

The role of Supervisors in Jovem de Futuro

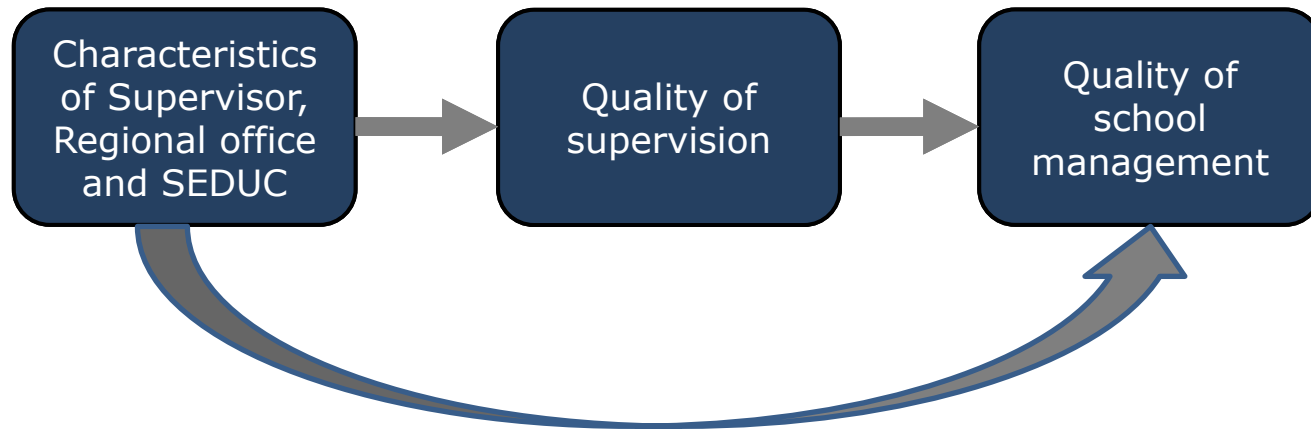
Supervision Quality – RN and ES

São Paulo, February 7th, 2020

Roadmap

- Research question
- Main results (spoilers)
- RN and ES: field survey (perception of school managers about supervisor visit quality)
- RN: Supervisor profile information
- New attribution indicators (based on logic model)
 - Presentation of indicators and results
- New constructs extracted based on manager perceptions
 - Presentation of factors and results

Role of Supervisors



Role of Supervisors

Characteristics
of Supervisor,
Regional office
and SEDUC

Fixed effect of supervisor, regional
office

RN: ACG form

Role of Supervisors

Quality of supervision

We measure **Quality of supervision** as the perception of managers regarding the supervisor's work/visit.

What does **Quality of supervision** consist of?
What factors in the supervisor-manager relationship can affect **Quality of visit**?

Joint exploratory factor analysis to define indicators.

Role of Supervisors

Quality of
school
management

Management quality indicator (Madeira & Meloni, 2018)

Tasks execution indicator

Operational results indicator

Role of Supervisors: 'Spoilers'!

1. We are opening the “black box” of supervision...
2. We found correlations of some supervisor traits with new supervision quality indicators.
3. RN supervisors are always not-as-well evaluated as supervisors in ES.
4. What is the story of constructs extracted from the survey? One represents personal traits of supervisors and the other adherence to program protocols:
 - Personal traits observed continue to show little correlation with the result measures analyzed; and,
 - Adherence to protocols has a positive and significant correlation with the SMAR execution measure

Role of Supervisors: 'Spoilers'!

What is the story of attributions? (Supervisor attributions: be a Tutor, be a Counselor, be an Intermediary between regional offices and schools; be an Implementation Guardian of the circuit – part of the program's logic model)

1. All 4 supervision attributions are correlated with one another: the effect of each attribution on its own is null. To be effective and yield result for the school, supervisors need the four attributions interacting with each other in their work.
2. The attributions indicator has a positive relationship with the tasks execution measure – for RN
 - If we trained a supervisor to reach the maximum evaluation in the attributions indicator, the percent variation obtained in tasks execution would be 28% in RN.
3. The attributions indicator has a positive relationship with the management quality measure - for ES
 - If we trained a supervisor to reach the maximum evaluation in the attributions indicator, it could increase the overall average of management quality by 2% in ES.

Profile of Supervisors:

RN x ES

Assessment of managers regarding the work of supervisors and role of supervision

ES 2017
173 interviews
conducted

Survey with managers in 2017,
third year of the program

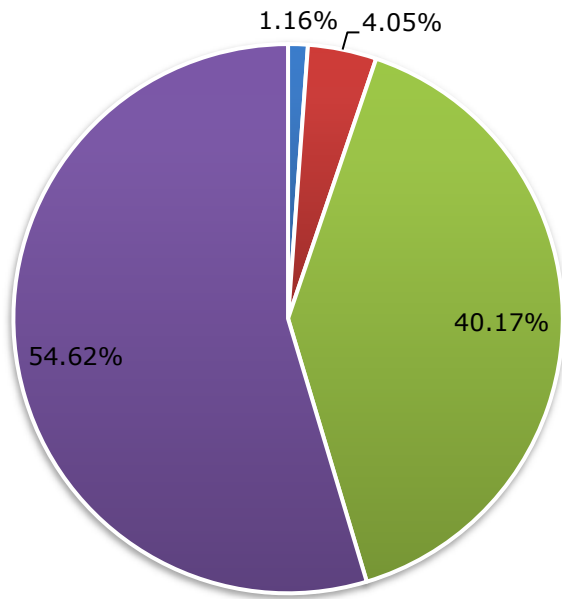
RN 2018
141 interviews
conducted

Survey with managers in 2018,
second year of the program

Descriptors - ES x RN					
	ES		RN		p-value
	Average	SD	Average	SD	
P	3.483	0.519	3.060	0.602	0.000
D	3.732	0.385	3.452	0.650	0.000
C	3.719	0.411	3.362	0.766	0.000
A	3.213	0.613	2.926	0.775	0.000
Knowledge	3.629	0.388	3.217	0.604	0.000
Relationship with managers	3.381	0.336	3.117	0.436	0.000
N	173		141		

