1.1 Key performance indicator models

The generation of appropriate performance indicators is a prime objective of the EDSS/EMIS strategy. The EDSS/EMIS system design is policy-driven, with the objective of meeting the fundamental policy goals required in any system of:

- managing risks by ensuring legal and regulatory compliance;
- reducing costs by effective monitoring and audit;
- improving performance by setting standards, benchmarks and targets; and
- maximising outcomes by focusing on significant deviations from those standards and targets.

To achieve these goals, the EDSS/EMIS strategy faces six main tasks:

- collecting relevant, accurate and up-to-date data from the most appropriate sources;
- selecting appropriate key, policy-related indicators;
- creating information/knowledge repositories (the 'data warehouse');
- improving information/knowledge access, not only for policy-makers but for other stakeholders such as schools, researchers and communities;
- enhancing the information/knowledge environment, by supporting high quality data inputs; validating that these are accurate, comprehensive and up-to-date; and using a full range of analysis techniques to produce useful outputs; and
- managing information and knowledge to meet changing needs, so that the indicators and data inputs are evaluated regularly, to ensure that they match changing policy requirements.

The identification and use of effective policy and performance indicators will support all of these tasks. The framework proposed for the EDSS will generate useful performance indicators for policy-makers through the collection, processing and analysis of accurate, relevant and up-to-date information. 31 key performance indicators have been identified, based on current policies as specified in relevant documentation including the National Agenda and by the central Managing Directors. Most of this data inevitably is derived initially from the nation's public and private schools. Most of the rest will come from the MoE's 16 central Directorates and 37 field directorates. Other data will be required from sources external to the Ministry. They relate to the six policy fields referred to in Section 1.3 of this annex above[1].

This list of KPIs and sub-indicators presented in the next table is provisional. As policies change, policy-makers will require new information. For example, teacher performance does not appear to be a major priority at present, but may well be a major policy imperative in the years to come. The EDSS must be sufficiently flexible to be able to generate new indicators, which support those new policy imperatives. But the basic structure underpinning the indicators will not change fundamentally. Education will continue to take place primarily in schools. Those schools will contain students and will employ teachers and other staff. They must deliver a curriculum and test the effectiveness of that delivery through examinations and other assessments. They will require buildings, facilities, and equipment and learning resources. And these must be paid for by government, parents and communities.

[1] The relationship between the KPIs and the policy fields is described in detail in sections 2.3-2.5 of the GOPA May 2005 report

The interactions between these elements within schools and classrooms are complex and still imperfectly understood. But the selection of appropriate indicators can assist policy-makers and others:

- to recognise that similar inputs can lead to very different outputs and to seek some of the reasons for those variations;
- to set goals, benchmarks and targets for all schools in order to raise standards; and
- to focus investigations and remedial policies on those areas, schools and student groups that fail to meet expected standards and targets.

The selected key performance indicators have to be integrated in the EDSS model repository in form of one model for each KPI. Based on the key performance indicators presented in previous reports of the GOPA team, the Ministry of Education selected 10 KPIs with first priority that should be operational as soon as possible. We recommend that another 21 KPIs be added in phases. The first 10 (Priority 1) KPIs need to be operational as soon as possible. Priority 2 indicators are those for which the required data is already available in electronic form. Priority 3 KPIs require that data flows have as yet to be established and/or the processes that generate that data are not yet operational. Some of these are qualitative, supporting unstructured and semi-structured decision-making.

The Department of Statistics collects statistical data on the basis of each governorate (Muhafazat). Each governorate is divided into a number of administrative subdivisions, (i) Liwa (District), (ii) Qada (sub-district), (iii) Tajammu, and finally into (iv) sub-units (Hai) or statistical blocks whereby each block contains a number of buildings varying in number:

The following grouping criteria IDs are used throughout the report:

- 1 = national level,
- 2 = Governorate (Muhafazat),
- 3 = Field Directorate level,
- 4 = Liwa (district),
- 5 = Qada (sub-district),
- 6 = Tajammu (community),
- 7 = Hai one individual,
- 8 = one individual school,
- 9 = one individual staff member,
- 10 = one individual student,
- 11 = other relevant elements.

