the school. In this way, the LEA encourages the schools' collaboration and provides resources and initiatives to help them to work together.

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Concerning how networks operate, schools have to design a network project. This project must include a programme of actions for students, teachers and families, as well as cooperation with the town hall, and other institutions or associations. This document has to address the following aspects: (1) justification, context analysis and needs; (2) plans, educational programmes and working groups; (3) aims; (4) organization; (5) awareness, training and information for the educational community; (6) the professionals involved in each action; (7) resources, and (8) monitoring and evaluation. In this sense, the development of plans (designed in a participatory form and implemented by teachers using their creativity and their knowledge about the school environment) can be very useful. Accordingly, we suggest that examples of good practices include the projects carried out in Cáceres (a city of Extremadura) by the nursery and primary school “Dulce Chacón” (involved in the ecology and peace networks). This school developed the project called “La Raya en torno al Tajo” (which was about local nature) and a project called “Mascarabá” (on the theme of values in education). These virtual spaces collect documents, resources, works produced by students, photographs, reports, and other evidence of the activities carried out.

Finally, at the end of the academic year, each school is evaluated and must submit an annual report about their participation in the network activity. This document usually includes: (1) the goals achieved; (2) the activities developed; (3) timetable followed; (4) difficulties in implementation; (5) evaluation aspects: instruments used, samples and results; (6) improvement proposals; and (7) teachers involved in each working group. These reports are available publically on the projects website of the school Dulce Chacón. For context, it should be noted that schools in Spain must provide a report justifying the work carried out, giving evidence about the findings and describing their improvement proposals for the next year. These proposals try to

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promote self-reflection about what things could be improved or are susceptible to change (e.g. more resources and collaborative mechanisms between surrounding schools).

Above, with this first case study, we have explained how the networks are developing from the educational policies of Extremadura. Overall, this network policy promotes innovation, experimentation and research in educational practice, which can be powerful tools for school improvement.

Case study 2. Canary Islands

In the Canary Islands, the '*Ley 6/2014, de 25 de julio, Canaria de Educación no Universitaria*' (local education law) establishes what should be the schools' response to students' diversity. This legislation includes the principle of inclusion in the preamble, promotes the responsibility of all members of the educational community in education, stresses the importance of overcoming barriers to learning and inequalities and encourages schools to open up to the environment and to use social and community resources effectively. At the same time, it emphasizes the importance of creating networks to build inclusive global projects, promoting new models of collaboration between schools and local authorities, and fostering ties with universities in order to conduct research in the field of education. In the following paragraphs, we summarise some of the key points reviewed, according to the legislation in this area (this information may be found in the legislation '*Resolución*' mentioned above).

With respect to organization, the networks are formed by schools interested in responding to the challenges and opportunities of the information society. Network participants explore the potential of collaboration with other institutions. In the introduction to the legislation, the importance of support between schools is mentioned.

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School-to-school networks allow the creation of meeting points and the sharing of resources and experiences through horizontal coordination. In this particular context, networking is considered to be a tool for community engagement.

There are several aims, such as: promoting the development of educational innovation, facilitating joint collaboration between schools and creating cooperative work environments. In this legislation, the aims for the different networks are well specified, in a clear and specific form, and cooperation mechanisms with the community are properly defined (e.g. ‘share experiences (between leadership teams, teacher staff, parents, students and other actors involved) across the digital platforms created ad hoc’). There are opportunities provided by the LEA to make this possible.

Just as in the previous case study, the networks have been formed in a ‘bottom-up’ manner in seven areas of interest (library, participation, health-promotion, solidarity, equality, environmental education, and absenteeism prevention), with different numbers of schools in each. At the time of writing, the 2016-2017 academic year data are not available on the website, except for the absenteeism prevention network, with 132 schools, and the equality network, with 96 schools. However, these numbers are indicative of the high participation rate of schools in the networks.

In terms of the structure, there is a coordinating committee, a group of trained facilitators for each network, and an evaluation committee (i.e. the same organization as in the case of Extremadura). It is the responsibility of the LEA to provide the necessary training for the development of a network project. For example, in the network on educational participation, the prospective coordinator has to complete a specific 50-hour online training course. The amount of training does differ by topic, however. Furthermore, not all the committees are made up of the same people. According to the network typology, there are different participants and roles (see Table 3). Network

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coordinators will meet every one or two months. During the third quarter, the coordinator will programme a meeting to share the network activities. Within schools, work teams meet monthly. Evidence of these meetings usually has to be collected in a report signed by the participants involved. At the end of the year, a celebratory event will be held for participating schools (like a conference or seminar) to exchange experiences. As we can see in Table 3, the network structure and agenda are well defined. That is important, because in practice, all the roles and timetables must be clear to work effectively (for example, the legislation specifies the meeting agendas for each academic year).

