Social Economic Debates
Volume 15, Issue 1, 2026
ISSN 2360-1973; ISSN-L 2248-3837

The effectiveness of the research methods and techniques used in the pre-university system in Dâmbovița County for increasing the level of school performance

Ioniță (Vișoiu) Carmen
Doctoral Student, Valahia University, Târgoviște
Email: ionyta_carmen@yahoo.com

Cristina Teodora Bălăceanu
University of Bucharest, Faculty o Business and Administration
Email:cristina-teodora.balaceanu@faa.unibuc.ro

Valentina Zaharia
Facuty of Business, Dimitrie Cantemir Christian University
Email: valentina_zaharia200@yahoo.com

Abstract: In order to measure the impact of improving quality management at the level of schools in obtaining the organization's performance, in relation to the increase in the insertion of graduates on the labor market, we undertook research carried out within the secondary, high school and vocational and technical education units in Dâmbovița County, the colleges/high schools-technological track. In carrying out the research, we identified the contributions regarding the improvement of quality management in secondary, high school and technical vocational education, using quantitative methods, as well as qualitative methods, based on the correlation of improvement programs with the needs and trends of the constantly changing economic and social environment. The qualitative research, of an exploratory type, involved the investigation of a small number of people, tutors or practice managers, among the economic agents practice partners of the technological high schools, as well as their managers willing to participate in the investigation, and envisaged a structured interview with the role of clarifying and structuring the problem of interest, leading to a better knowledge and understanding of it. The quantitative research, descriptive and causal, was carried out on a representative sample at the level of the researched community and was based on a questionnaire for data collection that allowed the generalization of the results obtained. The two types of research are complementary and complete the vision of the researched problem.

Key words: educational management, performance in education, quality management, vocational and technical education, qualitative and quantitative research methods

1. Introduction

Quality assurance in pre-university education is conditioned by the supportive attitude towards it, by the strategies that ensure and promote quality as a process, product, result. There is still a reservation towards the

evaluative dimension of quality, the evaluation itself being taken into account, rather as a context for the application of sanctions and corrective measures. The essence of evaluation is to grasp aspects that require intervention in order to improve, to identify development measures, not to have as an exclusive purpose (as it appears in the perception of the members of the organization) coercive interventions.

In the field of quality, the participatory approach has gained ground, so that the active involvement of the staff and its representativeness is increasingly supported. Mixed teams involved in quality assurance and monitoring are increasingly found in organizations open to modern organizational management. At the same time, there is a need for organizational models that ensure the achievement of national and their own quality standards, so that schools are increasingly implementing the models (or elements thereof) of the knowledge-based school organization, of the learning organization, of the community school.

Quality policies at the level of organizations are configured with the active involvement of staff in various stages: consultation, advice, decision, execution, monitoring and evaluation. Even if an attempt is made to harmonize policies at national and European level, the freedom of choice of states to develop their own quality systems remains.

In the Romanian space, the educational system and the quality system are centralized, the principle of decentralization being, in the perception of the actors in the school communities, an element that must be included in the agenda of the decision-makers

Through this research, the collection, processing and analysis of relevant data was carried out for the elaboration of recommendations related to the improvement of quality management at the level of schools in the secondary school, high school and technical vocational, a prerequisite for increasing the integration of young graduates into the labour market.

The scientific problem that was submitted for analysis is represented by the state of secondary, high school and technical vocational education in terms of improving the quality management applied at the level of the school units, which is reflected in the instructional-educational process, but also on the image and position of the educational unit and increases the insertion of graduates on the labor market.

2. Research methodology

In order to obtain information, the following methods and techniques for collecting information were used: investigation of statistical sources and direct research (Balaure, 2002).

As regards the investigation of statistical sources, the documentary analysis was based on analyses and reports of the INSSE, the legislative regulations on the organization and functioning of secondary, high school and technical vocational education, the statistical data of the Dâmbovița County School Inspectorate on the county's school network, forecasts of the main macroeconomic indicators developed by the National Prognosis Commission, administrative data of the Dâmbovița County Employment Agency regarding the structure of the areas with the highest job offer, studies on the quality of education providers in Romania carried out within the

European Network for Quality Assurance in Vocational Education and Training, statistical reports of the National Center for the Development of Vocational and Technical Education on the degree of employment of available places in education, professional and professional-dual, the statistical reports of the Ministry of National Education on the degree of occupation of the places available in high school education by streams, profile, specializations.

