

The Influence of Schools' Principal Management Profile on Students' Achievement

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Abstract

Keywords:

management; managerial behaviours; national exams; school achievement.

The expectations of the services provided by schools and the managerial skills and competencies of educational leaders are constantly undergoing changes. Educational management has proven to play a key role both in terms of student outcomes and in influencing teachers' motivation and professional performance by creating and consolidating the climate and the organizational culture in each school. There are real concerns in all the OECD countries that the skills and occupational profile designed previously for the school's principal, today no longer meet the current needs of the educational environment, which is strongly influenced by social dynamics and is characterized by unpredictability. On the other hand, the pandemic coronavirus crisis has further deepened the crisis of school governance, triggered by heavy workload, lack of interest from young human resources in moving to positions of principals or deputy principals due to the exhausting responsibilities, insufficient initial training, limited career prospects after the end of the manager's term and unattractive wages.

Within this context, educational management, governance adjustment and professionalization have become essential. This study aims to identify, within the educational network in Iași County, which are the data that can shape the competence profile (what they can do) and the occupational profile (what they have to do) of a successful manager, so that the managerial behaviour of the principal generates positive effects on students' school achievement.

Zusammenfassung

Schlüsselworte:

Institutionelles Management; Führungsverhalten; Nationale Prüfungen; Schulleistung.

Die Erwartungen an die von Schulen erbrachten Dienstleistungen und die Managementfähigkeiten und -kompetenzen von Bildungsleitern ändern sich ständig. Das Bildungsmanagement spielt nachweislich eine Schlüsselrolle sowohl in Bezug auf die Schülerergebnisse als auch bei der Beeinflussung der Motivation und beruflichen Leistung der Lehrer, indem es das Klima und die Organisationskultur in jeder Schule schafft und festigt. In allen OECD-Ländern gibt es echte Bedenken, dass das für frühere Zeiten entworfene Qualifikations- und Berufsprofil des Schulleiters nicht mehr den aktuellen Anforderungen des Bildungsumfelds entspricht, das stark von sozialen Dynamiken beeinflusst und von Unberechenbarkeit geprägt ist. Andererseits hat die Pandemie-Coronavirus-Krise die Krise der Schulverwaltung weiter vertieft, ausgelöst durch hohe Arbeitsbelastung, mangelndes Interesse junger Humanressourcen, aufgrund der erschöpfenden Aufgaben auf Positionen von Schulleitern oder stellvertretenden Schulleitern zu wechseln, unzureichende Erstausbildung, begrenzt Karriereperspektiven nach Ende der Manager-Berufszeit und unattraktive Gehälter.

Vor diesem Hintergrund werden Bildungsmanagement, Regierungs-Anpassung und Professionalisierung unerlässlich, und diese Studie zielte darauf ab, innerhalb des Bildungsnetzwerks im Landkreis Iași die Daten zu identifizieren, die das Kompetenzprofil (was sie können) und das Berufsprofil (was sie zu tun haben) der erfolgreichen Führungskraft prägen können, sodass das Führungsverhalten der Schulleitung positive Auswirkungen auf die Schulleistung der Schülerinnen und Schüler hat.

1. Introduction

School management has been prioritized on the global policy agenda, especially considering that the COVID-19 pandemic has generated an unprecedented worldwide educational crisis with immediate consequences, almost impossible to quantify across in the medium and in the long term.

Likewise, the latest studies on education in Romania reflect a deeply worrying reality regarding

the education system in our country, which has one of the lowest rates of access to early education in the European Union, the lowest rate in Europe of adult participation in training programs and the third highest rate in the EU of early school leaving. Moreover, the share of young people between 30-34 years old with a university degree is the lowest in the EU, functional illiteracy exceeds the 40% indicator, and school

infrastructure, especially in rural areas, where half of the school population in Romania learns, is outdated and inadequate for the 21st century education.