[Table 3 here]

Regarding incentives, the activities of participation and coordination are certified by the local authority. The coordinator of each network receives a '40 hours' diploma and the participating teachers, as well as families and others, receive a '20 hours' diploma.

In terms of operation, schools must design a network project which can be integrated into the General Programming.² This project will collect the following aspects:

- (1) *Pedagogical dimension*: goals, contents, activities, skills, methodology and evaluation criteria.
- (2) *Institutional dimension*: school infrastructure, resources and services.
- (3) *Family dimension*: actions and initiatives for family-school collaboration.

² The Spanish state education law requires schools to have a document that includes all the projects, programmes or plans that are being developed in the academic year. This must be updated annually, including aspects in relation to responding to students' diversity, tutorial action, extracurricular activities, inclusion, research and innovation processes.

(4) *Community dimension*: actions to increase knowledge; exchange information with other schools, and use of the local resources (e.g. health centre, social services, municipal sports facilities or leisure and free time activities, non-profit organizations, and neighbourhood associations).

The network projects run for three years. As we have explained, there are virtual platforms available on the Internet for communication and interaction. These platforms operate as a space to share information and resources. There are blogs enabled to collect experiences and to function as a communication tool for the dissemination of activities that are taking place. Schools also incorporate evidence of their projects in their websites. An example of this is the nursery and primary school called ‘Esteban Navarro Sánchez’, which participates in the network of health-promotion.

Lastly, at the end of the academic year, the network coordinator draws up a final report, which includes the following sections: level of achievement of the aims; description of actions; progress in different areas of the project, including strengths, weaknesses and improvement proposals; and organizational, educational, professional and social issues.

In summary, a comparative analysis of these two LEAs policies, promotes reflection about their differences and similarities (see Table 4).

[Table 4 here]

The information content in Table 4 highlights the commonalities and differences that deepen our theoretical or practical conceptions of networking. In relation to the differences, the key aspects are related to the goals formulated, the type of structure, the community engagement, the networks’ agendas, and the digital infrastructure to support the interaction between the actors. Similarities include the attempts to increase collaboration between schools and their communities, the organization through

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committees, the incentives for participants, the minimum duration of three years for the networks' projects, and the annual report as a vehicle for the collection of information and assessment. The analysis presented here can contribute to the understanding of networking in the education policy that was reviewed. It suggests that policies in the Canary Islands have been more thoroughly designed, and thus more facilitative of network success. This, we would argue, may mean that they lead to a greater probability of impact.

Conclusion

Many governments are incentivizing networks for educational purposes, because of the perceived benefits of school-to-school collaboration. As we have suggested in the literature review, networking is considered to be a strategy for school improvement (Muijs 2015a) as well as an effective school improvement method (Ainscow 2015b; Muijs 2015b). Networks can raise collective efficacy, student outcomes, and provide more collaborative scenarios (Ainscow et al. 2012b; West, 2010). With these ideas in mind, Spain is developing new policies to support networking in schools. But what is clear is that Spain does not have common legislation about networks and collaboration between schools. The particular situation of this country shows a diverse networks map. In our opinion, the monitoring of, and research about, these networks in the Spanish education system could be of great value in the coming years.

In the final part of this article, we discuss how the Spanish networks that have been studied fit in the different theoretical frameworks introduced earlier. For this, we return to our research questions:

1) *What forms of collaboration and networking are taking place in Spain?* 2)

How are policy and practice providing a framework for the development of networks in

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different parts of the country? and 3) What are the barriers to fostering school-to-school collaboration in this context?

In the previous section, we presented two examples of the forms of collaboration and networking that are taking place in the Spanish education system. The legislation of the two LEAs was analysed, focussing on the following categories or aspects: (1) aims and aspirations, (2) areas of interest, (3) organizational structure, (4) benefits and incentives, (5) network projects and (6) evaluation, and improvement proposals. As we have shown, there is no common state policy to support networking among schools in this country. Therefore, every LEA acts with different purposes and a variable extent of development in this regard. Accordingly, collaboration and networking adopt diverse forms, depending on the region. We conclude that the Spanish legislation encourages the development of school networks based on topics of interest and that schools join a network because they want to collaborate on a specific topic with other surrounding schools or local institutions (e.g. health centres or associations). In this way, to be part of a school network in Spain means sharing experiences and resources, and connecting different actors, both intra and inter-service, to work together for a common interest.

