INTERNATIONAL JOURNAL OF EDUCATIONAL RESEARCH AND INNOVATION

REVISTA INTERNACIONAL DE INVESTIGACIÓN E INNOVACIÓN EDUCATIVA

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Dificultades y retos para el acceso y el desempeño profesional inicial del inspector de educación en España

Difficulties and challenges for admission to the position of schools inspector in Spain and early career development

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RESUMEN.

Presentamos en este articulo una investigación en la que se analizan cuáles son las necesidades, dificultades y problemáticas más relevantes para el acceso al Cuerpo de Inspectores de Educación en España, así como los retos y expectativas del futuro inspector novel en el desempeño de la función inspectora en las distintas enseñanzas que conforman el sistema educativo español. Se analizaron, en primer lugar, las cuestiones centrales de la inspección educativa en el marco de la Unión Europea; para posteriormente, implementar una metodología con base en la etnográfica virtual y el enfoque reticular-categorial del análisis de redes con representaciones matriciales y grafos sociales y para el que se empleó UCINET y el visor yED Graph Editor. Desde este enfoque metodológico, se analizó la percepción y opinión de 140 estudiantes durante dos cursos académicos (2017-2019) del único Máster a nivel nacional que desarrolla la temática de la inspección y supervisión educativa y que se imparte en la UNED. Se realizó un análisis de sus respuestas abiertas en cuestionarios junto con los mensajes en foros desde la perspectiva del Análisis de Redes Sociales. Los resultados muestran que las principales dificultades, retos y necesidades se concentran en cuatro nodos centrales: la politización de los tribunales y el formato de la prueba de acceso, la escasa oferta formativa para formarse como inspector y la ausencia de un procedimiento formativo nacional exigible como requisito de acceso, así como la necesidad de formación en técnicas de supervisión para el desarrollo de las funciones inspectoras.

PALABRAS CLAVE.

ABSTRACT.

This article presents research that analyzed the most significant needs, difficulties and problems for admission into Spain's school inspectorates, the expectations of new inspectors and the challenges they face in their assessment of different school settings in the Spanish educational system. Firstly, the research addressed the central questions of school inspection and supervision in the European Union, then a methodology was applied based on virtual

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ethnography and the reticular-categorical approach to network analysis, with matrix representations and social graphs devised using UCINET and yED Graph Editor visor. This methodological approach was used to analyze the opinions of 140 students between 2017 and 2019 enrolled on the only Masters course in Spain dedicated to schools inspection and supervision, delivered by UNED (Spain's National Distance Education University). Their open responses to a questionnaire, and course forum interaction, were analyzed from the Social Network Analysis perspective. The results show that the main difficulties, challenges and needs coalesced around four central nodes: the politicization of tribunals and the entrance exam format, the lack of training courses for potential inspectors, the absence of a national study pathway for potential inspectors as an entry requirement, and the need for training in supervision techniques to perform their functions as inspectors.

1. Introduction.

Admission to a position in the public administration as a schools inspector and subsequent career development is an important guarantee of quality in education. Title VII of Spain's LOE-TC law regulates inspection of the national educational system and establishes its scope for schools: "Inspection of schools will cover all elements and aspects of the educational system to ensure compliance with the laws, the guarantee of rights and observance of task performance of those involved in the processes of teaching and learning, the improvement of the education system and the quality and equity of education" (Article 148.3). Admission to schools inspectorates and the capacity of inspectors to carry out their work can affect all stages in the education system, however, the problems, difficulties and challenges faced by new inspectors have not been analyzed in depth (Castán Esteban, 2016; Campos, 2017). So far, analysis has centered only on established inspectors, not on the perspective of teachers studying to take the official schools inspectorate entrance exam. This article analyzes the perception of teachers preparing such an exam to join their regional school inspection institutions, and provides a critical assessment of this entry procedure and how new inspectors develop at the start of their careers as schools inspectors. This analysis adds to the knowledge already acquired on working inspectors, and can and should inform the debate on the challenges faced by the education system as a whole in the coming years.

Requisites for admission to schools inspectorates in the EU. A comparative perspective.

This section provides a global perspective of entry conditions to schools inspectorates in different countries across the European Union. In particular, and in line with (Miguel et al., 2018), we will examine aspects such as procedure for admission to the inspectorates (1), the prior requisites for entry to the inspectorate (2), and the level of education or practical experience required to be considered for the post of inspector-supervisor (3). In terms of admission procedure, entry to the profession is by public employment exam, open competitive

exam or a combination of both, in almost half the education systems in the EU. This is the case in Austria, Slovakia, Slovenia, Portugal, Belgium, Bulgaria, Croatia, France, Greece, Ireland, Italy, Latvia, Malta, the Czech Republic, Sweden and Rumania. Around a third of EU countries contract new inspectors directly, and / or with some form of entrance exam. This procedure can be: a) by advertising job offers in the sector (in ex-EU Scotland); b) by direct appointment on interview (The Netherlands and Italy); c) by successful completion of a selection process that can include one or more of the following phases: exam or written test, interview, CV and evaluation of specific documentation (ex-EU England and Scotland, Poland and Lithuania; d) by a reserve list / commission of services (France); e) from the teachers' employment exchange (Hungary).