An essential role in maintaining or, on the contrary, in changing this *status quo* in the Romanian education system is played by the school principal. The effectiveness of his/her actions can now be measured by relating the managerial behaviours currently applied in daily managerial practice to the results students achieve in national exams, if these are considered as a prerequisite for continuing an educational path that ensures further integration on the labour market. Thus, the value of educational services in a school is given by the extent to which the principal monitors the effectiveness of educational practices in the school in relation to their impact on student achievement. A review of nearly 8,000 studies conducted by Hattie (1992) concluded that “the most powerful tool that can significantly influence students’ learning outcomes is feedback.” (p.9) At the same time, Kaagan & Markle (1993) note that in the most effective schools “constant assessment” is a strict rule which no one ever budges from.

2. Theoretical background

Carried out in successive stages by the Organization for Economic Cooperation and Development, the TALIS studies and their results are relevant in analyzing the educational systems in a significant number of countries.

Conducted in 2009 (in 22 education systems), 2013 (in 38 countries, including 26 OECD member states and 12 partner countries) and 2018 (for 45 countries and economies, including Romania, which is a candidate country), these large-scale investigations provide a wide range of analytical information, including a series of international reports on the various issues regarding educational leadership, the educational path of preschool, primary, secondary and high school students, the initial training of teachers in participating countries and observation of classroom teaching methods.

All these studies shed light on international comparative data, driving progress in research on the effectiveness of the education process. A general idea that emerges from the data analysis collected in the TALIS investigations is that there are major disparities in the quality of the educational processes between the countries participating in the study, and one of the

factors that generates and maintains these differences could be related to school management practices.

As reflected by the data collected in the TALIS studies (Pont & al, 2008) while high-level decision-makers seek to adapt educational systems to the current needs, the expectations regarding the services provided by schools and by educational leaders implicitly are constantly undergoing changes. On the one hand, there is a general trend of empowering schools through decentralization, and on the other hand, societal expectations are constantly growing, requiring the educational system to evaluate schools against their capacity to improve the learning outcomes for each student, while serving a population that is increasingly heterogeneous from an economic, cultural, and ethnic point of view.

For decision-makers in all participating countries, this situation raises concerns regarding the fact that the position of the school principal is designed for the needs of the past, no longer being able to meet the current challenges. These results, which shed new light on educational management, turn school management into a priority for all the educational systems around the world, and high-level decision-makers have realized that they need to enhance the quality of school management through firm, coherent and sustainable strategies.

At the same time, recent research validates the idea that school leaders can make a difference in student outcomes and organizational performance if they are guaranteed autonomy in making important decisions. In this new context, school leadership is becoming more important than ever because it must respond with appropriate measures to the complex challenges schools have faced in recent decades and constantly adapt the functioning mechanisms of the school organization to the social community which it is part of. In addition, schools have a responsibility in developing lifelong learning skills, while also facing new challenges such as dramatic changes in demographic trends, increased immigration, profound transformations in the labour market, the technological surge, and the rapid progress of knowledge.

Although the general trend in recent years has been that schools have a higher level of autonomy in terms of resource management decisions and curricular provision, but less freedom in hiring and paying teachers, the findings of OECD studies highlight important differences between countries participating in the investigation.

While in countries such as the Czech Republic, Hungary, the Netherlands, New Zealand, Sweden, England and the United States, the responsibilities of educational leaders tend to be growing in more areas, they are still very limited in countries such as Greece, Poland, Portugal and Turkey (OECD, 2016). At the same time, based on the analysis of the results of the PISA tests, the OECD studies reflect that the enhanced degree of autonomy held by an educational institution is correlated with the students' school achievement.

However, simple decentralization does not automatically lead to quality improvement in educational leadership. On the one hand, the principal must function in relation to an explicit term, with clear responsibilities in order to pursue the achievement of implicit goals. On the other hand, the effective autonomy of a school requires real support by creating the framework that allows for distributed leadership, through training programs in the field of school organization management and through motivating wages.