Some networks in the English education system take similar forms to Spain. The classification of Chapman and Muijs (2013) includes (1) highly effective schools supporting weaker schools for school improvement purposes; (2) small schools collaborating to share resources, broaden the curriculum, and ensure survival; (3) schools collaborating across phases; (4) schools collaborating to improve inclusion and provision for students with special educational needs; (5) and academy chains. It is apparent that, the second, third and fourth forms of school-to-school collaboration are closer to the Spanish reality. With regard to the legislation reviewed at least, it is the case that the local authorities of Extremadura and the Canary Islands try to share

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resources, exchange experiences across primary and secondary schools (between phases), and overcome barriers to be more inclusive (this especially is carried out in the 'educational research', 'educational participation' or 'equality' networks). Thus, networks identified by Fernández-Enguita (2007) include an institutional, professional, community, training and technological view of networking: the cases studied adopt all of these forms. At the same time, networks of innovation in the classroom, defined by Murillo (2009) as a group of teachers from different schools that share learning experiences, are directly related to the cases presented, too.

The mapping of the school networks in Spain, presented in Table 1, provides an overall response to the second question about how networks are being developed across Spain. According to this, we have noted that school-to-school collaboration is organized by themes. Specifically, the case studies that were conducted show that education networks are being developing through topics of interest. The primary driver in this regard is legislation. The legislation of Extremadura and the Canary Islands includes the following topics: library, ecology, health-promotion and equality. At the same time, Extremadura fosters networks about emotional intelligence, physical education, enterprise, and educational research. The Canary Islands invest in absenteeism prevention, educational participation, and solidarity. This gives an indication of the variety of collaboration and networking possibilities that these two LEAs provide.

Finally, identifying the main barriers to fostering school-to-school collaboration in the Spanish context is not easy. A study of collaboration between Andalusian schools (Martín and Morales 2013) concluded that joining in networks can be a complex issue, due to lack of commitment by teachers and the shortage of time in the teaching schedule to participate in these tasks. The value of networking in education is recognised, but there are equally wide and diverse perspectives on it as well as on strategies to

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implement it (Silva, Marques, and Araújo n.d.). In this respect, some barriers are cited below.

It is clear that network structures could be more inclusive. A feature seen in both sets of legislation (Extremadura and the Canary Islands) is that networks are organized, in that they distinguish between a coordination committee, a group of trained facilitators, and an evaluation committee. However, the creation of dynamic structures to give voice to all actors is relevant too (e.g. parents, students, volunteers or others, not only leadership teams or teachers). In addition, it is necessary to strengthen a culture of teacher collaboration. If the aim is that education networks succeed, we must start, we would argue, by investing in a more collaborative culture from within, between and beyond schools (Ainscow 2016b). Policy makers also should provide mechanisms for school-to-school collaboration. Working with colleagues from different schools to foster new connections and linking community resources in the local environment is the main challenge (Mulford 2007). Undoubtedly, people involved in these alliances have to believe in the community power, that can connect social and professional capital for an effective network society. Further, incentives, in terms of extra time, resources and socioeconomic conditions will be decisive in the development of networks and collaboration between schools not only in Spain, but around the world.

Creating effective networks is thus far more than merely a legislative task, and requires attention to genuine stakeholder involvement, incentives and culture change. It is true that networks have increasingly gained the attention of the education sector as a vehicle for innovation and school improvement (Muijs, West and Ainscow 2010). Inter-school collaboration has clearly evolved organically to take a number of different forms. Mulling over the efficacy of these forms of collaboration, the proliferation of networks as a change strategy has travelled at a much faster rate than evidence of their

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effectiveness (Rincón-Gallardo and Fullan 2016). In this sense, research about networks in education, (assuming we want to advance in this field), has to obtain more empirical evidence about what forms of collaboration and networking are being developed.

Finally, studies that examine the relationship of national and local policy contexts to this emerging practice can serve to highlight, for policy makers and practitioners alike, the various challenges and opportunities they present. In this light, the findings from this study of networks in the Spanish policy context offers the potential for innovative insights that both broaden and deepen theoretical and practical understanding in this area. In terms of contribution, this work brings new knowledge of the situation of school networks in Spain, with special attention on two regions and their legislation on networking. In this respect, we think that the mapping conducted can promote reflection in other contexts.

