

Article

An Effective National Evaluation System of Schools for Sustainable Development: A Comparative European Analysis

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Abstract: An international context of increasing attention to the quality of educational systems in school establishments is becoming more important to develop a governance that is compatible with the principles of sound and prudent management, inspired by effectiveness, efficiency, and sustainable development, in the long run. The article initially investigates the evolution of national evaluation system of schools as an important tool for management and for school quality improvement. The analysis is carried out on the 43 education systems belonging to the Eurydice Network in the period July–September 2018. Mainly, we have noticed a wide diffusion of evaluation and self-evaluation mechanisms and therefore the development of a school management culture to improve the quality of the system and students' performance. Subsequently, we aim to verify whether it is possible to identify a linear relationship between the assessment indicator expressed by the international statistical surveys on student performance and the overall quality of the school system. In this regard, the research data on the evolution of the national evaluation system and the statistical data of the OECD-PISA surveys are cross-referenced. Briefly, results on student performance show that the assessment of the quality improvement of the school system cannot be based exclusively on pupils' performance. However, there is a generalized evolution in the adoption of national evaluation systems, confirming that the managerial culture in European schools is growing. As a further future study, the research will observe the above reflections taking into account the evolution of student performance results for the three-year period of 2015–2018 (OECD-PISA 2018 will be published in December 2019), considering a substantial evolution of national evaluation systems in schools during this three-years period.

Keywords: school governance; sustainability; quality education; quality improvement; sustainable development

1. Introduction

School is universally recognized as the main instrument to train citizens of tomorrow, that is why every country should invest fund and allocate the best national human resources to this system. For its complexity and in order to fulfil its important mission over time, the school system is in constant development and international organizations such as, UN, OECD, and EU encourage quality improvement:

- Primary education quality has been included among the United Nations (UN) Millennium Development Goals (MDG) as the second target; confirmed and implemented in the Sustainability Developments Goals (SGDs) of the Agenda 2030 it focuses on obtaining a quality education as a foundation to create sustainable development, but most important is the idea that access to

inclusive education can help equip locals with the tools required to develop innovative solutions to the world's greatest problems;

- The OCED has been involved in education quality for many years, as PISA test was first introduced in 2000;
- In 2001, the European Council identified a fresh set of challenges which must be met so that Europe can become *the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion* through diversification, flexibility and deregulation of education systems. In 2009 and 2010, the European Commission went over the *Lisbon Strategy* and introduced ET 2020: a strategic framework in education and training and Europe 2020: a 10-year strategy for advancement of the economy of the European Union. A pillar of both these strategies is primary education quality improvement through school autonomy and self-evaluation. Again, the conclusions of the council of 20 May 2014, on quality assurance supporting education and training, stimulate the commission to back up states in improving school evaluation [1,2].

In this context, the focus of national school systems moved to new targets, such as the relationships between school and territory, delocalization and devolution, improvement of effectiveness and efficiency, enhancement of the role of all stakeholders, global citizenship, new technologies, European best practices and benchmarks [3,4].

Concerning school sustainability, a challenge regards its stakeholders: students, for instance, are the recipients of the educational process but, at the same time, input and output of the same process; parents are the selectors among different schools, but, meanwhile, they contribute a great deal to their children's education; teachers help to define strategy, guidelines, and process, but they also have to undergo to these; local community incorporates the above-mentioned stakeholders, support the system through tax payment, and receive the final benefits of its general improvement thanks to the increase of overall level of education.

The task of states involved in leading school system development is to understand and elaborate different needs through stakeholder engagement, in order to improve, day by day, the quality of the school system for pupils. The national evaluation system of the schools is the main instrument to increase transparency, non-financial reporting, social disclosure and to increase the managerial culture as a tool to strengthen school autonomy and to build a path to sustainable development in the long run for the educational system.

Based on the above considerations, this study develops reflections on the effectiveness of the national evaluation system as the cornerstone of school autonomy. The enlargement of school responsibility, a stable and effective governance structure, daily improvement in executive tools in order to introduce best management practices in educational institutions, represent the starting point for quality education that can lead to sustainable development and sustainable communities.

2. Theoretical Framework

The educational system reorganization has to be based on the principles of vertical and horizontal subsidiarity and managerial autonomy: reducing dependency by central administrative systems, developing management skills to improve an effective governance increasing the sense of responsibility about contents and methods [4].

As highlighted in *School Governance to Build a Learning Community* [5] the effectiveness of school system devolution still finds difficulties because of the well-known lack of basic management skills among governance bodies: improving of learning process and quality in the school system is commonly perceived, but the needed skills and tools are often not available.

The big challenge for European countries is to set the best accountability model for school system. According to Harris and Herrington [6], it is possible to identify two systems: one market based, where the dynamics are similar to those of the market, lead schools to compete for students on the basis of the quality and variety of the educational offer, and the other government based, where the

countries assigns schools to children, state authorities use tools such as incentives, sanctions and funds to put pressure on improving the performance of schools.

Camminatiello et al. [7], split school systems between school-based management (SBM), where the authority is devolved from government to schools: this means that principal, teachers, parents, maybe students and other stakeholders have the responsibility over school's operations and standards-based accountability (SBA), based on academic targets verified through standard tests, such as OECD-PISA.

Hanushek et al. [8] reveals that a market-based system or SBM has a good return in developed countries, but negatively affects students' performance in developing countries.

Recent reforms all over Europe has enhanced school responsibility area, increasing the need of accountability, as the result of an interaction between process and reporting tools aiming at informing the stakeholders and underlining transparency and mutual responsibilities. The effective fulfilment of stakeholders' expectations is linked to the school ability to manage its economic and socio-environmental responsibility [9]. The consolidation of school autonomy and the national system of evaluation represent two essential conditions to ensure the governance structures stable and effective, able to optimize teachers' development and build an integrated education system for the entire cycle of pupils' formation [10–13].

Therefore, the reporting process requires consideration of ethical values and principles at the base of responsibility such as transparency, comparability, inclusiveness, accuracy, completeness, clarity, neutrality, and effectiveness [14].

In the past decade, schools inside and outside of Europe have been involved in a converging path towards the introduction and the enhancement of evaluation system, which accompanies the request of greater autonomy: didactics, administrative, managerial and financial devolution naturally matches with the implementation of assessment.

The demand for policies and systems oriented at ensuring and enhancing the quality of education has been extensively spread at European level: the set-up of the national system of evaluation has boosted the development of common pattern, even though with some differences and divergences among the European Countries. Despite this, it is possible to identify four main phases of development of the National System of Evaluation—the selected order for the exposure does not mirror the choices of the single countries:

- internal evaluation: auto-analysis and auto-verification of the scholastic service;
- external evaluation: assessment by an external subject/body, primarily finalized to monitor and improvement;
- actions of improvement: planning and implementation, at school establishment level, of the interventions through the development of a plan;
- social accountability: publication and dissemination of the reached results, also using markers, indicators, reports, and comparative data, according to transparency, sharing, engagement and of promotion to the improvement of the service.

Effective evaluation is a very difficult proceeding, schools are expected to play the rather passive role of information providers, but then they are also expected to be active partners in the shaping of evaluation questions and the interpretations of results [15].