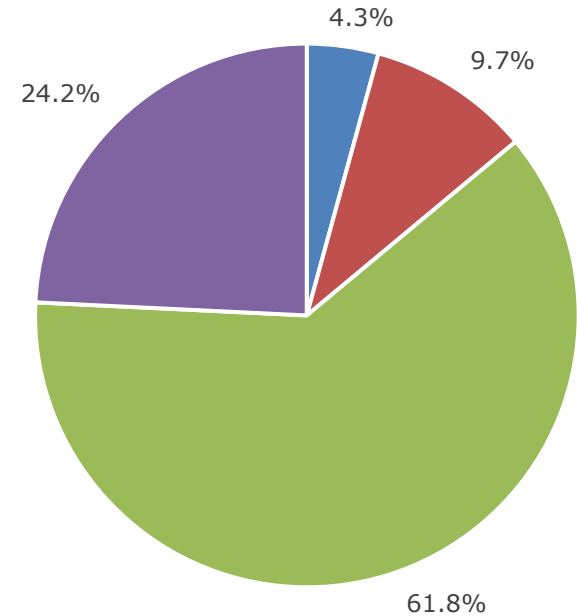
Planning

Espírito Santo



■ Disagree ■ Weakly agree ■ Agree ■ Strongly agree

Rio Grande do Norte

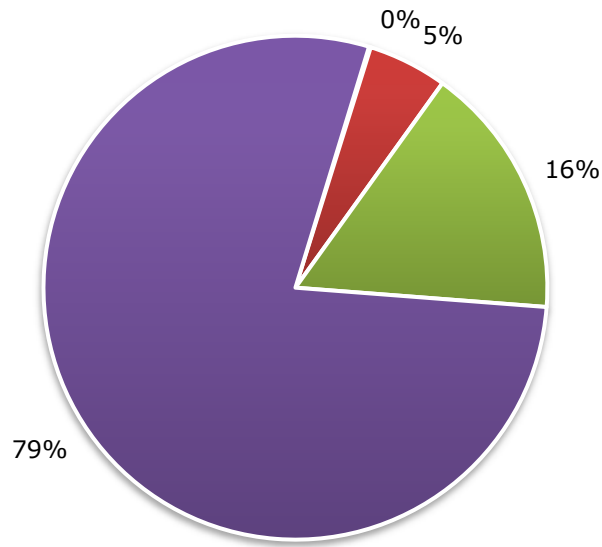


■ Disagree ■ Weakly agree ■ Agree ■ Strongly agree

Set of questions about actions

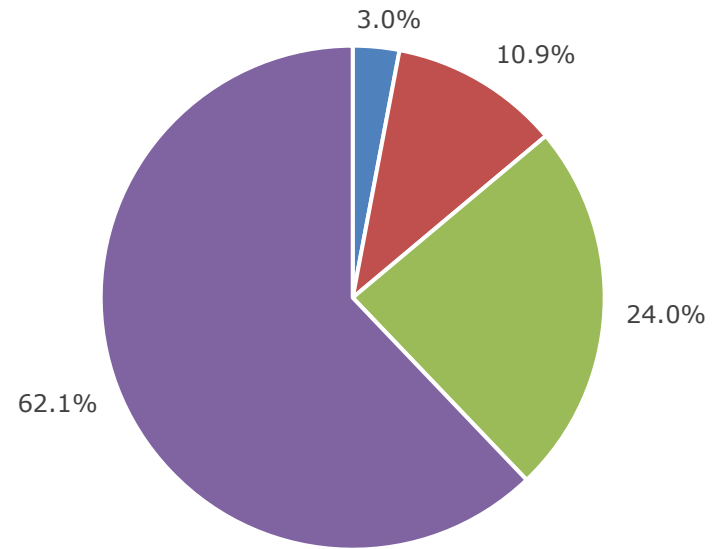
Execution

Espírito Santo



■ Never ■ Sometimes ■ Often ■ Always

Rio Grande do Norte

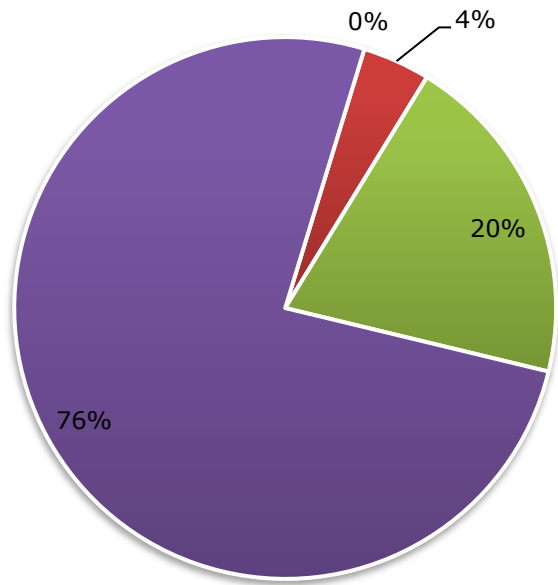


■ Never ■ Sometimes ■ Often ■ Always

Set of questions about frequency

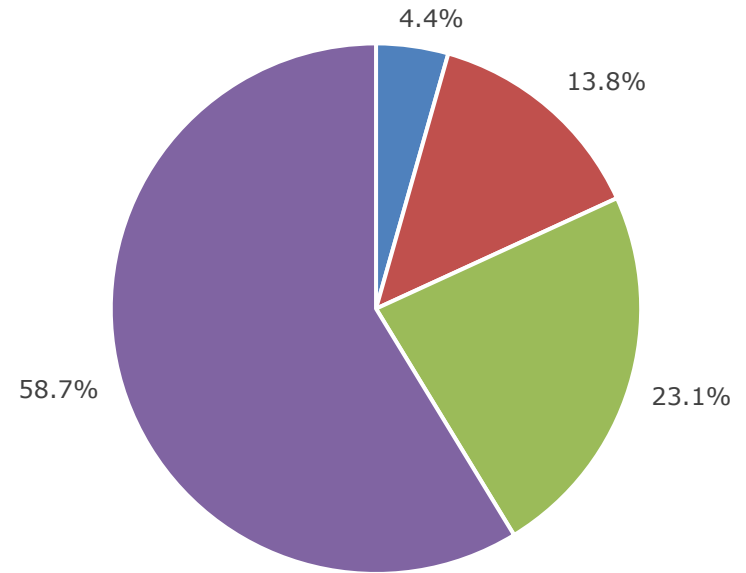
Monitoring

Espírito Santo



■ Never ■ Sometimes ■ Often ■ Always

Rio Grande do Norte

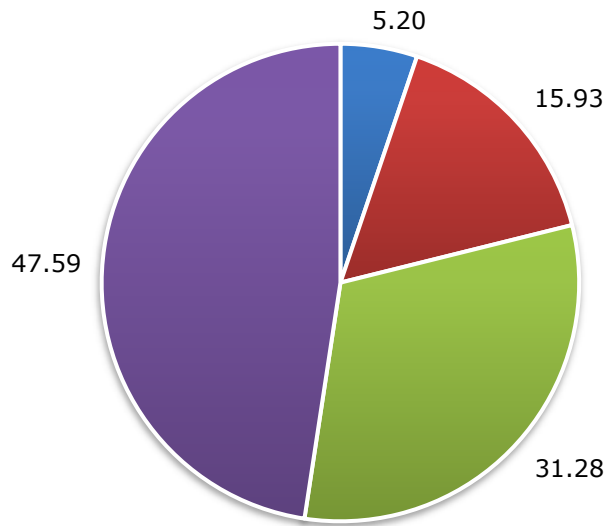


■ Never ■ Sometimes ■ Often ■ Always

Set of questions about frequency

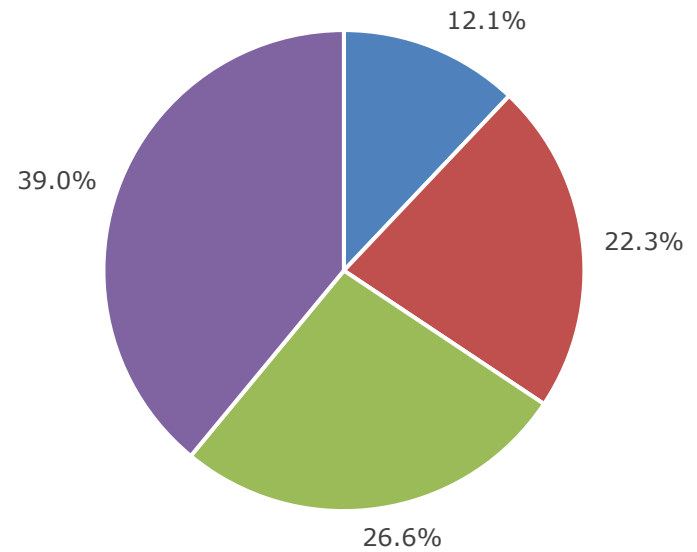
Route correction

Espírito Santo



■ Never ■ Sometimes ■ Often ■ Always

Rio Grande de Norte



■ Never ■ Sometimes ■ Often ■ Always

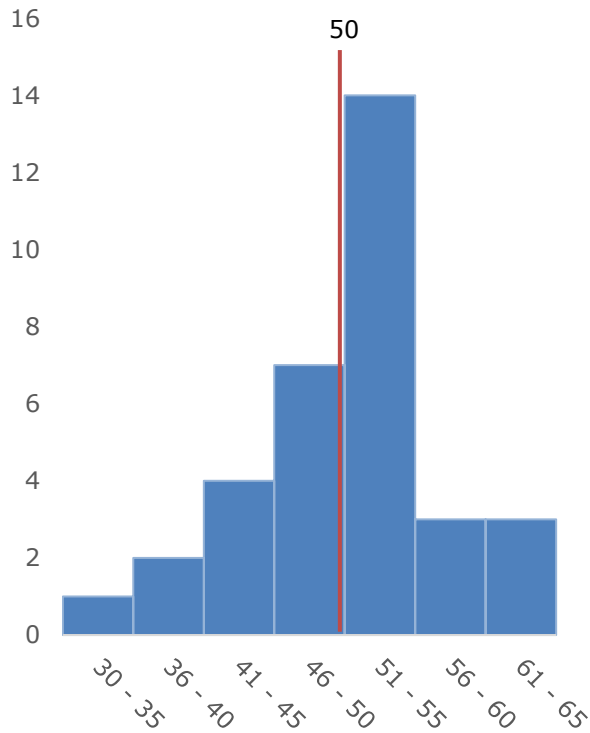
Set of questions about frequency

Supervisor Profile in RN:

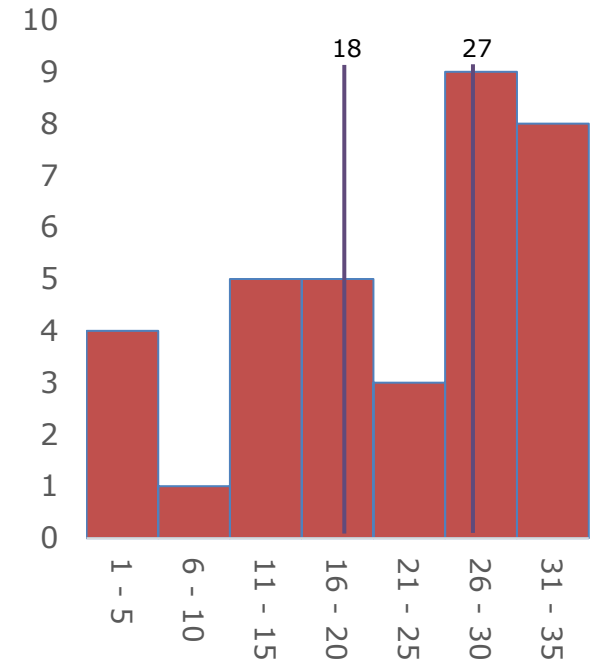
New information gathered in RN

Supervisor Profile in RN

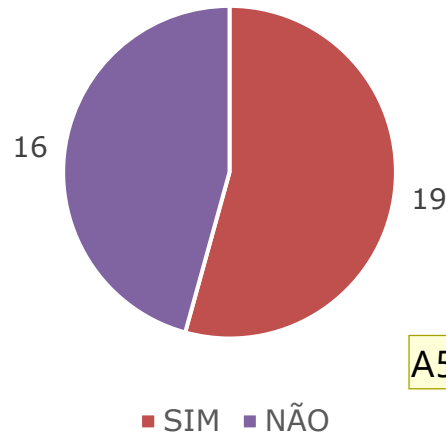
Age Distribution



Years in the Department of Education



Participation in School Management Courses



A5

Slide 17

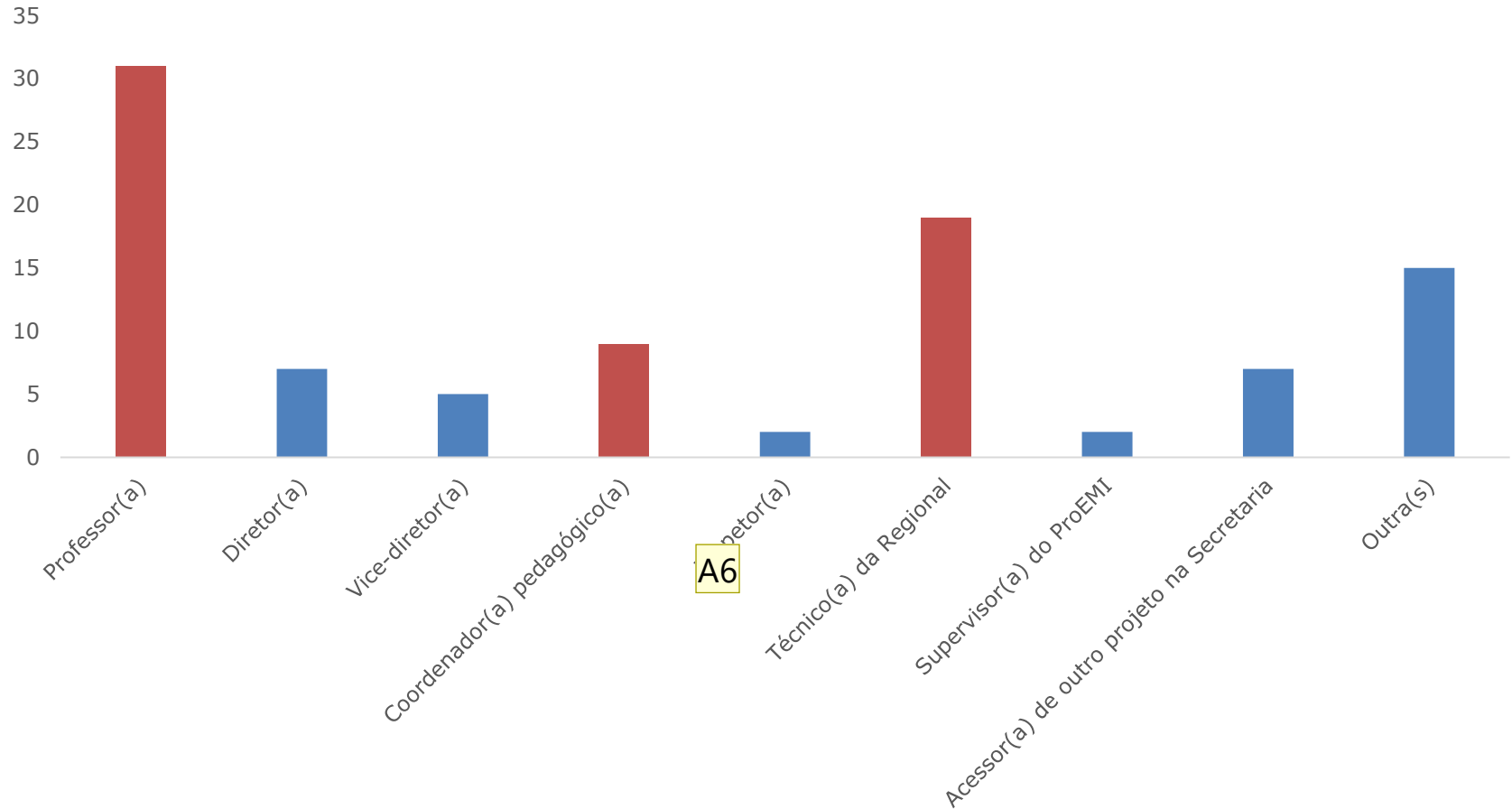
A5

legendas: YES / NO

Andrew, 1/28/2020

Supervisor Profile in RN

Previous Functions



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A6

legendas: Professor / Director / Vice-Director / Pedagogical Coordinator / Inspector / Regional Office Technician / ProEMI
Supervisor / Chairperson of another Board project / Other(s)

Andrew, 1/28/2020

Supervisor Profile in RN

- Age

Variable	Obs	Mean	Std. Dev.	Min	Max
idade A7	34	50.82353	6.881995	30	62

- Experience

Percentiles		Smallest		
1%	1	1		
5%	2	2		
10%	4	2	Obs	35
25%	15	4	Sum of Wgt.	35
50%	25		Mean	21.6
			Std. Dev.	9.876294
75%	28	33		
90%	33	33	Variance	97.54118
95%	33	33	Skewness	-.6708935
99%	34	34	Kurtosis	2.353186

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A7

legenda: age

Andrew, 1/28/2020

Supervisor Profile in RN

- Previous functions - others

Other Previous Functions
PNAIC Instructor and Resolution 48/MEC Program Instructor PIP (Pedagogical Innovation Project)
Counselor and Instructor
Gifted Students
Pedagogical Support and Distance Tutor at UFRN
Pedagogical Supervision (EFCEM)
Despertar
ASG
Theology
Learning Acceleration
Administrative Coordinator and Director at 10 th DIREC, Caeco-RN
RN Alfabetizado and PNAIC
RPTV Technician
2 nd Language Schools, English Teacher and Pedagogical Coordinator (São Paulo, Natal, Mossoró/Caraúbas)
Professor Instructor of the Educational Technology Nucleus
Coordinator of Private School Network 3 years
Projects and Programs Coordinator

Role of Supervisors:

Connecting results with the Program's
Logic Model

Attributions:

Logic Model of Program

- (1) **They are tutors:** they complete the service training process of school managers, leading them to practice the management circuit, helping out with doubts and difficulties that arise in its application.
- (2) **They are Counselors:** they support the study on causes and solutions for school problems and suggest what to do. They are like experienced managers providing counseling to schools.
- (3) **They are Intermediaries between regional offices and schools:** They circulate information and articulate school needs with actions from regional offices and Department of Education.
- (4) **They are implementation guardians of the circuit:** They track, verify and demand fulfillment of the stage's specific actions.

Source: Jovem de Futuro: concepts, actions and theory of change. Section 4.3
Supervision and support, page 29.