Table 1: Summary of KPIs and sub-indicators

No.	Indicator
1. Schools	
1.1	School by cycle
1.2	School by student population
1.3	School by area (sqm)
1.4	School by grades
1.5	School by gender
1.6	School by authority
1.7	School serving an administrative unit by type

No.	Indicator
2. Class size	
2.1	Basic school class average size
2.2	Secondary school class average size
2.3	% of basic schools over basic class size target
2.4	% of schools over secondary class size target
3. Rented, 2-shift & multi-class school sub-indicators	
3.1	% of students in rented classrooms
3.2	% of rented school accommodation (educational and non educational rooms)
3.3	% of students in 2-shift school-buildings[2]
3.4	% of 2-shift schools (i.e. schools sharing their buildings with another school)
3.5	% of students in multi-class units
4. School capacity	
4.1	% of overcrowded classrooms
4.2	% of students in overcrowded classrooms
4.3	% of under-utilised classrooms
4.4	% of non-utilised classrooms
5. Students' profile	
5.1	% of male / female students
5.2	Student age profile by grade
5.3	Average student distance from home to school
5.4	% of schools in defined 'remote' rural areas
6. Gross enrolment ratio (GER)	
6.1	% of children enrolled at basic cycle
6.2	% of children enrolled at secondary cycle
6.3	% of children enrolled at kindergarten
7. NER sub-indicators	
7.1	% enrolled in each age-group regardless of grade
7.2	% enrolment in secondary education
7.3	% enrolment in vocational education
8. Teacher profile	
8.1	% male / female teachers
8.2	Teacher age profiles
8.3	Teachers by subject specialism
8.4	% of teachers currently teaching their specialisation
8.5	Teachers by highest qualification
8.6	Teachers by employment status
8.7	Teachers by locality

No.	Indicator
9. Teacher training	
9.1	% of teachers with ICDL
9.2	% of teachers with classroom practice training
10. Student-teacher ratio (STR)	
10.1	Student-teacher ratio
10.2	Problem factors
11. Student absence and drop-out rates	
11.1	Percentage of students absent *more than x days per year* without permission
11.2	Percentage of students absent *more than x days per year* with permission
11.3	Percentage of dropped out students
12. Special educational needs	
12.1	% of students identified as 'gifted'
12.2	% of students assessed for special needs
12.3	% of assessed special education needs (SEN) children in mainstream schools
12.4	% of assessed SEN children taught by teachers with special needs training
12.5	% of schools with facilities for SEN
13. Teacher performance indicator	
13.1	% teachers evaluated as satisfactory or above
13.2	Aggregated grade averages per class undertaking last year's NAfKE tests
14. Student performance	
14.1	Standardised NAfKE results by grade & gender
14.2	School performance in standardised tests
14.3	District performance in standardised tests
14.4	% of teachers trained in test construction and analysis by cycle and subject
14.5	Performance of sample of students in national & international tests at selected grades
15. Tawjeehi	
15.1	National pass rate % on "Tawjeehi" exam
15.2	Variation between male and female average national and educational district pass rates in "Tawjeehi" exam
16. Repetition rate	
16.1	% students repeating a grade
16.2	% male/female repetition rates
17. Student completion & destination rates	
17.1	% enrolled students completing each grade
17.2	% enrolled vocational students completing each course by grade
17.3	% students unemployed 6 months after leaving basic school
17.4	% students progressing to higher education from government & private schools
17.5	% students unemployed 6 months after leaving vocational school
18. Vocational education	

No.	Indicator
18.1	ratio of vocational students graduating to number enrolled
18.2	responsiveness of vocational school curriculum to local labour market
19. Illiteracy	
19.1	National & local illiteracy rates
19.2	% illiterate population attending illiteracy elimination centres
20. ICT resources	
20.1	% of schools with sufficient computers for ICT
20.2	ratio of students per computer
20.3	% of schools with online broadband connectivity
20.4	% of pupils working online at least once per month
21. Textbook	
21.1	% students in basic education provided with new, revised text books
21.2	% secondary students provided with new, revised text books
22. Building construction	
22.1	Ratio of actual building starts to planned
22.2	Ratio of actual building completions to planned
23. School income	
23.1	Donations as % of school expenditure
23.2	% of FD budget allocated for local (FD) discretion
23.3	Cost of educational provision per pupil in schools by school size
23.4	Private school per capita expenditure & income
24. Facility provision	
24.1	numbers of school disruptions due to inadequate facilities, furniture and equipment
24.2	facility quality measure
24.3	furniture quality measure
24.4	equipment replacement rate
25. Teacher utilisation	
25.1	% of teachers teaching xx hours above & below average weekly total
25.2	% of teachers teaching specialisms for >50% teaching time
26. Staff absences and turnover	
26.1	% staff-days unauthorised absences monthly
26.2	% staff-days authorised absences monthly
26.3	% staff departures annually