Sample of participants

The sample of teachers in secondary, high school and technical vocational education, technological track, on which the quantitative research was carried out consists of a number of 235 teachers out of a total of 607 existing teachers at the level of technological high schools in the county according to the database of the Human Resources Management Department of the Dâmbovița County School Inspectorate. The sample was established by applying the formula (Balaure, 2002):

$$n = \frac{t^2 \times p(1-p)}{\Delta_\omega^2}$$

where: t- the coefficient corresponding to the probability with which the results are guaranteed (it is taken from the statistical tables of the Student distribution, in this case for a probability of 95%, t has the value of 1.96)

- p- the proportion of the components in the sample that have the researched characteristic is considered equal to 0.5 for achieving a maximum possible dispersion
- the permissible limit error is considered in this case +/- 5%Δ_ω

$$n = \frac{1{,}96^2 - 0{,}5(1-0{,}5)}{0{,}05^2} = \frac{1{,}9208 \times 0{,}5}{0{,}0025} = \frac{0{,}9604}{0{,}0025} = 384{,}16$$

If the ratio between the sample size calculated according to the previous formula and the size of the collectivity(N), respectively the total number of teachers-technological high schools is greater than 10%, the sample size is recalculated by applying the following formula (Cătoiu, 2009):

$$n' = \frac{n \times N}{n + N - 1}$$

$$\frac{N}{n}(\%) = \frac{607}{384}(\%) = 15{,}8\,\% > 10\,\% \Rightarrow n' = \frac{384 \times 607}{384 + 607 - 1} = \frac{233088}{990} \cong \mathbf{235}$$

The sampling method used in the research approach is stratified random sampling, as it took into account the segmentation of the collectivity into homogeneous layers according to several criteria, each with a diverse structure, as follows:

- by gender (female, male)
- by age (under 30 years, 31 – 40 years, 41 – 50 years, 51 – 60 years, over 60 years)
- by seniority in pre-university education and in the respective school unit (less than 5 years, between 6-10 years, between 11-20 years, more than 20 years)
- according to the teaching degree held (Beginner, Definitive, Grade II, Grade I, Doctor)
- by teaching status (tenured, seconded, qualified substitute, unqualified substitute)
- by the position held (management, execution)
- by the respondent's place of residence and school (urban, rural)

The stratified random sampling is considered disproportionate, because it was intended to give greater importance to the segmentation of the community for the "Technologies" layer from the perspective of a much better knowledge of the researched issues.

The questionnaire was completed by the respondents, teachers, both through the classic way, the survey being carried out using an electronic form "google forms", distributed to the respondents through the official email address of the school, but also within the communication groups through social networks or other similar applications. The use of this form of distribution was a direct cause of the pandemic generated by the new coronavirus

The research was carried out on a representative sample at the level of educational institutions, which are part of the structure of secondary, high school and technical vocational education in Dâmbovița County. The degree of representativeness of the sample was influenced by factors such as: the homogeneity of the studied community, the sampling method used and the sample size.

The sample consisted of a number of 235 people, calculated on the basis of standard formulas in the literature, with a probability of guaranteeing results of 95% and an error of 5%.

The teachers participating in the research come from both urban and rural areas. The sampling method is random-type, stratified and non-proportional segmentation due to giving greater importance to the category of respondents who are part of the "technologies" curricular area, these being teachers with specialized training in the qualification areas specific to each unit and well aware of the issues of vocational and technical education.

The main sources of obtaining information about the collectivity subjected to quantitative research were: the Dâmbovița County School Inspectorate, the National Institute of Statistics and the Ministry of National Education, the database of the Dâmbovița CCD.

3. Analysis of results in terms of correlations between items

The analysis is based on the calculation and interpretation of the most notorious correlation coefficient, the existence of multiple statistically significant links between the causal variable (increase in the insertion rate of

graduates) and the effect variables (dissemination of information at the level of the entire group, training of teachers to meet the objectives, empowerment of all persons involved in the educational process, for a direct and active involvement in order to permanently improve its quality, correlation of the educational offer with the needs local and regional socio-economic development, reduce the rate of early school leaving, carry out teaching in accordance with the interests of students, correlating the lesson with their daily lives, encourage all students to improve their performance, collaborate with students to discover news in the field).

