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**Report of the Data Analysis of the Head teacher
Questionnaire Used to Measure System Factors:
Across Country Results**



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1. Across country results

For the head teacher questionnaire only across country analyses were conducted as the number of questionnaires per country was very small (below 60).

1.1 Steps of data processing for the analysis of the head teacher questionnaire data

In this part of the data documentation steps of data cleaning and preparation are described. Specifically two steps were undertaken for this task: (1) cleaning the data delivered by all the countries, and (2) conducting Reliability analysis for the whole scale. These data cleaning and analysis procedures are described in detail below.

1.1.1 Cleaning the data

As part of the first steps of data cleaning, descriptive statistics by item were conducted in order to check carefully whether any mistakes were made regarding the coding of the questionnaire data. According to the coding guidelines that were given to all the countries the coding for the items included in Part A was from 1 to 4 (1= “No policy” – 4= “Accountability”). The coding for the items in Part B was from 1 to 5 (1= “Absolutely disagree”, 4= “Absolutely Agree” and 5= “Not applicable”) and the coding for the items in Part C was from 1 to 4 (1= “Never” – 4= “Very often”). Missing values were indicated by using the codes 7, and 9: Code 9 was given when a teacher omitted the task and code 7 was used to indicate that items were not administered. Where a mismatch of data coding was found, the corresponding country was notified and the data were being corrected. The number of missing values per item is presented in Appendix A, Table A1. The percentages of the items that were coded with 7 and 9 were very low therefore they were considered as missing and no additional processes were made. More specifically, as can be seen in Table A1 (see Appendix A), for code 7 there were only 100 missing values for items HTBQ4, HTBQ5a, HTBQ5b and HTBQ6 and all of them were located in Cyprus and Greece since these items were not administered as they did not match the country context. For code 9 the number of missing values was very small (the largest number of missing values with code 9 was 14 for item HTCQ10) and the percentage of missing values with code 9 was not more than 2%.

1.1.2 Conducting Reliability Analysis

After the data cleaning, reliability analysis was conducted and the Cronbach alpha was calculated for the entire scale (72 items in total). The results of the reliability analysis showed that the Cronbach alpha was very high ($\alpha = 0.96$). In addition, the calculation of the value of the Alpha “if item deleted” revealed that none of the items had to be removed.

1.2 Generalisability Analysis

After the cleaning and preparation of the data, a Generalisability Study on the use of head teachers’ ratings was conducted (Cronbach, Gleser, Nanda, & Rajaratnam, 1972; Shavelson, Webb & Rowley, 1989). The results of the ANOVA analysis (see Appendix A, Table A2) showed that some items that were included in the questionnaire were not generalizable, which can be explained by the small number of the sample. More specifically, 13 items were found not to be generalizable. However, the standard deviation of these items was very small (smaller than 0.8) and therefore they were not excluded from the analyses. The only exception was for items HTAQ1b, HTAQ4i and HTBQ2 which were removed from the analyses as their standard deviation was higher than 0.8.

1.3 Categorization of items according to factors

The head teacher questionnaire was developed and used, for the measurement of the factors and dimensions of the dynamic model included in the system level, and was adjusted having in mind the different context of the participating countries (for the questionnaire see Appendix B). The questionnaire aimed at measuring the impact of the national/state policy on: a) the policy on teaching, b) the policy on the school learning environment and c) on evaluation. More specifically, for the measurement of these overarching factors, the questionnaire included items concerning: quantity of teaching, provision of learning opportunities, quality of teaching, student behavior outside the classroom, provision of sufficient learning resources, collaboration and interaction between teachers, relations with the community, partnership policy and evaluation (for the specification table with the categorization of items in all the system factors, see Appendix C).

1.4 Confirmatory and Exploratory Factor Analysis (CFA & EFA)

Having in mind the categorization of the items in the Specification Table (see Appendix C), Confirmatory Factor Analysis was conducted for each of the system factors of the dynamic model which were measured by the head teacher questionnaire by using the EQS software for Structural Equation Modeling (Byrne, 1994). CFA was used, as the objective was to test whether the data fit a hypothesized measurement model; in this case the assumptions of the dynamic model in regard to each of the system factors. The CFA models which were conducted for the system factors, showed that some of the items that were included in the questionnaire had to be removed from the analyses. Therefore, the items that remained in each of the school factors in the CFA models are presented in Table A3-Part A in Appendix A. For the items that were excluded from the analyses some possible explanations are provided in section 1.5.

The reliability of each scale measuring the system factors was also calculated and the results show that for each factor the Cronbach alpha was satisfactory (for all factors alpha was greater than 0.7). In addition, the calculation of the value of the “Alpha if item deleted” revealed that none of the items had to be removed from each factor. The results of the reliability analysis per factor, across countries are also presented in Table A3 (Appendix A). In addition, the covariance matrixes used for the SEM analysis were produced and SEM analysis per factor was initially conducted to find out whether the questionnaire items could help us develop scores for each factor. For the SEM analysis the EQS program was used. The fit indices of the one factor models that were produced are presented in Table A3 (Appendix A). For the system factors a two-factor model could not be produced but the single factor models that were produced were found to fit well to the data.

For some factors exploratory factor analysis was conducted as they consisted of less than 4 items and the one-factor model is just identified (i.e., its degrees of freedom are 0). The results of the exploratory factor analysis were satisfactory and they are presented in Table A3-Part B in Appendix A. More specifically, the results of the exploratory factor analysis show that for all the factors the first eigenvalue is much

bigger than the second eigenvalue, which was much smaller than 1 and in all cases it explained more than 70% of the variance. These results show that we can treat the items of each factor as belonging to one factor especially since the loadings of the items on each factor were relatively big (bigger than 0.74). The reliability of these factors was also calculated and for each of these factors the Cronbach alpha was satisfactory (for all factors alpha was greater than 0.7).

