

Exploring the social reporting practices of public schools: survey and cluster analysis of the Italian educational system

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Exploring the Social Reporting Practices of Public Schools: Survey and Cluster Analysis of the Italian Educational System

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Abstract

Reforms in the Italian educational sector have led schools to become more accountable. Social Reporting (SR) is an effective response to stakeholders’ increasing demand for information and an innovative public accountability tool for Italian Public Schools (IPSs). Using a survey and cluster analysis, our study investigates current awareness and adoption of SR practices to improve the accountability of IPSs. The results show that SR practices are still underused and that IPSs fall into two main groups: “early movers”, which are highly sensitive to this tool and will employ it earlier, and “latecomers”, which show less awareness.

Keywords: Public School Accountability, Social Reporting Practices, Italian Public Schools

1. Introduction

Recent reforms in the educational sector of various countries have been characterised by a willingness to establish greater autonomy and responsibility levels in public schools and have led to enhanced interest in public accountability functions and purposes in these organisations (Sinclair, 1995; Parker & Gould, 1999; Møller, 2009). In the Italian educational sector, these reforms,¹ which have led to a transfer of responsibilities from the central level to the schools and pivot on the managerialist concepts of autonomy and school assessment, have increased schools’ need to “give account”, especially to the local community to which they belong, and to discard their “self-referential context” (Bracci, 2006, p. 212). Hence, to legitimise the decisional powers ensured by autonomy, Italian Public Schools (IPSs) seek to extend their traditional public accountability processes towards forms that go beyond the simple request to be accountable for results and that embrace a “social dimension” of accountability (Bovens, 2007; Coy et al., 2001; Bracci, 2009; Paletta, 2011).

Social Reporting (SR) could be an effective response to this growing demand for accountability to achieve the social responsibility that is innate in schools and that requires an “educational alliance” (Paletta, 2011, p. 122) with stakeholders. In recent years, IPSs have begun to show interest in voluntary SR which can contribute to an “integrated approach to accountability” (Paletta, 2011, p.

127) wherein compulsory administrative procedures, conducted at a central level, merge with self-assessment and interaction with stakeholders at the school level by means of voluntary social disclosure.

This integration of voluntary reporting processes, considered in the Italian context as an expression of a “Cooperative Accountability” system (GBS, 2016), with administrative accountability procedures, can encompass the concept of “Intelligent Accountability” proposed by O’Neill (2002) in response to criticisms of test-based accountability systems (Carnoy et al., 2003; Jacob & Levitt, 2003). In fact, intelligent accountability studies, which move from the sense of responsibility of school players and the dialogue established between schools and stakeholders (O’Neill, 2002, 2013; Cowie et al., 2007; Sahlberg, 2010), suggest complementing the existing purposes of public school accountability systems, focused on student learning, by “giving account” of the overall value generated by schools to meet the new and different stakeholder expectations.

Although these studies do not directly mention SR, it seems reasonable to consider SR a fully fledged means of intelligent accountability, primarily because it is based on stakeholder involvement and engagement. In addition, due to its voluntary nature, SR plays a supplementary and integrative role in mandatory reporting processes, fostering “new” integrated managerialist approaches to accountability consistent with intelligent accountability perspectives. By adopting this interpretative perspective, our paper aims to contribute to the public school accountability literature.

In fact, interest shown by some IPSs in SR practices can also be viewed within this framework in the Italian educational sector. Although SR is becoming increasingly popular among these “experimenter schools”, few studies have analysed these practices in Italy (De Anna, 2005; Bracci, 2009; Previtali, 2010; Mori, 2014). Moreover, most of them are theoretical, and empirical studies are limited to describing case studies of a few pioneer schools located in northern and central Italy that have already experienced SR (Speziale, 2009; Paletta, 2011) or to investigating the phenomenon in a defined geographical area of the country (Rauci et al., 2016).

This paper attempts to fill this gap in the literature. Moving into the field of public school accountability, we conducted an exploratory analysis of SR practices in IPSs to investigate the current state of

- awareness of SR scopes and functions by IPSs;
- adoption of SR practices by IPSs.

To achieve these goals, we first administered a questionnaire survey to a sample of 444 IPSs. The questionnaire is a suitable methodology to explore rarely investigated events and the relevant motivations or opinions of a large population (Fowler Jr., 2013). Next, we applied cluster analysis

to test possible categorisations of IPSs based on various degrees of interest shown in activating SR practices. This technique is effective for grouping schools to trace the main patterns of these practices in the Italian context and draw policy conclusions. The paper is structured as follows: Section 2 provides a review of the literature on public school accountability, Section 3 analyses the role of SR from the intelligent accountability perspective and Section 3.1 provides an overview in the IPSs context, Section 4 presents the research design and results, Section 5 discusses the results, and Section 6 presents the study's conclusions.

2. School accountability in public school accountability

Accountability is a concept with a broader and complex meaning, especially in the public sector. The characteristics of the aims assigned to the accountant, the nature of the resources employed, the various types of stakeholders, and the elusiveness of its relationship with the concepts of responsibility, answerability, transparency and control, generate many interpretative perspectives of public accountability (Parker & Gould, 1999; Bovens, 2007) in several forms (Sinclair, 1995; Mulgan, 2000) and in the educational sector as well (Coy et al., 2001; Møller, 2009; Ng, 2010; Hooge et al., 2012).

The prevailing wisdom is that the most traditional form of accountability in public organisations is *administrative* (Sinclair, 1995; Bovens, 2007; Møller, 2009). Hence, each public school is accountable to the higher hierarchical levels of the educational system for the use of inputs and outputs.

Recently, this concept has been enriched by the *professional accountability* that occurs when people are members of a community of professionals, such as teachers, and perceive a duty to comply with the standards or codes of ethics of the profession.

A further form of accountability, namely *social accountability*, is increasingly employed in public sector organisations, although it is not currently widespread in the context of public school accountability and related studies. Social accountability is based on the moral obligation to be responsible for one's mandate, function and actions towards the community to which one belongs by activating "horizontal" accountability processes inspired by transparency principles and deep social or cultural expectations (Coy et al., 2001; Bovens, 2007).

In accordance with this multifaceted nature of public accountability, many studies in the educational sector have specifically analysed public school accountability according to a double perspective (Carnoy et al., 2003; Figlio & Loeb, 2011) depending on

1. the use of accountability results;

2. the types of reporting tools and processes used.