Table no. 1. Correlations between the increase in the insertion rate of graduates, the dissemination of information at the level of the entire group, the training of teachers to meet the objectives

		increasing the insertion rate of graduates	dissemination of information across the collective	training of teachers to achieve the objectives	empowering all the people involved in the educational process, for a direct and active involvement in order to permanently improve its quality	correlation of the educational offer with the needs of local and regional socio-economic development	reducing the rate of early school leaving	Deliver teaching in line with students' interests, linking the lesson to their daily lives	Encourage all students to improve their performance	Collaborate with students to discover what's new in the field
increasing the insertion rate of graduates	Pearson Correlation	1	,903**	,877**	,889**	,873**	,910**	,639**	,798**	,863**
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
dissemination of information across the collective	Pearson Correlation	,903**	1	,911**	,964**	,810**	,914**	,748**	,726**	,825**
	Sig. (2-tailed)	,000		,000	,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
training of teachers to achieve the	Pearson Correlation	,877**	,911**	1	,911**	,829**	,887**	,788**	,781**	,870**

objectives	Sig. (2-tailed)	,000	,000		,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235

Source: made by the author based on the interpretation of the data

Applying the correlation function in this case generated the following information:

- The significance threshold values in all cases are 0.000, which denotes a probability of guaranteeing results of 99.9%. All these associations are direct, so the variables influence each other.
- Between the causal variable (increase in the insertion rate of graduates) and the first effect variable (dissemination of information at the level of the entire collective) there is a direct association of a very high intensity (0.93). Between the causal variable and the next effect variable (teacher training to achieve objectives) there is a direct association of a very high intensity (0.87).
- The causal variable exerts a direct influence on the resulting variable (the empowerment of all the people involved in the educational process, for a direct and active involvement in order to permanently improve its quality) a correlation coefficient value of 0.88 that reflects a very high intensity;
- The causal variable exerts a direct influence on the resulting variable (correlation of educational offer with local and regional socio-economic development needs), a value of Perason's correlation coefficient of 0.87, which shows a very high intensity;
- There is a positive association between the causal variable and the resulting variable (reduction in the rate of early school leaving), and its intensity being very high (0.91), an ideal situation in the case of all associations between variables;
- Statistically significant links were also found between the causal variable and the resulting variables: teach according to students' interests, correlating the lesson with their daily lives, encourage all students to improve their performance, collaborate with students to discover news in the field.

Table no. 2. Empowering all people involved in the educational process, for a direct and active involvement in order to permanently improve its quality, correlating the educational offer with the needs of local and regional socio-economic development, reducing the rate of early school leaving, carry out teaching in accordance with the interests of the students, correlating the lesson with their daily life

		increasing the insertion rate of graduates	dissemination of information across the collective	training of teachers to achieve the objectives	empowering all the people involved in the educational process, for a direct and active involvement in order to permanently improve its quality	correlation of the educational offer with the needs of local and regional socio-economic development	reducing the rate of early school leaving	Deliver teaching in line with students' interests, linking the lesson to their daily lives	Encourage all students to improve their performance	Collaborate with students to discover what's new in the field
empowering all the people involved in the educational process, for a direct and active involvement in order to permanently improve its quality	Pearson Correlation	,889**	,964**	,911**	1	,791**	,914**	,769**	,684**	,824**
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
correlation of the educational offer with the needs of local and regional socio-economic development	Pearson Correlation	,873**	,810**	,829**	,791**	1	,831**	,594**	,868**	,823**
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235

reducing the rate of early school leaving	Pearson Correlation	,910**	,914**	,887**	,914**	,831**	1	,704**	,710**	,804**
	Sig. (2-tailed)	,000	,000	,000	,000	,000		,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
Deliver teaching in line with students' interests, linking the lesson to their daily lives	Pearson Correlation	,639**	,748**	,788**	,769**	,594**	,704**	1	,506**	,588**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000		,000	,000
	N	235	235	235	235	235	235	235	235	235