1.5 Results of the across countries SEM analyses

SEM analysis was conducted to see whether the items of the questionnaire can be grouped according to our assumptions. Separate SEM analyses were conducted for the three overarching factors: a) School Policy on Teaching, b) Policy on the School Learning Environment and c) Policy on Evaluation. Our attempt was to develop three models for these overarching factors based on the data from all the countries. From the separate SEM analysis, three models were developed and three second order factors were identified. The first overarching factor is school policy on teaching and consists of the factors measuring: a) quantity of teaching, b) quality of teaching and c) provision of learning opportunities and their dimensions (for the model regarding school policy on teaching, see figure 1). The other overarching factor is Policy on the School Learning Environment and consists of the factors measuring differentiation of the learning resources, use of the learning resources (quantitative aspects), teacher collaboration, partnership policy and relation with the community (for the model regarding policy on the School Learning Environment, see figure 2). Finally, the third overarching factor is Evaluation: Dimensions and consists of the factors measuring the dimensions of evaluation of the school policy on teaching and the learning environment. For evaluation, two new factors were identified through the analyses that were not included in the dynamic model: teacher evaluation and school evaluation. (for the model regarding evaluation, see figure 3). This shows the potentials of expanding the dynamic model by looking at the teacher and school evaluation as two separate factors. The fit indices of the across country models are shown in Table 1.1.

Also, another model was tested for each of the three factors of the dynamic model (i.e. school policy on teaching, policy on the school learning environment and school evaluation) in order to compare its fit to the data with the 3 proposed models. In each Model 2 all the items that were used for the SEM analysis in each of the three overarching factors were considered as belonging to a single factor. These models were an attempt to see if the questionnaire items refer to a social desirability factor and may reveal that the construct validity of the questionnaire is problematic. The fit indices of each model are shown in Table 1.1. We can see that model 1 is the model that was found to best fit the data for each of the overarching factors. If models 2 were found to fit to the data, this would cause doubts on whether we could have scores per each factor separately.

Table 1.1: Results of the SEM analysis across countries

SEM analyses – Results							
A. School Policy on teaching							
Models	X²	Df	X²/df	p	CFI	RMSEA	Range RMSEA
Model 1 (Figure 1)	208	176	1.2	0.001	0.984	0.031	0.004 – 0.046
Model 2 (one factor model)	958	249	3.8	0.001	0.661	0.121	0.112 – 0.129
B. Policy on the school learning environment							
Models	X²	Df	X²/df	p	CFI	RMSEA	Range RMSEA
Model 1 (Figure 2)	35	31	1.1	0.001	0.994	0.029	0.001 – 0.063
Model 2 (one factor model)	363	44	8.3	0.001	0.593	0.193	0.174 – 0.211
C. School Evaluation							
Models	X²	Df	X²/df	p	CFI	RMSEA	Range RMSEA
Model 1 (Figure 3)	82	62	1.3	0.001	0.987	0.041	0.007 – 0.063
Model 2 (one factor model)	865	119	7.3	0.001	0.536	0.179	0.168 – 0.190

Figures 1, 2 and 3 reveal the second order factor models that were found to fit to the data when across country analysis was conducted. These models show that the items of the head teacher questionnaire can be used to measure the system factors. Figure 1 presents the second-order factor model of the head teacher questionnaire measuring

system factors on the school policy on teaching with factor parameter estimates. Figure 2 presents the second-order factor model of the policy on the school learning environment and Figure 3 shows the second-order factor model for school evaluation. In Figure 3 it is shown that two new factors were identified through the analyses: a) F5: Teacher evaluation and F6: School evaluation. The dynamic model focuses only on the factors concerned with the dimensions of evaluation (factors F1-F4 as shown in figure 3) and the two factors that were added to the model, regarding teacher and school evaluation, show that there are potentials of expanding the dynamic model.

Based on the results of the theoretical models (models 1) the factor scores were estimated based on the loadings of the items that occurred from the SEM analysis, as they appear below in Figures 1, 2 and 3. These factor scores will be used for the multilevel analysis, in order to identify the impact of the system factors on student achievement in mathematics and science. Looking at the loadings of the items and the factors we can see that they are all very high and that all the loadings are statistically significant.

Figure 1: The second-order factor model of the head teacher questionnaire measuring system factors on the school policy on teaching with factor parameter estimates