Prior requisites for admission to the schools inspectorate vary considerably. One group of countries requires candidates to have already acquired "initial training" to qualify for entry to the inspectorate, which can be classified across the EU as: a) countries that require a level of education that equips a candidate to work as a teacher, such as a Teaching degree in most cases, which is true for more than half the education systems in the EU: Germany, Austria, Belgium, Cyprus, Slovakia, France, Greece, Ireland, Italy, The Netherlands, Portugal, the ex-EU member state United Kingdom, Hungary, Lithuania, Poland, the Czech Republic, Rumania and Sweden; b) countries that require a higher level of education, to be admissible to the teaching profession: b-1) a Master's degree, in Slovenia and Malta, b-2) specific experience in education that accredits their competence as teachers, in Scotland, Iceland, Hungary, The Netherlands, Hungary, Montenegro and Bosnia Herzegovina, and, b-3) countries that require candidates to have undergone initial training according to specifics: b-3-1 / training in the education stages in which they will work (Cyprus): a degree in teaching infants and primary school children, and a Master's to teach in secondary school; b-3-2 / a specialism required if the inspector wishes to work in secondary education (Cyprus); b-3-3 / in areas where the inspector is going to work (Hungary): a degree that covers knowledge of education laws and a Master's that enables inspectors to evaluate education in practice; b-3-4, special related areas (Serbia): a Master's for admission based on an initial training related to education law, otherwise, a degree, and, b-3-5, in cases where the candidate already has a contract in the education administration, such as in Lithuania and Hungary, where a higher education qualification and the relevant professional qualification in teaching are required. Optionally, education systems can require or consider appropriate other types of training, such as: a) official or minority languages: Cyprus, England, Republic of Ireland, Slovakia; b) general and specific knowledge in information and communication technologies (ICT): Czech Republic, Lithuania, the Flemish Community of Belgium, Ireland and England; c) specialized assessment courses: France, Portugal, United Kingdom, Lithuania, Latvia, Poland and Rumania; d) a thorough knowledge of the education system (Germany and ex-EU Wales).

There is a second group of countries that require potential schools inspectors to belong to an institution / department of the public education administration, as is the case in about half the EU member states, though not in Scotland or The Netherlands. Where civil service membership is a requisite, admission to the schools inspectorate is via official public employment exam or open exam, or combination of both, which is the case in Austria, Slovakia, Portugal, Belgium, Bulgaria, France, Greece, Ireland, Italy, Malta, Czech Republic,

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Sweden and Rumania. Variations within this group include: a) the candidate is not required to belong explicitly to an educational institution or department, merely registered as a civil servant (non-EU state of Montenegro); b) teaching experience accredited by the education administration (non-EU state of Turkey, which requires 8 years' experience as a teacher).

Finally, although England, Wales and Sweden do not require membership of an institution or department of the public education administration in order to apply to be a schools inspector, membership of a teaching association is necessary, even if this does not confer public functionary status. In particular; a) the candidate must possess a license as teacher or educational specialist (Wales and England, with Qualified Teacher Status [QTS] issued by the national educational authority); b) the candidate must be a teacher or belong to another type of educational institution (Sweden).

Another cluster of countries require previous teaching, or another type of, experience. Most countries require prior teaching experience for admission to the schools inspectorate, ranging from two years, in Austria, up to 20. The normal requirement is for 10 years' experience, as in Greece, Malta or the French and German speaking regions of Belgium. Lithuania and Montenegro also require experience in ICT use, and Montenegro requires proof of publication of scientific or professional works; Lithuania requires proof of analytical capacity and ability to work in a group. Ireland, Austria and Portugal consider it desirable to have school management experience, and the Netherlands considers it compulsory; it is recommendable in Ireland, and is considered a criterion for differentiating of equal merit in Portugal.

A small number of states do not demand prior teaching or any other type of experience, as prerequisite for admission to the schools inspectorate, although it is a factor to be considered in interviews. Hence, a) although teaching experience is not compulsory, a candidate that cannot certify their own experience in the field has fewer entry options (The Netherlands); b) it is not compulsory for early schools inspection but it is required for supervision of centers of higher levels of education, in which case teaching experience of between two and five years is required according to the responsibilities for the level of inspector (Bulgaria): c) the extent of teaching experience required depends on the team of inspectors that is formed and the scope of their inspection and supervision, so they will ensure that the team as a whole possesses the necessary experience: as a teacher, as guarantor of the quality of education (the non-EU state of Iceland); as a teacher in other education settings and in education management (Rumania); academic or research experience, qualified teachers with professional experience in education centers (Italy, Portugal); d) consideration of the candidate's capacities, knowledge and competences, such as in ICT (Flemish Community of Belgium, Ireland, Slovakia, Wales), and analytical competences (Lithuania, Wales).