Source: made by the author based on the interpretation of the data

The causal variable (empowerment of all persons involved in the educational process, for a direct and active involvement in order to permanently improve its quality), under the conditions of a significance threshold of 0.000 and a probability of guaranteeing results of 99.9% exerts a direct influence on the following resulting variables:

- increasing the insertion rate of graduates, a coefficient value of 0.88 that reflects a very high intensity;
- dissemination of information at the level of the entire collective, a result of Pearson's coefficient of 0.96, a very high intensity;
- training of teachers to meet the objectives, a coefficient value of 0.91 which signifies that the connection is one of a very high intensity;
- correlation of the educational offer with the needs of local and regional socio-economic development, a value of the coefficient of 0.79 which reflects a high intensity of the association of these two variables;
- reducing the rate of early school leaving, a result of the correlation coefficient equal to 0.91 that shows a very high intensity;

- carry out teaching in accordance with the interests of the students, correlating the lesson with their daily life, a result of the coefficient of 0.76 that reflects the existence of a high intensity bond;
- encourage all students to improve their performance, collaborate with students to discover novelties in the field, a coefficient value of 0.68, a reasonable intensity link.

Table no. 3. Correlations between variables

		The staff of the school is well motivated	Equal opportunities are promoted in the school	Actively participatory teaching activities are predominant	The school unit has a quality WEB page	Teaching/team training activities are carried out	Emphasis is placed on cooperation and teamwork activities	support students to become aware of the value of learning that subject	Encourage all students to improve their performance	Use questions for the purpose of obtaining causes/ explanations/ solutions
The staff of the school is well motivated	Pearson Correlation	1	**,763****	**,870****	**,778****	**,815****	**,848****	**-.758****	**-.722****	**-.749****
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
Equal opportunities are promoted in the school	Pearson Correlation	**,763****	1	**,684****	**,820****	**,852****	**,814****	**-.792****	**-,488****	**-.868****
	Sig. (2-tailed)	,000		,000	,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
Actively participatory teaching activities are predominant	Pearson Correlation	**,870****	**,684****	1	**,822****	**,726****	**,753****	**-.666****	**-.707****	**-.700****
	Sig. (2-tailed)	,000	,000		,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235

The school unit has a quality WEB page	Pearson Correlation	**,778****	**,820****	**,822****	1	**,764****	**,758****	**-.821****	**-.721****	**-.860****
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
Teaching/team training activities are carried out	Pearson Correlation	**,815****	**,852****	**,726****	**,764****	1	**,938****	**-.859****	**-.559****	**-.776****
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235
Emphasis is placed on cooperation and teamwork activities	Pearson Correlation	**,848****	**,814****	**,753****	**,758****	**,938****	1	**-.820****	**-.597****	**-.757****
	Sig. (2-tailed)	,000	,000	,000	,000	,000		,000	,000	,000
	N	235	235	235	235	235	235	235	235	235

Source: made by the author based on the interpretation of the data

The causal variable "the staff of the educational unit is well motivated" correlates positively with the following resulting variables:

- Equality of opportunity is promoted in the school (a correlation coefficient value of 0.76 that reflects a high intensity of their ascottion);
- Actively participatory teaching activities are predominant (a coefficient of 0.87 that shows a very high intensity of the link between the two variables);
- The school unit has a quality WEB page (a coefficient value of 0.77 that supports the existence of a high intensity correlation)
- Teaching/team training activities are carried out (a coefficient of 0.81 demonstrating a very high intensity link)
- Emphasis is placed on cooperation and teamwork activities (a correlation coefficient with a value of 0.84 resulted and highlights a very high intensity of the connection between the two items).