Indicator: Tutor

Items related to the attribution:
q14, q15, q20, q21, q22, q23 and q24

q14. Supervisor clarifies doubts on topics addressed in the Managing for Results training

q15. Supervisor proposes ways for interpreting the educational indicators

q20. Supervisor takes ownership over the school's diagnosis, problems and needs

q21. Supervisor guides the forming of the management group or pair before starting the planning

q22. Supervisor discusses the state's educational targets

q23. Supervisor discusses the school's educational targets

q24. Supervisor provides orientation on preparing the schedule for executing actions

Indicator: Counselor

Items related to the attribution:
q16, q17, q26, q27, q37,
q38, q39, q40, q41, q42, q43, q44 and q45

q16. Supervisor discusses the root causes that negatively affect the IDEBES

q17. Supervisor guides the decision-making based on evidence

q26. Supervisor revises the action maps prepared in Planning

q27. Supervisor provides orientation on the continuous recording of progress of all actions

q37. Supervisor helps reformulate actions

q38. Supervisor helps identify causes of the problem

q39. Supervisor anticipates potential problems

q40. Supervisor proposes solutions

q41. Supervisor forms study groups

q42. Supervisor listens to those involved in the problem being faced

q43. Supervisor researches bibliography about the theme and consults with experts

q44. Supervisor analyzes past experiences or experiences from other schools

q45. Supervisor incentivizes collaboration in network among schools

Indicator: Intermediary between regional board and schools

Items related to the attribution:
q13, q25 and q30

q13. Supervisor demonstrates full knowledge of programs and projects available at the Department of Education

q25. Supervisor discusses with schools the Department's stipulations and guidelines

q30. Supervisor provides answers to requests submitted to Regional Offices

Indicator: Implementation guardian of the circuit

Items related to the attribution:
q18, q28, q29, q32, q33, q34, q35 and q36

q18. Supervisor assists in the use of SGP (Project Management System) as a management tool

q28. Supervisor monitors whether actions from the Action Plan are being executed

q29. Supervisor monitors whether actions from the Action Plan are being input in the SGP

q32. Supervisor provides orientation of the dissemination of quarterly results in relation to the annual target

q33. Supervisor helps in the identification of best practices

q34. Supervisor helps assess the execution of tasks and delivery of products

q35. Supervisor analyzes structural indicators with ease

q36. Supervisor helps analyze Execution data that will be used to Correct Routes

Descriptive Statistics of New Indicators

Descriptors - ES x RN					
	ES		RN		
	Mean	SD	Mean	SD	p-value
Tutor Indicator	3.476	0.512	3.056	0.614	0.000
Counselor Indicator	3.421	0.474	3.106	0.671	0.000
Intermediary Indicator	3.482	0.489	3.069	0.679	0.000
Guardian Indicator	3.731	0.364	3.397	0.668	0.000
Attributions Indicator	3.487	0.433	3.132	0.638	0.000
Observations	173		141		

Traits

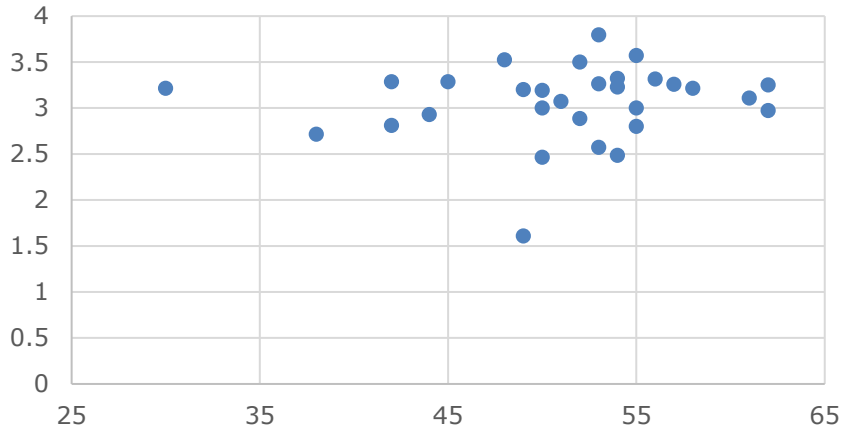
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Attributions

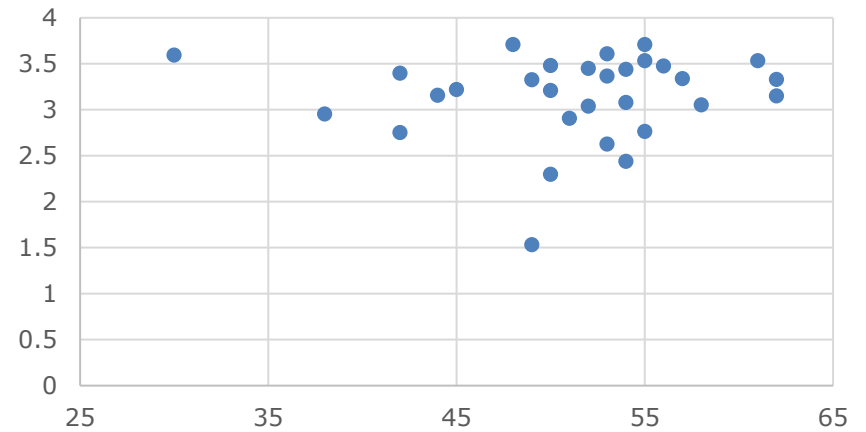
(Logic Model)