School inspection is a common practice in many countries as educational quality is commonly considered a driver of sustainable development, as for United Nations Sustainable Development Goals N. 4: Quality Education of Agenda 2030 (Global Agenda for Sustainable Development—UN SGDs). In this context evaluation of students' achievements through standardized tests, such as PISA (Program for International Student Assessment—a program developed by the Organization for Economic Co-operation and Development, aimed at evaluating educational systems measuring 15-year-old students' performance on mathematics, science and reading) aims to provide comparable data in order to improve education policies and outcomes. School inspection is a widespread experience

in different developed countries, sometimes used as a starting point for external evaluation of the educational system.

Since schools' evaluation first appeared, many reforms have been adopted in different countries especially in order to provide more autonomy to educational establishments, local authorities and country providers. This policy direction has led to a perceived need for greater accountability, transparency, and cost effectiveness to counterbalance the increased autonomy given to schools [16].

In recent years, in parallel with the heavy legislative production, evaluation has been deeply studied by researchers at various stages as internal and external evaluation, schools' performance, pupils' outcome, teachers' work, deans' conduct, management achievement, educational policy, national educational system, even compared to other country standards [5,12].

School evaluation has become an important issue in the international debate about educational quality for the method and the use of data, with a view to understand how evaluation could become an adequate guide to orient system improvement [17] in order to prevent the risk that evaluation procedure remains formal and not substantial.

The escalation of the adoption of comparative systems of evaluation, the spreading of autonomy in the school system, the pursuit of high levels of learning in different areas and the need of reliable public data on service quality, contributed to the definition of a regulatory scheme in every European country. In this trial, it is possible to identify two essential conditions: school establishment autonomy and suitable structures of governance, conducted by capable and competent directors with both pedagogic and managerial skills. It is clear that the achievement of this important objective requires scholastic executives with high managerial competences and a system of values inspired by transparency, sharing, evaluation, and effective and efficient management, so far not suitable in the most of the scholastic institutes and verifiable in comparison to the different community territorial areas [18].

Despite the importance of the development of educational processes and evaluation procedures finalized to the activation of a learning path and day by day quality improvement, often there are not managerial experience and organizational tools [12].

The principle of permanent autonomy of schools, as an engine to pursuit social and economic goals, implies the development of a governance compatible with the rules of sound and prudent management, inspired by economic-business principles of effectiveness, efficiency, and economicity.

In light of the above, full autonomy and school management target attainment represents the prerequisite for general school improvement and for effective guidance in the sustainable development of the whole system [3,19–21].

The hard use of a standard evaluation system, such as PISA, may move the focus of the educational evaluation survey from the original purpose of improving school systems worldwide, through pupil's evaluation, to easy solutions and tricks only set to quickly improve tests' score [22].

According to Pope et al. [23], it is possible to identify a discrepancy between institutional purposes and students' individual conditions, national achievements, and social background of students. The need to reach standard and universal targets could well spark off a crisis as they do not consider measurable or not measurable educational objectives—such as physical, moral, civic and artistic development—dangerously tightening our collective image of what education should be [24] and often, causing the spread of cheating in the application of the test [25].

In order to face the critics to an excessively rigid and encoded system, Ricchiardi & Torre [26] underline the importance of the connection between evaluation and improving, reachable through the gradual integration of school effectiveness and school improvement. The first model refers to the steady analysis of data referring to pupils' performance, while the second one refers to a trial of change aimed to improve a school's performance in the long term.

Researchers demonstrate how process use, which is the improvement in terms of cognitive development, is successful if people involved learn from internal evaluation and change in the intervention or in their practices basing on such trial and not only from the results at the end of the internal evaluation [27–30].

A balanced growth of the quality of school services should respect the triple bottom line scheme: responsible use of public economic resources, stakeholder engagement and planetary protection, in order to create economic, social, and environmental value [31–35].

Improving the quality of education and training through the provision of high-level services, lifelong learning of teachers and instructors, skilled directors, and appropriate facilities has a positive influence on pupils' outcomes.

Quality increase deals with school governance evaluation, indeed it aims at monitoring or improving the quality of the school as a whole and is a widespread approach used in quality assurance across Europe [36].

In this regard, the study observes the relationship between the evolution of the national evaluation system and methods based on students' assessment.

3. Research Methodology

The research aims to investigate the importance of evaluation as corporate governance processes in European school establishments, tool useful to quality improvement, especially where academic performance is not very impressive, according to OECD-PISA results. The paper also analyzes the reforms and correctives undertaken by the states with the worst performance. The investigation refers only to compulsory schools and therefore primary education and high school education, according to different national legislations.

Based on the last available reports, Eurydice 2015 (for the years 2013/2014) and the OECD-PISA 2015, the research looks at:

- evolution of national evaluation systems, between 2015 and 2018 in countries belonging to Eurydice Network;
- improvement or reforms of national evaluation systems in countries where OECD-PISA 2015 outcome are unsatisfactory.

In other words, the study proposes a reflection on the relationship between the implementation of an effective national evaluation system and the tendency to improve the quality level of the education system, asking the following question:

Is it possible to identify a single and synthetic parameter of evaluation (standardized test) as a measurement element of the existing relationship between school management tools (national system of evaluation) and quality of the system (students' output)?

In order to validate the above consideration, it has been conducted a search whose results are exposed in the following paragraph.

Analysis is assembled on the development of the national evaluation system in the countries belonging to the Eurydice Network.

Eurydice is an institutional network that collects, updates, analyses, and disseminates information on the policies, structure, and organization of the European education systems. Founded in 1980 on the initiative of the European Commission, the network consists of a central unit based in Brussels at the Education, Audio-visual and Culture Executive Agency (EACEA), as well as 43 national units operating in 28 member States of the European Union, in Albania, Bosnia and Herzegovina, Iceland, Liechtenstein, Montenegro, the former Republic of Yugoslavia of Macedonia, Norway, Serbia, Switzerland, and Turkey.

Eurydice addresses those responsible for educational policies in Europe, at national, regional, and local levels, with the aim of increasing cooperation in the education sector and supporting decision-making processes, while improving knowledge of systems and policies.

The activity of the network is supporting and facilitating European cooperation in the field of lifelong learning by providing information on education systems and policies (<https://eacea.ec.europa.eu>).

The Eurydice Network primarily focuses on the way education in Europe is structured and organized at all levels. It provides a vast source of information, including:

- detailed descriptions and overviews of national education systems;
- comparative thematic reports devoted to specific topics of community interest;
- factual reports on education, such as national education structures, school calendars, comparison of salaries, and of required taught time per country and educational level.

In this respect, between July and September 2018, a content analysis has been developed, founding on the last available report: “Assuring Quality in Education: Policies and Approaches to School Evaluation in Europe” (13 January 2015, data from 2013/2014) [36].

Data collection has been based on an excel worksheet developed for items.

More specifically, analysis has been conducted on the 43 educational systems of the countries belonging to Eurydice Network (Figure 1).



Figure 1. Educational systems analyzed (Eurydice 2018 network).