The causal variable "the staff of the educational unit is well motivated" correlates negatively (the increase of one variable determines the decrease of the other, inversely proportional relationships) with the following resulting variables:

- Support students to become aware of the value of learning that subject (a correlation coefficient of -0.75 reflecting high intensity)
- Encourage all students to improve their performance (a Pearson coefficient value of -0.72 that attests to a high intensity association)
- Use questions in order to obtain the causes/explanations/solutions (a result of the coefficient of -0.74 is obtained, which shows a high intensity of the connection of these two items)

The variable in the educational unit is promoted; equal opportunities is positively associated with the following variables:

- - The staff of the school is well motivated (a coefficient value of 0.76 signifying a high intensity of the association);
- Actively participatory teaching activities are predominant (a correlation coefficient result of 0.68 that outlines a high intensity);
- The school unit has a quality WEB page (a Pearson's coefficient value of 0.82 that shows the existence of a correlation of a very high intensity);
- Teaching/training activities are carried out in teams (a coefficient of 0.85 that highlights a very high intensity association);
- Emphasis is placed on cooperation and teamwork activities (a result of the coefficient of 0.81 showing a very high intensity);

The variable in the school is promoted equal opportunities is negatively associated with the following variables: support students to become aware of the value of learning that subject (a coefficient of -0.79) and encourage all students to improve their performance (a coefficient of -0.48).

Table no. 4. Correlations identified

Correlations

		The staff of the school is well motivated	Equal opportunities are promoted in the school	Teaching/team training activities are carried out	Emphasis is placed on cooperation and team work activities	support students to become aware of the value of learning that subject	Encourage all students to improve their performance	Use questions for the purpose of obtaining causes/explanations/solutions	Passing the baccalaureate exam	Relevant results at school competitions and Olympiads	decrease in the school dropout rate	Insertion of graduates on the labor market
support students to become aware of the value of learning that subject	Pearson Correlation	**-.758****	**-.792****	**-.859****	**-.820****	1	**,613****	**,845****	**,912****	**,779****	**,898****	**,873****
	Sig. (2-tailed)	,000	,000	,000	,000		,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235	235	235
Encourage all students to improve their performance	Pearson Correlation	-.722**	-,488**	-.559**	-.597**	,613**	1	,542**	,646**	,683**	,705**	,753**
	Sig. (2-tailed)	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235	235	235
Use questions for the purpose of obtaining causes/explanations/solutions	Pearson Correlation	-.749**	-.868**	-.776**	-.757**	,845**	,542**	1	,847**	,755**	,787**	,793**
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000
	N	235	235	235	235	235	235	235	235	235	235	235
**. Correlation is significant at the 0.01 level (2-tailed).												

Source: made by the author based on the interpretation of the data

The item supporting students to become aware of the value of learning that subject is directly associated with:

- passability/ acceptability of the baccalaureate exam (a coefficient value of 0.91 that highlights a very high intensity link);
- relevant results at school competitions and Olympiads (the correlation coefficient obtains a result of 0.77 which outlines a high intensity of the association of variables);
- the insertion of graduates into the labor market (a result of the correlation coefficient of 0.87 which signifies a strong high intensity of the connection between these items.

In all the cases presented, the materiality threshold is 0.000, so the probability of guaranteeing the results is 99.9%

Hypothesis testing

H1: The development of skills and implicitly of qualifications for graduates are correlated with market requirements, with the dynamics and current trends of the economic and social environment.

To verify the extent to which confirmation, the refutation of the first hypothesis, the correlation function and Pearson's coefficient are used.

Table no. 5. Correlation function

		entrepreneurial skills and competences	learning skills and competences (learning to learn)	civic, interpersonal, intercultural and social skills and competences	scientific and technological skills and competences	cultural expression skills and competences	correlation of the educational offer with the needs of local and regional socio-economic development	learning programmes are developed and reviewed based on feedback received from all stakeholders; To this end, feedback is collected from students, economic agents and community representatives and used in the development and revision of learning programs
entrepreneurial skills and competences	Pearson Correlation	1	,830**	,917**	,668**	,916**	,561**	,441**
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235
learning skills and competences	Pearson Correlation	,830**	1	,833**	,608**	,791**	,432**	,461**

(learning to learn)	Sig. (2-tailed)	,000		,000	,000	,000	,000	,000
	N	235	235	235	235	235	235	235
civic, interpersonal, intercultural and social skills and competences	Pearson Correlation	,917**	,833**	1	,591**	,881**	,496**	,511**
	Sig. (2-tailed)	,000	,000		,000	,000	,000	,000
	N	235	235	235	235	235	235	235
scientific and technological skills and competences	Pearson Correlation	,668**	,608**	,591**	1	,774**	,533**	,421**
	Sig. (2-tailed)	,000	,000	,000		,000	,000	,000
	N	235	235	235	235	235	235	235

Source: made by the author based on the interpretation of the data

All types of skills and competencies correlate directly with the demands of the market and the business environment. The value of Sig in all cases is 0.000. It is found that there is a moderate, statistically reasonable relationship between the variables. **Thus, we can speak of a partial confirmation of the hypothesis, and not of a total one because there should have been deterministic or very high links between the items analyzed.**

H2: Achieving excellent and lasting results in line with stakeholder expectations is possible through effective partnerships, resources and processes.