No.	Indicator
27. Teacher supervision	
27.1	% supervisors trained to provide structured advice on improving classroom performance
27.2	% schools where teachers receive structured advice from supervisors
27.3	numbers of schools where constructive feedback is structured as part of quality assurance as %age of total
28. **Educational expenditure**	
28.1	Total & per capita educational expenditure and sources
29. **Central Directorate effectiveness**	
30. **Field Directorates efficiency**	
31. **System quality indicator**	
31.1	Improved learning nationally
31.2	Numbers of recorded administrative complaints
31.3	Numbers of complaints about teachers & schools

1.2 Priority 1 key performance indicator models

1.2.1 KPI no. 1 and sub-indicators – School profile

The purpose of this KPI is to provide accurate, up-to-date and relevant information about every school in the Kingdom. Users will be able to discriminate and compare schools by:

- cycle: pre-primary, basic, secondary
- location
- area
- student numbers by gender
- grades taught
- status (public or private)
- catchment area, defined through the GIS.

Each of these provides a separate sub-indicator, for comparative analysis and benchmarking. The location field will facilitate school mapping by two or more indicators. This is a basic indicator from which other KPIs can be derived.

The table below presents the respective sub-indicators, their data sources as well as the algorithm how to calculate them.

Table 2: School profile and sub-indicators

No.	Indicator	Required information	KPI calculation	Data sets required	Grouping criteria (GC)	Formula
1.1	School by cycle	School type (basic, secondary, and vocational) for each school per grouping criteria (GC)	1. Select schools with same school cycle 2. Aggregate no. of School National No. with the similar school cycle per grouping criteria (GC)	▪ School National ID ▪ School active ID ▪ School educational level ID ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	$\sum_{i=1}^{m}\sum_{j=1}^{n} Aij$ A = school i of respective cycle j n = max. no. of schools with cycle j per GC m= max. no. of cycles
1.2	School by student population	Total no. of registered active students per school[3] by age group per GC	1. Select students with same age in year Aggregate no. of student IDs of same age group (years) that are active per GC	▪ Student national ID ▪ Student active ID ▪ School national ID ▪ School active ID ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	$\sum_{i=1}^{25}\sum_{j=3}^{n} Aij$ A = student i of age group j n = max no. of students per age group j and per GC
1.3	School by area (sqm.)	No. of school land area in sqm. per school and GC[4]	1. Select school compound area in sqm 2. Aggregate no. of schools with identical school compound area (in sqm) per GC	▪ School National ID ▪ School active ID ▪ School compound size (sqm) ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	$\sum_{i=1}^{m}\sum_{j=1}^{n} Aij$ A = school i of respective area size j n = max. no. of schools with area size j per GC m= max. no. of area sizes per GC

[3] Dropped out students should not be considered for this indicator,

[4] The following size categories are proposed: 1 = <300 sqm. ; 2 = 301-600 sqm. ; 3 = 601 – 900 sqm. ; 4 = >901sqm.

No.	Indicator	Required information	KPI calculation	Data sets required	Grouping criteria (GC)	Formula
1.4	School by grades	Grades provided by schools per GC	1. Select schools offering same grades 2. Aggregate no. of School National No offering this same grade per GC	▪ School national ID ▪ School active ID ▪ Grades per School National No. ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	$\sum_{\substack{i=1 \\ j=1}}^{\substack{m \\ n}} Aij$ A = school i with grade j per GC n = max. no. of schools with grade j per GC m = max no. of grades (actually 12 grades)
1.5	School by gender	No. of female, male and mixed schools per GC	1. Aggregate no. of School National No's with the same gender type ID (female, male, mixed) for one GC	▪ School National No. ▪ School active ID ▪ School gender flag ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	$\sum_{\substack{i=1 \\ j=1}}^{\substack{3 \\ n}} Aij$ A = school i with gender flag j n = max. no. of schools with same gender flag per GC *Note:* *j characterises gender flag (3 possibilities: male, female, mixed)*
1.6	School by status	No. of private and public schools per GC	1. Select total number of status type IDs 2. Aggregate no. of School National No. with the same status ID per GC	▪ School National No. ▪ School status ID ▪ School active ID ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	$\sum_{\substack{i=1 \\ j=1}}^{\substack{3\,(m) \\ n}} Aij$ A = school i with status j n = max. no. of schools per GC m = max. no. of statuses (at present 3 statuses: public, private and UNWRA)