In terms of the training and work experience required before being considered for the post of official school inspector and supervisor, appointment depends on: a) successful completion of a trial period or work experience gained on the job: Flemish Community of Belgium, Germany, The Netherlands, Scotland, Poland and Slovenia, where inspectors form part of the civil service; b) a period of training: b-1) specific training in school assessment: Flemish Community of Belgium, Ireland, Malta and United Kingdom; b-2) specific training beyond school assessment: in schools management (Cyprus), in public administration to check compliance with legal requirements (Hungary), school center management or administration

(Portugal, United Kingdom, Austria); b-3) professional training for top rank inspectors: North Macedonia (a non-EU state), and, c) alternating training and field work during the year-long trial period.

In the case of Spain, our comparison of the most significant aspects of the procedure for admission / incorporation into the country's official schools inspection institutions to that of other EU countries described above, centers on: general norms for admission to the schools inspectorate [current education law] (1); the procedure established for admission [evolution and current state] (2).

The "General law for admission / incorporation to the inspectorate" as stipulated in the LOE-TC regulatory framework currently in force in Spain, establishes the following aspects on admission / incorporation (and internal promotion) into the schools inspectorate: to accede to the schools inspectorate a candidate must have at least five years' experience in one of Spain's public administration education departments, and must be qualified with a doctorate, a degree, degree in Engineering, Architecture or equivalent title, and successfully complete the selection process, and where necessary, be accredited with sufficient knowledge of the co-official language in the Autonomous Community where they are designated to work, in accordance with that Community's laws, and, b) the twelfth additional provision. Admission and internal promotion. Admission to the schools inspectorate is via public employment examination. Aspirants must have at least six years' experience in teaching as a member of a public service teaching institution. Spain's regional education authorities are responsible for convening the public employment examination for schools inspectors, which is based on the following criteria: b-1) the evaluation phase of the examination includes an assessment of the candidates' professional career and specific merits as teachers, successful performance in leadership roles, and membership of a university professors' association, as defined by this Law; b-2) the exam consists of a test of aspirants' knowledge of pedagogy, education law and administration in terms of schools inspection and supervision, as well as specific technical aspects of the profession; b-3) the education authorities can set aside up to one third of inspector places for school principals who fulfil the general requirements and who have received a positive assessment of their leadership in at least three contractual periods. The candidates selected by the public employment examination process must undertake a trial period of specific work experience to prepare them for induction to the inspectorate, after which they are officially appointed civil servants to their respective institution of schools inspectors.

The procedure for admission to the schools inspectorate, initially established in Royal Decree 2193/1995, 28 December, which established the basic norms of entry and provision of posts for schools inspection still in force, has subsequently been modified in: a) Royal Decree 1573/1996, 28 June [BOE - Official State Bulletin, 29 June] and Royal Decree 334/2004, 27 February [BOE, 28 February]; b) Royal Decree 276/2007, 23 February, which approved the norms regulating school inspectors' admission, induction, and acquisition of new competences for teachers, as referred to in the Organic Law of Education 2/2006, 3 May, and it regulated the transitional admission regimen referred to in the seventeenth transitional provision of this law [currently in force in its consolidated version] in turn derogating Royal Decree 334/2004, thus establishing the entry requirements in Article 41, and consolidating

admission to the schools inspectorate by means of public employment examination and other competitive examination types.

2. Methodology.

For this study, we developed a methodology with two qualitative aspects, and with a reticular-categorical approach to network analysis. This comprised an analysis of students' perceptions through responses to an open questionnaire with three questions: (1) the main difficulties faced by aspirants for admission to the schools inspectorate; (2) the challenges faced by schools inspectors in today's society; (3) the needs in terms of instruction and professional guidance for inspectors in order to improve performance as inspectors and supervisors of education in schools. These questions were posted on three discussion forums on UNED's online platform to be discussed and debated by the students. The qualitative analysis of the responses to the questionnaire and the analysis of the debate generated in the forums from the Social Network Analysis (SNA) perspective allowed us to delve into the digital interaction of the conversations by selecting subject areas and their conceptual and semantic relations. SNA is based on the idea that the structures of relations between elements help explain the whole, the social setting and each element better than the attributes of these elements taken individually (Borgatti et al., 2002; Castells & Monge, 2011; Caverlee, Liu & Webb, 2010). Thus, this SNA procedure for joint, qualitative and reticular analysis yields results of greater depth than quantitative statistical methods, since they allow us to investigate and understand relations and opinions in virtual learning settings.