Consistent with the proposed theoretical framework, the analysis therefore aims to investigate the state of the art of the implementation of the national evaluation system in comparison to 2015 (year of the last available report). The search is focused on the evolution of the national evaluation system with particular reference to its four main phases of development:

- external evaluation,
- internal evaluation,
- development plan,
- social accountability.

Data collection is based on the website of Eurydice and National or Institutional Ministerial website from each investigated country.

It has been implemented a qualitative content analysis based on the comparison of data indicating the current level of development of the national evaluation system in the governance and culture of the schools. Data have been collected in a structured grid for each research section above mentioned. Table 1 presents the research items.

Table 1. Data collection.

External Evaluation	Internal Evaluation	Development Plan	Social Accountability
Responsible body	Responsible body	Responsible body	Available
Focus	Focus	Focus	Autonomy
Purpose	Purpose	Purpose	Disclosure
Frequency	Frequency	Frequency	Frequency

The following section presents and comments the results recorded in relation to the four elements under analysis.

Subsequently, we discuss the results obtained in the research by crossing our analysis with the OECD-PISA 2015 (<http://www.oecd.org/pisa/>) data, processed for our purposes. We calculate the average obtained on the three standardized tests of math, science, and reading skills in the European area and compare with national results (above, around, and below the average).

In this way, we will be able to observe the behavior of the States about the overall trend towards improvement in the educational system. We observe the relationship between the adoption of the national evaluation system and the quality of the results in the OECD-PISA tests.

4. Results and Discussion

In accordance with the research methodology adopted and illustrated in the previous section, the results will be exposed and commented with respect to the following logical process:

- 4.1 Evolution of external and internal evaluation of schools within the national evaluation system.
- 4.2 Considerations about the relationship between PISA 2015 results and national evaluation system development.

4.1. Evolution of External and Internal Evaluation of Schools

In this part, we compare the presence of external evaluation and internal evaluation in 2015 and 2018, in the countries object of the survey.

Subsequently, limited to 2018, we present information about:

- bodies responsible for the evaluation (external and internal);
- focus of the evaluation (external and internal);
- frequency of evaluation activities (external and internal).

According to the research methodology, internal evaluation results will be supported by two further elements: the implementation of the development plan and the social accountability.

4.1.1. External Evaluation

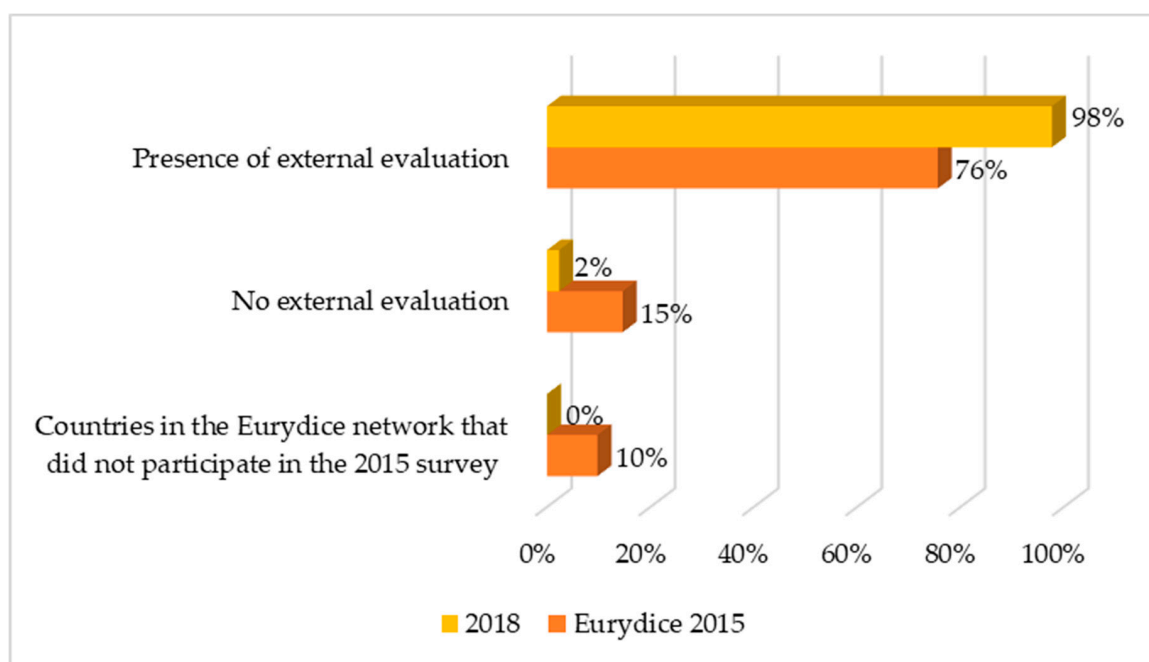
The first key element in assessing the evolution of national evaluation system is the search of the presence of external evaluation procedures.

Data from the research are presented in comparison with data emerging from the Eurydice 2015 report, referring to 2013–2014 (Table 2; Figure 2).

Table 2. Presence of external evaluation system in the schools, Eurydice 2015–2018.

External Evaluation of Schools	Eurydice 2015 Data Processing		2018	
	A.V.	% V.	A.V.	% V.
Presence of external evaluation ¹	31	76%	42	98%
No external evaluation	6	15%	1	2%
Countries in the Eurydice Network not participating in the 2015 survey	4	10%	-	-
TOTAL	41	100%	43	100%

¹ External school evaluation also as a piloting phase. The 2015 figure includes Cyprus, where the external evaluation is carried out fully only on secondary school (ISCED2).

**Figure 2.** Presence of external evaluation system in the schools, Eurydice 2015–2018.

The total number of educational systems analyzed in the Eurydice 2015 report and 2018 are different because of the most recent joining of Albania and Switzerland to Eurydice Network (41 total educational systems in 2015 vs. 43 total educational systems in 2018).

The four countries not participating in the Eurydice 2015 survey, although belonging to the network, are: Bosnia-Herzegovina, Liechtenstein, Montenegro, and Serbia.

There is a growing trend towards the implementation of external evaluation system in schools: from 76% in 2015 to 98% in 2018 in countries that have introduced a formalized external evaluation system for schools.

Data contained in the Eurydice 2015 report show that in six education systems there were no central indications for external evaluation for both primary and secondary schools (Cyprus is here counted among the countries that apply the external evaluation).

Data collection carried out for this study in 2018, however, shows that Luxembourg is the only country not having a real system of external evaluation; anyhow in this country there is the *Division du développement des établissements scolaires* (School Development Division), a department of the *Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques* (SCRIPT; Service for the Coordination of Educational and Technological Research and Innovation, available online: <http://www.portal.education.lu>), with the aim of supporting schools in the process of quality improvement. In Luxembourg, therefore, the quality assurance of the school system is mainly based on the internal evaluation of the schools, but with the fundamental assistance of the central system,

which has the mission to support the schools in their general approach to the development, and more specifically in the implementation of a school development plan.