Table no. 6. Hypothesis testing with Kendall's coefficient

			effective partnerships and collaborations with external stakeholders are developed, maintained and continuously reviewed	Passing the baccalaureate exam	Relevant results at school competitions and Olympiads	decrease in the school dropout rate	Insertion of graduates on the labor market
Kendall's tau_b	effective partnerships and collaborations with external stakeholders are	Correlation Coefficient	1,000	,722**	,756**	,731**	,743**

	developed, maintained and continuously reviewed						
		Sig. (2-tailed)	.	,000	,000	,000	,000
		N	235	235	235	235	235

Source: made by the author based on the interpretation of the data

As in the previous case, the use of the correlation function was chosen because it has a high degree of precision. This time, the correlation coefficient applied is Kendall's.

Among the variables: effective partnerships and collaborations with external stakeholders are developed, maintained and permanently reviewed, the passability/ acceptability of the baccalaureate exam, relevant results at school competitions and Olympiads, the decrease in the school dropout rate, the insertion of graduates on the labor market, positive associations were identified, at a significance threshold of 0.000 and a probability of 99.9%. In all these cases, the intensity of the links is high. **They demonstrate the confirmation of the hypothesis.**

H3: The increase in the involvement of the decision-makers at the level of the school generates an increase in the performance of the unit.

In order to establish the potential association between the variables, the Hi-squared test was chosen.

Table No. 7 Hi-squared test

	Valori	df	Sig (2-sided)
Pearson Hi pătrat	19.742[a]	5	0.001
Rata de probabilitate	20.685	5	0.001
Asociere lineară	2.523	1	0.112

Source: made by the author based on the interpretation of the data

According to the result of Hi squared, there is a statistically significant association between the increase in the involvement of decision-makers and the performance of the school unit. **The hypothesis is confirmed.**

H4: The development of students' learning skills and competences are closely related to the frequency of use of educational resources by teachers.

This hypothesis is tested using the correlation function and uses three of the most relevant coefficients: Pearson's, Kendall's, and Sperman's.

Table no. 8. Pearson's correlation coefficient

		Manual	Books	Workbooks	Concrete materials and objects	educational software
learning skills and competences (learning to learn)	Pearson Correlation	**,651****	**,726****	**,832****	**,867****	**,838****
	Sig. (2-tailed)	,000	,000	,000	,000	,000
	N	235	235	235	235	235

Source: made by the author based on the interpretation of the data

Table no. 9. Kendall's correlation coefficient

		learning skills and competences (learning to learn)	Manual	Books	Workbooks	Concrete materials and objects	educational software
learning skills and competences (learning to learn)	Correlation Coefficient	1,000	**,674****	**,706****	**,802****	**,891****	**,822****
	Sig. (2-tailed)	.	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235

Source: made by the author based on the interpretation of the data

Table no. 10. Sperman's correlation coefficient

		learning skills and competences (learning to learn)	Manual	Books	Workbooks	Concrete materials and objects	educational software
learning skills and competences (learning to learn)	Correlation Coefficient	1,000	**,710****	**,755****	**,846****	**,934****	**,871****
	Sig. (2-tailed)	.	,000	,000	,000	,000	,000
	N	235	235	235	235	235	235

Source: made by the author based on the interpretation of the data

The use of the three coefficients highlights an interdependent link between learning skills and competences and the educational resources used by teachers in the educational process. In all these cases (Perason, Sperman and Kendall) the values of the significance threshold are in accordance with the imposed limits, and the probability of guaranteeing the results is 99.9%, a very high chance that the results are accurate. Regardless of the model of the correlation above, it is determined that the intensity of the bonds between variables is high (the values of the coefficient are between 0.65 and 0.93. **Thus, that hypothesis is confirmed.**