Correlation between age and attributions

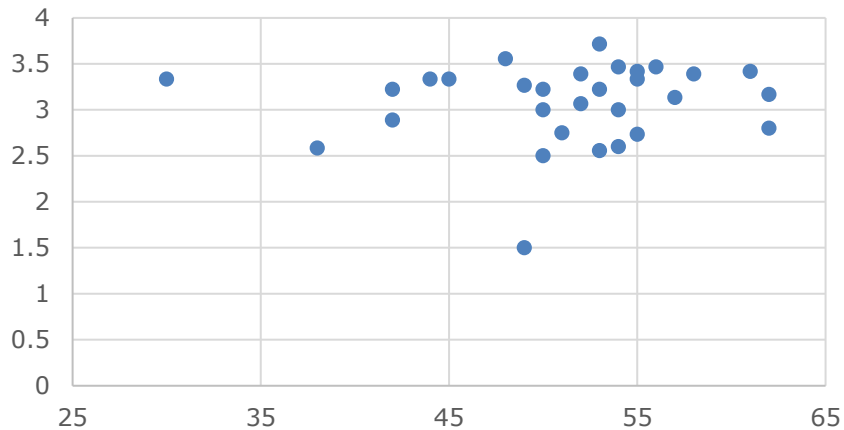
Age vs. Tutor



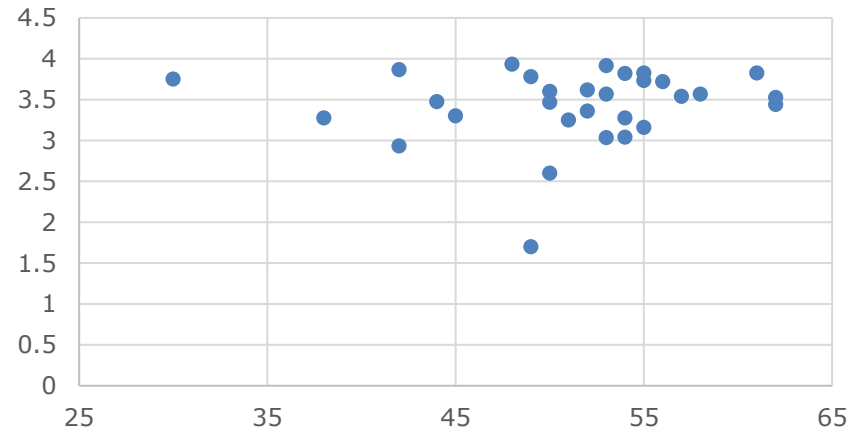
Age vs. Counselor



Age vs. Intermediary

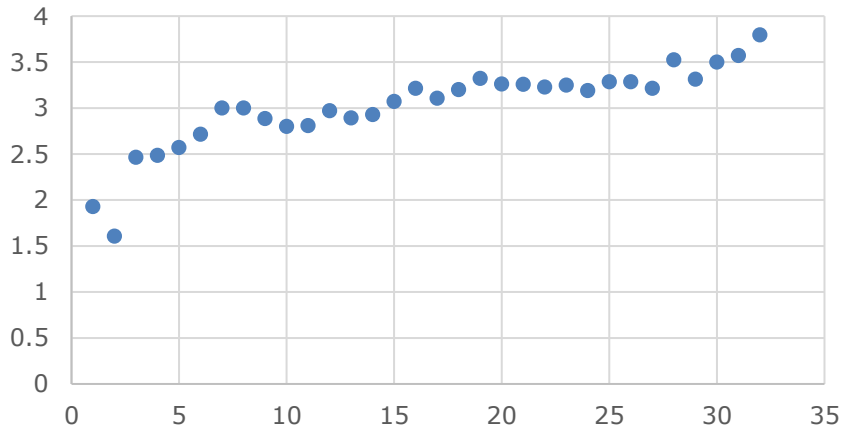


Age vs. Guardian

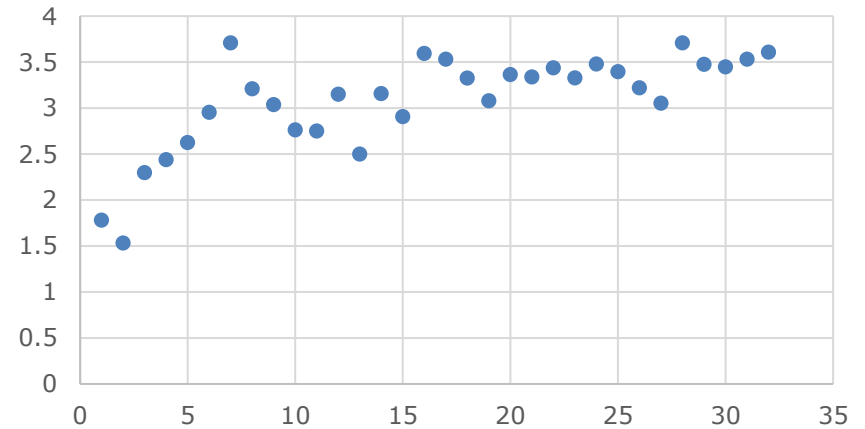


Correlation between experience and attributions

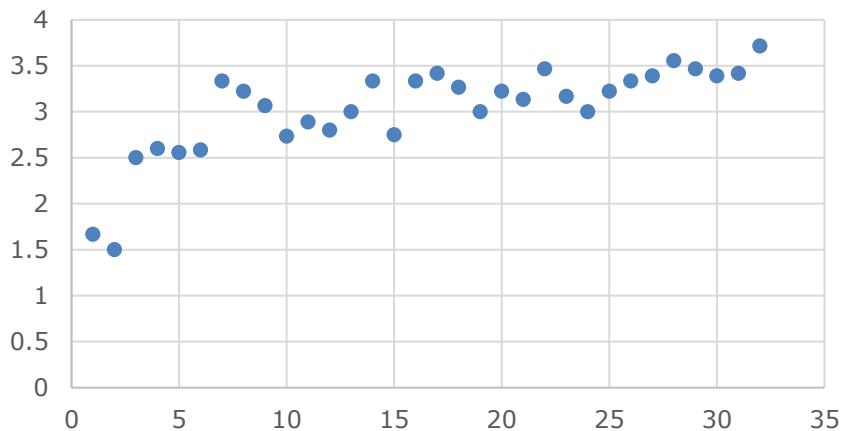
Experience vs. Tutor



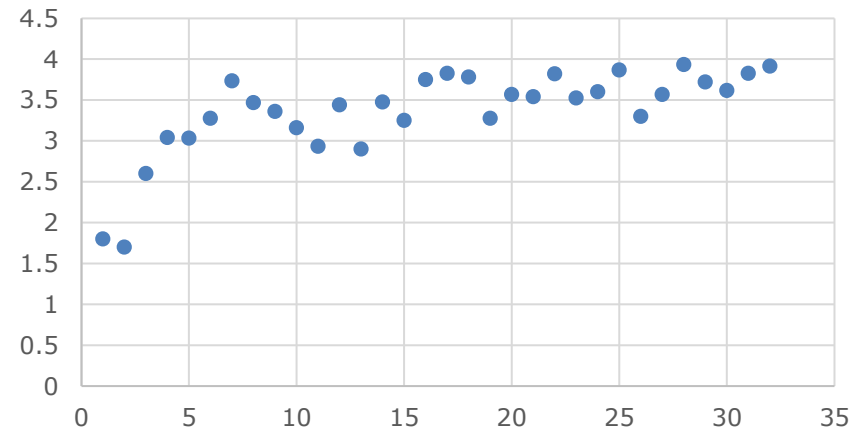
Experience vs. Counselor



Experience vs. Intermediary



Experience vs. Guardian



Connecting outcome measures with Supervisor Attributions

Following the Program's Logic Model

Regression of the Attributions Indicator in result measurements

Support to the results discussion based on the Theory of Change

Supervision and support

Dimension	result: Management Quality			result: Tasks Execution			result: Operational Results		
	ES	RN	ALL	ES	RN	ALL	ES	RN	ALL
Attribution	0.168 [-0.022 ; 0.358] sig. 2%	0.052 [-0.101 ; 0.205] not sig. 1%	0.143 [0.030 ; 0.257] sig. 3%	0.018 [-0.007 ; 0.043] sig. 1%	0.214 [0.122 ; 0.306] sig. 32%	0.078 [-0.010 ; 0.166] sig. 8%	-0.008 [-0.036 ; 0.020] not sig. 0%	0.003 [-0.037 ; 0.044] not sig. 0%	-0.016 [-0.063 ; 0.031] not sig. -1%
<p>When coefficients without EF and EF are statistically equal, we opted to show the regression coefficient without EF.</p> <p>When coefficients without EF and EF are statistically different, we opted to show the regression coefficient with EF.</p>									

Analysis of the estimated coefficient's contribution in the result variable (percent variation)

Analysis of coefficients									
	Result:			Result:			Result:		
	Tasks execution			Management quality			Operational result		
	ES	RN	ALL	ES	RN	ALL	ES	RN	ALL
Y-bar	0.97	0.78	0.87	4.25	3.92	4.09	0.74	0.64	0.69
Attribution indicator									
Beta	0.018	2.436,,,#	0.078*	2.38: ,,#	0.052	2.365,,,#	/2022: #	0.003	/2038#
Avg. attribution indicator	3.53	3.16	3.34	3.53	3.16	3.34	3.53	3.16	3.34
Proportional beta	0.01	0.18	0.05	0.08	0.04	0.09	0.00	0.00	/203#
How much varies in the result?	0.98	0.96	0.92	4.33	3.97	4.18	0.73	0.64	0.68
Percent variation	3' #	45' #	8' #	4' #	3' #	4' #	/3' #	2' #	/4' #
Note#***p<0.23; **p<0.27; *p<0.32#									

Quality of Supervision: analysis
based on the perception of
managers

Factor analysis with data from ES and RN

Assessment of managers regarding the work of supervisors and the role of supervision

ES 2017
173 interviews
conducted

RN 2018
141 interviews
conducted

Exercise: Conduct a joint exploratory
factor analysis of the two states

Common factors – ES and RN

Variable	Factor1	Factor2	Uniqueness
q9	0.6973	0.0339	0.4782
q10	0.7364	0.0928	0.3497
q13	0.6161	0.1989	0.4026
q14	0.6878	0.1786	0.3164
q15	0.6152	0.2493	0.3363
q16	0.6614	0.1946	0.3375
q17	0.6482	0.2388	0.2977
q18	0.6191	0.2593	0.3160
q20	0.6946	0.1298	0.3696
q21	0.6183	0.1682	0.4381
q23	0.6808	0.1835	0.3212
q24	0.6230	0.1800	0.4163
q25	0.5992	0.2120	0.4112
q26	0.1796	0.6125	0.4326
q28	0.2018	0.5788	0.4543
q29	0.2004	0.5486	0.4991
q30	0.0693	0.6344	0.5288
q32	0.1738	0.6078	0.4467
q33	0.0654	0.7319	0.3904
q34	0.0452	0.7840	0.3317
q35	0.1186	0.6962	0.3811
q36	0.1142	0.7278	0.3363
q39	0.0593	0.6863	0.4662
q41	-0.1209	0.7380	0.5705
q43	-0.0065	0.6763	0.5489
q44	0.0479	0.6928	0.4695
q45	-0.1309	0.8264	0.4573
q51	0.7203	-0.0208	0.5025
q52	0.7271	-0.0138	0.4857
q53	0.8858	-0.1727	0.4081
q54	0.8793	-0.1807	0.4253
q55	0.8753	-0.1877	0.4375

Factor 1
 Items reflect the perception of school management based on the personal traits of supervisors
 [Knowledge, Relationship with managers, and Planning support (P)]

Factor 2
 Items reflect the perception of school management based on the supervisor's adherence to the Program's protocol
 [Execution support (D), Monitoring (C) Action Plan (P), and Problem-solving support (A)]