It is worth mentioning the situation of Croatia, where no external evaluation system has yet been found, although a pilot project for the introduction of a comprehensive evaluation system for educational institutions has been set up. The project started in 2017 will end in 2019 with the aim to develop an integrated evaluation system, consisting of external evaluation tools and self-evaluation. The purpose is to set up a national approach to the introduction of a systematic, valid, and objective evaluation of the work of schools: the introduction of such a system is expected to contribute to the establishment of a strong and clearly defined quality assurance system in the Republic of Croatia (National Centre for External Assessment of Education. Available online: <https://www.ncvvo.hr>).

The development of the ERI SEE (Education Reform Initiative of South Eastern Europe) network, which links Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Moldova, Montenegro and Serbia, with the aim of developing regional cooperation in education and training, is also worth mentioning. In particular, the network (ERI SEE - Education Reform Initiative of South Eastern Europe. Available online: <http://www.erisee.org>) has the following objectives:

- Establishment of the regional platform for the cooperation of education experts in the region dealing with quality assurance in general education (QA network) and addressing recommendations of the European Quality Assurance Reference Framework in general education, with the particular focus on the internal and external assessment of education;
- Synchronizing the work of this QA network with the work of the Education and Training 2020 Workgroups—Open Method of Coordination nominees—from the countries of the region;
- Establishment of an on-line regional platform offering possibilities for communication and sharing between experts.

These experiences, together with the growing number of countries that have so far introduced external evaluation systems compared to 2015, make it possible to identify, in the European area, a widespread tendency to use evaluation as a tool for management control of schools.

The current situation has been observed with specific regard to the subjects responsible for the evaluation, which in most cases (77%) are represented by inspection bodies external to the school (Centre, Inspectorate, External Commission). These bodies are different according to the relationship of dependence that they have with the ministry: they are independent bodies, i.e., not bound by any direct link with the ministry—mostly agencies or inspectorates autonomous or conditional on the ministry itself—or they are officials or ministerial inspectors who carry out their activities on behalf of the ministry.

External evaluations are sometimes conducted at several territorial levels. In such cases, the inspection uses standards defined by the ministry, and the outcome of the assessment is mainly intended for the ministry. There are also a minority of cases where the external evaluation is carried out by centralized bodies (state or region).

In relation to the focus of the external evaluation, it is observed that—in 28% of the systems analyzed—the evaluation is mainly focused on the quality of teaching and learning. The main indicators evaluated are: teachers' preparation and competence, teaching methods, student outcomes, drop-out rate.

In most of cases (63%), however, the evaluation is conducted by observing the school as a whole and in addition to the quality of teaching and learning, aspects such as organization and management of the school, environmental and building conditions, stakeholder engagement, social context, and integration are considered.

In accordance with the above-mentioned indications and community aims, it is observed that in most of the analyzed systems (in 70% of cases in 2018) the external evaluation is conducted in order to support the school in implementing improvement actions. The evaluation is therefore intended as a stimulus to develop an operational management mechanism to lead the school action: from planning

to performance of functions, from management to organizational structure and from communication to stakeholder engagement.

Evaluation is a fundamental management tool, aimed at monitoring:

- the achievement of the objectives set by management;
- the implementation of any corrective actions.

With no control procedure, the organization is not able to direct its activities towards long-term value creation and stakeholders' satisfaction: evaluation can, therefore, be considered as a fundamental step for sustainable school development, understood as the achievement of objectives defined on the basis of key stakeholders' expectations (i.e., students, parents, teachers, community), in accordance with the principles of economic growth, social inclusion, and environmental protection.

In order to lead the effective national evaluation system of schools to sustainable development, the subjects responsible for the evaluation make themselves available to the school. In fact, it is not uncommon to develop a network of advice and support to schools for the implementation of strategic plans that consider the critical points emerging from the evaluation and pay attention to the development of strengths and the recovery of weaknesses detected.

In this respect, Spain has put in place a system of diagnostic evaluations: a useful tool for schools to prepare the development plan. The inspectors work with schools that have received a negative assessment by defining priorities for action and assist the school in monitoring the state of improvement and progresses. In 2018, in Belgium—Flemish Community, an approach called 'Screening Inspection 2.0' was launched based on dialogue and collaboration, with the assumption that the school is primarily responsible for its quality (Quality Education Inspectorate. Available online: www.onderwijsinspectie.be).

In limited cases (16%), the evaluation of the school system is intended as a simple control action with a sanctioning purpose or as tool to assign a generic assessment identified in a predefined scoring notation. Necessarily, a negative consideration is expressed on this approach: the evaluation does not reach its effective purpose of management guidance, oriented to the search for improvement of the school system. It identifies the absence of a broad and transparent vision of management and performance evaluation, ignoring either key stakeholders' expectations or the triple bottom line framework (considering financial, social and environmental performance).

Finally, with reference to the periodicity of the external evaluation, there is a rather variable frequency. In the majority of cases (70%) the checks on schools have a defined frequency: from annual in 26% of cases, up to a 10-year periodicity. However, in 7% of these cases, the periodicity of the external evaluation does not follow a fixed timetable but varies according to the territorial diversity. In 5% of the systems analyzed, checks are carried out on a random basis. In all other cases, the information is not detected because not available.

4.1.2. Internal Evaluation of Schools

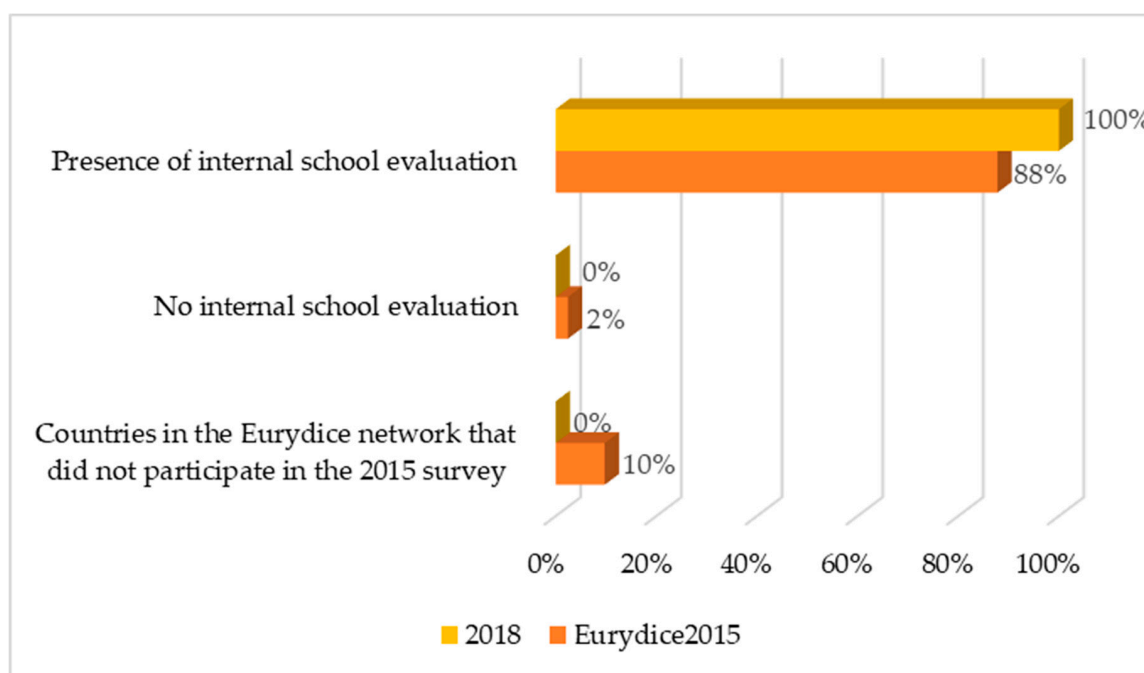
Similarly in relation to internal evaluation, the first element of analysis is the presence of internal evaluation tools in the schools.