The quantitative analysis was based on a codifying and categorizing process comprised of a descriptive and an interpretative stage. The categorization procedure was organized around three phases: phase 1: segmentation and identification of units of meaning, and grouping of descriptive categories; phase 2: construction of a system of emerging subject nuclei or meta-categories; phase 3: identification of qualitative domains (sequential and transversal analysis of meta-categories). The descriptive analysis of the data required counting the frequencies of the most significant sources of information for this research, which were the threads of the online discussion forums on the aLF platform. Two evaluators codified students' written interventions in two academic years (2017-18 / 2018-19). Given the high number of identified discursive units (1897 / N words = 83751), Guetzkow's U index was calculated to measure coincidence in the number of discursive units identified by two independent evaluators and codifiers, according to the following formula (Holsti 1969):

$$U = (O1 - O2) / (O1 + O2)$$

where O1 represents the number of units identified by Codifier 1, and O2 the number of units identified by Codifier 2. Later, the process of synthesis and grouping of the most representative categories was performed. This qualitative approach to frequencies was developed alongside the analysis of chat rooms and forum discussion on the aLF platform based on the SNA perspective. This was done with the UCINET 6 and visor yED Graph Editor 3.11.1 programs to edit the graph and make it comprehensible. The matrix scheme used to generate the graph was:

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$$\Pr(\mathbf{Y} = \mathbf{y}) = \left(\frac{1}{\kappa}\right) \exp\left\{\sum_A \eta_A g_A(\mathbf{y})\right\}$$

where ηA is the parameter of the corresponding A configuration (whose result cannot be zero if it is assumed that all the pairs of variables in A are "conditionally dependent"). In addition, gA (y) = yijIIAyij is the configuration of the statistical network corresponding to A; gA (y) = 1 if it coincides with the "y" observation in the network, and if the network does not appear in the result, it is 0. κ is a quantity that ensures that the standardization (1) has an adequate probability distribution. All the exponential random graph models take the form of Eq. (1) which implies a general probability distribution of graphs in "n" nodes, considering that there exist different assumptions of dependency, with the consequence of selecting different types of configurations that are relevant for the model. Considering this equation, the only relevant configurations for the model are those in which the possible links are configurations that are mutually contingent among themselves.

The sample comprised 140 students studying a Master's in Education Inspection and Supervision at UNED, 81 men, 59 women with a mean age of 43. The students represented all 17 of Spain's Autonomous Communities, the largest contingents being from Madrid (21%), Castilla-La Mancha (17%) and Andalucía (16%). The two official teaching bodies represented were secondary school teachers (62%) and primary school teachers (32%). The mean teaching experience of the participants was 18 years, and 56% held a position of responsibility in an educational center. Demographic data on the participants were taken from a questionnaire, and expressed consent was given by the participants for their use. The questionnaire, in Spanish, ("Inspección de Educación. Formación, Acceso y Desempeño" http://cort.as/-688) was validated by the expert competence coefficient and the Delphi method.

3. Results.

After codifying the open comments in the questionnaire and the first round of analysis, Guetzkow's U equaled .0078, with a conformance of almost 91% in the number of units identified by the codifiers. The inter-rater reliability was also calculated, to verify text consistency in the units identified (Weingart et al., 1990), comparing the subject units identified by codifier 1 and codifier 2, using Excel. In our case, text consistency was 86.11% in the first round, which was considered an excellent result (Simons, 1993). Using these main categories and the respective subcategories (17 categories), the two codifiers independently assigned a unique codify to each unit, and after the first round of the main codifying, we calculated Cohen's kappa coefficient to verify the codifiers' reliability. The basic version of Cohen's suggested by Brennan and Prediger (1981) produced the following calculation:

$$\kappa = (\Sigma\ P_{ii} - \Sigma\ P_i\ x\ P_i) / (1 - \Sigma\ P_i\ x\ P_i)$$

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where Σ Pii is the proportion of observed agreement, and Σ Pi x Pi is the proportion of probable agreement (Holsti, 1969). To determine the conceptual importance of the categories and identify potential problems in order to improve the codifying scheme, we systematically compared the preliminary codifying results produced by the two codifiers. We found a relatively medium-to-high codifying correspondence of κ = .87.13. Kappa values above .80 are generally considered a very good result (Brett et al., 1998). This value is relatively high compared to the results of other studies (Lombard, Snyder-Duch & Bracken 2002), and can be considered highly satisfactory. Table 1 presents the main categories detected, based on the coding.

Table 1. Results of the inter-rater consistency matrix.