Recent studies have validated the hypothesis that four major components in the spectrum of managerial responsibilities significantly influence student school achievement:

a. Leadership aimed at supporting, evaluating and developing human resources

All countries are looking for solutions to reduce the growing gap between inefficient schools and those with exceptional results, to provide equal opportunities for all students, regardless of their social or family background. In this regard, many researchers in the field of education (Elmore, 2000; Mulford et al, 2003) support the idea that a vital function of school management is to reconfigure the institution in the form of a "learning organization" that continuously increases its performance through many paths followed simultaneously: curriculum and learning programs configuration, continuing professional development of human resources and promoting a climate that is conducive to collective learning.

b. Setting realistic student achievement goals and pursuing them through appropriate and flexible strategies

Educational leadership focused on goal achievement, performance evaluation, and progress assessment can significantly influence student outcomes. Aligning the instructional-educational process with external standards, setting strategic goals

for students' results, measuring progress in relation to objectives and adapting the educational approach to the conditions of the course is a complex and dynamic process in which educational leaders play a key role.

Relatively recent empirical studies have validated the hypothesis that high learning standards associated with strong assessment systems significantly increase student academic achievement (Hanushek and Raymond, 2004a, 2004b). Additionally, according to Hanushek et al. (2007), who analyzed the results of the PISA tests, student performance tends to be higher in systems that have national exit exams. However, these data are refuted by the case of Romania where, although there are national assessment and baccalaureate exams, the results obtained by students in PISA tests place our education system in a worrying position.

To effectively use the information from standardized examinations, educational leaders need to develop skills in interpreting and using data to adjust the performance improvement strategies of the organization they lead.

c. Efficient use of material and human resources by capitalizing on them to achieve pedagogical goals

By significantly increasing the autonomy of educational institutions, school leaders have an increased responsibility for the management of material and human resources. If a correct relationship is established between this approach and the pedagogical goals, it could help focus all operational activities on achieving the objectives regarding the improvement of the education and teaching process.

In OECD countries, 84% of schools that educate students up to the age of 15 have full autonomy in terms of budget spending, and 57% of schools have full autonomy in building the budget. The extremes are Poland, Austria and Italy where only 20% of pre-university institutions have autonomy in terms of managing financial resources, while in the Netherlands and New Zealand autonomy exceeds 90%.

d. Configuring management policies that go beyond the school boundaries

Another role that completes the broader spectrum of responsibilities of an educational manager is to establish partnerships and collaborative relationships with other schools or with representatives of local authorities or the community, in a broad sense. To

strengthen their position, schools in certain countries are encouraged to form educational networks called consortia within which they share both resources and responsibilities. In this context, school leaders have the responsibility to engage in activities that exceed the boundaries of their school, go beyond their environment and establish connections with the outside world.

This converging effort and energy of individuals and institutions is what Leithwood et al (2008), Leithwood & Jantzi (2006) defined as system leadership: “A systemic approach that integrates classes, schools, levels in the system in order to achieve student achievement.” This perspective considers the system as a whole, with an adapted management base that requires interrelationship and interdependence between different levels of the system.

Among all the studies reviewed to identify a model for applying the questionnaires in almost 100 schools in Iași County, the research conducted by Marzano, Waters & McNulty in 2005 and published in a book called *School Leaders that Works. From Research to Results* is the closest to the research hypothesis on which we based this article. Their perspective is that studies conducted over a 35-year period, that is, between 1970 and 2005, provide strong guidelines for the nature of a principal’s managerial behaviour and that these behaviours have a clear effect on student achievement.

The 21 responsibilities identified in Marzano, Waters & McNulty’s research (2005) are relatively common issues, often pointed out in the literature and constantly viewed in a direct determination relationship with respect to managerial efficiency.

The novelty that the authors of the study emphasize, however, is the fact that these behaviours translated into managerial responsibilities should be standard operating procedures for any school principal. Furthermore, they should be able to quantify the relationship between responsibilities and student school achievement.

Although all 21 responsibilities have been highlighted in the literature over the past few decades, the fact that they prove to be statistically significant in relation to student school achievement shows how important they are in the executive management of schools. The more things that are known about the internal workings of an organization, the more likely

it is that someone will lead that organization in the most efficient way possible.

Starting from this model and referring to the 21 responsibilities specific to the managerial activity in a school described above, we designed a questionnaire adapted to the specific characteristics of the Romanian education system.