The purpose of the research carried out between January and June 2025 based on a questionnaire, applied to a sample of 235 teachers from educational units with a technological background, was to improve quality management in secondary, high school and vocational schools in Dâmbovița County, as a prerequisite for the integration of graduates into the labor market. The data obtained were analyzed using the SPSS program, using statistical tests to validate the hypotheses. Thus, the hypothesis:

- *the correlation of qualifications with labour market requirements* – has been partially confirmed, highlighting moderate statistical links;
- *effective partnerships and well-used resources increase school performance* – a strongly confirmed hypothesis;
- *the involvement of local decision-makers increases the performance of school organizations* - hypothesis confirmed;
- *Frequent use of educational resources by teachers improves students' competences* – hypothesis confirmed.

The research shows that quality management has a direct impact on students' results, the pass rate, insertion in the labor market, the school's image.

4. Conclusions

Following the exploratory research, it can be found that the entire organization is influenced by the implementation of quality standards, which leads to the modification of the organizational culture, by creating a favorable environment for constant progress. Implementation depends on the level of detail of the existing quality program, the size of the organization, and the complexity of its processes.

In order to successfully implement the quality management system, the institution must go through several key stages, such as the commitment of leaders, the formation of the implementation team, the launch of the quality management system awareness program, the training of staff, the development of action plans, the development of documentation for the quality management system, an efficient control of documents, the implementation itself, conducting an internal audit, management analysis and continuous improvement.

Quality management results from the structures, practices and processes through which the continuous improvement of educational services is ensured in the institution. It must be centered on those strategies, structures, techniques and operations through which the institution demonstrates that it evaluates its

performance in ensuring and improving the quality of education and has information systems that demonstrate the results obtained in learning. The institution must manage the quality assurance of all its activities and make public the information and data that prove a certain level of quality.

The improvement of management in technical education in order to increase the integration of young people on the labor market refers mainly to the implementation of systems and tools for assessing and anticipating skills needs, which will lead to an attractive, relevant and quality training offer from schools. Also, the existence of a well-regulated qualifications framework at central level and a coherence and consistency of policies in the field of education, employment and the economy provide support for the improvement of strategic management in vocational and technical education. The regulation of a well-structured qualifications framework must be achieved through transparency and the involvement of all stakeholders in the development of quality-assured qualifications.

Technical education units must integrate into strategic planning a well-developed strategy for promoting the educational offer. Its effects, together with the good information of the stakeholders, support and professional guidance for students and parents, lead to an increase in the notoriety of technical education and the enhancement of the professional skills obtained, particularly important effects in the current situation, where at the level of vocational and technical education there have been major decreases in the number of students over the years, against the background of the decrease in the school population as a whole but also of the changes made without consistency throughout this period in the structure of this form of education. Megatrends related to digitalization, globalization, technological evolution, environmental changes, aging societies guide future trends regarding the content of jobs, the way they are executed within them, the time and the people involved, in other words the references are about the skills needed to enter the labor market as well as the opportunities to evolve in the career.

5. Bibliography

Argyris, C. (n.d.). Action science and organizational learning. *Journal of Managerial Psychology, 10*(6), xx–xx.

Balaure, V., coord. (2002). *Marketing, 2nd ed., revised and added*, Uranus Publishing House, Bucharest, p. 149.

Bălăceanu, C. T., & Alexe, F. A. (2021, November). Perspectives for the development of the Romanian economy in the context of using rational economic behaviour. In International Conference on Management and Industrial Engineering (No. 10), pp. 693-702. Niculescu Publishing House.

Berndt, E. R., Hall, B. H., Hall, R. E., & Hausman, J. A. (1974). Estimation and inference in nonlinear structural models. In S. V. Berg (Ed.), *Annals of economic and social measurement* (Vol. 3, pp. 653–665). NBER.

Bîrzea, C. (2010). Definition and classification of competences. *Journal of Pedagogy, 58*(3), 7–13.