Cod.1	(TE)	(P	(AF)	(BP)	(FP)	(FI)	(AN)	(TS)	(RA)	(CE)	(EE)	(ED)	(OC)	(OG)	(ME)	(EV)	(AD)
(TE)	**328**	34	22	23	18	8	9	10	23	21	12	10	7	4	16	18	21
(PT)	23	**349**	21	12	13	14	10	5	7	8	9	10	11	12	11	10	9
(AF)	17	21	**198**	10	11	10	12	10	10	9	8	7	6	5	3	4	2
(BP)	15	18	10	**260**	9	8	7	9	10	11	12	10	8	9	11	12	13
(FP)	8	17	11	6	**328**	8	10	11	12	13	6	7	8	9	5	11	12
(FI)	4	15	12	5	12	**162**	9	10	10	12	8	9	6	7	8	9	10
(AN)	12	10	10	10	13	4	**57**	8	8	9	3	4	5	6	7	12	16
(TS)	15	5	9	11	10	7	9	**125**	10	8	23	4	3	10	11	12	13
(RA)	5	12	8	7	9	8	7	2	**42**	10	11	6	7	10	9	10	12
(CE)	19	12	11	8	8	9	8	12	2	**10**	10	11	12	11	8	11	12
(EE)	21	11	12	9	7	10	9	13	3	9	**78**	6	10	12	4	5	9
(ED)	3	16	12	10	8	12	10	5	10	5	23	**21**	3	13	3	12	13
(OC)	7	3	10	11	12	34	11	7	5	7	23	9	**16**	6	2	14	12
(OG)	9	5	9	12	11	12	12	8	7	8	12	5	3	**42**	2	15	10
(ME)	11	6	8	10	21	12	15	15	8	10	3	6	6	12	**16**	16	9
(EV)	10	7	7	9	23	6	16	14	3	11	5	12	8	10	3	**26**	8
(AD)	8	8	6	8	1	8	9	12	2	12	6	12	9	9	5	9	**109**
Total	515	549	376	421	514	332	220	276	172	174	252	150	130	187	124	198	290
Ag.	**81**	**86%**	**85%**	**87**	**88**	**89**	**87**	**86**	**85**	**81**	**83**	**87**	**88**	**81**	**89**	**83**	**89%**

The extensive subject area covered by the public employment examination for school inspectors (Spanish acronym, TE), politicization of examination tribunal (PT), lack of preparatory courses for the examination (AF), an overly strict scoring scale (BP), selection process format (FP), initial on-the-job training (FI), analysis of national and regional legislation (AN), specific supervision techniques (TS), knowledge of legal-administrative regimen (RA), school coexistence management (CE), specific aspects of functioning at different stages and teaching in the education system (EE), writing disciplinary action reports (ED), functioning of school institutions (OC), general organization of school center (OG), methodology (ME), evaluation (EV), attention to diversity (AD).

The extensive subject area covered by the public employment examination for school inspectors (Spanish acronym, TE), politicization of examination tribunal (PT), lack of preparatory courses for the examination (AF), an overly strict scoring scale (BP), selection process format (FP), initial on-the-job training (FI), analysis of national and regional legislation (AN), specific supervision techniques (TS), knowledge of legal-administrative regimen (RA), school coexistence management (CE), specific aspects of functioning at different stages and teaching in the education system (EE), writing disciplinary action reports (ED), functioning of school institutions (OC), general organization of school center (OG), methodology (ME), evaluation (EV), attention to diversity (AD). The results from the codifying show that the students identified a mean of 3.8 concepts in the three areas analyzed (challenges, needs and difficulties). Table 2 presents the percentages and totals for the associated words.

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Table 2. Frequencies of meaning for the most significant categories.

Categorías	% Cases	Nb Words
1. Extensive subject area	63%	328
2. Politicization of examination tribunal	67%	349
3. Lack of preparatory courses	38%	198
4. Strict scoring scale	50%	260
5. Selection process format	63%	328
6. Initial on-the-job training	24%	125
7. Analysis of national and regional legislation	8%	42
8. Specific supervision techniques	2%	10
9. Knowledge of legal-administrative regimen	15%	78
10. School coexistence management	31%	162
11. Functioning of stages, teaching in the system	41%	57
12. Disciplinary action reports	24%	125
13. Functioning of school institutions	8%	42
14. General school center organization	2%	10
15. Methodology	15%	78
16. Evaluation	4%	21
17. Attention to diversity	3%	16
18. Politicization	8%	42
19. Legal-administrative regimen	3%	16
20. Training courses	5%	26
21. Supervision techniques	21%	109
Total	100%	2167

We observe that the main themes that concern the aspirants to join Spain's schools inspectorates are: the difficulties in preparing the public employment examination and in achieving admission to the inspectorates (politicization of the public employment examination tribunals, 67% / selection process format, 63%). In terms of the challenges that future inspectors expect to face: school coexistence management, 31% / Functioning of stages and teaching in the education system, 41%). Finally, for needs, three areas were identified that require priority training: disciplinary action reports, 24% / supervision techniques, 21%).