Data of the research conducted are presented in comparison with the data emerging from the Eurydice 2015 report, with reference to the period 2013–2014 (Table 3; Figure 3).

Table 3. Results on internal evaluation of schools, Eurydice 2015–2018.

Internal Evaluation of Schools	Eurydice 2015 Data Processing		2018	
	A.V.	% V.	A.V.	% V.
Presence of internal school evaluation ¹	36	88%	43	100%
No internal school evaluation	1	2%	0	0%
Countries in the Eurydice Network that did not participate in the 2015 survey	4	10%	-	-
TOTAL	41	100%	43	100%

¹ The 2015 figure includes France, where recommendations are given for secondary school (ISCED 2).

**Figure 3.** Results on internal evaluation of Schools, Eurydice 2015–2018.

As for external evaluation, there is a general trend towards the adoption of internal evaluation procedures. We consider the all possible situations in which internal evaluation is foreseen, mandatory or recommended: we want to detect the diffusion of self-evaluation culture.

Similarly to the data relating to external evaluation, the difference between the total number of educational systems analyzed in the Eurydice 2015 report and 2018 (41 vs. 43) is different due to the most recent joining of Albania and Switzerland to Eurydice Network, not included in 2015 report.

The four countries that did not participate in the Eurydice2015 survey, although belonging to the network, are: Bosnia-Herzegovina, Liechtenstein, Montenegro, and Serbia.

In most cases (56%), the responsible of internal evaluation are management bodies: school manager or groups of subjects within the institute (manager, teaching staff, administrative staff): In a third of the systems analysed, the self-evaluation activity is extended to stakeholders other than teaching and administrative staff, such as, representatives of students and parents. In only one case (Romania) the evaluation is carried out by external commissioners reporting to the head teacher.

Stakeholder engagement is extremely important because it represents a fundamental step for the development of a governance oriented to social reporting and sustainability in the long term. Transparent disclosure and accountability reporting are key actions to meet stakeholders' expectations and to obtain agreement, confidence, and resources necessary for the economic feasibility of the actions undertaken by the school.

In most of the cases (56%), the internal evaluation analyzes the school as a whole, considering aspects such as:

- quality of teaching (evaluation of teachers and students);
- organization;
- leadership;
- management of economic resources;
- facilities.

One-third of the systems focus the evaluation specifically on teachers, students, and outcomes.

According to self-evaluation, the observation is extended to all areas of school management, not limited to the assessment of teachers and student outcomes: this confirms the spread of a vision of self-evaluation as a tool for internal control.

Regarding methods and measures used for self-evaluation, in most cases (53%) the authority responsible for the educational system (ministry, central authority) provides common tools and indicators: for example, guidelines, frameworks, websites, forums, and performance statistics.

In 23% of cases, however, schools are free to define their own methods: for example, analysis of strengths and weaknesses and feedback questionnaires among stakeholders.

Self-assessment is carried out almost annually in most cases for which information is found (47%): this underlines the importance of the self-evaluation as an internal control tool. Overall, internal evaluation has a defined frequency in 70% of cases, ranging from one to five years; it is discretionary in 2% of cases.

4.1.3. Development Plan

Beyond internal evaluation, it is important to observe if schools implement a development plan as the third step in the wider process of resources–activities–results: the self-assessment and the development plan become tools for programming and controlling the management of the establishment. Plan should be aimed at directing or correcting actions towards the achievement of results, responding to the expectations of sustainability of the involved stakeholders (see above).

The analysis shows that in many educational systems (79%) statement about development plan is available. (Table 4: Figure 4); the educational systems where no statements on the use of development plans have been found are: Albania, Belgium (French Community), Bosnia-Herzegovina, Cyprus, Germany, Liechtenstein, Poland, Switzerland, and Turkey.

The development plan is mostly drawn up by managers, alone or with the assistance of internal school staff (49%); however, in many cases, this task is carried out by the pedagogical council or by external bodies (municipalities and inspectors).

Improvement actions are identified mainly with reference to external and internal evaluations report (42%), thus highlighting an important link between evaluation and corrective actions; in 19% of the systems the focus of the plan is school; in 12% is the teaching quality (teachers and students).

The development plan is settled with varying frequency: there is an annual drafting in 26% of systems; more rarely, the periodicity refers to many years (19%).

Table 4. Availability of statement on development plan.

Development Plan	2018	
	A.V.	% V.
Availability of statements on the use of the development plan	34	79%
No statements on the use of the development plan	9	21%
TOTAL	43	100%

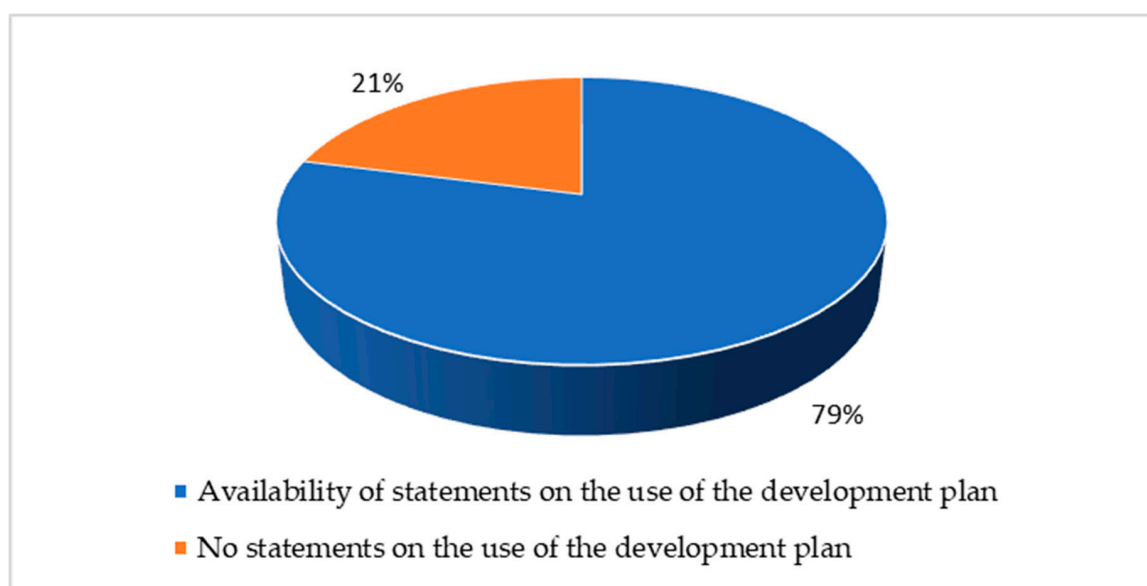


Figure 4. Availability of statement on development plan.