Thus, after consulting with experts in education sciences, we reached the conclusion that this questionnaire needs to be summarized in a much more flexible form, so we selected 7 categories of responsibilities that represent the basic landmarks of the questionnaire, which were associated with all 21 responsibilities in the study by Marzano, Waters & McNulty (2005). The seven components of the manager’s competency profile, translated into specific behaviours are:

1. Recognizing merit and optimizing performance
2. Institutional ethos and changing flexibility
3. Inter- and intra-institutional communication / vision and principles
4. Discipline and resources
5. Intellectual monitoring / evaluation and stimulation
6. Direct knowledge and involvement in the curriculum, teaching and education
7. Efforts to promote the educational offer and to acquire resources

Also, to provide a complete educational landscape in which the respondents work, demographic data were requested at the end of the questionnaire, such as: the name of the school where the respondent works as a principal, the years of teaching experience, the number of years as a principal, study levels achieved, urban / rural residency, locality, comments on possible difficulties in understanding the items of the questionnaire or suggestions for improving the questionnaire.

In the first stage, the online questionnaire was administered in the form of a pre-test to 15 principals from different types of schools: primary schools, middle schools, theoretical high schools / colleges, vocational high schools / colleges, technological high schools / colleges in order to identify those aspects that could create difficulties in understanding the items, ambiguous wording or errors of significance. After the

answers were received, necessary changes were made, and the final form was completed by 97 school principals in Iași County.

3. Results

Research hypotheses

Hypothesis 1 There is a set of relationships between the following dimensions: *Monitoring / evaluation and intellectual stimulation, Knowledge and direct involvement in the curriculum, teaching and education, Recognition of merits and performance optimization, Institutional ethos and flexibility in approaches to change, Discipline and resources* and their impact on managerial behaviors, in which the first factors are predictors, and the last in criteria, in a regression model. In terms of these relationships, we anticipate a positive impact of *Monitoring / evaluation and intellectual stimulation, Knowledge and direct involvement in the curriculum, teaching and education, Recognition of merits and performance*

optimization, Institutional ethos and flexibility in approaches to change, Discipline and resources on managerial behaviors.

Reporting results

As predicted, the statistical data indicated the existence of positive associations between the dimensions: *Monitoring / evaluation and intellectual stimulation, Knowledge and direct involvement in the curriculum, teaching and education, Recognition of merits and performance optimization, Institutional ethos and flexibility in approaches to change, Discipline and resources* and managerial behaviors (Table 1). In other words, school managers who scored high on these dimensions (*Monitoring / evaluation and intellectual stimulation, Knowledge and direct involvement in the curriculum, teaching and education, Recognition of merits and performance optimization, Institutional ethos and flexibility in approaches to change, Discipline and resources*), will tend to manifest more effective managerial behaviors.

Table 1. Correlation matrix for the variables contained in the regression models

Variable	1	2	3	4	5	6
• Cmp. Mng	1	0.592**	0.665**	0.569**	0.784**	0.680**
• Monit_eval		1	0.544**	0.438**	0.478**	0.494**
• Curriculum			1	0.367**	0.633**	0.562**
• Rec_mer_opt_perf				1	0.520**	0.470**
• Ethos_instit					1	0.611**
• Discipline						1

Note. ** $p < 0.01$; two-tailed.

Moreover, a hierarchical multiple regression analysis revealed that the *Monitoring / evaluation and intellectual stimulation, Knowledge and direct involvement in curriculum, teaching and education, Recognition of merits and performance optimization, Institutional ethos and flexibility in approaches to change, Discipline and resources* dimensions form a significant predictive model, able to explain, in an adjusted form, 72% of the variance of managerial behaviors ($R^2_{aj} = 0.718$, $p < 0.05$ for model 4, Table 2). Of the five predictors, *Discipline and resource dimensions, Institutional ethos, and Monitoring /*

evaluation and intellectual stimulation have a significant explanatory contribution, while *Knowledge and direct involvement in curriculum, teaching and education* play a significant marginal role in determining managerial behaviors. Thus, school principals with a high level of expression in these responsibilities tend to manifest, to a greater extent, effective managerial behaviors. The largest explanatory weight of managerial behaviors is placed on *Institutional ethos*, followed by *Discipline and resources* and *Monitoring / evaluation and intellectual stimulation*.