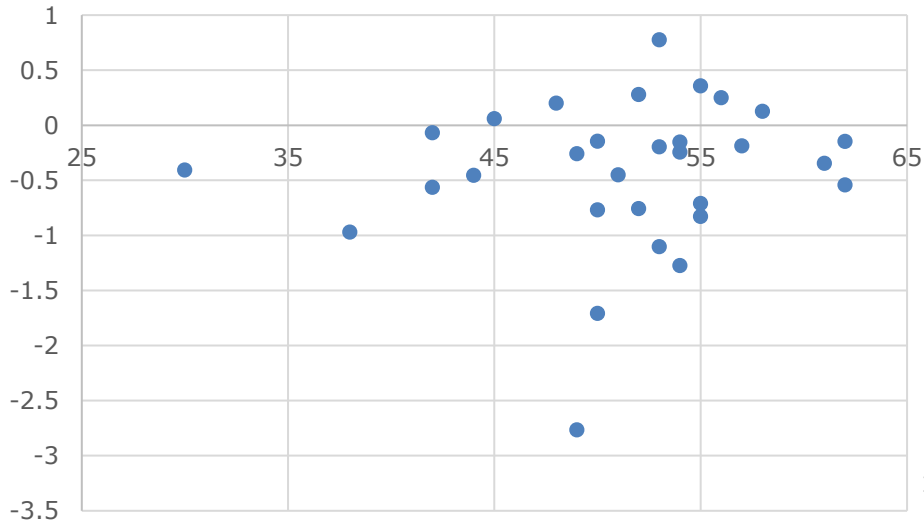
Traits

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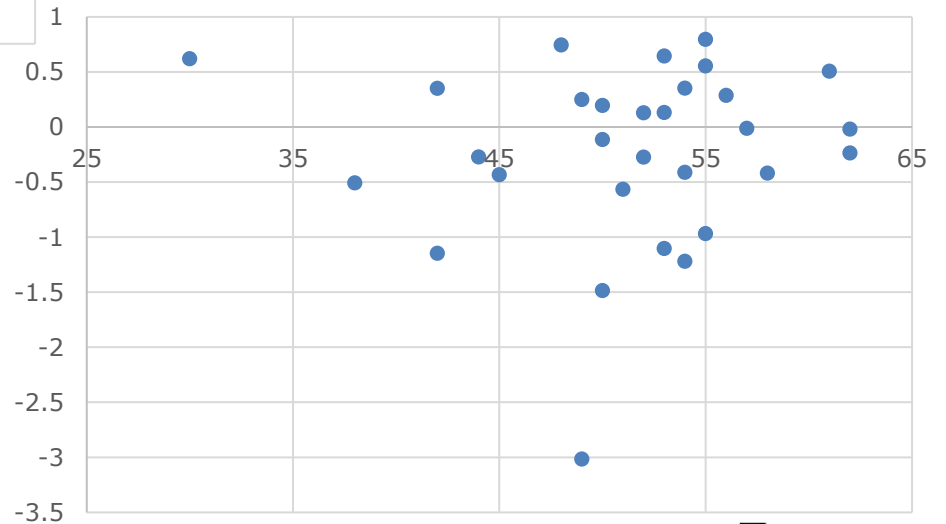
Factors

Correlation between age and factors

Age vs. Strategic Competences Factor

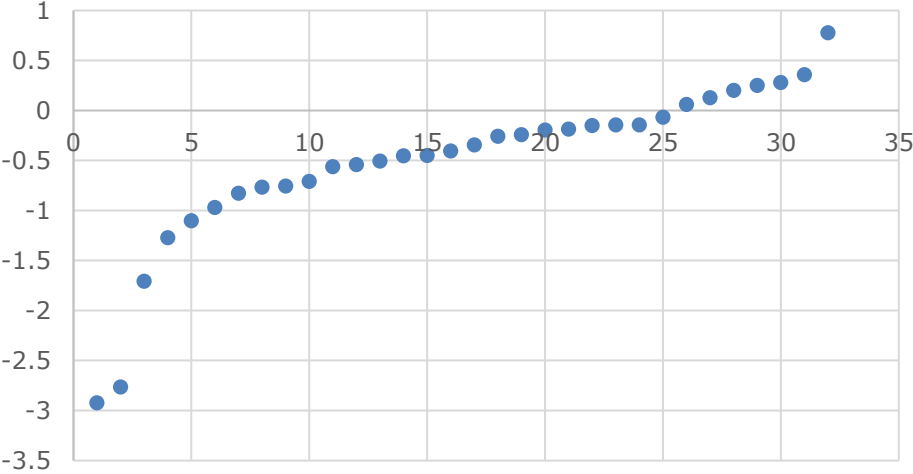


Age vs. Executive Competences Factor

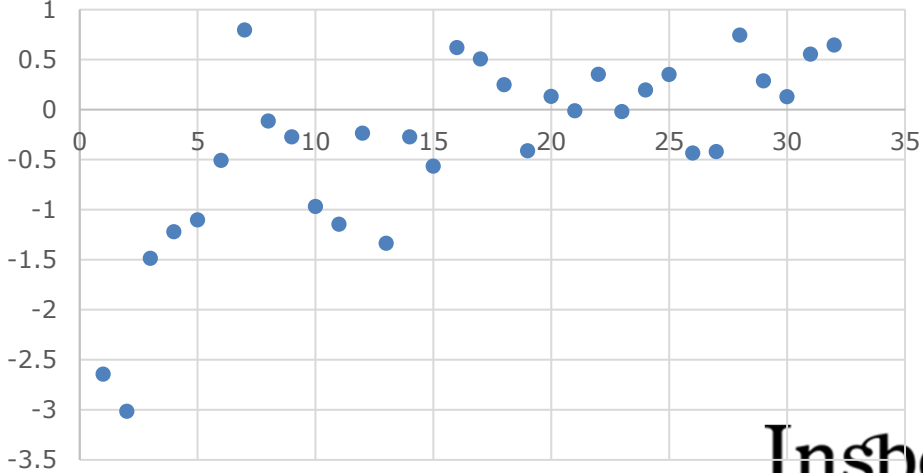


Correlation between experience and factors

Experience vs. Strategic Competences
Factor



Experience vs. Executive Competences
Factor



Results Indicators: Descriptive analysis

Descriptors - ES x RN					
	ES		RN		p-value
	Mean	SD	Mean	SD	
Management Quality (overall average)	4.247	0.519	3.924	0.516	0.000
Operational Results Indicator <i>Average: student attendance, classes taught, ratio of students with above-average grades</i>	0.737	0.090	0.640	0.123	0.000
Tasks Execution Indicator <i>Ratio of tasks and actions executed</i>	0.967	0.068	0.778	0.298	0.000
Observations	172		140		

Note: For Management Quality, in ES, we only used the grade provided by the first evaluator, in order for the methodology to be comparable to the one used in RN in 2018.

Visit Quality Effect - Results:

Visit Quality Effect: Tasks Execution Indicator

VARIABLES	(1) ES	(2) ES	(3) ES	(4) ES	(5) ES	(6) ES	(7) RN	(8) RN	(9) RN	(10) RN	(11) RN	(12) RN	(13) RN
F1: Personal traits	-0.016*	-0.017*	-0.016*	-0.009	-0.008	-0.011	0.062*	0.046	0.044	0.014	0.002	0.022	-0.038
	[0.008]	[0.008]	[0.008]	[0.010]	[0.010]	[0.008]	[0.033]	[0.034]	[0.035]	[0.049]	[0.052]	[0.034]	[0.041]
F2: Adherence to the program	0.026***	0.026**	0.026***	0.027*	0.027*	0.018	0.052*	0.073**	0.075**	0.042	0.124**	0.128***	0.155***
	[0.010]	[0.010]	[0.010]	[0.014]	[0.014]	[0.012]	[0.027]	[0.030]	[0.031]	[0.046]	[0.047]	[0.038]	[0.041]
Manager: participated in IU's training		-0.055*	-0.051	-0.060	-0.055	0.042		-0.215	-0.212	-0.254	-0.928***	-0.858***	-0.807***
		[0.031]	[0.035]	[0.040]	[0.045]	[0.036]		[0.227]	[0.235]	[0.342]	[0.200]	[0.207]	[0.202]
Manager: age		0.000	-0.000	-0.000	-0.000	-0.000		-0.008**	-0.008**	-0.005	-0.003	-0.003	-0.003
		[0.001]	[0.001]	[0.001]	[0.001]	[0.001]		[0.003]	[0.003]	[0.004]	[0.004]	[0.003]	[0.004]
Manager: at least 5 years in the school		-0.015	-0.017	-0.026*	-0.025*	-0.019*		-0.058	-0.056	-0.072	-0.155**	-0.123*	-0.124*
		[0.011]	[0.010]	[0.013]	[0.013]	[0.010]		[0.069]	[0.070]	[0.082]	[0.074]	[0.069]	[0.067]
Manager: at least 5 years in the function		0.001	0.003	0.005	0.005	0.008		0.045	0.037	-0.076	0.039	0.062	0.049
		[0.016]	[0.016]	[0.018]	[0.018]	[0.014]		[0.074]	[0.075]	[0.094]	[0.129]	[0.091]	[0.105]
School priority			-0.030*	-0.019	-0.019	-0.024		0.031	0.046	0.016	0.016	0.014	0.056
			[0.018]	[0.029]	[0.030]	[0.020]		[0.076]	[0.096]	[0.141]	[0.119]	[0.128]	
Management Complexity Index			-0.007	-0.010	-0.010	-0.006		-0.012	-0.012	-0.049	-0.035	-0.043	
			[0.006]	[0.006]	[0.007]	[0.005]		[0.031]	[0.034]	[0.043]	[0.035]	[0.037]	
Socioeconomic Level Index					0.002	0.001					0.022*	0.006	0.011
					[0.003]	[0.002]					[0.012]	[0.010]	[0.009]
Supervisor: female													-0.383**
													[0.150]
Supervisor: age 50+													0.124*
													[0.073]
Supervisor: more than 20 years in SEE													0.022
													[0.098]
Supervisor: was director or regional counselor													-0.163**
													[0.068]
Supervisor: participated in school management course besides IU's													0.143**
													[0.062]
Supervisor: performs another function in SEE													-0.210
													[0.128]
Observations	172	172	172	172	171	171	136	136	136	136	99	99	97
Adjusted R-squared	0.023	0.031	0.060	0.262	0.259	0.144	0.149	0.176	0.166	0.317	0.453	0.370	0.400
Constant	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manager Controls	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
School Controls	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Supervisor fixed effect	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N
Regional fixed effect	N	N	N	N	N	Y	N	N	N	N	N	Y	Y