No.	Indicator	Required information	KPI calculation	Data sets required	Grouping criteria (GC)	Formula
1.7	School serving an administrative unit by type	Pure graphical presentation of no. of schools with students of one administrative unit	1. Select a GC 2. Select schools with students from this GC 3. Select school type of schools student is assigned to 4. Present in tabular form (school name / national school ID by GC)	▪ School IDs ▪ School location (Qada) ▪ School active ID ▪ GC data elements	1, 2, 3, 4, 5, 7, 8	Not applicable

Notes:

1. School cycle: the standard basic/secondary/vocational classification is rather too broad for most policy-making purposes. We propose a classification of 5 cycles:
   - pre-primary (KG)
   - primary (or 'lower basic') = grades 1 - 6
   - lower secondary (or 'upper basic') = grades 7 – 10 inclusive
   - secondary = grades 11-12
   - secondary vocational.

2. Schools are classified by the highest grade taught in the school, so schools with Grades 1 – 11 are classified as 'secondary' although most of their activities are at the basic education cycles. For most analytical purposes, whenever schools must be classified into just one cycle, we propose that it is the cycle with the largest numbers of students.

3. School area (KPI 1.3): We propose that schools are classified into 4 categories, based on square metres: 1 = <300 sqm; 2 = 301-600 sqm; 3 = 601 – 900 sqm; 4 = >901 sqm .

4. Major data for the calculation of these KPI will be stored in the fact sheet "School profile" and "Student profile". Dimension tables required are dimension tables for the administrative units (Field Directorate, Liwa, Qada and Hai) as well as for (i) school status, (ii) school grades, and (iii) student status (active or drop-out)

1.2.2 KPI no. 2 and sub-indicators - class size

This KPI provides as indicator of class size by school cycle (pre-primary, basic and secondary) to identify average class sizes and classes over and below the national and FD average class size for each cycle and grade. It is then possible to identify where teachers and /or facilities are needed to ensure that class sizes are maintained at an acceptable level. It can be used with the classroom capacity/overcrowding KPI no. 4 as a basis for identifying school building priorities.

Table 3: Class size sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
2.1	Basic school class average size	Aggregated number of students per class attending a basic school by GC	1. Calculate no. of student ID per basic school class 2. Aggregate these class averages at level of GC 3. Divide by no. of schools considered per GC	▪ Student ID ▪ School National No. ▪ School cycle ID ▪ GC data elements	1, 2, 3, 4, 5, 6, 7, 8	$\sum_{i=1}^{n} Ai \sum_{i=1}^{n} B$ A = total students of basic school i B = total classes per basic school i n = max. no. of basic schools per GC
2.2	Secondary school class average size	Aggregated number of students per class attending a secondary school by GC	1. Calculate no. of student ID per secondary school class 2. Aggregate these class averages at level of GC 3. Divide by no. of schools considered per GC	▪ Student ID ▪ School National No. ▪ School cycle ID ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	$\sum_{i=1}^{n} Ai \sum_{i=1}^{n} B$ A = total students of secondary school i B = total classes per secondary school i n = max. no. of secondary schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
2.3	% of basic schools over basic class size target	Aggregated number of basic school classes exceeding the set target value divided by total no. schools per GC	1. Calculate no. of student ID per basic school class 2. Aggregate these class averages at level of GC 3. Divide by total of classes considered per GC	▪ See no. 2.1 ▪ Target value for basic school class size (EDSS system reference table) ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} Ai / \sum_{j=1}^{m} Bj * 100$ A = basic school i with at least one overcrowded class B = basic school n = max. no. of basic schools with overcrowded classroom per GC m = max. no. of basic schools per GC *Please note:* *For the calculation of overcrowded classrooms please refer to KPI 4*
2.4	% of schools over secondary class size target	Aggregated number of secondary school classes exceeding the set target value divided by total no. schools per GC	1. Calculate no. of student ID per secondary school class 2. Aggregate these class averages at level of GC 3. Divide by total of classes considered per GC	▪ See 2.2 ▪ Target value for secondary school class size (EDSS system reference table) ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} Ai \sum_{j=1}^{m} j * 100$ A = secondary school i with at least one overcrowded class B = secondary school n = max. no. of secondary schools with overcrowded classroom per GC m = max. no. of secondary schools per GC *Please note:* *For the calculation of overcrowded classrooms please refer to KPI 4*

Major data for the calculation of these KPI will be stored in the fact sheet “School profile” and “Student profile”. Dimension tables required are dimension tables for the administrative units (Field Directorate, Liwa, Qada and Hai) as well as for (i) school status, (ii) school grades, and (iii) student’s status (active or dropped out).