4.1.4. Social Accountability

The identification—through the development plan—and the consequent implementation of actions should be formalized and reported to stakeholders.

In most of the analyzed systems (67%) there are forms of elaboration and formalization of the results of the evaluation, although not always addressed to all stakeholders (Table 5; Figure 5). The educational systems where no statements on the formalization of evaluation results have been found are: Bosnia-Herzegovina, Cyprus, Belgium (Flemish Community), Belgium (French Community), Greece, Hungary, Latvia, Liechtenstein, Malta, Norway, Portugal, Spain, Switzerland, United Kingdom (Wales).

Table 5. Availability of statements on the formalization of evaluation results.

Formalization of Evaluation Results	2018	
	A.V.	% V.
Availability of statements on the formalization of evaluation results	29	67%
No statements on the formalization of evaluation results	14	33%
TOTAL	43	100%

From the analysis, we notice that the elaboration of the outcomes is based on:

- defined indicators or common protocols, established at central level;
- standards chosen by each school.

In 21% of cases, the main object of reporting is the school in its overall performance, while sometimes it is the quality of teaching or the self-assessment report.

The most common way to present the results is in written form (reports or social reports, in 30% of the cases observed), but there are also cases of verbal form through public meetings with stakeholders.

Reports are publicly shared in 28% of cases (i.e., publication on the official website); in 16% of observed cases the report is not intended for disclosure, but only for internal purpose or upon request of the central authorities; sometimes, the publication is left to the choice of the school.

Finally, in relation to the frequency of reporting, in systems where information is available, it is mainly annual, 16% of the total; there are also cases where the frequency is two years, 9%; or to the discretion of each school, 5%.

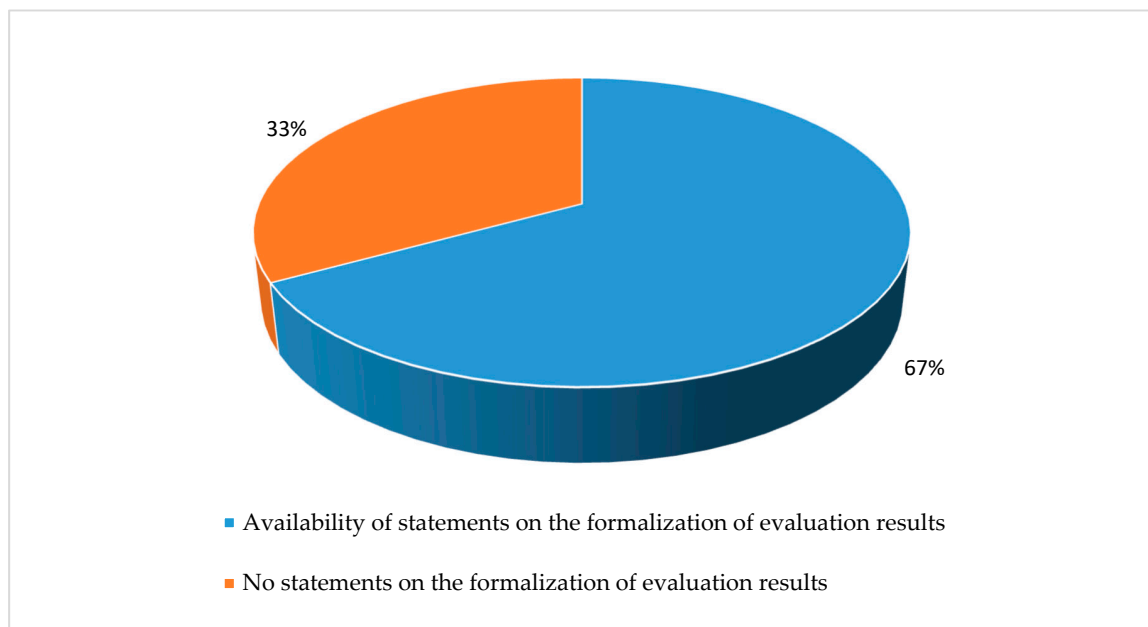


Figure 5. Availability of statements on the formalization of evaluation results.

4.2. Relationship between PISA 2015 Results and National Evaluation System Development

Social responsibility and sustainability have assumed growing importance for the implementation of schools' quality, combining economic and social-environmental performance. This confers a central role to the governance bodies in charge of management and foresees the involvement of new management roles to open the school environment to managerial values and principles.

The Programme for International Student Assessment, known as PISA, is the international survey promoted by the Organization for Economic Co-operation and Development, OECD, with the aim of assessing, every three years, the level of education of teenagers in the main industrialized countries. The survey assesses the extent to which pupils, approaching the end of compulsory schooling, have acquired some of the essential knowledge and skills of their course of study, expressing the assessment of student performance and, as a result, comparing national education systems.

According to our research paper, the output of PISA tests represents a weak and partial aspect for the evaluation of the entire school system quality, which is often strongly conditioned by extremely subjective elements. This is why, to complete the survey, we want to observe how the results of our research relate to the available data of PISA 2015 and reflect on the basic question of this study.

As presented in Section 3 on research methodology, OECD-PISA data have been processed in order to identify an average parameter per member State against the European average (Table 6).

In this regard and with reference to the results found in tests of science, maths, and reading, we note that:

- in 19 countries, academic performance is below the EU average;
- in 7 countries, performance is around the EU average;
- in 14 countries, performance is above the EU average;
- in 3 countries in the Eurydice Network, and therefore the subject of our survey, no information was found in the OECD-PISA 2015 surveys.

Table 6. Positioning of school yields in the countries analyzed in relation to European average.

Average Positioning	PISA 2015 Data Processing	
	A.V.	% V.
Below the EU average	19	44%
Around the EU average	7	16%
Above the EU average	14	33%
Information not available	3	7%
TOTAL	43	100%