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.10

Visit Quality Effect: Tasks Execution Indicator

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	ES	ES	ES	ES	ES	ES	RN	RN	RN	RN	RN	RN	RN
F1: Personal traits	-0.016*	-0.017*	-0.016*	-0.009	-0.008	-0.011	0.062*	0.046	0.044	0.014	0.002	0.022	-0.038
	[0.008]	[0.008]	[0.008]	[0.010]	[0.010]	[0.008]	[0.033]	[0.034]	[0.035]	[0.049]	[0.052]	[0.034]	[0.041]
F2: Adherence to the program	0.026***	0.026**	0.026***	0.027*	0.027*	0.018	0.052*	0.073**	0.075**	0.042	0.124**	0.128***	0.155***
	[0.010]	[0.010]	[0.010]	[0.014]	[0.014]	[0.012]	[0.027]	[0.030]	[0.031]	[0.046]	[0.047]	[0.038]	[0.041]
Observations	172	172	172	172	171	171	136	136	136	136	99	99	97
Adjusted R-squared	0.023	0.031	0.060	0.262	0.259	0.144	0.149	0.176	0.166	0.317	0.453	0.370	0.400
Constant	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manager Controls	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
School Controls	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Supervisor fixed effect	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N
Regional fixed effect	N	N	N	N	N	Y	N	N	N	N	N	Y	Y

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.10

F1 - Personal traits:

- ES => more bureaucratic is not good
- RN => still not running properly

F2: Adherence to the program:

- ES and RN – positive correlation with program execution

Visit Quality Effect: Management Quality Indicator

VARIABLES	(1) ES	(2) ES	(3) ES	(4) ES	(5) ES	(6) ES	(7) RN	(8) RN	(9) RN	(10) RN	(11) RN	(12) RN	(13) RN
F1: Personal traits	-0.094	-0.097	-0.093	-0.034	-0.045	-0.075	-0.009	-0.013	-0.004	0.138	0.081	0.043	0.111
	[0.082]	[0.087]	[0.086]	[0.101]	[0.104]	[0.086]	[0.063]	[0.063]	[0.067]	[0.082]	[0.076]	[0.065]	[0.083]
F2: Adherence to the program	0.188*	0.195*	0.193*	0.128	0.135	0.173	0.073	0.077	0.068	-0.002	-0.024	0.017	-0.006
	[0.099]	[0.105]	[0.104]	[0.141]	[0.142]	[0.108]	[0.051]	[0.053]	[0.057]	[0.078]	[0.084]	[0.070]	[0.078]
Manager: participated in IU's training		-0.069	-0.079	-0.015	0.027	-0.027		-0.571**	-0.656***	-0.620**	-0.672**	-0.752***	-0.752**
		[0.128]	[0.133]	[0.237]	[0.245]	[0.108]		[0.215]	[0.180]	[0.299]	[0.260]	[0.261]	[0.299]
Manager: age		-0.010**	-0.010**	-0.010	-0.011	-0.011**		-0.000	0.001	0.003	0.004	0.004	0.003
		[0.005]	[0.005]	[0.007]	[0.007]	[0.005]		[0.006]	[0.007]	[0.007]	[0.011]	[0.010]	[0.009]
Manager: at least 5 years in the school		0.117	0.114	0.004	0.001	0.090		0.068	0.080	-0.090	-0.029	-0.049	-0.037
		[0.100]	[0.104]	[0.143]	[0.146]	[0.098]		[0.141]	[0.139]	[0.141]	[0.131]	[0.124]	[0.130]
Manager: at least 5 years in the function		0.169*	0.167*	0.313**	0.311**	0.238**		0.106	0.120	0.056	-0.261	-0.146	-0.164
		[0.085]	[0.087]	[0.139]	[0.141]	[0.097]		[0.132]	[0.141]	[0.172]	[0.230]	[0.159]	[0.159]
School priority			-0.098	-0.012	0.027	0.018		0.113	0.182	0.188	0.123	0.090	
			[0.099]	[0.183]	[0.197]	[0.123]			[0.127]	[0.120]	[0.116]	[0.147]	[0.151]
Management Complexity Index			0.012	0.013	0.011	0.012			0.118**	0.124**	0.075	0.062	0.075
			[0.032]	[0.047]	[0.047]	[0.034]			[0.045]	[0.053]	[0.083]	[0.053]	[0.066]
Socioeconomic Level Index					0.014	0.008					-0.002	-0.009	-0.013
					[0.025]	[0.019]					[0.022]	[0.014]	[0.016]
Supervisor: female													0.621**
													[0.265]
Supervisor: age 50+													-0.022
													[0.118]
Supervisor: more than 20 years in SEE													-0.263
													[0.159]
Supervisor: was director or regional counselor													0.091
													[0.118]
Supervisor: participated in school management course besides IU's													-0.193
													[0.141]
Supervisor: performs another function in SEE													0.163
													[0.178]
Observations	171	171	171	171	170	170	136	136	136	136	99	99	97
Adjusted R-squared	0.021	0.038	0.031	0.020	0.009	0.085	0.009	0.005	0.054	0.114	-0.032	-0.058	-0.065
Constant	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manager Controls	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
School Controls	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Supervisor fixed effect	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N
Regional fixed effect	N	N	N	N	N	Y	N	N	N	N	N	Y	Y

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.10

Visit Quality Effect: Management Quality Indicator

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	ES	ES	ES	ES	ES	ES	RN	RN	RN	RN	RN	RN	RN
F1: Personal traits	-0.094	-0.097	-0.093	-0.034	-0.045	-0.075	-0.009	-0.013	-0.004	0.138	0.081	0.043	0.111
	[0.082]	[0.087]	[0.086]	[0.101]	[0.104]	[0.086]	[0.063]	[0.063]	[0.067]	[0.082]	[0.076]	[0.065]	[0.083]
F2: Adherence to the program	0.188*	0.195*	0.193*	0.128	0.135	0.173	0.073	0.077	0.068	-0.002	-0.024	0.017	-0.006
	[0.099]	[0.105]	[0.104]	[0.141]	[0.142]	[0.108]	[0.051]	[0.053]	[0.057]	[0.078]	[0.084]	[0.070]	[0.078]
Observations	171	171	171	171	170	170	136	136	136	136	99	99	97
Adjusted R-squared	0.021	0.038	0.031	0.020	0.009	0.085	0.009	0.005	0.054	0.114	-0.032	-0.058	-0.065
Constant	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manager Controls	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
School Controls	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Supervisor fixed effect	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N
Regional fixed effect	N	N	N	N	N	Y	N	N	N	N	N	Y	Y

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.10

F1: Personal traits do not affect management quality

F2: adherence to the program's protocol has a positive correlation with management quality in ES