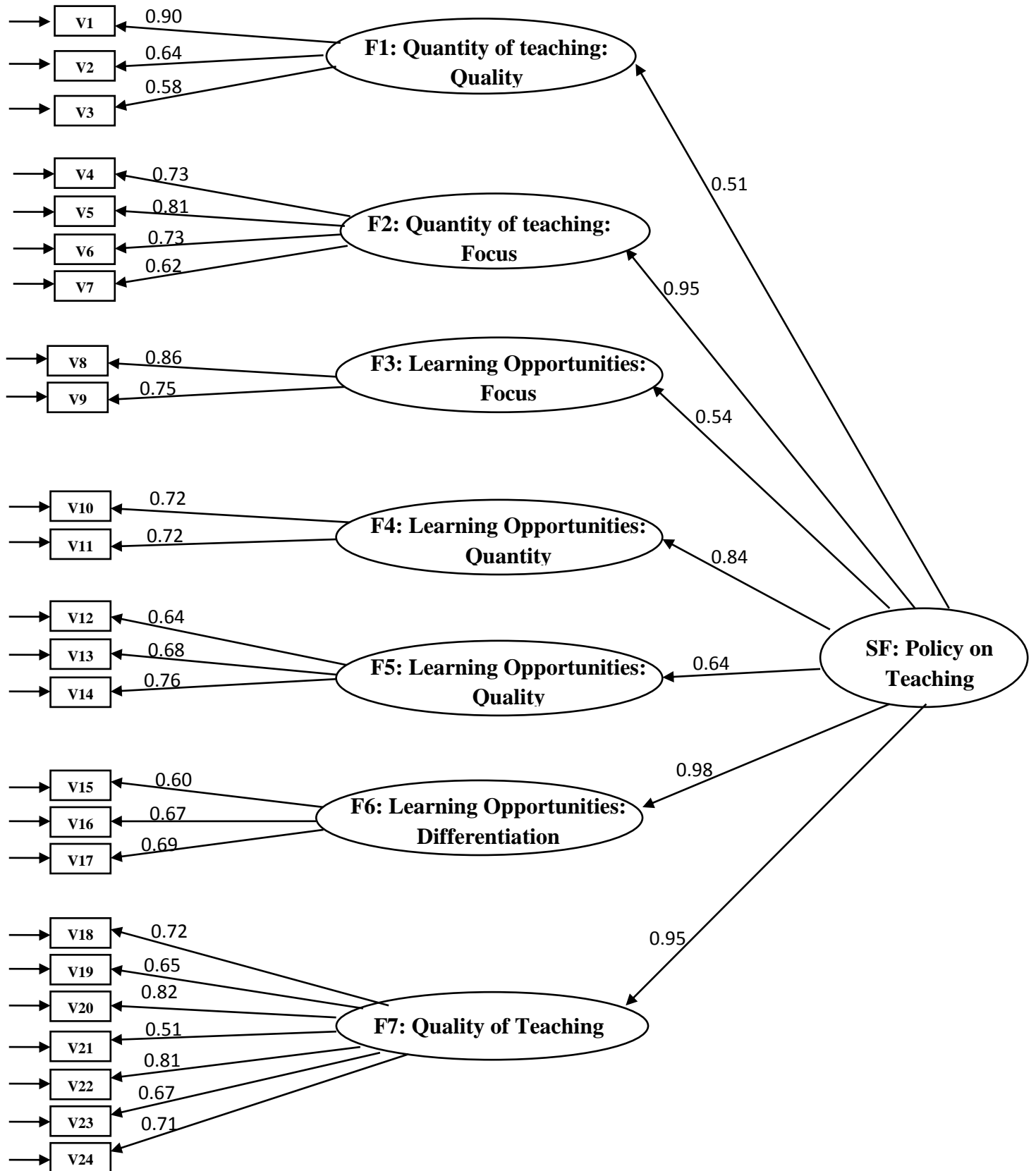


Figure 2: The second-order factor model of the head teacher questionnaire measuring system factors on the school learning environment with factor parameter estimates