The first perspective distinguishes a “consequential” accountability system from a “report card” system (Carnoy et al., 2003; Hanushek & Raymond, 2005; Figlio & Loeb, 2011). The former associates the reported performance in comparison with predefined standards or stated expectations with a range of rewards and sanctions, while the latter only reports on and accounts for school activities and their results. Similarly, in the second perspective, which is well known in the international literature as “standard-based accountability” (Figlio & Loeb, 2011), reporting and accountability processes are imposed on schools by strict rules that are established at a central level to ensure established student learning practices and “comparative competition” among schools. Among the reporting tools based on a standard-based accountability approach, test-based accountability using centralised and standardised tests to account for student achievements has aroused significant interest among policy makers around the world, both in the managerial literature and in educational research (Carnoy et al., 2003; William, 2010).

In many countries, test-based accountability systems are spreading in response to recent reforms aimed at increasing the autonomy and responsibility levels of public schools to introduce competition mechanisms inspired by market-based models. These mechanisms should lead to a more rational and efficient basis for school organisation (Edwards et al., 1997; Broadbent et al., 1999; Bracci, 2009). These directions in administrative accountability systems, which focus on standards and test scores, consider relevant elements of school work, management and performance but produce some doubts regarding their ability to encourage improvements in school responsibility in terms of public accountability (Oakes et al., 2005; Cowie & Croxford, 2007). These doubts can be interpreted, even in the widest adoption in public sector organisations of private sector “managerialist” approaches, as a way of rationalising the broader dialectic of efficiency-public accountability (and ensuring social justice/equity) (Lane, 1997; Saravanamuthu & Filling, 2004). Specifically, managerialism, which leverages quantitative techniques of evaluation, is already quite widespread in international educational contexts such as universities, where it continues to reconstitute itself with respect to changes in society (Braun & Merrien, 1999; Roberts, 2004).

However, these managerialist directions of school sector reforms, with their extensive focus on standards, seem to ignore some of the most critical missions of public schools, such as preparing thinking and critical students for conscious participation in a democratic society (Oakes et al., 2005; O’Day & Leithwood, 2007). These aims are often difficult to measure. In fact, tests and standards suffer from some intrinsic limits, such as an excessive focus on comprehension skills instead of general knowledge, and produce related distortions in their provision of educational processes, such as “cheating” and “teaching to test” (Jacob & Levitt, 2003). In addition, this managerialist

utilitarian conceptualisation of standards risks underestimating the fact that students need to receive equal and quality educational services and resources, such as facilities, books, qualified teachers and safe schools (Coy et al., 2001; Christensen, 2004; Oakes et al., 2005). These factors often vary across different areas of a country, or they may be out of the control of public schools and principals. There is also the possibility that they may be ignored altogether because they are generally relegated to the fringes of the efficiency-public accountability trade-off (Braun & Merrien, 1999; Leithwood, 2001; Møller, 2009). Hence, these factors risk being “obscured” by school administrative accountability models, such as Standard-Based Accountability, and by the related managerialist culture of rankings, enrolment numbers, and the treatment of students as “customers” (Tilling & Tilt, 2004), thereby privileging technical “output and efficiency measures” over “processes and public interest” (Saravanamuthu & Filling, 2004, p. 443). Above all, standards, test scores and the “power of numeracy” do not allow the shaping of social (accountability) relationships that aim to legitimise the decisional powers associated with the autonomy of public schools that would oblige them to be accountable also in validating the value and social impacts produced for their local community (Edwards et al., 1997; Roberts, 2004; Ezzamel et al., 2007).

In response to these criticisms of standard-based accountability (O’Day, 2002) and particularly of test-based accountability (Jacob & Levitt, 2003; Koretz, 2015), O’Neill (2002) proposed the concept of intelligent accountability, which seeks to combine standardised mandatory accountability processes with voluntary ones. In fact, to realise the shift from a “standards-based” system to an “intelligent” one, we must remember that in social organisations such as schools, responsibility precedes accountability, and the latter cannot replace the former (Hargreaves, 2008; Sahlberg, 2010). By adopting this point of view and implementing a shift from mere “requirements” and compliance, using defined standards, to responsiveness and a “sense of responsibility” of each school (O’Neill, 2002; Cowie et al., 2007), public school accountability can accomplish its purposes, especially its typical “social relation” (Bovens, 2007). Indeed, public school accountability approaches that are based only on compliance (standards) and maintain traditional managerial hegemony, in which principals decide, top down, all organisational things, are the antithesis of a professional learning community (Leithwood, 2001; Holloway, 2004; Connolly et al., 2017). There is little scope for collaborative work or decision-making and few opportunities to learn from collective experience (Cowie & Croxford, 2007; O’Neill, 2013). Conversely, intelligent accountability assumes a school governance founded on collegiality in which members are united in the same ideals and support an open professional approach based on an everyday voluntary process of “giving reasons” for conduct. This approach nurtures dialogue between the school and its community in defining the shared measures that are disclosed and by which it is assessed. These

“horizontal” accountability approaches, based on active forms of stakeholder involvement and shared governance where social and technical considerations are present in managerial discourse, ultimately extend the “social” dimension of traditional public school accountability processes (Sahlberg, 2010; Bovens, 2007). According to Coy et al. (2001), the disclosure of more comprehensive information on a routine basis would move school accountability beyond the traditional decision usefulness accounting paradigm towards true public accountability and social responsibility for these institutions. SR practices can thus be a useful means for public schools to achieve these intelligent accountability goals.

3. The role of SR in intelligent accountability

Literature has widely debated the role of SR in addressing the need for organisations’ public accountability (Gibson & Guthrie, 1995; Gray et al., 1996; Pollifroni, 2007; Mussari & Monfardini, 2010; Michelon et al., 2015). However, SR has scarcely been investigated in the public school sector, which is more interested in test-based accountability developments (William, 2010; Hamilton et al., 2013). Although intelligent accountability studies do not directly mention SR practices, they offer interesting opportunities to use these tools to accomplish public school accountability purposes. Indeed, by incorporating “social responsibility” into organisational objectives, SR allows schools to be responsible for their conduct in fulfilling obligations arising from stakeholders’ relationships, and thus be more inclined to be accountable from an “intelligent” perspective (Sahlberg, 2010; Bovens, 2007; O’Neill, 2013).

In these perspectives, SR practices can also be usefully conceptualised through the critical responses lens to managerialism’s effects that derive from the critical accounting literature (Laughlin, 1987; Baker & Bettner, 1997; Tinker, 2005; Bebbington et al., 2007), particularly the two-fold aspects proposed by Tilling and Tilt (2004). In the former, considering a contextualisation within a wider domain (e.g., historical and socio-cultural), these practices allow for greater understanding of the social root of accountability with the recognition that the “giving account” process is a “human endeavour” and not only a technical aspect. It is relevant to the role of human actors and their various interests within a certain socio-political context (Tilt, 2016). The second critical proposal, according to Tilling and Tilt (2004, p. 558), is “a call to action, to participate in an actual transformation of the system” since the present one is not satisfactory. This requires active involvement of both schools and stakeholders in building a social accountability relationship which thus supports these institutions in discarding their traditional self-referentiality.