Visit Quality Effect: Operational Results Indicator

VARIABLES	(1) ES	(2) ES	(3) ES	(4) ES	(5) ES	(6) ES	(7) RN	(8) RN	(9) RN	(10) RN	(11) RN	(12) RN	(13) RN
F1: Personal traits	-0.003 [0.014]	-0.001 [0.014]	0.002 [0.013]	0.004 [0.018]	0.007 [0.019]	0.011 [0.014]	-0.011 [0.012]	-0.009 [0.012]	-0.009 [0.013]	-0.008 [0.016]	-0.020 [0.024]	-0.029 [0.018]	-0.020 [0.025]
F2: Adherence to the program	0.012 [0.014]	0.008 [0.015]	0.007 [0.014]	-0.009 [0.017]	-0.011 [0.017]	-0.003 [0.014]	0.012 [0.013]	0.011 [0.014]	0.011 [0.014]	-0.000 [0.021]	-0.009 [0.028]	0.013 [0.023]	0.002 [0.022]
Manager: participated in IU's training		0.041 [0.048]	0.033 [0.047]	0.047 [0.062]	0.037 [0.063]	0.034 [0.043]		-0.084 [0.052]	-0.102* [0.058]	-0.003 [0.092]	0.195 [0.124]	0.096 [0.086]	0.153 [0.099]
Manager: age		0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]		0.002 [0.001]	0.002* [0.001]	0.002 [0.002]	0.003 [0.003]	0.001 [0.002]	0.001 [0.002]
Manager: at least 5 years in the school		0.039*** [0.013]	0.035*** [0.013]	0.024 [0.016]	0.025 [0.016]	0.027** [0.012]		-0.005 [0.018]	-0.001 [0.018]	0.017 [0.025]	0.070* [0.035]	0.037 [0.032]	0.049 [0.032]
Manager: at least 5 years in the function		-0.062*** [0.021]	-0.061*** [0.019]	-0.062*** [0.021]	-0.062*** [0.021]	-0.057*** [0.014]		-0.062** [0.029]	-0.064** [0.030]	-0.039 [0.030]	-0.077 [0.049]	-0.044 [0.042]	-0.061 [0.042]
School priority			-0.066*** [0.022]	-0.050 [0.030]	-0.061* [0.033]	-0.048** [0.023]			0.043 [0.030]	0.064* [0.037]	0.125* [0.064]	0.097* [0.051]	0.112* [0.062]
Management Complexity Index			-0.003 [0.005]	-0.000 [0.006]	0.000 [0.006]	-0.002 [0.005]			0.020** [0.009]	0.021 [0.013]	0.025 [0.020]	0.018 [0.012]	0.014 [0.015]
Socioeconomic Level Index					-0.004 [0.004]	-0.003 [0.003]					-0.001 [0.007]	0.000 [0.004]	-0.001 [0.005]
Supervisor: female													0.140** [0.068]
Supervisor: age 50+													0.080** [0.030]
Supervisor: more than 20 years in SEE													-0.077** [0.035]
Supervisor: was director or regional counselor													-0.012 [0.045]
Supervisor: participated in school management course besides IU's													-0.141*** [0.034]
Supervisor: performs another function in SEE													-0.004 [0.056]
Observations	172	172	172	172	171	171	136	136	136	136	99	99	97
Adjusted R-squared	-0.006	0.053	0.110	0.394	0.402	0.410	-0.009	0.006	0.033	0.137	0.180	0.044	0.111
Constant	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manager Controls	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
School Controls	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Supervisor fixed effect	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N
Regional fixed effect	N	N	N	N	N	Y	N	N	N	N	N	Y	Y

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.10

Visit Quality Effect: Operational Results Indicator

VARIABLES	(1) ES	(2) ES	(3) ES	(4) ES	(5) ES	(6) ES	(7) RN	(8) RN	(9) RN	(10) RN	(11) RN	(12) RN	(13) RN
F1: Personal traits	-0.003 [0.014]	-0.001 [0.014]	0.002 [0.013]	0.004 [0.018]	0.007 [0.019]	0.011 [0.014]	-0.011 [0.012]	-0.009 [0.012]	-0.009 [0.013]	-0.008 [0.016]	-0.020 [0.024]	-0.029 [0.018]	-0.020 [0.025]
F2: Adherence to the program	0.012 [0.014]	0.008 [0.015]	0.007 [0.014]	-0.009 [0.017]	-0.011 [0.017]	-0.003 [0.014]	0.012 [0.013]	0.011 [0.014]	0.011 [0.014]	-0.000 [0.021]	-0.009 [0.028]	0.013 [0.023]	0.002 [0.022]
Observations	172	172	172	172	171	171	136	136	136	136	99	99	97
Adjusted R-squared	-0.006	0.053	0.110	0.394	0.402	0.410	-0.009	0.006	0.033	0.137	0.180	0.044	0.111
Constant	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manager Controls	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
School Controls	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
Supervisor fixed effect	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N
Regional fixed effect	N	N	N	N	N	Y	N	N	N	N	N	Y	Y

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.10

Questions in common: factors and attribution

Question	Factor1	Factor2	Uniqueness	Attribution
q9	0.6973	0.0339	0.4782	N
q10	0.7364	0.0928	0.3497	N
q13	0.6161	0.1989	0.4026	Y
q14	0.6878	0.1786	0.3164	Y
q15	0.6152	0.2493	0.3363	Y
q16	0.6614	0.1946	0.3375	Y
q17	0.6482	0.2388	0.2977	Y
q18	0.6191	0.2593	0.316	Y
q20	0.6946	0.1298	0.3696	Y
q21	0.6183	0.1682	0.4381	Y
q23	0.6808	0.1835	0.3212	Y
q24	0.623	0.18	0.4163	Y
q25	0.5992	0.212	0.4112	Y
q26	0.1796	0.6125	0.4326	Y
q28	0.2018	0.5788	0.4543	Y
q29	0.2004	0.5486	0.4991	Y
q30	0.0693	0.6344	0.5288	Y
q32	0.1738	0.6078	0.4467	Y
q33	0.0654	0.7319	0.3904	Y
q34	0.0452	0.784	0.3317	Y
q35	0.1186	0.6962	0.3811	Y
q36	0.1142	0.7278	0.3363	Y
q39	0.0593	0.6863	0.4662	Y
q41	-0.1209	0.738	0.5705	Y
q43	-0.0065	0.6763	0.5489	Y
q44	0.0479	0.6928	0.4695	Y
q45	-0.1309	0.8264	0.4573	Y
q51	0.7203	-0.0208	0.5025	N
q52	0.7271	-0.0138	0.4857	N
q53	0.8858	-0.1727	0.4081	N
q54	0.8793	-0.1807	0.4253	N
q55	0.8753	-0.1877	0.4375	N

Concluding Remarks

Field survey with school managers:

- In a descriptive manner: supervisors in RN are always not-as-well evaluated as supervisors in ES S
- Constructs extracted from this survey:
 - Factor 1: Personal traits are not correlated with the outcome measures tested
 - Factor 2: Adherence to the Program's protocol only has a positive correlation with the tasks execution measure

Conclusions

Correlations between traits and indicators of supervision quality:

- Age x Attributions^(*):
 - Little heterogeneity of 'age' trait among supervisors and little correlation
- Experience x Attributions^(*):
 - Positive and high correlation, that is, more time in the department is correlated with better performance in all attributions tested
- Previous experiences:
 - Having worked as professor, pedagogical coordinator, or regional office technician is homogenously spread along the age and experience distributions

(*) Same results for the constructs extracted from the perception questionnaires: strategic competences factor and executive competences factor.

Conclusions

Association between the attributions indicator and tasks execution indicator:

- Correlations always positive and with statistical significance, and at least 10% confidence, particularly in the RN sample.
- High coefficients for RN.
- THAT IS, we found some relationship between attributions and the tasks execution measure, and of high magnitude.
- Effect percentages are high.
- Hypotheses for this result:
 - Given the program's lower maturity in RN, the supervisor role has greater effect in the first effect layer outlined in the Theory of Change, which is through the execution of tasks

Conclusions

Association between the attributions indicator and management quality indicator:

- Correlation always positive, but only reaches statistical significance of 10% confidence in ES.
- By the Theory of Change, the management quality indicator measures an intermediary step between the Circuit functioning and generating result, whereby for the state with greater maturity in the program, supervision's performance reaches management level.
- Effect percentages are modest.

Conclusions

Association between the attributions indicator and the operational results indicator

- By the Theory of Change, the operational results indicator measures the last phase the supervisor's work should reach: the school's operational level.
- We did not find any statistically significant correlation between the attributions indicator and the operational results measure.

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