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Together with this study of frequencies, we also performed an analysis of students' perceptions and opinions in three threads in the discussion forums using SNA. We analyzed the network of interactions obtained from aLF with the most significant loads and exceptions. For that, we edited the resulting UCINENT network with the yED Graph Editor 3.11.1 (Figure 1) for a more visual and comprehensible result.
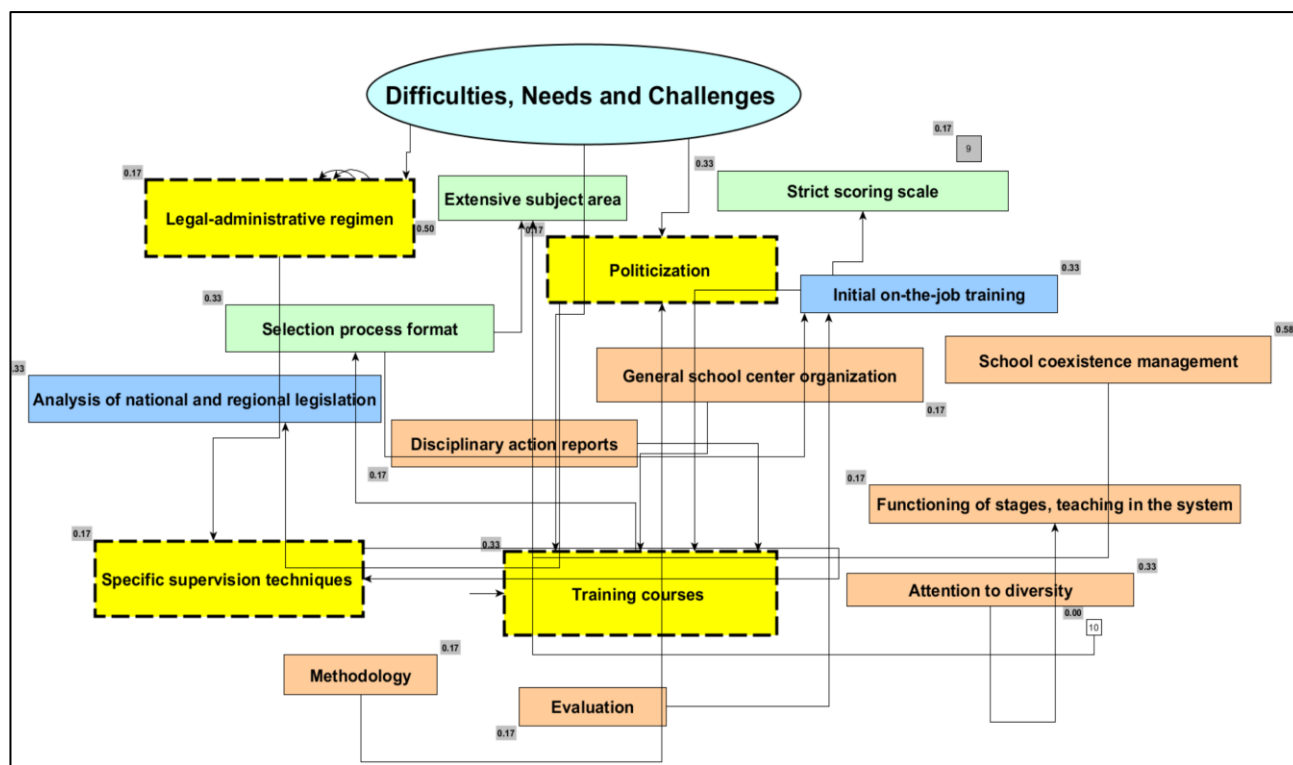

Figure 1. Network of category relations.

The mean density of the three discussion forum threads with the dichotomized matrix was .56, with a .23 standard deviation, which represents a high value for our sample of 140 students, and an average network range of 3.658, indicating that each key word is interrelated with a mean of almost 4. This value is considered high for 17 nodes. In addition, this result shows that more than two thirds of all possible links were present, and participation was high. There are four main nodes in yellow for the three central threads of the forum (1. Politicization. 2. Legal-administrative regimen. 3. Training. 4. Supervision techniques). Blue represents "needs", brown represents "challenges" and green "difficulties". We analyzed network centrality to identify the most prominent aspects, by analyzing node range, betweenness and closeness (Table 3).

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Table 3. Node range, betweenness and closeness in the "Inspection" social network.