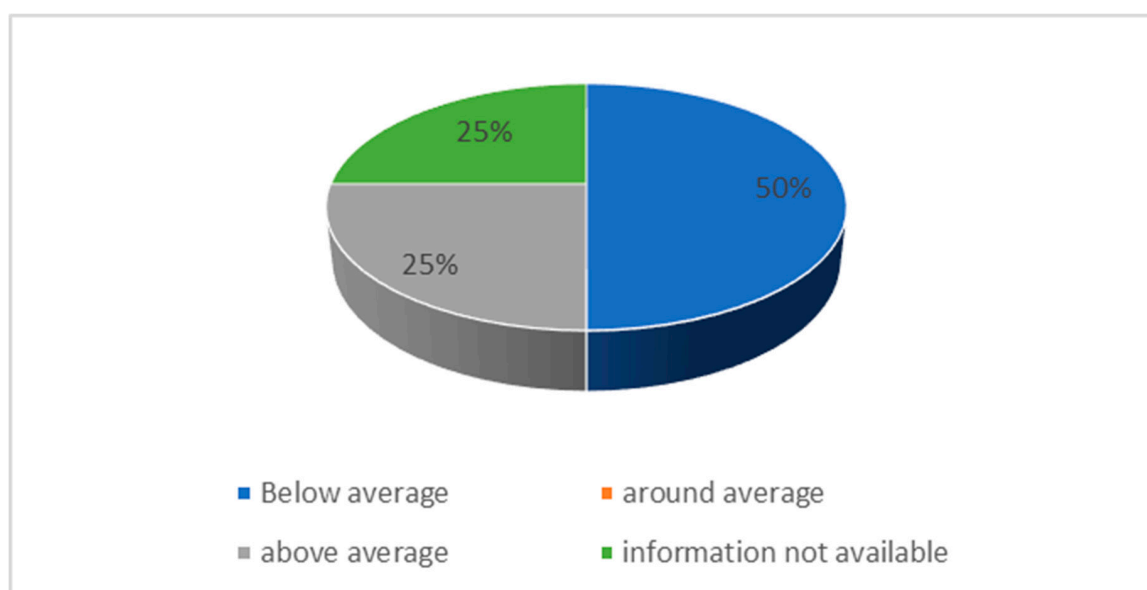
According to the basic question of this study, we want to observe the relationship between the above OECD-PISA 2015 processed data and the Eurydice 2015 indications about the state of the national evaluation system. Finally, we observe the evolution in the last three years period.

In 2015, 12 countries show a negative or not available figure regarding external evaluation (10 countries belong to Eurydice Network as reported in Table 2, Section 4.1.1). Two other States, Albania and Switzerland, although not belonging to Eurydice Network in 2015, took part in the OECD-PISA 2015 survey).

Results show:

- six cases the evaluation of the results is below the average;
- three countries (Finland, Norway and Switzerland) have largely positive results in academic performance and above average, despite the fact that in 2015 they did not have a formalized external evaluation system;
- no countries around average;
- three countries (Liechtenstein, Bosnia-Herzegovina and Serbia) where information is not available because these countries did not participate either in the Eurydice 2015 survey (although they belonged to the network) or the OECD-PISA tests (Figure 6).

In 2018, in 10 cases of the above-mentioned 12, the presence of the external evaluation system is found to confirm a general tendency to improve school management regardless of the evaluation of school outcomes. Indeed, the two cases which have no formalized external evaluation system are Croatia and Luxembourg for the reasons set out above.

**Figure 6.** Positioning of schools without external evaluation in relation to the school yields.

As for internal evaluation, we distinguish between countries where the presence of self-evaluation in 2015 is recommended (Figure 7), mandatory (Figure 8), or information unavailable (Figure 9).

In nine countries where internal evaluation was recommended in 2015, the processing of the results recorded by PISA shows three cases below the average; two cases around the average; four cases where the outcomes of students are above the EU average. Also, in this case, in 2018 all these countries formally adopted an internal evaluation system.

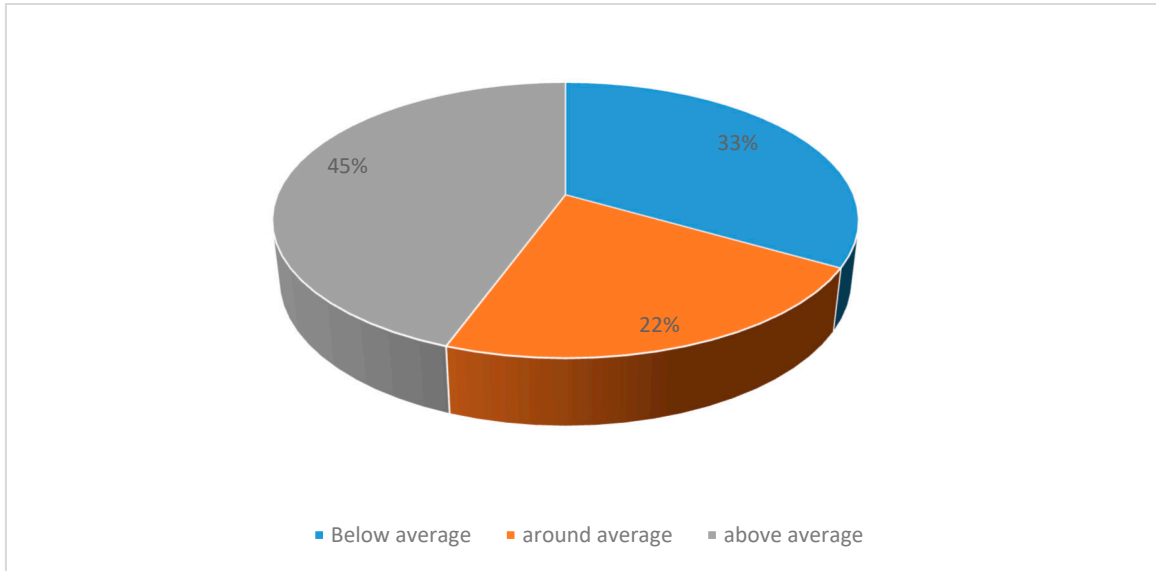


Figure 7. Positioning of schools with internal evaluation recommended in relation to the school yields.

Similarly, compared to 27 countries that had a mandatory self-assessment system already in 2015, there are 13 cases with below-average results; 5 cases with around-average results; 9 cases with above-average results.

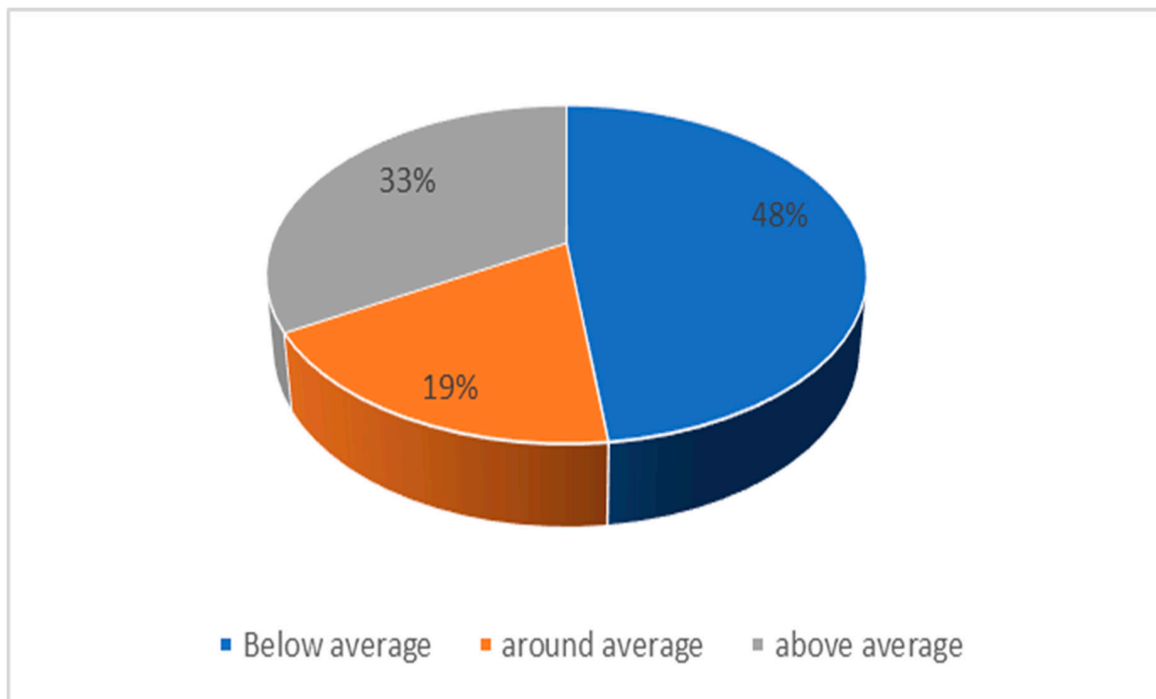


Figure 8. Positioning of schools with internal evaluation mandatory in relation to the school yields.