Table 2. Hierarchical regression analysis

Variables	B	SEB	β	p
Model 1				
Curriculum	0.372	0.069	0.487	0.000*
Monit_eval	0.309	0.085	0.327	0.000*
Model 2				
Curriculum	0.328	0.064	0.429	0.000*
Monit_eval	0.208	0.082	0.220	0.013**
Rec_mer_opt_perf	0.265	0.066	0.315	0.000*
Model 3				
Curriculum	0.152	0.062	0.199	0.017**
Monit_eval	0.170	0.070	0.180	0.017**
Rec_mer_opt_perf	0.139	0.060	0.165	0.023**
Ethos_instit	0.535	0.091	0.487	0.000*

Model 4				
Curriculum	0.119	0.062	0.155	0.058
Monit_eval	0.141	0.069	0.149	0.043**
Rec_mer_opt_perf	0.112	0.059	0.134	0.060
Ethos_instit	0.466	0.093	0.424	0.000*
Discipline	0.310	0.122	0.198	0.013**

Note $R^2_{aj} = 0.718$ for model 4 ($p < 0.05$); * $p < 0.01$, ** $p < 0.05$

Ethos is the institutional component characterized to the highest degree by consistency and thus it requires a principal at the beginning of a managerial term to set the coordination policies that define the Institutional Plan of Development against data that ensure the stability of the educational climate and, at the same time, to anchor its specific approaches in a pre-existing set of values and principles.

Also, the educational climate influences the policies that the school cultivates in relation to the employed staff and the extent to which the teachers acquire, through a coherent strategy of continuing training, the teaching competencies for their subject. At the same time, the school ethos influences the degree of employee involvement in important decision-making, while strong institutional ethos greatly influences the constant cultivation of teamwork practices, responsibility sharing, a culture of collaboration and mutual support, as opposed to individualistic practices.

Most of the schools in Iași County reflect a high degree of institutional ethos representation as both principals and teachers were more open to participate in training programs, European projects that facilitate knowledge of other education systems through project mobilities, as well as better knowledge of the latest research in the field of education sciences, in general, and of institutional management, in particular. Thus, models of good educational practices were adopted and applied in these schools, which led both to consolidating the quality of the human resource and to developing a sense of belonging to a prestigious educational community.

Thus, institutional ethos influences the interventions of any successful principal who understands that any school organization is a living organism that grows and whose optimization is achieved not by invasive interventions, but by inspired harmonization of continuity and managerial innovation.

Hypothesis 2 Managerial behaviours are explained differently in relationship to the *Monitoring /*

Table 3. Hierarchical regression analysis for averages at national below-average assessment (6.08)

Variables	B	SEB	β	p
Model 1				
Curriculum	0.371	0.090	0.513	0.000*
Monit_eval	0.410	0.118	0.434	0.002*
Model 2				
Curriculum	0.333	0.085	0.460	0.001*

evaluation and intellectual stimulation, Knowledge and direct involvement in the curriculum, teaching and education, Recognition of merits and performance optimization, Institutional ethos and flexibility in approaches to change, Discipline and resources dimensions, considering the results students achieved at the national assessment examination and the baccalaureate exam.

Thus, by testing the median, we reached two categories of results, below and above the median, which allowed us to examine, for each variable, how effective the predictive models are.

The students' scores in the national assessment were divided into two categories, below and above the median (6.08) and allowed us to perform a comparative analysis of the prediction of managerial behaviours. Thus, in the case of school principals where children achieved grades below 6.08 in the national assessment examination, the results show that model 3, containing the dimensions *Knowledge and direct involvement in the curriculum, teaching and education, Monitoring / evaluation and intellectual stimulation, Recognition of merits and optimization performance* and *Institutional ethos and flexibility in approaches to change* best explain managerial behaviours, the contribution of variables being significant or marginally significant, in the case of the *Recognition of merits and optimization of performance* dimension. Thus, school principals who have high levels of expression in these responsibilities tend to have developed managerial behaviours. The adjusted coefficient of determination of the model is $R^2_{aj} = 0.772$, which explains, in adjusted form, 77% of the variance of managerial behaviours, the overall effect being a very high level.