Thus, SR can shape the social context and a trust-based culture in which to achieve its voluntary disclosure process. It is inspired by the sense of responsibility of schools being accountable for student learning and school activities and results in the implementation of an “educational alliance” with their stakeholders (Paletta, 2011). For public schools, this effect requires clearly identifying stakeholders and the social impact of their conduct so as to identify in social reports the relevant content required to facilitate dialogue, participation and effective stakeholder engagement (Owen et al., 2001; Bebbington et al., 2007). This tool allows schools to be answerable to specific expectations with greater emphasis on mutual adjustment, judgement and trust approaches, thus overcoming the bureaucratic rigidities of traditional administrative accountability processes. Above all, this participative accountability would prevent the risks of a “rhetoric of participation” (Holloway, 2004, p. 481) that does not translate into genuine empowerment and cooperation among all school players (O’Neill, 2013). In particular, it can discourage the potential use of accounting’s discourse of “student numbers” and test scores to create an ambiguous atmosphere (accountability) in which efficiency could have priority over the social responsibilities of the school (Christensen, 2004).

Hence, by moving from the primary function of public schools as cultural institutions that provide education, SR content could achieve the many purposes of this demand for public accountability and could demonstrate the “added value” produced for their own community. Some examples of benefits include the ability to offer educational curricula in compliance with the demands of the labour market, a commitment to social inclusion processes, management of the school’s reputation, the creation of useful networks with other schools, relationships with universities and other institutions, contributions to the economic, social and cultural development of the reference context, and openness to innovations and to primary international trends (Tooley & Guthrie, 2007; Cowie & Croxford, 2007; Ng, 2010; O’Neill, 2013).

Within this framework, it is clear that SR in schools cannot only have a communicative function but must also be conceived as a “new” managerialist tool that allows schools to perform an in-depth analysis of their activity and their focus on stakeholder needs, and to develop the contents of public school accountability as a “social relation” (Saravanamuthu & Filling, 2004; Bovens, 2007; Paletta, 2012). With these purposes, SR can embrace at least four different and correlated interpretive perspectives on the disclosure of public schools that are useful to pursuing the aims of intelligent accountability (O’Neill, 2002; Cowie & Croxford, 2007; Pollifroni, 2007; Bracci, 2009; Sahlberg, 2010; Paletta, 2011; Hooge et al., 2012).

First, SR supports the achievement of intelligent accountability aims by improving stakeholder involvement and dialogue. In this way, SR is a negotiation tool for “the nature of obligation” to

justify the conduct of schools and to define stakeholder expectations. This horizontal accountability function presupposes a clear mapping of the various categories of stakeholders, especially at a local level, and an evaluation of the degree of legitimacy of their requests to be answered through SR content. Hence, SR in schools integrates communication regarding student learning, activities and results. It provides an account of what schools are doing to meet stakeholder requests and of the educational, social and economic returns produced for the local context.

Second, by becoming an integral part of the strategic planning and control processes of schools, SR also directs them towards intelligent accountability purposes. It underpins a rearrangement of the school's mission, strategy, performance indicators, activities, and overall organisation on the basis of expectations derived from stakeholders' dialogue to provide content to social reports. This focus on "managers managing" schools in terms of local community needs, via SR aims, can increase schools' professional and social reputation and thus their competitive abilities and scope to attract students, teachers and funds.

Third, SR accomplishes forms of intelligent accountability, because it instils a sense of responsibility and an evaluation culture in schools. It subjects them to more open and on-going public scrutiny by the local community, similar to other forms of "democratic controls" adopted by public organisations (Bovens, 2007).

Fourth, as a reporting model, social reports provide a comprehensive representation of the school's performance. In fact, intelligent accountability presumes a complementary disclosure approach using other documents included in administrative accountability processes that are already produced by schools on a mandatory basis. It integrates the existing planning, control and assessment processes to communicate and manage school performance from a systemic, accessible and comprehensive perspective. Using this approach, SR aims not only to disclose the school's mission as a public institution providing educational services but also to demonstrate the appropriateness, rationality and social acceptance of its internal procedures, overhead allocations and service efforts, making them legitimate and reliable in pursuit of the commitments made to the reference community (Coy et al., 2001; Tooley & Guthrie, 2007).

3.1 SR in IPSs: An overview of the Italian context

This paper uses the lens of intelligent accountability to contribute to the literature on public school accountability by examining the Italian school framework. In Italy, the issue of SR in schools began to be relevant with the advent of recent regulatory developments concerning public school accountability aims. In recent years, several legislative provisions, also related to the self-

assessment of schools, have mentioned the adoption of SR practices by schools but have not provided a specific description of their contents or implementation (M.D. 31/07/2007; P.R.D. 80/2013, art. 6). In addition to this regulatory trend, some innovations to this issue were also offered by GBS, the Italian standard setter for SR, which recently drafted a SR proposal for schools (GBS, 2016). Prior to this research document, there were no guidelines accepted by the scientific community for IPSs, with the exception of the SR standard released for the overall public sector by the GBS.

GBS considers the social report of schools the final output of a voluntary reporting process through which each school measures and communicates its educational, social and economic results. SR is considered a tool of “cooperative accountability” based on the active involvement and effective participation of all stakeholders (GBS, 2016) consistent with public accountability purposes.

Therefore, we believe that the adoption of SR within a cooperative accountability framework can be identified as a national conceptualisation of the intelligent accountability interpretative perspectives proposed by the international literature, making it a new and important public accountability tool for IPSs.

Indeed, as a tool of voluntary accountability from the intelligent or cooperative accountability perspectives, SR can overcome inadequate interconnections between the mandatory reporting processes that characterise the current administrative accountability systems of IPSs, which are considered too far removed from stakeholder concerns, from the needs of the local context, and from the strategic vision of schools (Adams & Frost, 2008; Karsten et al., 2010; GBS, 2016). Subsequently, SR can contribute to the aforementioned integrated approach to accountability in which the compulsory administrative procedures conducted at a central level, including test-based accountability approaches, are joined by self-assessment and interaction with stakeholders at a school level, within the scope of intelligent accountability, by means of voluntary social disclosure. More specifically, among IPSs accountability tools, SR could provide a useful managerialist link between educational and financial planning reports and final reporting (e.g., a three-year educational plan, financial annual report, management report, and self-evaluation report). For each school project this report highlights the educational purposes, planned resources, resources used and results achieved, interpreting them while also considering the socio-economic expectations of the local context to outline the school’s contribution to value co-creation or to achieve a territorial model of school governance (GBS, 2016). SR thus allows schools to address the inadequacy of traditional reporting documents in meeting the various stakeholder requests for accountability and to give content, via SR, to substantial and effective “answerability” (Coy et al., 2001; Cowie & Croxford, 2007; Ezzamel et al., 2007).