Bishay, A. (1996). Teacher motivation and job satisfaction: A study employing the experience sampling method. *Journal of Undergraduate Sciences, 3*, 147–154.Canrinus, E. T., Helms-Lorenz, M., Beijaard, D., Buitink, J., & Hofman, A. (2012). Self-efficacy, job satisfaction, motivation and commitment: Exploring the relationships between indicators of teachers' professional identity. *European Journal of Psychology of Education, 27*, 115–132.Griffin, D. K. (2010). A survey of Bahamian and Jamaican teachers' level of motivation and job satisfaction. *Journal of Invitational Theory and Practice, 16*, 56–76.

Boxall, P. F. (1993). The significance of human resource management: A reconsideration of the evidence. *The International Journal of Human Resource Management, 4*(3), xx–xx.

Cătoiu, I., coord. (2009) *Marketing-Treatise Research*, Uranus Publishing House, Bucharest, pp. 91

Conger, J. A. (1987). Towards a behavioural theory of charismatic leadership in organizational settings. *Academy of Management Review, 12*, xx–xx.

De Vos, A., Dewettinck, K., & Buyens, D. (2007). To more or not to move? The relationship between career management and preferred career moves. *Employee Relations, 30*(2), 156–175.

Garvin, D., Edmondson, A., & Gino, F. (2008). Is yours a learning organization? *Harvard Business Review*, March, 109–116.

Giroux, H., & McLaren, P. (1986). Teacher education and the politics of engagement: The case for democratic schooling. *Harvard Education Review, 56*(3), 213–239.

Herzberg, F., Mausner, B., Patterson, R. O., & Capwell, D. F. (1957). *Job attitudes: Review of research and opinion*. Psychological Services of Pittsburgh.

Huselid, M. (1995). The impact of human resource management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal, 38*, xx–xx.

Lîsîi, A., Lupancu, P. E., Bălăceanu, C. T., & Gruiescu, M. (2024). Guidelines of entrepreneurship coaching. *Moldoscopie*, 100(1), 68-73.

Mândruț, O., & Ardelean, A. (2012). *Didactics of skills training*. http://www.uvvg.ro/cdep/wp-content/uploads/2012/06/Didactica-competente-final.pdf

McKelvey, R. D., & Zavoina, W. (1975). A statistical model for the analysis of ordinal level dependent variables. *The Journal of Mathematical Sociology, 4*, 103–120.

Popescu, C., & Surcel (Georgescu), R. (2016a). Career professionalization, performance and sustainability in an organisation. *The Journal Contemporary Economy*, ISSN 2537–4222.

Popescu, C., & Surcel (Georgescu), R. (2016b). Improving performances of teaching staff in order to obtain the status of permanent teacher in pre-university education. In *Proceedings of the 10th International Management Conference*, Bucharest.

Popescu, C., Mieilă, M., Tudorache, A. M., & Toplicianu, V. (2015). Modelling discrete choice variables in assessment of teaching staff work satisfaction. *PLoS ONE, 10*(4), e0115735. https://doi.org/10.1371/journal.pone.0115735

Popescu, C., & Surcel (Georgescu), R. (2017). The impact of standardization on growth of performances of human resources within an organization. In S. Hugues & N. Cristache (Eds.), *Risk in contemporary economy* (pp. 217–225). LUMEN Proceedings. https://doi.org/10.18662/lumproc.rce2017.1.18

Potolea, D., & Toma, S. (2013, June 14–15). Standards for the teaching profession. *Education Congress*, Bucharest, p. 15.

Sink, P. E. (1986). Performance and productivity measurement: The art of developing creative scoreboards. *Industrial Engineer*, January, 86–90.

Sulea, C., Maricuțoiu, L., Zaborilă Dumitru, C., & Pitariu, H. (2010). Predicting Counterproductive Behavior in the Workplace: A meta-analysis of its relationship to individual and situational factors. *Human Resources Psychology, 8*(1), xx–xx.

Thomson, M. M., Turner, J. E., & Nietfeld, J. L. (2012). A typological approach to investigate the teaching career decision: Motivations and beliefs about teaching of prospective teacher candidates. *Teaching and Teacher Education, 28*, 324–335.

Wright, P. M., McMahan, G. C., & McWilliams, A. (1994). Human resources and sustained competitive advantage: A resource-based perspective. *International Journal of Human Resource Management, 5*(2), 301–326.