If we add the *Discipline and resources dimension* in the case of model 4, the explanatory efficiency of the regression model does not increase significantly, which means that this dimension does not play an important role in determining managerial behaviours in this category.

Monit_eval	0.358	0.111	0.379	0.003*
Rec_mer_opt_perf	0.201	0.084	0.260	0.024**
Model 3				
Curriculum	0.220	0.080	0.304	0.011**
Monit_eval	0.291	0.097	0.308	0.006**
Rec_mer_opt_perf	0.150	0.074	0.195	0.052
Ethos_instit	0.385	0.116	0.369	0.003*
Model 4				
Curriculum	0.230	0.077	0.318	0.006**
Monit_eval	0.241	0.098	0.255	0.021**
Rec_mer_opt_perf	0.170	0.072	0.220	0.026**
Ethos_instit	0.285	0.125	0.274	0.031**
Discipline	0.355	0.201	0.186	0.089

Note $R^2_{aj} = 0.772$ for model 3 ($p < 0.05$);

$R^2_{aj} = 0.824$ for model 4 ($p > 0.05$);

* $p < 0.01$, ** $p < 0.05$

In conclusion, the best explanatory model of managerial behaviour for the cases in which students achieved grades below 6.08 in the national assessment is model 3 (Table 3). Also, of the 4 variables of model 3, the largest explanatory weight is placed on the *Institutional ethos and flexibility in approaches to change* dimension, followed by the *Monitoring / evaluation and intellectual stimulation* and *Knowledge and direct involvement in the curriculum and in teaching and education* dimensions.

For the principals where children achieved grades below 6.08 in the national assessment, the statistical data indicate model 4, containing the *Knowledge and direct involvement in the curriculum, teaching and education, Monitoring / evaluation and intellectual stimulation, Recognition of merits and optimization of*

performance, Institutional ethos and flexibility in approaches to change and *Discipline and resources* dimensions as best explaining managerial behaviours, with only two variables contributing significantly: *Institutional ethos and flexibility in approaches to change* and *Discipline and resources*. Thus, school principals who showcase high levels of expression in the *Institutional ethos and discipline* dimension tend to have developed managerial behaviours. The adjusted coefficient of determination of the model is $R^2_{aj} = 0.772$, being able to explain, in adjusted form, 77% of the variance of managerial behaviours, the overall effect being a very high level. Of the 5 variables in Model 4, the largest explanatory weight is placed on the *Institutional ethos dimension and the flexibility in approaches to change*, followed by the *Discipline and resources* dimension (Table 4).

Table 4. Hierarchical regression analysis for averages at national above-average assessment (6.08)

Variables	B	SEB	β	p
Model 1				
Curriculum	0.430	0.148	0.487	0.008*
Monit_eval	0.326	0.166	0.332	0.060
Model 2				
Curriculum	0.168	0.138	0.191	0.234
Monit_eval	0.191	0.138	0.194	0.181
Rec_mer_opt_perf	0.572	0.149	0.571	0.001*
Model 3				
Curriculum	0.091	0.132	0.103	0.499
Monit_eval	0.195	0.128	0.198	0.142
Rec_mer_opt_perf	0.134	0.238	0.134	0.577
Ethos_instit	0.624	0.276	0.545	0.033**
Model 4				
Curriculum	-0.064	0.138	-0.073	0.646
Monit_eval	0.196	0.118	0.200	0.108
Rec_mer_opt_perf	0.060	0.220	0.060	0.786
Ethos_instit	0.542	0.255	0.473	0.045**
Discipline	0.518	0.218	0.362	0.026**

Note $R^2_{aj} = 0.772$ for model 4 ($p < 0.05$);