Undoubtedly, the scientific community has both a challenge and an opportunity to rethink the potential of networking and collaboration in education, as well as the main barriers to these modes of organization. This reflection should include the design of new policies to develop effective school practices, and the consideration of networks as a 'mirror' wherein the present and future of education takes place. In conclusion, we suggest that in Spain, and in other countries as well, it is time to create synergies to move towards more collaborative policies and practices.

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Table 1. Classification of school networks in Spain

Local Education Authority	Topics of interest
Andalusia	Ecology
	Learning communities
	Library
	Peace
Aragón	Health-promotion
	Learning communities
	Library
Asturias	Ecology
	Health-promotion
	Library
Balearic Islands	Ecology
Basque Country	Environmental sustainability
	Library
Canary Islands	Absenteeism prevention
	Educational participation
	Equality
	Environmental education
	Health-promotion
	Library
	Solidarity
Cantabria	Health-promotion
	Library
	Solidarity
Castilla y León	Environmental sustainability
	Library
Castilla La Mancha	Ecology
	Library
Catalonia	Environmental sustainability
	Learning communities
	Library
Ceuta y Melilla	Cooperation
Extremadura	Ecology
	Educational research
	Equality
	Emotional intelligence
	Enterprise
	Health-promotion
	Library
Galicia	Physical education
	Library
La Rioja	Ecology
	Library
Madrid	Ecology
	Innovation
	Library
Murcia	Ecology
	Library
	School gardening
	Environmental sustainability
Navarra	Emotional intelligence
	Health-promotion
	Innovation
	Safety
	Solidarity
Valencia	Learning communities

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Table 2. Description of each network

Topic of interest	Number ¹	Description
Library	14	This network incorporates all schools that use the school library as a space to exchange experiences and information, develop plans, promote reading culture and innovation projects, and establish partnerships with surrounding schools. The network acts as a resource centre of teaching-learning and the responsible staff of school library cooperates actively.
Ecology	9	This network promotes exchanges and cooperation activities between schools with ecological common interests. Generally, these schools carry out eco-audits on consumption. Seminars, workshops and visits to nature are organized. Participating schools are often identified with a green flag.
Health-promotion	6	The network is composed by health-promoting schools. These foster healthy lifestyles focused on diet, physical activity, emotional health and the environment. There is collaboration among different sectors and disciplines. They share resources for improving health conditions and well-being.
Sustainability	5	Schools making up this network carry out an assessment of environmental quality. These promote actions to improve the problems identified in terms of management, clean energy, waste, water, noise, and alternative transport. They also take into account reduction, reuse and recycling conduct. The participating institutions are called 'green schools', and they educate students in values in order to be more responsible, reducing the ecological footprint, and collaborating in environmental projects.
Learning communities	4	Learning communities are schools that perform educational activities for social and educational change, and increase interactions within their communities. Among their characteristics are: the involvement of families, volunteers, dialogic gatherings, styles of horizontal communication, accessible information, democratic participation of interactive groups, equality, overcoming school failure and elimination of conflicts, dialogic learning and high expectations for all.
Solidarity	3	This network consists of schools interested in education for sustainable development, solidarity, tolerance, equality, respect, justice and promotion of human rights.
Equality	2	The purpose of this network is to foster reflection about coeducation in the educational community. Schools that are part of this network have to coordinate coeducational programmes. Through this partnership, schools share experiences and teaching materials on gender and equality, respect for sexual affective education, and proactive actions for preventing gender violence.
Emotional intelligence	2	This school network stimulates habits, attitudes and values in relation with the emotional intelligence. There are schools that try to foster projects of innovation based on emotional and social skills: ability for self-motivation, emotional regulation, self-esteem and identity, stress management, empathy and assertiveness.
Gardening	2	This network is formed by schools that use the ecological school garden as learning and teaching resource to develop different curriculum areas and skills. It is also considered a tool to promote teamwork and learning about agriculture and rural culture. Students have the opportunity for direct contact with nature, and to take care of the processes of gardening. The network has a counselling service and they advise about the implementation of school gardens, lending tools, literature and documentation on organic farming and teaching units.
Innovation	2	The network consists of schools that share experiences and discuss current issues regarding education. Monthly meetings are held to talk about projects, achievements and difficulties. At these events, people involved are discussing educational issues that are of common interest across schools (for example: inclusion and technology among many others).