Moreover, by capturing this potential, the adoption of voluntary SR practices can help restore the balance of legislative orientation towards the risks entailed in deepening a managerialist “culture” of assessment and self-assessment of school performance that is overly centred on student achievements using standard-based accountability systems. The INVALSI (National Institute for Educational Evaluation) for example, was created for this purpose in 2002. Recently, its test-based approach was further developed by P.R.D. 80/2013, thus defining the new National Evaluation System. However, the sole use of these systems risks further strengthening administrative accountability processes and scopes if they are not accompanied by a cultural change that requires internal school players to focus on the accountability processes based on a sense of responsibility towards their stakeholders. Thus, the traditional bureaucratic-administrative approach to school management and governance must evolve towards more fruitful “new” managerialist approaches through SR practices inspired by an “intelligent” orientation for accountability purposes.

This change should primarily involve the role and leadership style of principals, as also intended by the same regulatory reform (L.D. 165/2001, art.1; L. 107/2015) that has modified the professional setting from “principals” to school “managers”. The leadership approaches of school principals should be driven by a focus not only on improving academic performance but also on educating students about social and ethical issues, on enhancing the human capital of staff, on weaving relationships with stakeholders and at the same time, on preserving the economic ratio of activities (Day & Leithwood, 2007; Paletta & Bezzina, 2016).

Through this cultural evolution, principals as well as other internal school players can absorb that sense of responsibility that underpins intelligent accountability and activate SR processes, which rely on the substantial involvement of their stakeholders in school governance to establish trust-based relationships in accordance with stakeholder engagement approaches (Owen et al., 2001; Bebbington et al., 2007; Connolly et al., 2017).

Despite this pressure to embrace a “social dimension” for public school accountability, the issue of SR in schools has been rarely investigated in Italian literature. Few studies have analysed these practices in the Italian context, and most do so from a theoretical perspective (De Anna, 2005; Bracci, 2009; Previtali, 2010). Some empirical studies are limited to describing case studies of a few pioneer schools located in northern and central Italy that have already experienced SR (Speziale, 2009; Paletta, 2011), while others (Mori, 2014; Raucci et al., 2016) have conducted a statistical analyses of the SR practices of schools by focusing only on a limited geographical area of the country or on broader research purposes regarding levels of transparency through websites.

4. Survey and cluster analysis of SR in IPSs

4.1 Research design and methods

To achieve our research purposes, we conducted an exploratory investigation using a questionnaire survey and a cluster analysis. The questionnaire survey methodology is suitable for analysing scarcely investigated events because it allows for the exploration of relevant motivations and opinions and the beginning of scientific debate (Fowler Jr., 2013). In keeping with the public accountability context of the study, the survey focused only on IPSs. Public schools are representative of the Italian educational system because they are more numerous and enrol a larger number of students than private schools (MIUR, 2013). The sample was built by applying a random sampling method to the lists of IPSs available in the academic year 2013/2014. Thirty percent of schools were extracted for each Italian region for the sample to reproduce the same distribution as the whole population, i.e., 8,954 public schools. A sample of 2,684 schools of every level and grade was defined, and a questionnaire survey was submitted to them.

The questionnaire consisted of three parts including 24 questions, many of which were close-ended or evaluation scales, so as to increase the validity of the answers obtained and the subsequent statistical analysis of the results. The measurement scales were developed according to a four-point Likert scale to avoid levelling answers at the midpoint with subsequent distorted results.

As with other studies using a questionnaire survey to analyse SR practices (Williams et al., 2011; Thorne et al., 2014) and in line with methodological recommendations (Ihantola et al., 2011; Fowler Jr., 2013), three steps were followed in developing our questionnaire: (1) we reviewed the literature dealing with SR in the public context, with a special focus on the public educational sector; (2) we developed a preliminary questionnaire, which was analysed by researchers in the SR field to verify the clarity, validity and completeness of its contents; and (3) we administered a pilot version of the questionnaire to a selected, restricted group of IPSs. Various techniques were applied to neutralise response bias, which was also revised based on input from a group of experts in the design of the questionnaire survey methodology. First, we kept the questionnaire short and easy to complete, with questions and wording as simple as possible and minimal use of jargon. Next, with these purposes in mind, the questionnaire was pre-tested several times to ensure that the format, sequencing and wording were appropriate and to ensure the validity of the data. The final version of the questionnaire, with a cover letter which briefly explained the purpose of the study, was sent via e-mail to school principals of the sample of IPSs from December 2013 to July 2014 (a period prior to the publication of the research document by GBS on SR in schools). During this period, the survey was emailed out twice along with three post-card reminders. We obtained a total of 444 responses

(16.54% of the sample), which is a reasonable number to answer the research questions (Fowler Jr., 2013). Questionnaire data were analysed using descriptive statistics.

Next, we applied a cluster analysis technique on all 444 responding schools to identify the presence of natural groups among schools that answered the questionnaire based on some of the variables included in the first two sections of the questionnaire. We were thus able to identify subsets of schools that were heterogeneous among the sets but homogeneous within each cluster to capture additional information about a different awareness of the SR issue. Clustering is a statistical multivariate technique that involves partitioning a set of objects into a useful set of mutually exclusive clusters such that the similarity among observations within each cluster (i.e., subset) is high, while the similarity among observations from different clusters is low (Johnson & Wichern, 2002). To perform cluster analysis, we employed both hierarchical clustering techniques (single linkage, complete linkage and average linkage methods) and partitional clustering techniques (k-means²). However, this study only reports the complete linkage method results, which is the best method for our purposes because the results are considered more reliable and the subsequent classification is more homogeneous and well differentiated.³ This method produces compact clusters without any chain effect. In addition to the single linkage method, the complete linkage method is also unchanged, compared to monotone transformations (Cerioli & Zani, 2007). Lastly, we used the Calinski-Harabasz test (Calinski & Harabasz, 1974), a cluster validity criterion, to select a suitable number of groups of schools. Particularly large values of the Calinski-Harabasz pseudo-F indicate distinct clustering.