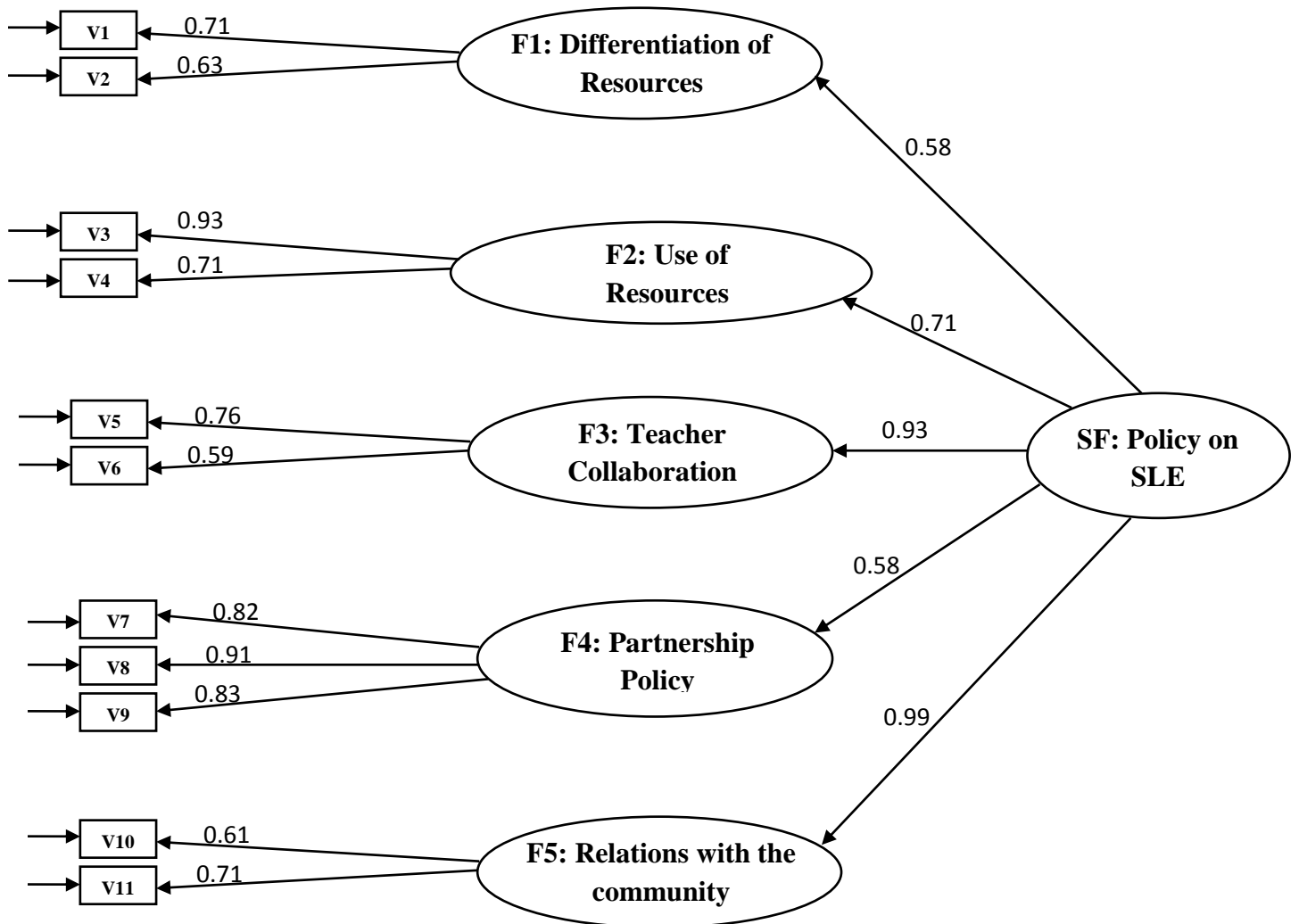
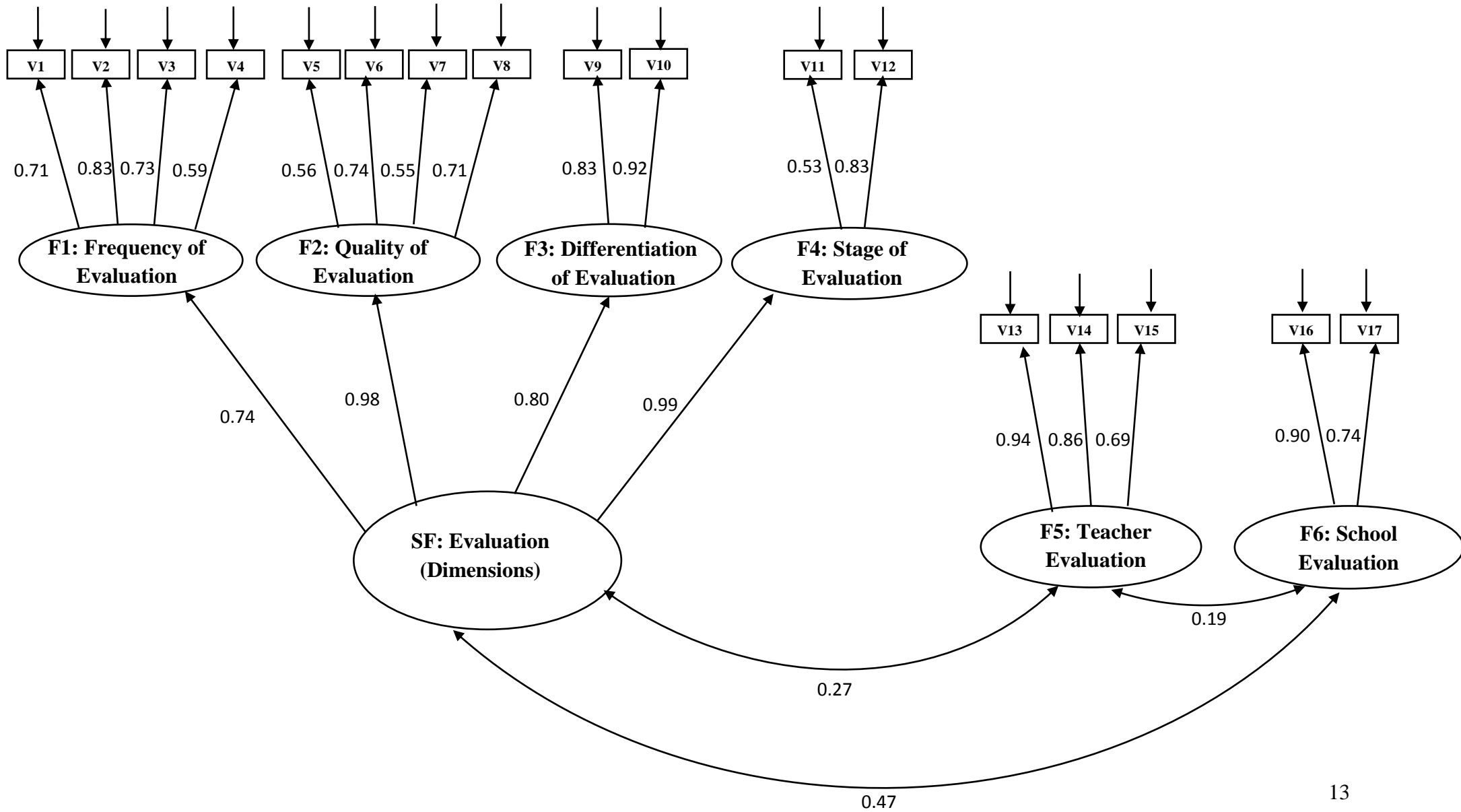


Figure 3: The second-order factor model of the head teacher questionnaire measuring system factors on school evaluation with factor parameter estimates



Interpretation of Results

First, it is important to note that in spite of the fact that we had a very small amount of data from each participating country, which shows that evaluation of the system is a sensitive issue and thus not many head teachers wanted to express their views, we managed to show the construct validity of the questionnaire. More specifically, it was shown that the head teacher questionnaire can be used for the measurement of the system factors and we have managed to create three separate models for the three overarching factors which show the relations of the factors across countries. The three separate models that were created for the three factors included in the dynamic model at the system level, showed that the questionnaire items do not belong to a single factor; and therefore do not refer to a social desirability factor but that each factor can be considered as being important.

Specifically, regarding evaluation, we have had some very good results as it was possible to measure the dimensions and it was shown that the school and teacher evaluation is something different than the evaluation of the policy. Through the multilevel analyses, it should be further examined whether these two factors should be taken under consideration for expanding the dynamic model and for seeing whether the dynamic model should refer separately to teacher and school evaluation and not only to the evaluation of the policy.

The dimensions could also be measured for policy on teaching, while it was not easy to identify the dimensions for the school learning environment since they were not all measured by the questionnaire which focused mostly in the dimensions of quality and differentiation (see specification table, Appendix C).

It is also important to note that while in the student questionnaire we have encountered difficulties with the items measuring the differentiation dimension, it was easier to measure differentiation of the system factors through the head teacher questionnaire.

From the analyses it was shown that some of the questionnaire items had to be removed. Specifically, from the Generalizability and CFA analyses (sections 1.2 and 1.4,

respectively), 16 items in total had to be removed out of the 72 items that were included in the questionnaire. These items belong to four categories which are: a) items concerned with some aspects of record keeping, b) items concerned with the teachers' role during break time, c) items concerned with the incentives given by the system/national standards and d) items concerned with homework.