	Items	Nodal Grade		Betweenness		Closeness	
		Deg.	NrmD.	Bet.	nBet.	Far.	Clos.
Dificulties	1. Extensive subject area	19.0	54.550	65.5	32.5	77.0	41.10
	2. Politicization of examination tribunal	21.0	52.275	63.0	30.5	71.2	38.96
	3. Lack of preparatory courses	20.0	51.250	61.5	25.5	70.3	34.60
	4. Strict scoring scale	11.0	28.750	35.0	19.3	56.0	35.51
	5. Selection process format	12.0	30.225	33.0	20.0	55.0	31.00
Needs	6. Initial on-the-job training	10.5	28.750	32.5	19.0	51.0	29.81
	7. Analysis of national and regional legislation	9.0	27.750	31.5	18.2	48.0	27.43
	8. Specific supervision techniques	20.5	35.500	55.0	29.4	74.0	38.45
	9. Knowledge of legal-administrative regimen	20.5	51.500	60.0	31.3	74.0	39.61
Challenges	10. School coexistence management	16.0	50.500	59.0	30.2	72.0	39.12
	11. Functioning of stages, teaching in the system	11.0	28.500	32.0	18.0	55.0	31.37
	12. Disciplinary action reports	11.0	28.500	32.0	18.0	55.0	31.37
	13. Functioning of school institutions	11.0	28.500	32.0	18.0	55.0	31.37
	14. General school center organization	15.0	35.500	55.0	29.4	74.0	38.45
	15. Methodology	7.0	18.500	12.0	8.0	15.0	11.37
	16. Evaluation	18.0	52.500	61.5	32.0	76.0	41.10
	17. Attention to diversity	12.0	30.750	32.5	20.5	56.0	31.00
Nodes Central	18. Politicization	21.0	16.0	50.500	59.0	30.2	72.0
	19. Legal-administrative regimen	20.5	18.0	52.500	61.5	32.0	76.0
	20. Training courses	20.0	19.0	54.550	65.5	32.5	77.0
	21. Supervision techniques	20.5	15.0	35.500	55.0	29.4	74.0

The centrality shows the position of the concepts in the network, and yields a result that is quite high, 68.5%, with 17 nodes. The highest degree (maximum number of relations in a network node) is 21 ("politicization of the public employment examination tribunals"), forming nodes 11-14 (linked to admission and the difficulties involved in the entry examination process, and lack of job opportunities following admission to the schools inspectorate, conditioned by political influence on its functions and responsibilities). The results show that the aspects with the highest normalized degree (Nrmdegree: percentage of connections with one node over the network total) and higher node degree are found in the shadowed items in Table 3. The results for the degree of intermediation, 55,251, provide important information on the frequency of appearance of a node in the shortest frame (or geodesic) that connects to two others: that is, it shows when a theme can be intermediary between others. The facilitators with a higher intermediation degree (≥20), and which recur in the three dimensions analyzed,

constitute the most important aspects of the analysis. The results of the degree of closeness indicate that these bigger nodes concentrate around the aspects that interrelate the three dimensions: difficulties, challenges and needs.

4. Discussion.

The results of this study show that there are a set of difficulties, challenges and needs around the profession of schools inspection and supervision in Spain that need to be addressed, both in terms of the professional functions and also in response to the technological and social interaction challenges that characterize development in this 21st century (Lucendo & Vázquez-Cano, 2020; Sevillano & Vázquez-Cano, 2008). The opinions of different researchers on the subject, as well as working inspectors, seem to indicate the need for regeneration in schools inspection and supervision. As stated by Rodríguez-Gómez and Gairín (2015, p 73), "education organizations require strategies that enable them to respond to the continuous and changing needs and demands within their environment. It is not a question of organizations adapting to social changes but that they anticipate these changes and seek out alternatives". The perception of teachers who study to take the public employment examination leading to admission to the schools inspectorates is doubly interesting. Firstly, they are working teachers with more than six years in the job, and will have already observed first-hand the work and functions of schools inspectors, as professionals and at their centers that have been inspected. They are also training and studying to be future inspectors, and understand the workings of the profession from two different perspectives. Our analysis shows that the difficulties involved in admission to schools inspectorates center on the possible politicization of the examining tribunals. As an institution that is closed and hierarchically dependent on politicians (generally under the remit of a governing provincial delegate), there is concern that appointment by tribunal can involve political bias, as the selection process can be subject to political interference. As stated by Castán Esteban (2016), in each Autonomous Community election that saw a change of political party in government, the head of the schools inspectorate of that Community has been dismissed. Undeniably, the head of a schools inspectorate is a political appointment determined by that regional government, which can direct and condition how school inspectors operate. This situation is evident both to aspirants to the job and working school inspectors (Castán Esteban, 2016, p. 20), hence the call for state-wide public employment examination to avoid a situation in which members of a tribunal might already know the candidates, or in some cases have even worked with them as colleagues as provisional inspectors. A public employment examination involving a tribunal ballot of all the functionaries of the school inspectorates would be a better guarantee of impartiality. Prior training as a schools inspector before taking up the job is seen as another difficulty. As Castán Esteban (2016, p. 4) (…) says: "It is remarkable that it is not considered necessary to have had prior training as an inspector to work as a schools inspector and supervisor. All that is needed is experience as a classroom teacher and to successfully come through the selection process."