The following section describes the results of the survey and the cluster analysis of the findings.⁴

4.2. Results of the survey

This section presents the descriptive results of our survey on the basis of 444 responses obtained from the IPS sample. The results are listed in Tables 1A, 1B and 1C, divided according to the sections of the submitted questionnaire.

Section A - General information about surveyed schools

Table 1A: General information about surveyed schools

[Insert Table 1A]

Section A aimed to collect general data about school principals and schools to investigate their geographical distribution, size and activity.

Most school principals (approximately 64%) were female and were on average 55 years old. According to the EUROSTAT classification (EUROSTAT, 2015), the answers obtained were geographically distributed as follows: 27.98% in southern Italy, 21.50% in northern Italy, 14.56% in the islands and 13.58% in central Italy. Most responses came from schools in southern Italy, which seem more interested in extending the social content of their public accountability. We recorded the lowest percentages both for the islands and for central Italy. Most responding schools (66.22%) were comprehensive schools (which include more educational levels, from kindergarten to upper secondary school) or “didactic circles” (from kindergarten to primary school) that enrolled from 500 to 1,500 students and employed fewer than 150 teachers.

Section B - Awareness and assessment of SR

Table 1B: Awareness and assessment of SR

[Insert Table 1B]

Section B identifies how many school principals are aware of SR, how they interpret it and their interest in implementing this process.

As expected, almost all school principals (approximately 95% of respondents) already knew about SR, and had heard about it as a possible school accountability tool. This is relevant, especially considering the following answer about its potential use within a perspective of openness to dialogue with stakeholders typical of the intelligent accountability approach. Schools had two main interpretative perspectives on social reports: the social report as a stakeholder involvement tool (94% of respondents) and as a strategic planning and management tool able to unify the representation of school performance (86% of respondents).

The main reason underpinning the decision to undertake an SR process was the improvement of dialogue with stakeholders and their participation in “school life” (94%). However, schools are also aware that they are not the only institution designated to undertake this involvement within the educational community, considering that most schools (approximately 79%) indicate the need to meet stakeholders’ demand for information as an equally important driver to implement SR. Moreover, the surveyed schools did not consider the increase in enrolment and the attraction of financial contributions as strong incentives for implementing SR. Both motivations and

interpretations provided by schools highlight a fruitful way of conceiving SR within a broader and systematic dialogue process with stakeholders. This approach relates to intelligent accountability perspectives and is very important in identifying their expectations in the content of social reports. By analysing the main factors that could hinder (or have hindered) these SR processes in schools, results obtained reveal that most schools considered the hindering factors, such as the lack of time, financial resources and specific guidelines, the unsuitableness of the information system and the inadequate participation of stakeholders in the school management process, as “enough”.

It is remarkable that the re-systematisation of data resulting from other reporting processes already implemented in schools for social reports was indicated as being a barrier by only slightly more than half of the schools analysed (approximately 63%). According to school principals, this factor was the smallest obstacle. This result, however, should be considered with caution, as difficulties arising from the adoption of an SR process were not fully evaluated due to lack of experience. At the time of the survey, only 28% of schools had launched a process to draw up a social report in the following school year, while among the remaining schools 84% stated that they would launch the process over the next 4-5 years. As a result, we can expect the number of schools that will draw up a social report in the next five years to reach approximately 89% of the sample. Thus, prospectively, it seems that IPSs have planned to adopt SR processes and felt the need to reinforce communication with stakeholders, especially along the social accountability dimension. Only a small number of schools had already drawn up a social report (73 schools, or 16.44% of respondents), underscoring that this topic, from a practical point of view, was not very familiar to the schools surveyed, despite the theoretical interest shown in SR potential.

The following section of the questionnaire is dedicated to this group of 73 schools.

Section C - Experiences in SR

Table 1C: Experiences in SR

[Insert Table 1C]

This section provides an in-depth discussion of practices implemented by those schools that had already experimented with SR in terms of goals. The data in this section were processed on the basis of these 73 “pioneer” schools.

To identify the profile of this group of schools, we crossed the answers obtained for this section with those of Section A. Considerations for section A also apply to these pioneer schools, except for

information regarding their geographical distribution which reveals, on the contrary, that most of these schools (37 schools representing 51% of the total) are located in northern Italy and the remaining schools are divided among the other country' areas.

Before becoming involved with SR, most school principals were aware of SR, primarily because they had already heard about SR processes applied in schools (84%) or in private and public companies (60% and 64%). Seminars and training courses (92%) were the main information channels through which principals had become aware of SR, closely followed by specialist reviews (59%). Most of these pioneer schools (73%) released only one social report, while only a small number of schools boasted years of experience in SR.

Among the pioneer schools, we could not identify a well-established and systematic SR process. In almost all schools (approximately 90%), the school principal suggested undertaking this voluntary process. Most schools (62 schools) had established a dedicated team for the SR process with various compositions among schools. The teams of most schools included, in different combinations, the principal and delegates from both teaching and administrative staff. Only three schools established their teams differently by including all stakeholder categories. From this perspective but in different terms, by focusing on the procedures used, we observed that to enhance the reliability of the report, approximately 67% of school principals extended the responsibility of SR processes to all internal school players, enlisting the approval of the school board. Teachers were the most involved category, and most schools (90%) defined their participation as “continuous and proactive”. The participation of administrative and support staff was considered positive and was defined as “continuous” by principals. The participation of students and their families was deemed “discontinuous”, while that of public authorities and economic organisations was defined as “not entirely satisfying”. These disclosure approaches to SR show that, despite acknowledging (in section A above) the importance of external stakeholder engagement for the implementation of SR, at present IPSs are not willing to truly involve them in the process in practice. Only 51% of schools seemed to have overcome the issue by simply attaching an assessment questionnaire to the social report for stakeholders with the aim of obtaining an assessment of their strengths and weaknesses.

4.3 A cluster analysis of survey findings

In the second phase of our analysis, we used the cluster analysis technique and applied the complete linkage method to identify subsets among the full sample of 444 responding schools. The Calinski–Harabasz pseudo-F showed the highest value of 583.60 for a number of clusters equal to two (Table

2). Hence, the Calinski-Harabasz test led us to classify the whole set of 444 schools into two clusters, the first comprising 322 schools and the second 122 schools.