Some explanations of the possible reasons that some items had to be removed from the analyses are presented in more detail below and the removed items are classified based on our assumptions about the reasons for which they might have had to be removed.

As mentioned, the results from the analyses showed that some of the items concerned with certain aspects of record keeping had to be removed. A possible explanation could be that in some countries the system does not expect schools to keep records for some matters, such as teacher absenteeism or extra-curricular activities. Therefore the fact that these items appeared to be problematic can be explained by the different context of the countries and the different demands of the system in regard to specific aspects of record keeping. These items were: HTAQ1b, HTAQ1e and HTQA1f. Moreover, as it resulted from the analyses, some of the items concerned with the teachers' role during break time had to be removed. This can probably be explained by the fact that in some systems it is not expected by the teacher to supervise students during break time while in other systems (such as Cyprus and Greece) the policy might be very clear and strict about the role of the teacher during break time. The items that were related to teachers' role during break time and were removed from the analyses were: HTAQ4i and HTB1k.

A similar problem appeared with the items concerned with the incentives given by the system and actions taken to increase national standards. The reason why these items had to be removed is probably due again to differences of the system in some countries and to whether a system is more centralized or decentralized. For instance, some of the items that were related to the incentives provided by the national/state ministry of education to help schools become more effective, were context specific and were more relevant to centralized systems rather than decentralized. These items were: HTBQ2, HTBQ3, HTBQ4, HTBQ5a, HTBQ5b and HTBQ6. From these items, items HTBQ4, HTBQ5a, HTBQ5b and HTBQ6 were not administered in Cyprus and Greece as they did not match the context of the countries.

In addition, some of the items concerning homework (i.e. type of homework, amount of homework, assignment and correction of homework) had to be removed. This again may be caused by differences in the context of some countries, since some countries may have a clear policy for homework while in other countries with more decentralized systems the schools are responsible for determining how much or what type of homework is assigned to students. The items measuring the systems' policy on homework that were removed from the analyses were: HTAQ4e1, HTAQ4e2 and HTBQ1d.

Finally, during the SEM analyses, item HTAQ4f was removed from the factor concerning the provision of learning opportunities and item HTBQ1f was removed from the factor concerning the provision of sufficient learning resources, as their loadings were found to be low and therefore their contribution to each of the two factors was small.

References

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Cronbach, L. J., Gleser, G. C., Nanda, H. & Rajaratnam, N. (1972). *The Dependability of Behavioral Measurements. Theory of Generalizability Scores and Profiles*. New York: Wiley.

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Appendix A

A1) Table 1: Missing values across countries

	Missing Codes	
Items of the Head Teacher Questionnaire	Code 7	Code 9
HTAQ1a	0	1
HTAQ1b	0	0
HTAQ1c	0	0
HTAQ1d	0	3
HTAQ1e	0	0
HTAQ1f	0	0
HTAQ1g	0	3
HTAQ2a	0	1
HTAQ2b	0	1
HTAQ2c	0	1
HTAQ3	0	8
HTAQ4a	0	0
HTAQ4b	0	5
HTAQ4c	0	3
HTAQ4d	0	4
HTAQ4e1	0	0
HTAQ4e2	0	1
HTAQ4e3	0	4
HTAQ4e4	0	0
HTAQ4f	0	3
HTAQ4g	0	3
HTAQ4h	0	4
HTAQ4i	0	4
HTAQ4j	0	2
HTAQ5	0	7
HTAQ6	0	2
HTAQ7	0	2
HTAQ8	0	2
HTAQ9	0	1
HTAQ10	0	2
HTAQ11	0	1
HTAQ12	0	0
HTAQ13	0	2
HTAQ14	0	5
HTAQ15	0	3
HTAQ16	0	2

HTBQ1a	0	4
HTBQ1b	0	3
HTBQ1c	0	3
HTBQ1d	0	1
HTBQ1e	0	3
HTBQ1f	0	1
HTBQ1g	0	2
HTBQ1h	0	1
HTBQ1i	0	1
HTBQ1j	0	1
HTBQ1k	0	2
HTBQ1I1	0	1
HTBQ1I2	0	1
HTBQ1I3	0	1
HTBQ2	0	2
HTBQ3	0	1
HTBQ4	100	0
HTBQ5a	100	0
HTBQ5b	100	4
HTBQ6	100	0
HTBQ7a	0	0
HTBQ7b	0	1
HTBQ7c	0	1
HTCQ1	0	3
HTCQ2a	0	4
HTCQ2b	0	3
HTCQ2c	0	3
HTCQ2d	0	3
HTCQ3	0	4
HTCQ4	0	8
HTCQ5	0	9
HTCQ6	0	8
HTCQ7	0	4
HTCQ8	0	7
HTCQ9	0	6
HTCQ10	0	14

A2) Table 2: Results of the ANOVA analysis across countries

ANOVA		
	F	Sig.
HTAQ1a	11,213	,000
HTAQ1b	1,745	,126
HTAQ1c	20,031	,000
HTAQ1d	20,117	,000
HTAQ1e	4,044	,002
HTAQ1f	5,262	,000
HTAQ1g	1,841	,107
HTAQ2a	2,794	,018
HTAQ2b	2,657	,024
HTAQ2c	14,600	,000
HTAQ3	2,906	,015
HTAQ4a	3,344	,006
HTAQ4b	4,054	,002
HTAQ4c	4,358	,001
HTAQ4d	2,219	,054
HTAQ4e1	6,844	,000
HTAQ4e2	8,269	,000
HTAQ4e3	3,747	,003
HTAQ4e4	6,692	,000
HTAQ4f	,886	,491
HTAQ4g	7,891	,000
HTAQ4h	4,165	,001
HTAQ4i	1,690	,139
HTAQ4j	2,951	,014
HTAQ5	14,480	,000
HTAQ6	2,919	,015
HTAQ7	4,127	,001
HTAQ8	4,067	,002
HTAQ9	13,524	,000
HTAQ10	27,290	,000
HTAQ11	5,466	,000
HTAQ12	4,091	,001
HTAQ13	9,999	,000
HTAQ14	16,086	,000
HTAQ15	6,782	,000
HTAQ16	15,435	,000
HTBQ1a	2,706	,022
HTBQ1b	2,862	,016
HTBQ1c	2,388	,040
HTBQ1d	3,236	,008