* $p < 0.01$, ** $p < 0.05$

The division of the grades achieved by the students at the baccalaureate exam into two categories, below and above the median (7.09), allowed us to refine the analysis of the explanatory power of predictors of managerial behaviours, anticipating that the dimensions of *Knowledge and direct involvement in curriculum, teaching and education, Monitoring / evaluation and intellectual stimulation, Recognition of merit and performance optimization, Institutional ethos and flexibility in approaches to change* and *Discipline and resources* split the average of the baccalaureate overall grade below 7.09, respectively above 7.09. In the first case (averages below 7.09), the results show that model 1, containing the dimensions *Knowledge and direct involvement in the curriculum, teaching and education* and *Monitoring / evaluation and intellectual stimulation* best explain the managerial behaviours, only the *Knowledge and direct involvement in the curriculum, teaching and education* dimension having a marginally significant contribution. Thus, school principals who display a high level of awareness of this responsibility tend to have developed managerial behaviours. The adjusted coefficient of determination of the model is $R^2_{aj} = 0.340$, explains, in an adjusted form, 34% of the variance of managerial behaviours, the global effect being one of average level. If we add the other dimensions to the analysis, *Recognition of merits and performance optimization, Institutional ethos and flexibility in approaches to change* and *Discipline and resources*, the coefficient of determination R^2_{aj} decreases, so that instead of increasing the explanatory efficiency of the regression model, we subtract it. Therefore, the best explanatory model of managerial behaviours, for the cases in which the students got

grades below 7.09 in the baccalaureate exam, is model 1.

By contrast, in schools where students achieved grades over 7.09 in the baccalaureate exam, managerial behaviours were explained by model 5, consisting of the *Knowledge and direct involvement in the curriculum, teaching and education, Monitoring / evaluation and intellectual stimulation, Recognition of merit and performance optimization, Institutional ethos and flexibility in approaches to change* and *Discipline and resources* dimensions. Of the five variables in the model, three contribute significantly: *Discipline and resources, Institutional ethos and flexibility in approaches to change* and *Monitoring / evaluation and intellectual stimulation*, two dimensions (*Discipline and resources* and *Monitoring / evaluation and intellectual stimulation*) having a positive effect, and one (*Institutional ethos and flexibility in the approaches to change*) a negative effect on managerial behaviours. In other words, school principals who have high levels of expression in *Discipline and resources* and *Monitoring / evaluation and intellectual stimulation*, and, perhaps counter-intuitively, low levels of *Institutional ethos and flexibility in approaches to change*, tend to have developed managerial behaviours. The adjusted coefficient of determination of the model is $R^2_{aj} = 0.988$ explains, in an adjusted form, 98% of the variance of managerial behaviours, the overall effect being a very high level. Of the 5 variables in Model 4, the largest explanatory weight is placed on the *Discipline and resources* dimension, followed by the *Institutional ethos and the flexibility in approaches to change* and *Monitoring / evaluation and intellectual stimulation* dimensions (Table 5).

Table 5. Hierarchical regression analysis for averages at the above-average baccalaureate exam (7.09)

Variables	B	SEB	β	p
Model 1				
Curriculum	0.349	0.282	0.398	0.247
Monit_eval	0.508	0.327	0.499	0.155
Model 2				
Curriculum	0.016	0.268	0.019	0.953
Monit_eval	0.310	0.278	0.304	0.297
Rec_mer_opt_perf	0.686	0.288	0.643	0.044**
Model 3				
Curriculum	0.093	0.288	0.106	0.755
Monit_eval	0.203	0.308	0.202	0.526
Rec_mer_opt_perf	1.517	1.028	1.422	0.184
Ethos_instit	-1.033	1.225	-0.782	0.427
Model 4				
Curriculum	-0.051	0.069	-0.058	0.493
Monit_eval	0.355	0.074	0.349	0.003**
Rec_mer_opt_perf	0.059	0.277	0.056	0.838
Ethos_instit	-0.716	0.291	-0.542	0.049**
Discipline	1.604	0.147	1.208	0.000*

Note $R^2_{aj} = 0.988$ for model 4 ($p < 0.05$);

* $p < 0.01$, ** $p < 0.05$

Discipline and resources are components of the operating mechanism of a school that directly influence students' school achievement. Discipline is reflected, primarily, in the way the principal configures the school curriculum, imposing a controlled pace of work and rules of conduct on students and teachers, reflecting the demands that the educational environment indirectly raises regarding the learning process.