Table 2: Calinski-Harabasz test - Complete linkage method

[Insert Table 2]

We have classified the responding schools into two groups presenting similar characteristics. By observing the descriptive statistics of the answers obtained in each cluster, we traced the profile of the schools merged in each cluster primarily in terms of geographical location and size. Schools included in the first cluster are mainly located in southern Italy (120 schools in the south, 87 in the north, 68 in the centre and 47 in the islands) and featured a small number of students and teachers (“small-medium” size schools), while schools included in cluster two were mainly located in northern Italy (57 schools in the north, 36 in the south, 23 in the centre and 6 in the islands) and largely comprised “big” size schools. The main discriminating factors of the clusters, namely geographical area and school size, has enabled us to deepen differences among the 444 schools in terms of the degree of awareness and dissemination of SR practices.

By comparing the factors that characterise each cluster, we can say that small-medium schools, prevailing in cluster 1, are more sensitive to the SR issue. The lower operational complexity, associated with their smaller size, offers more room for innovation in terms of SR processes. Additionally, the first cluster included all the “pioneer” schools and principally those that, although did not draw up a social report, not only seemed more interested in this tool, when compared to schools of cluster 2, but were more inclined to test its implementation in the near future. These dynamics, which can be noted in the small majority of answers obtained from the 322 IPSs in cluster 1, allowed us to identify them as “early movers”. These schools showed, at least on a formal level, a higher level of awareness of SR functions and were more convinced of the potential of SR practices to build social accountability relationships based on a dialogue with their stakeholders. Moreover, the prevailing localisation of the schools of this cluster in southern Italy led us to confirm their willingness to adopt innovative accountability approaches, such as SR, to increase both their role in and engagement with local communities compared to schools located in other areas of the country.

Overall, through SR implementation, all the “early movers” schools aim to achieve integration processes with other existing administrative accountability tools to effectively fill the accountability deficit with stakeholders. In programming terms, schools in the first cluster showed, even if

minimal, a greater intention to launch SR processes (or to realize them again) during the following scholastic year and in the next 4-5 years, compared to those observed in the second cluster. Based on the opposite behavioural characteristics, we can identify schools included in the second cluster as “latecomers”. They are mainly northern schools (with the exclusion of the “pioneers” in the north that are part of the first cluster) and largely comprise “big” size institutions that showed less interest in developing SR approaches in the future years, compared to schools in cluster 1. Overall, these findings confirm the information obtained by the descriptive statistical analysis of answers.

5. Discussion

Our findings highlight that SR practices are rarely used by IPSs, although both the localisation of survey responses and the cluster analysis results underscore that southern schools are more sensitive to this issue. Overall, the results show that IPSs are highly aware of the potential of SR practices to support the “new” dimensions of social responsibility goals of the conduct of schools. As a result of knowledge acquired by attending seminars and other training courses (92%), the primary reason to adopt SR is to enhance the social dimension of public accountability so as to foster stakeholder dialogue and engagement (94% of schools). According to this trend, IPSs consider SR an accountability tool to capture stakeholders’ expectations and explain school action, results and the impact of educational processes. This approach is a way of gaining knowledge about problems to be faced and of encouraging a trust-based culture around their conduct and strategic goals (O’Neill, 2002). In a broad sense, schools seem to conceive SR practices as a means of transparency and answerability to instil their “sense of responsibility”, from the early planning stages to the reporting ones, to accomplish shared accountability towards stakeholders in line with intelligent accountability purposes (Cowie & Croxford, 2007; O’Neill, 2013).

This important managerial and communications value, which schools associate with SR, is enhanced by the limited number of schools (approximately 59%) that assign SR the mere marketing function of increasing enrolment. The recognition of the “human endeavour” role in the SR process, rather than being conceived only as a technical means for promotional purposes, highlights a useful critical connotation (Tilling & Tilt, 2004) of rebalancing the managerialism risks of school accountability reforms that are increasingly focused on standard-based systems. This positive trait, highlighted by the results, seems to place schools within a countertrend to some criticisms of the same SR practices, which are often accused of pursuing merely “symbolic” legitimization goals (Owen et al., 2001; Mahoney et al., 2013).

However, although the schools are sufficiently aware of the SR's contribution to pursuing public accountability aims, from a practical point of view, the collected data show that SR is still not a common practice in the surveyed IPSs: only 73 schools (16% of respondents) had produced social reports. In addition, most of these schools had a female principal, in line with the majority of schools that participated in the questionnaire. This greater interest shown by women principals in SR practices highlights how they feel more responsible towards the local communities and seek to enhance the social dimension of school accountability processes to foster an active dialogue with stakeholders. These results are consistent with other general studies on SR practices (Galbreath, 2011; Rao & Tilt, 2016) that have shown a greater attitude for women to engage with stakeholders and to respond to their needs, via SR, but also with studies on gender role and leadership style in school context. Several studies, that consider female leadership style more interpersonal, inclusive, and participative (Coleman, 2007; Grogan et al., 2010), underlined their greater orientation towards transformational practices, especially in their collaborative/shared dimensions which are also more consistent with intelligent accountability aims (Trinidad & Normore, 2005; Connolly et al., 2017). The highest survey responses came from schools in southern Italy, which are more interested in extending the social content of their public accountability, although the prevalence of schools that had already experienced SR were located in northern Italy. This comparison is corroborated by new insights resulting from the cluster analysis in which IPSs can be divided into two groups.

The “early movers” group which consists of small-medium-sized schools that are located mainly in southern Italy, includes schools with a greater awareness of SR functions as a means to sustain their “sense of responsibility”. These schools show a greater sensitivity and understanding of the importance of using these voluntary accountability practices to involve and engage stakeholders in their actions. The “early movers” include pioneer schools that have already produced a SR and especially IPSs that, despite not having drawn up a social report yet, are more interested in its potentiality and more inclined to activate SR processes (or to realize them again) in the following years, compared to schools in cluster 2.

Conversely, the “latecomers” group, which consists of “big” size schools mainly located in northern Italy (excluding those “pioneers” belonging to the first cluster), is less aware of SR as a process that can activate “new” forms of social accountability relationships. The greater operational and administrative complexity, deriving from their dimensions, can make the adoption of SR practices, and their integration with other consolidated accountability processes, a non-priority in school management. These schools are more focused on the traditional administrative accountability processes, and they will address the less “familiar” issue under investigation later.

Overall, although most schools that have recently experienced SR are located in northern Italy, southern schools will gain ground if we consider that, as shown both by the survey and cluster analysis, they are more aware of and sensitive to the potential of SR processes to activate a systematic dialogue with the community in an attempt to understand their deeper social or cultural expectations. The attention to building these social accountability relationships illustrates schools' interests in achieving social consensus to "re-legitimize" their function as public institutions that contribute to the social cohesion, cultural and economic revival of this area of the country (Cowie & Croxford, 2007; Bebbington et al., 2007; Tilt, 2016).