HTBQ1e	1,770	,122
HTBQ1f	6,604	,000
HTBQ1g	5,467	,000
HTBQ1h	8,282	,000
HTBQ1i	2,948	,014
HTBQ1j	9,511	,000
HTBQ1k	2,875	,016
HTBQ111	1,625	,156
HTBQ112	,640	,670
HTBQ113	6,406	,000
HTBQ2	1,100	,363
HTBQ3	2,307	,047
HTBQ4	4,183	,008
HTBQ5a	1,554	,207
HTBQ5b	1,030	,384
HTBQ6	4,706	,005
HTBQ7a	,822	,536
HTBQ7b	1,568	,171
HTBQ7c	1,469	,202
HTCQ1	4,604	,001
HTCQ2a	1,142	,340
HTCQ2b	,836	,525
HTCQ2c	3,338	,007
HTCQ2d	6,889	,000
HTCQ3	8,623	,000
HTCQ4	6,227	,000
HTCQ5	4,786	,000
HTCQ6	3,980	,002
HTCQ7	3,993	,002
HTCQ8	4,669	,000
HTCQ9	4,902	,000
HTCQ10	6,553	,000

A3) Table 3: Results of the Exploratory and Confirmatory Factor Analysis

A. Policy on Teaching					
Part A. Results: Confirmatory Factor Analysis					
System Factors	X ²	df	CFI	RMSEA	Cronbach alpha
*Quantity of teaching (Focus) Items: PA1a, PA2a, PA3, PA4a, PA4b, PA4c, PA4d	0.93	2	0.99	0.001	a=0.73
Quality of Teaching Items: PA2c, PA4h, PA5, PA6, PA10, PB1i, PB1j	18	11	0.98	0.061	a=0.83
Part B. Results: Exploratory Factor Analysis					
System Factors	First eigenvalue	Second eigenvalue	Explained variance	loadings bigger than:	Cronbach alpha/ Pearson r
Quantity of teaching(Quality) Items: PB1a, PB1b, PB1c	2.16	0.49	72%	0.81	a=0.81
Learning Opportunities (Focus) Items: PA4e3, PA4e4	1.62	0.38	80%	0.90	r= 0.62
Learning Opportunities (Quantity) Items:PA1c, PA1d	1.55	0.45	77%	0.88	r= 0.55
Learning Opportunities (Quality) Items: PB1e, PB1g, PB1h	1.93	0.57	64%	0.79	a=0.72
Learning Opportunities (Differentiation) Items: PA2b, PA4g, PA15	1.86	0.63	62%	0.74	a=0.69
B. School Policy on the SLE					
Results: Exploratory Factor Analysis					
System Factors	First eigenvalue	Second eigenvalue	Explained variance	loadings bigger than:	Cronbach alpha/ Pearson r
Differentiation of resources Items: PA13, PA16	1.43	0.56	71%	0.84	r= 0.44

Use of resources (qualitative aspects) Items: PA4j, PA1g	1.57	0.43	78%	0.88	r= 0.57
Teacher Collaboration Items: PA7, PA12	1.44	0.55	72%	0.84	r= 0.44
Partnership Policy Items: PB1L1, PB1L2, PB1L3	2.44	0.32	81%	0.89	a=0.89
Relations with the community Items: PA8, PA11	1.32	0.67	66%	0.81	r= 0.32
C. Evaluation					
Part A. Results: Confirmatory Factor Analysis					
System Factors	X²	df	CFI	RMSEA	Cronbach alpha
Evaluation: Frequency Items: PC2a, PC2b, PC2c, PC2d	0.74	1	0.99	0.001	a=0.83
Evaluation of the School Policy on teaching and the SLE: Quality Items: PC3, PC4, PC5, PC6	1	1	0.99	0.061	a=0.74
Part B. Results: Exploratory Factor Analysis					
System Factors	First eigenvalue	Second eigenvalue	Explained variance	loadings bigger than:	Cronbach alpha/ Pearson r
Stage of Evaluation Items: PC9, PC10	1.37	0.32	83%	0.91	r= 0.67
Differentiation of Evaluation Items: PC7, PC8	1.78	0.21	89%	0.94	r= 0.78
Teacher Evaluation Items: B7a, B7b, B7c	2.39	0.41	79%	0.84	a=0.87
School Evaluation Items: PA9, PA14	1.66	0.33	83%	0.91	r= 0.67

***Note:** In the case of Quantity of teaching (Focus), items PA4a, PA4b, PA4c and PA4d were grouped as one variable as they all concerned aspects of the school's policy on the quantity of teaching and they were found to be correlated with each other.

Appendix B

QUESTIONNAIRE FOR HEADTEACHERS

This questionnaire has been developed for a study that aims to capture headteachers' opinions about the national/state education policy on teaching and the broader learning environment of primary schools. The following three aspects of teaching and the school learning environment (SLE) are taken into account in the questionnaire:

A. Usage of teaching time

Time management, student absenteeism, teacher absenteeism, homework, school timetabling, and teaching time spent on extra-curriculum activities.

B. Provision of learning opportunities

Use of visual materials and technological equipment in classrooms, dealing with students with special educational needs (e.g., gifted children, children with learning difficulties, children with special interests), and teachers' long-term planning.

C. Quality of teaching

Student assessment and evaluation, lesson structuring, orienting students to achieve specific goals, application exercises, using questions as an teaching technique, use of learning strategies, time management, and the classroom as a learning environment.