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Another difficulty mentioned by the participants in our survey is the format of the selection process, in which those who are preparing the examination must also gain some practical work experience as inspector and supervisor, but often the selection process itself demands more than the prior knowledge required to become a schools inspector, given that this is a question of technical aspects that would be covered by any post-admission training, or which would be required beforehand in an arbitrated and regulated system of training for admission (similar to the Master's in Teacher Training) (Vázquez-Cano, 2012; 2018). In this sense, training in the legal and administrative aspects of the function of schools inspection, and those of a technical and procedural nature regarding the issuing of disciplinary action reports, is essential in the work of the inspector (Arévalo Jiménez, 2017), and this stands out as one of the main concerns and needs in terms of training for potential future schools inspectors.

Two further challenges that schools inspectorates need to address concern school existence management and the functioning of the educational stages. ICT have emerged as catalyzers of these two important areas; firstly, school coexistence management is conditioned by the activity and interaction of students on the Net, and by the way these relations affect their behavior inside and outside the classroom, and their academic performance (Vázquez-Cano & Sevillano, 2013). School inspectors need to be fully trained in the use of technologies to enable them to intervene in the supervision of practical teaching work involving ICT, and to organize and design new working spaces and supervision techniques based on emerging technologies such as big data, block chain, virtual supervision and social transference through social networks, among others (Ayuso Velar, González Manzanera & Villaseñor Martín, 2017; Crespo Ramos, 2017; Vázquez-Cano et al., 2011). Also, admission to schools inspectorates from different public service areas is sometimes seen as a limitation or difficulty that should be rectified by proper training.

For example, to inspect and supervise one of Spain's Official Language Schools or Vocational Training Centers, without adherence to the official state school teaching body, requires the inspector to receive specific continuous training, if we wish to combine regulatory compliance with promotion and assessment for innovation and the improvement of the processes to achieve quality in education (Vázquez-Cano, 2012; 2018). This seems to be necessary and, in line with the needs, difficulties and challenges, and the perceptions of authors like Tomás Secadura (2017, p. 519), "the reality is that these days, schools inspectorates are seen as weak, with no clear justification, with a professional profile that is constantly shifting and undefined. Currently, the basic contradiction lies in defining what is, and what should be, the role of schools inspectors and supervisors in the 21st century".

5. Conclusions.

The results of this article show that the perception of teachers who study to take the public employment examination to become schools inspectors is one that manifests difficulties, challenges and needs. One of the difficulties related to admission to schools inspectorates that generated most concern and agreement was the feeling among many aspirants, also fueled by alarmist articles in the national and regional press (Caballer, 2007; El Plural, 2013), that entry to the profession can sometimes be affected by politicization of the tribunals that adjudicate appointments. Moreover, the work that new inspectors must undertake at the start

of their careers is conditioned by an exhaustive knowledge of the education system as a whole, and of supervisory techniques to be developed; in fact, one of the tests in the selection processes relates to the proposal for an inspection report, for which no initial training is required, even though this *is* a requirement in order to be a teacher or school principal. In addition, the teachers studying to become schools inspectors detect a number of priority areas in which inspection and supervision should play a significant role, and which require continuous specialist training, such as: school coexistence management and, in particular, everything related to the use of technology in academic and social settings. It is also important to have an in-depth knowledge of the functioning of the school stages and teaching in the education system that differs from the knowledge required for admission to the schools inspectorate. Without this theoretical-practical training, the work of supervision becomes more complex, especially in evaluation (Article 151.F LOE-TC, 2013). The perceptions of teachers studying to become schools inspectors are that there should be specific practical training directly related to the work of inspection and supervision, and within this dimension, particular references to how to develop disciplinary action reports and manage legal-administrative processes.

The unfinished debate on what exactly is involved in schools inspection and what purpose it serves also needs to consider how inspection and supervision are developed, as well as the admission process to gain entry to the profession and how the work of an inspector is performed. For this reason, the perspectives on those on the inside of school inspectorship are just as valid and necessary as those school staff whose centers are inspected by such officials. In terms of how the profession is developed, and in line with Camacho (2014, p. 572), we can conclude "the tasks that are most highly valued involve contact with the teachers in order to facilitate advice, through a range of actions, coordination between the educational stages and the evaluation of teachers and principals".

Acknowledgments.

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