The south's greater levels of backwardness come from a series of historical, political and structural differences in the economy of southern and northern Italy. These differences are characterised by lower levels of industrialization, modest integration within the international economic system, high unemployment rates, that have recently reactivated significant migratory flows to the north of Italy and Europe, and by the low efficiency of public organisations' action with the increasing distrust of citizens (OECD, 2017). This is especially reflected in the low quality of some essential services, such as education. In fact, southern schools are characterised by lower performance compared to those in the north in terms of student achievements in basic disciplines, a greater percentage of drop-outs, greater difficulties in promoting inclusionary approaches, and weak relationships between schools and the labour market (INVALSI, 2016; OECD, 2017).

Given these critical issues in their operating context, southern schools seek the opportunity to improve this poorer performance compared to schools located in northern Italy, moving beyond student results so as to speed their recovery as highlighted also in Paletta (2012). They could apply SR to shape the social context and make the tangible benefits for the community perceivable thereby increasing a trust-based culture around their sense of responsibility and complying with the obligations they have implicitly accepted to address these issues (Ezzamel et al., 2007; Sahlberg, 2010). These results and the underuse of SR in schools in southern Italy confirm observations by Raucci et al. (2016) and highlight how these practices are mainly used among schools located in northern Italy as underlined by previous case studies (Speziale, 2009; Paletta, 2011).

In addition to the purpose of engaging stakeholders and establishing a dialogue with them, the intelligent accountability orientation of IPSs is indicated by the use of SR practices to achieve another goal, namely, higher levels of integration and systematisation in the disclosure of the various public accountability tools already used for traditional purposes of administrative accountability (Coy et al., 2001; Bracci, 2006). Specifically, by connecting the planning and results measurement phases, SR can achieve comprehensive insights into the performance of schools by first regarding the management of stakeholder expectations (as highlighted by 86% of answers) and

then using feedback from better dialogue processes with them as an SR adoption driver (declared by 94% of schools). Hence, as mentioned earlier, the integration of standard-based accountability processes with SR processes can extend the social dimension of public school accountability to suit intelligent accountability purposes (Paletta, 2011; O'Neill, 2013). These trends could find an initial form of experimentation with intelligent accountability perspectives in the Italian context through the SR model proposed by GBS, which theorises this attempt to integrate approaches using the term "Cooperative Accountability".

Nevertheless, considering the limited experience achieved so far by IPSs, these are still only potential factors that drive school behaviour in this direction. Indeed, the results show that schools conceive their earlier SR experiences within traditional managerialist paradigms typical of Italian public organisations that are based on formal accountability approaches and bureaucratic-administrative control systems (Fitzgerald et al., 2003; Pavan & Reginato, 2005; Borgonovi et al., 2008). These approaches emerge by observing the operational procedures employed by the experimenter schools. They reveal an internal conservative orientation and top-down monitoring of SR processes that mainly comply with the decisions of the school principal. Nonetheless, the commitment of principals is essential to increase staff interest in SR initiatives (Holloway, 2004; Møller, 2009; Paletta & Bezzina, 2016). The scant involvement of people outside the schools, which we note in the results, indicates that IPSs are not currently prepared for the active and substantive participation of stakeholders in establishing SR processes (Leithwood, 2001; Bebbington et al., 2007). In addition, stakeholders are only generically identified, and there is no evidence of an in-depth analysis of their specific interests and concerns to make the information disclosed in social reports more effective. For instance, 94% of schools say that improvement in dialogue with stakeholders is the main reason for undertaking SR, but 51% of experienced schools attach at least an assessment questionnaire to analyse the interest of stakeholders and their feedback. This use of SR as a one-way communication tool seems inspired by a "supply-driven reporting" approach. In literature, this approach, which centres on SR goals and contents and is driven by top management (which is the principal in schools) using uniform generic language and communication strategies, achieves weak stakeholder engagement. As proposed for other sectors by similar studies (Owen et al., 2001), it would be useful for schools to move towards "demand-driven reporting" approaches where SR contents and scope are determined by the actual demands and expectations of different stakeholders.

6. Conclusions

The aim of our research was to use the interpretative lenses of public school accountability to empirically assess the awareness of the SR scope and functions by IPSs and their level of adoption of SR. Despite the increasing theoretical interest of IPSs in SR practices, our analysis shows that the issue has been poorly addressed from a practical standpoint. Overall, southern schools feature greater sensitivity towards the issue investigated, but most schools that have already experienced SR are located in northern Italy. These results are confirmed by the cluster analysis which showed a distinction between two groups of schools. The “early movers” group, composed by pioneer schools and mainly by IPSs of southern Italy which are more intentioned, at least on a formal level, to develop SR practices (or to realize them again) in the next years, because they are aware of their potentials. The “latecomers” group, comprising mainly northern schools, which are less sensitive to SR practices and will address them later. Unfortunately, the results show that schools still conceive their earlier SR experiences within traditional managerialist paradigms based on bureaucratic-administrative control systems, which are strongly top-down (school principal) and formal accountability approaches.

The widespread use of SR as a tool for intelligent accountability purposes requires more focus on dialogue and engagement with stakeholders. Hence, there is a need to increase staff interest in SR practices and to promote the substantial training of other school members so as to achieve their conscientious involvement and spread a culture that is open to dialogue. However, to guide school governance and management in this direction, school principals must be the first to adopt collaborative/shared leadership approaches based on the transformational styles (Day & Leithwood, 2007; Paletta e Bezzina, 2016). These are driven by the “sense of responsibility” towards the community and consider the intelligent accountability approach necessary to build substantive relationships with stakeholders (Cowie & Croxford, 2007; O’Neill, 2013). Likewise, schools should organise seminars, open days, special theme days, specific website links, and other information-centred initiatives, especially for external stakeholders so as to inform and “educate” them about SR functions and about how dialogue on and sharing of activities and results organised by schools can be fostered through their contents. In other words, by shaping social context and increasing the full involvement of all stakeholders, the value of SR practices and contents can be maximised as a public school accountability tool (Owen et al., 2001; Bebbington et al., 2007; Ng, 2010).