Principals of schools with high levels of expression of *Discipline and resources, Monitoring / evaluation and intellectual stimulation* tend to have developed managerial behaviours that lead to their students' getting average grades over 7.09 at the baccalaureate exam.

4. Discussions

A careful analysis of the data highlights the fact that the best results in external evaluations are achieved by students who learn in schools where discipline is carefully observed in the school environment, being one of the institutional priorities. Moreover, discipline is a significant factor in the learning process and insofar as it is cultivated in the family and the socio-familial environment from which the students come, can contribute by amplifying or, on the contrary, diminishing the effects of the strategies implemented by the school.

On the other hand, the material, human or financial resources available can decisively influence the students' school results. Thus, it becomes significant for the learning process if a school has unqualified teachers, or if the educators are not able to teach online or work with special needs students. Also relevant for the quality of learning are lack of internet access, insufficient or lack of teaching materials, poor educational facilities, lack of materials or tools necessary for vocational skills development, or lack of school counsellors to intervene professionally in the process of school and career guidance.

Within the Iași County school network, these components are represented in various degrees, from one school to another, with strong implications depending on the where the school is located (urban / rural area). At the same time, discipline and resources are aspects that must be correlated with other elements such as: the number of students, local or commuting teachers, the number of special needs students, the number of students from vulnerable social/economic or ethnic backgrounds, the number of students in family placement, the number of students whose parents are migrant workers or students who have returned from abroad where they have studied for a number of years in other educational systems. All these variables significantly influence the range of issues that may become relevant in terms of discipline or human / material resources in a school.

Monitoring / evaluation and intellectual stimulation are essential responsibilities in a school principal's portfolio and are clearly highlighted in the job description. The success of the educational approach in a Romanian school is quantified exclusively with reference to the results achieved at the final exams of the schooling cycle – the national assessment examination for 8th grade graduates and the baccalaureate for 12th grade graduates, respectively, the national hierarchies of successful schools and high schools / colleges being based on these results. Therefore, the teaching process is oriented almost exclusively towards preparing students to sit these exams, often ignoring to cater the needs of the labour market and the dynamics of social life at the level of educational micropolitics put into practice at school.

Although the educational ideal of the Romanian school aims for a free, whole, and harmonious development of the individual, as well as towards the development of an autonomous and creative personality, it remains only a desideratum, a theoretical landmark, as long as the educational practices in the Romanian school are often rooted in obsolete didactic reflexes, lacking in vision and openness towards the real world and the real needs of the students. One of the dysfunctions frequently mentioned in connection to current Romanian education is that schools do not prepare their students for the realities and rigors of the labour market, being too strongly focused on communicating information and not on skills training. An essential role in maintaining or, on the contrary, in changing this situation in the Romanian education system is held by the school principal. The effectiveness of his actions can now be measured by referring the managerial behaviours currently applied in daily managerial practice to the results obtained by school students in national exams, if they are seen as a prerequisite for continuing an educational path that ensures further integration on the labour market.

5. Conclusions

Consequently, the present study aims to carry out a rigorous scientific analysis approach based on the observation and investigation of the factors that may influence the managerial behaviours of the school principal, which, in turn, indirectly determine the students' educational results.

However, the study may face some limitations, as the degree to which institutional management policies influence academic performance is difficult to identify for at least three reasons. First of all, there are difficulties in drawing up a single definition of

educational management. Second, several forms of leadership have been identified, as well as numerous individual traits that could define the competency profile and occupational profile of a successful leader. Finally, it is difficult to single out and quantify the direct and indirect effects of the school manager on academic results, as compared to the influence of teachers, who interact more with students.

In order to provide the research with rigor and validity, the study is based on the established theories of educational management, adapting a research tool used in other cultural settings and applying it to subjects in the Romanian education system. At the same time, the traits of the Romanian education system were considered in the process of adapting the applied questionnaire, as well as the responsibilities of a school principal, considering their job description, in accordance with the specific laws governing this type of activity.

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