¹ Number of these specific networks around the country.

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Cooperation	1	This network consists of schools and educational institutions related to joint projects among participants. Through the network, students and teachers have the opportunity for mobility and exchanges. This network of local cooperation between institutions seeks to promote experiences, foster links, discover new elements of cultural and social diversity in other associations, and develop and disseminate materials.
Educational participation	1	This network aims to promote participation in all areas of educational life. Participatory educational processes for educational improvements are aimed for. Schools involved develop approaches and use tools for active participation in social life.
Educational research	1	Schools associated with this network are interested in developing research proposals, innovation, experimentation, and using of technology to improve education. This network fosters design projects, workshops and seminars on new methodologies, inclusive education and cooperative learning, among others.
Enterprise	1	This network consists of schools that have entrepreneurial initiatives and use students' creativity, imagination and innovation for projects that have an impact on society. Schools involved in this network analyse the opportunities offered by the environment and use them for their own benefit.
Peace	1	Schools develop measures and actions to improve coexistence plans. Some areas of action are: school mediation, tutorial action, promoting coexistence through the development of values, attitudes, skills and habits; prevention of risk and situations of conflict, awareness of the need to live in peaceful and democratic societies.
Physical education	1	The common aim of the school participants in this network is the promotion of sport and physical activity. Students and families think about the relevance of physical activity as tools against childhood obesity and sedentary life styles.
Absenteeism prevention	1	This network promotes measures for school continuity. Schools serve as a laboratory of successful experiences, dissemination of initiatives and best practices for reducing early school dropout that, in the Spanish case, is proportionally high.
Safety	1	This network consists of schools that are involved in educational projects and awareness campaigns about road traffic safety. Students learn rules and traffic signs with the aim of developing habits that will help them to prevent accidents.

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Table 3. Networks structure from the Canary Islands

School network typology	Participant organization	Agenda meetings
Library	Coordination Team (Responsible for the Library Programme and teachers with the tutor role involved)	Bimonthly
Educational participation	Coordinator, trained facilitators, a representative of families and a representative of students	Bimonthly
Health-promotion	<i>Health committee</i> (Health Programme Coordinator, teachers and representatives of families, students, Health Centres and Local Authorities)	Monthly
	<i>Area committee</i> (Coordinators of schools of the same local area)	Monthly
Solidarity	<i>Solidarity committee</i> (Solidarity program coordinator, teachers, students and other community participants involved)	Monthly
	Committee area of each island (Coordinators of schools of the same island)	Quarterly
Equality	Committee for Equality (Teachers, students, families and non-teaching staff)	Bimonthly
	<i>Area committee</i> (Coordinators of schools of the same local area)	Monthly
	<i>Insular committee</i> for monitoring and coordination (Coordinators of schools of the same island)	Quarterly
Environmental education (includes sustainability, ecology and school gardening)	<i>Environmental Committee</i> (Coordinator, representatives of teachers, leadership team, students, families, non-teaching staff and the local authority)	Monthly
	Committee area of each island (Coordinators of schools of the same island)	Monthly
	<i>Insular committee</i> for monitoring and coordination (Coordinators of schools of the same island)	Quarterly

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Table 4. Comparative analysis: differences and similarities between the two local authorities’ policies

EXTREMADURA	CANARY ISLANDS
Differences	
The goals are very broad and ambitious	The goals are more specific and detailed
The structure of the networks is quite loose	The structure of the networks is well defined
The communities are involved, in some cases	Communities are part of the daily routine of networks
The network’s agenda (timetable and meetings) are not specified in the legislation	The network’s agenda (timetable and meetings) are specified in the legislation
There is not a digital platform for the network’s working - only a website explaining the overall aims and the schools involved in each network	There is a common website with the details about the network’s organization. There is also a digital platform for communication between the participants of each network
Similarities	
The interest in promoting collaboration between schools and their communities, in order to respond more effectively to the challenges of today’s society	
The similar organization (coordinating committee; a group of trained facilitators for each network and an evaluation committee)	
The incentives for participating in the network activity	
The network’s projects’ contents and duration (3 years)	
The annual report, monitoring and evaluation of networks	

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Figure 1. Categories identified for the analysis of the Spanish education legislation
(Original figure created for this publication)