In this respect, our study contributes to literature in several ways. Theoretically, the results highlight the importance of SR for public schools as an intelligent accountability tool. SR can support schools’ need to engage in and establish an active dialogue with stakeholders, especially in the community where they belong, in response to greater autonomy and responsibility levels ensured by the recent sector reforms in Italy and in other countries (Bracci, 2009; Paletta, 2012). Through SR

practices, schools can shape a trust-based culture with stakeholders by recording their expectations from the early planning stages to the reporting ones and by giving an account of their missions, strategies and activities as the expression of a “new” dimension of social responsibility of school conduct. More specifically, as highlighted by the greater interest of schools in southern Italy, these practices could especially support schools that operate in the country’s most critical areas in economic and socio-cultural terms and that often show worse school performance. Through stakeholder involvement in the SR process, these schools might make the benefits produced for the community tangible. Thus, in “re-legitimizing” their sense of responsibility in complying with the implicitly accepted obligations to address these critical issues, they can attempt to recover their performance gap compared to other areas of the country.

Overall, these interpretive perspectives on SR practices, which “contextualise” an understanding of school accountability’s social roots, can contribute to the broader critical accounting literature that often underlines, sometimes excessively, the focus of pre-existing studies on the (mere) technical aspects of reporting to the detriment of a more in-depth social accountability relationship consideration that may or may not be associated with reporting per se (Laughlin, 1987; Tilling & Tilt, 2004; Tinker, 2005). In this way, the bureaucratic rigidities of traditional administrative accountability in public schools can be loosened by embracing, via SR, recent manifestations of managerialism inspired, as observed by Saravanamuthu and Filling (2004, p. 440), by a “post-bureaucratic ethos” in which “there is greater emphasis on coordination through mutual adjustment, judgement and trust, as well as integration of policy formulation and implementation”.

From an empirical point of view, our study sheds light on the potential of SR practices as a new public school accountability tool that overcomes the managerialist limits of consolidated administrative accountability processes to link the planning stage with the measurement of results, thereby offering more integrated and comprehensive insights into school performance (Coy et al., 2001; Holloway, 2004). The adoption of voluntary SR practices can be read as a fruitful “critical” response to rebalancing recent international legislative orientations towards a managerialist “culture” of assessment of school performance that is overly focused on student achievements based on standards, test scores and the “power of numeracy”, making them accountable for the overall value generated for society (Edwards et al., 1997; Roberts, 2004). By giving account via SR for educational, social and economic returns produced for local contexts, public schools can concretely accomplish both a responsiveness and “sense of responsibility” consistent with the cooperative accountability, as a form of contextualisation in Italy of the intelligent accountability concept proposed in the international literature (O’Neill, 2002; Paletta, 2011).

However, our research has some limitations. Firstly, our study describes “the state of the art” of awareness and adoption of SR practices for IPSs’ accountability. Since this is an emerging issue in the Italian educational framework, and considering the lack of specific standards for drawing up SR in this sector, we did not analyse the content of the few reports issued. As noted, our study was conducted prior to the publication of the SR proposal for schools by GBS. Their publication offers an opportunity to study their possible impact on SR practices in schools, primarily in terms of the content disclosed, by adopting other exploratory investigations.

In addition, our study only focused on the Italian context. Future research could strengthen the results by comparing Italian school SR practices with those of other countries and by further investigating the causes of the phenomena explored. In fact, stakeholder involvement and the sense of responsibility of schools on which intelligent accountability purposes are based on may be influenced by different factors in other educational contexts, and related to national cultures and histories that may influence the SR practices that are implemented. With these purposes in mind, other international experiments could enrich the contribution to SR studies and deepen its critical response to the way in which managerialism is effected in the school sectors’ reforms in other countries. In addition, the prevalence of female principals in IPSs who are interested and experienced in SR practices from an intelligent accountability perspective offers interesting insights for future investigational patterns that also refer to other countries.

Lastly, further research could extend our findings by adding direct interviews with school principals to the questionnaire. This perspective should aim to detail the identification processes of stakeholders, focusing on the most influential ones, on the type of information that serves their interests, and on the best strategies to achieve useful intelligent accountability content via SR.

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Tables

Table 1A: General information about surveyed schools

Main results	Percentage of answers
Most respondents are female	64%
Most respondents are located in Southern Italy	28%
Most school principals manage a comprehensive school	66%

Table 1B: Awareness and assessment of SR

Main results	Percentage of answers
Principals already know about SR	95%
Social report is a tool of stakeholders involvement to identify their expectations	94%
SR allows to include the stakeholders expectations in strategic planning and control processes of schools	86%
The improvement of dialogue with stakeholders is the main reason behind the decision to undertake a SR process	94%
Principals consider the need of meeting stakeholders' requests a strong motivation for implementing SR	79%
Principals do not consider increasing enrolment and attracting financial contributions crucial incentives for implementing SR	59%
Principals consider the unsuitableness of the information system and the inadequate participation of stakeholders as 'enough' hindering the implementation of the SR process	49%
Principals consider the lack of time, financial resources and specific guidelines as 'enough' hindering the implementation of the SR process	42%
Principals do not consider particularly problematic to reorganize the data of other mandatory documents already drawn up by schools for SR	63%
Schools that will draw up a social report in the next school year	28%
Schools that will draw up a social report in next four/five years	89%
Schools that have already drawn up a social report	16%

Table 1C: Experiences in SR

Main results	Percentage of answers
Schools that have already drawn up social reports are located in Northern Italy	51%
Most of principals already heard about SR processes with reference to school field	84%
Principals found out about social reports in seminars and training courses	92%
Schools have one year of experience in SR	73%
School principals have suggested undertaking a social report	90%
Schools that have established a team devoted to SR	85%
Most of schools that established a team for the SR process mostly include in the team the principal and delegates of both the teaching and administrative staffs	95%
The most involved stakeholder category is teachers which participation is defined as "continuous" or "continuous and proactive" by most of principals	90%
Most of principals consider the participation of administrative and support staff as "continuous"	66%
Most of principals consider the participation of students and their families as "discontinuous"	52%
Most of principals consider the participation of public authorities and economic organizations as "not entirely satisfying"	49%
Schools that submit social reports for the approval of the board of governors	67%
Schools that attach to the social report an assessment questionnaire for stakeholders	51%

Table 2: Calinski/Harabasz test – The complete linkage method

Number of clusters	<u>Calinski/Harabasz</u> (pseudo F)
2	583.60
3	367.19
4	378.35
5	362.79
6	295.73

Footnotes

¹ See L. 59/1997; D.Lgs. 59/1998; D.P.R. 275/1999; D.P.R. 347/2000; D.I. 44/2001; D.L. 165/2001; L. 107/2015.

² Unlike hierarchical clustering, k-means clustering requires the number of resulting clusters, k , to be specified prior to analysis. Thus, it will produce k different clusters of greatest possible distinction.

³ Other methods, both hierarchical and not-hierarchical, provide the same results as the complete linkage method.

⁴ Questionnaire is available on request.