Finally, for seven countries that in 2015 did not have an internal evaluation system or with no information available (of which, five countries belong to the 2015 Eurydice Network as reported in Table 3, Section 4.1.2) we note that:

- in three cases, the evaluation of the results was below the average;
- in one case, Switzerland has largely positive results in academic performance and above average, despite the fact that in 2015 they did not have a formalized internal evaluation system;
- in three cases (Liechtenstein, Bosnia-Herzegovina, and Serbia) the information is not available because these countries did not participate in either the Eurydice 2015 survey (although they belonged to the network) or the OECD-PISA tests (Figure 7).

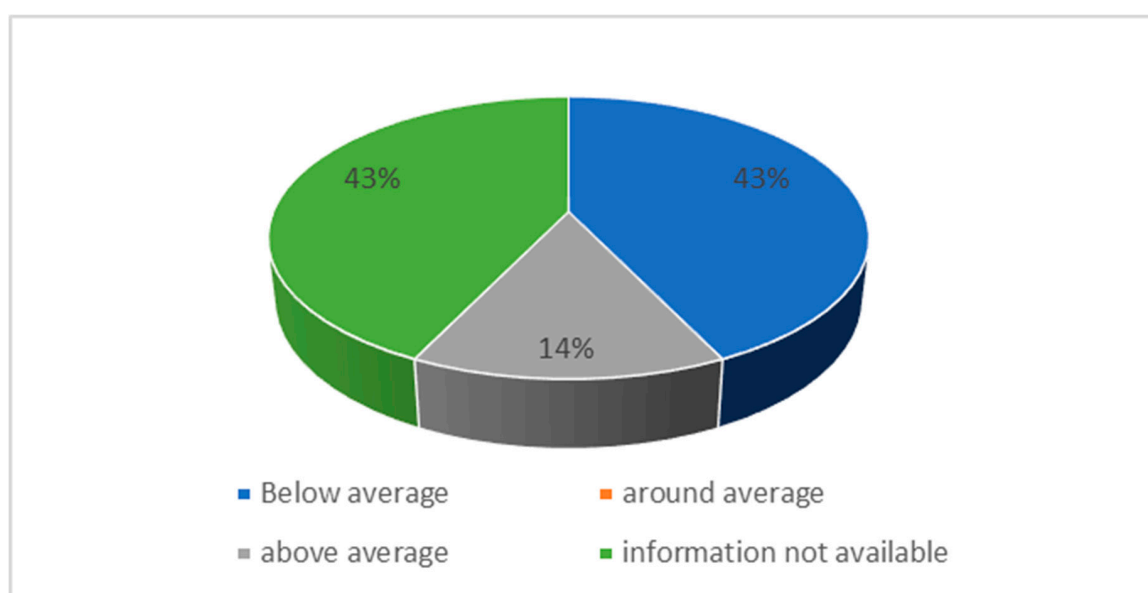


Figure 9. Positioning of schools without internal evaluation in relation to the school yields.

We can conclude that the effectiveness of the National Evaluation System of school is a promoter of operational mechanisms for planning and controlling school activities with particular emphasis on sustainable development, as it allows the implementation of a guided and informed management, which means economic feasibility and corporate longevity.

Necessarily, in order to correctly evaluate school system quality improvement over time:

- we cannot consider only the outcomes of the students at a certain time, since this data are influenced by subjective and discretionary variables that can strongly condition the overall outcome of the test;
- we cannot use standardized tests, indistinctly administered, without considering the territorial, contextual, and social specificities.

The research shows that in an educational system without a national evaluation system, results can be excellent, as well as very poor. Conversely, in educational systems where there is a mandatory evaluation system in accordance to the law, there are many situations with results below-average.

5. Conclusions

European schools show a progressive increase in the attention and interest in the adoption of national evaluation system and social accountability, both according to the need of enhancing educational quality and positive interaction with stakeholders.

In this regard, school sustainability:

- is a condition that defines the quality of the relationships between stakeholders and schools;
- reflects the ability to duly and adequately meet educational expectations and scientific advancement of the management;
- guarantees employment and contributes to the economic and social wellbeing of a country

The optimization of the productive combinations of the educational offer proposed by the school must respond to the needs of education (direct or indirect) and, in observance of suitable behaviors, to allow the activation of adequate value creation processes for the whole community.

The success of the school system is therefore connected to the ability to combine the conditions of cost-effectiveness and sociality.

The former is closely linked to the ability to maintain the conditions of income and monetary-financial equilibrium in compliance with the conditions of effectiveness and efficiency. The latter is linked to the implementation of stakeholders' expectations related to the provision of the school service, to the relative evaluation and fair composition in the decision-making processes, to maximize the social function of the scholastic institutions.

Therefore, we affirm the concept of responsible and sustainable school, aimed at the close interconnection between the principles of sound management, the fulfilment of users' social expectations and environmental protection.

As shown in the research results, the awareness of a leaded and carefully monitored management, able to use effective operational evaluation and self-evaluation mechanisms, is increasingly becoming important at European level and in the national education systems.

Moreover, data confirm a greater attention to evaluation issues, highlighting a substantial development of school management culture in the last three years towards the adoption of corporate governance processes.

Going further, in the analysis it appears that the presence of an external evaluation system for schools goes from a rate of 76% in 2015 to 98% in 2018 and for internal evaluation from 88% to 100%.

The outcome shows how in school management is raising a generalized awareness about the importance of assuming responsible behavior, adopting corporate governance processes based on the evaluation, organization of processes and actions aimed at fixing management targets, even through the development of improvement plans (79% of the cases, see Figure 4). It is therefore stated that a school management carefully monitored and effectively evaluated, also with different systems in different countries, is the optimal for aiming at the overall development of the school system and, consequently, improving the quality of the training of students.

It is essential to direct all school processes to the development of the evaluation system: from teacher training to the quality of teaching, from the organization of resources to the availability of more tools, from educational processes to training processes.

Only if the management is oriented to stakeholders' engagement it is possible to aim at a progressive improvement of the establishment. Therefore, the study will verify the evolution in the outcomes of students in the three-years period 2015–2018 and will develop further reflections once the results of the OECD-PISA 2018 will be available (December 2019).

With regard to the above conclusions, the results of the research confirm the starting hypothesis of this study: the need to align the managerial skills of school governance with the changes in regulations, as well as to modify and expand the tools for assessing the school system.

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