The questionnaire also asks for your views about the national/state policy for improving the broader learning environment of primary schools. Specifically, four aspects of the School Learning Environment (SLE) are taken into account: a) School policy on student behaviour outside the classroom; b) Teacher collaboration; c) Relations with parents and the wider community; and d) Use of school and local community resources.

The questionnaire is structured in three parts: Part A covers the national/state policy and your school policy; Part B covers the impact of national/state policy on school practices, and Part C covers evaluation of the national/state policy.

Completing the questionnaire will take approximately **20 minutes**.

Thank you very much for your help.

PART A: THE NATIONAL/STATE POLICY AND YOUR SCHOOL POLICY

Part A provides statements about the relationship between the national/state policy and your school policy. Please circle one number that *you* think applies to each statement, based on the following scale:

1 = <u>No</u> national/state policy OR the content of the national/state policy is not clear.
2 = Schools are <u>encouraged</u> to implement the national/state policy.
3 = Schools are <u>required</u> to implement the national/state policy.
4 = An <u>accountability</u> system exists to ensure that the national/state policy is implemented.

In your view, what is the impact of the national/state policy on the following?

	No Policy	Encouragement	Requirement	Accountability
1. Keeping systematic school records relating to:				
A. Student absenteeism.	1	2	3	4
B. Teacher absenteeism.	1	2	3	4
C. Special educational needs of students.	1	2	3	4
D. Long-term planning by the teachers.	1	2	3	4
E. Organisation of extra-curricular activities (e.g. trips, visits and other activities).	1	2	3	4
F. Disciplinary problems involving students during break-times.	1	2	3	4
G. Taking advantage of educational resources available in your school (e.g., maps, software etc.).	1	2	3	4
2. School participation in programmes aimed at:				
A. Making good use of teaching time.	1	2	3	4
B. Providing learning opportunities beyond those offered by the formal curriculum.	1	2	3	4
C. Improving teaching quality (e.g., structuring, questioning, orientation).	1	2	3	4
3. Designing the school timetable so that sufficient time is allowed for students to move around classrooms/buildings and prevent the loss of teaching time.	1	2	3	4

./..

In your view, what is the impact of the national/state policy on the following?

	No Policy	Encouragement	Requirement	Accountability
4. Your school policy on:				
A. Encouraging all school staff to maximise teaching time and minimise disruptions to classes.	1	2	3	4
B. Regaining any lost teaching time by offering extra class time for learning.	1	2	3	4
C. Ensuring that lessons start and finish on time.	1	2	3	4
D. Ensuring that there are no interruptions of lessons (e.g., for announcements).	1	2	3	4
E. Developing a policy on homework that provides guidelines about the:				
1) Amount of homework given to students.	1	2	3	4
2) Type of homework.	1	2	3	4
3) Role of parents in supervising homework.	1	2	3	4
4) Feedback on homework assignments.	1	2	3	4
F. Providing learning opportunities to students beyond those offered by the formal curriculum.	1	2	3	4
G. Supporting students with special needs (e.g., children with learning difficulties, gifted children, children with special interests).	1	2	3	4
H. Establishing a school policy on the characteristics of effective teaching.	1	2	3	4
I. Establishing a school policy about teachers' role in supervising students during break-times.	1	2	3	4
J. Ensuring that teachers make use of different educational tools available in the school.	1	2	3	4
5. Differentiating teaching according to students' needs and abilities.	1	2	3	4
6. Providing incentives for teachers and students to implement the school policy on teaching (e.g., your school rewards teachers who spend extra time giving support to students and/or feedback to parents).	1	2	3	4
7. Promoting cooperation among teachers within schools on professional development issues (e.g., exchanging teaching materials, experiences from participating in different projects).	1	2	3	4
8. Creating networks between schools for teacher professional development purposes.	1	2	3	4
9. Using the results of school evaluations to identify school improvement priorities.	1	2	3	4

./..

In your view, what is the impact of the national/state policy on the following?

	No Policy	Encouragement	Requirement	Accountability
10. Promoting the pedagogical role of the headteacher as an instructional leader (e.g., observing lessons and giving feedback to class teachers).	1	2	3	4
11. The role of teaching staff in promoting the school's learning environment (e.g., establishing relations with the parents and the school community).	1	2	3	4
12. The role of staff meetings in promoting teacher professional development (e.g., discussing issues on effective teaching and on dealing with students that have special educational needs).	1	2	3	4
13. Providing resources to the school for offering in-service training for specific groups of teachers (e.g., newly appointed teachers).	1	2	3	4
14. Conducting school self-evaluation for improvement purposes.	1	2	3	4
15. Promoting equity in education by providing extra learning opportunities to those who need them	1	2	3	4
16. Providing extra resources to students from more disadvantaged backgrounds.	1	2	3	4

PART B: THE IMPACT OF NATIONAL/STATE POLICY ON SCHOOL PRACTICES

Part B refers to statements relating to the impact that the national/state policy may have on the actions taken to improve educational practice in your school. For each statement, please choose a **number from 1 to 4 of the scale below** to show how much you agree or disagree with each statement about the impact of national/state policy. **Where there is no national/state policy on a specific issue (or if you are unaware of such a policy), please place an X in the ‘Not applicable’ box on the right.**

1	2	3	4
Absolutely disagree	Disagree	Agree	Absolutely agree

To what extent do you agree or disagree with the following?

	Absolutely disagree	Disagree	Agree	Absolutely agree	Not applicable
1. I feel <i>positively</i> influenced by the national/state policy to establish our school policy in relation to the following aspects:					
A. Managing teaching time.					
B. Dealing with student absenteeism.	1	2	3	4	
C. Dealing with teacher absenteeism.	1	2	3	4	
D. Assigning and correcting homework.	1	2	3	4	
E. Making good use of time spent on extra-curricular activities.	1	2	3	4	
F. Using visual aids and technological equipment in the classroom.	1	2	3	4	
G. Dealing with students with special education needs.	1	2	3	4	
H. Long-term planning of teaching.	1	2	3	4	
I. Assessing students.	1	2	3	4	
J. Establishing a school policy on promoting effective teaching practices.	1	2	3	4	
K. Duties for teaching staff during break times (e.g., supervising students, organizing learning activities).	1	2	3	4	
L. Organising parent-teacher meetings and/or lectures concerned with how parents can help deal with problems that include:					
1) Student absenteeism.	1	2	3	4	
2) Homework.	1	2	3	4	
3) Dealing with students with special educational needs.	1	2	3	4	

Questions 2 - 7 refer to the actions taken by the national/state ministry of education to improve the quality of primary schooling. Using the same scale as above, please indicate the extent to which you agree or disagree with

each statement. As before, **where no action is taken (or if you are unaware of any action), please place an X in the 'Not applicable' box on the right.**

1	2	3	4
Absolutely disagree	Disagree	Agree	Absolutely agree

To what extent do you agree or disagree with the following?

	Absolutely disagree	Disagree	Agree	Absolutely agree	Not applicable
2. Extra incentives provided by the national/state ministry of education to teachers working in disadvantaged areas have a positive effect on appointing effective teachers in these areas.	1	2	3	4	<input type="checkbox"/>
3. The national/state ministry of education offers incentives to schools that succeed in raising student achievement outcomes and help these schools to become even more effective.	1	2	3	4	<input type="checkbox"/>
4. Students of specific age groups take national/state tests considered important for students' academic success and career development.	1	2	3	4	<input type="checkbox"/>
5. The national/state ministry of education provides performance indicators that help primary teachers to:					
A. Focus their teaching on specific outcomes.	1	2	3	4	<input type="checkbox"/>
B. Develop instruments to assess student performance.	1	2	3	4	<input type="checkbox"/>
6. By allocating more resources to schools in disadvantaged areas, the ministry of education helps the students of these schools reach national standards.	1	2	3	4	<input type="checkbox"/>
7. The teacher appointment process ensures that those who are appointed at primary schools have sufficient level of:					
A. Subject-matter knowledge in the core subjects of the primary curriculum (i.e., Languages and Mathematics).	1	2	3	4	<input type="checkbox"/>
B. Subject-matter knowledge in Science.	1	2	3	4	<input type="checkbox"/>
C. Pedagogical knowledge.	1	2	3	4	<input type="checkbox"/>

PART C: EVALUATION OF THE NATIONAL/STATE POLICY

Part C seeks your views on the evaluation of the national/state education policy regarding primary schooling. To answer questions 1-11 of Part C, please circle a number from 1 to 4, based on the scale below, to show how often the following practices relating to the evaluation of national/state policy are observed:

1	2	3	4
Never	Rarely	Often	Very often

In your view, how often do the following happen?

	Never 1	Rarely 2	Often 3	Very often 4
1. The ministry of education collects information for the evaluation of the national/state policy relating to teaching and/or the learning environment.				
2. To evaluate the implementation of the national/state policy on teaching, the ministry of education collects information about...				
A. Teachers' perceptions of the state/national policy and actions taken to improve teaching.	1	2	3	4
B. The impact of the state/national policy on promoting student learning.	1	2	3	4
C. Students' perceptions of the state/national policy and actions taken to improve teaching.	1	2	3	4
D. Parents' perceptions of the state/national policy and actions taken to improve teaching.	1	2	3	4
3. Evaluation of teachers' ability to implement the national/state policy on teaching,	1	2	3	4
4. Information collected during evaluation of the national/state policy on teaching is used for re-designing the policy and/or for making new decisions.	1	2	3	4
5. The results of evaluations of national policy on teaching are used for teacher appraisal purposes (e.g., career development purposes).	1	2	3	4
6. Information collected on the school learning environment during evaluation of the national/state policy is used to re-design school policy.	1	2	3	4
7. Aspects of the national/state policy <i>on teaching</i> which are considered problematic are evaluated <i>more often</i> and/or <i>in more detail</i> .	1	2	3	4
8. Aspects of the national/state policy <i>on the school learning environment</i> which are considered problematic are evaluated <i>more often</i> and/or <i>in more detail</i> .	1	2	3	4
9. The ministry of education ensures that new national/state reforms are evaluated as soon as the reform begins.	1	2	3	4
10. The ministry of education reviews their evaluation mechanisms and adapts them in order to improve the quality of the evaluation process.	1	2	3	4

Finally, in the space provided below, please write down anything you consider important for **the development and evaluation of school policy** relating to the teaching and the learning environment of your school.

Thank you very much for your contribution.

Appendix C

Specification Table: Items of the Head teachers' questionnaire by system factor

	Dimensions				
	Quality	Frequency	Focus	Stage	Differentiation
Impact of the National Policy on:					
A. Policy on Teaching					
Quantity of Teaching	PB1a, PB1b, PB1c		PA1a, PA1b PA2a, PA3, PA4a, PA4b, PA4c, PA4d		
Provision of learning opportunities	PA4f, PB1d, PB1e, PB1g, PB1h	PA1c, PA1d, PA1e	PA4e1, PA4e2, PA4e3, PA4e4		PA2b, PA4g, PA15
Quality of Teaching	PA2c, PA4h, PA5, PA6, PA10, PB1i, PB1j				
B. Policy on the School Learning Environment					
Student behavior outside the classroom	PA4i, PB1k, PA1f				
Provision of sufficient learning resources	PB1f	PA4j, PA1g, PB3			PA13, PA16, PB2, PB6
Collaboration and interaction between teachers	PA7, PA12				
Partnership Policy	PB1L1, PB1L2, PB1L3				
Relations with the community	PA8, PA11				
C. Evaluation	PC3, PC4, PC5, PC6, PA9, PA14	PC2a, PC2b, PC2c, PC2d,	PB5a, PB5b, PB7a, PB7b, PB7c	PC9, PC10	PB4, PC7, PC8