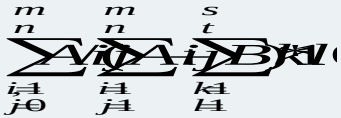
1.2.3 KPI no. 3 and sub-indicators – rented, 2-shift and multi-class schools

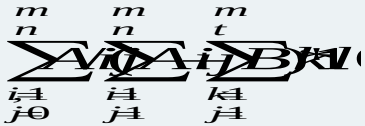
A MoE policy priority is to reduce the numbers of rented schools, 2-shift and multi-class schools in the Kingdom. This indicator identifies the % of students in taught in rented classrooms and in two-shift schools and the numbers of rented schools and school buildings. This in turn enables decision-makers to prepare strategies to prioritise new school building programmes to replace rented accommodation and two-shift schools by cycle and location.

Table 4: Rented, 2-shift & multi-class school sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
3.1	% of students in rented classrooms	▪ Number of rented classrooms ▪ Number of classes using this classroom ▪ Number of students per class	1. Select number of rented classrooms 2. Select number of classes assigned to these classrooms 3. Select number of students assigned to these classes 4. Aggregate per GC	▪ Student ID ▪ Class national no.[5] ▪ Classroom national no. ▪ National building no. ▪ School national no. ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	$\sum_{i=1}^{m}\sum_{j=1}^{n}\sum_{k=1}^{w} A_{ij} B_{kj}$ A= total of students of class i taking lessons in a rented class room in school j B = total of students of class i of school j taking lessons in classroom owned by MoE m = max. no. of classes with rented classrooms per GC n = max. no. of classes with rented classroom per school j v = max. no. of classes in classrooms owned by the MoE per GC m = max. no. of classes per GC

[5] The entity "class" does not yet exist in the current EMIS version. Therefore this should be created during the ETL process and a 1:1 relation between class and classroom should be automatically established. Students should be assigned to classes and not to classrooms. Additional information on the entity class is provided in the respective infocube.

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
3.2	% of rented school accommodation (educational and non educational rooms)	▪ No. of rented educational rooms ▪ No. of rented non-educational rooms ▪ No. of non-educational rooms owned by MoE ▪ No. of non-- educational rooms owned by MoE	1. Select number of school national no. with rented accommodation 2. Aggregate per GC	▪ National school no. ▪ National building ID ▪ Building ownership ID ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	 A = total of rented accommodation per school i B = total of no of rented/MoE-owned accommodation per school l m = max. no. of schools with MoE-owned classrooms per GC n = max. no. of schools with rented accommodation per GC
3.3	% of students in 2-shift schools	No. of students attending a 2-shoft school Total no. of students	1. Select no. of multi-shift schools 2. Select no. of student ID assigned to these schools 3. Aggregate per GC 4. Divide by total no. of schools (1 - + 2 shift) of GC 5. Multiply by	▪ National student no. ▪ National school no. ▪ No. of shifts offered at school level (School shift ID>1) ▪ GC data elements	1, 2, 3	 A = student i in 2-shift school j B = student k in 1-shift school l m = max. no. of 2-shift schools per GC n = max. no. of students per school i s = max. no. of 1-shift schools per GC t = max. no. of students per school l
3.4	% of 2-shift schools	No. of 2-shift schools and total number of schools	1. Select no. of schools with 2-shift ID = 2 shifts 2. Aggregate per GC 3. Divide by total number of schools per GC 4. Multiply by 100	▪ National student no. ▪ National school no. ▪ No. of shifts offered at school level (School shift ID=2) ▪ GC data elements	1, 2, 3	 A = 2-shift school i B = 1-shift school l m = max. no. of 1-shift schools per GC n = max no. of 2-shift schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
3.5	% of students in multi-class units		1. Select no. of classes with EMIS field "room type" set to multiple classes per GC 2. Select no. of classes that have more than one student assigned per GC 3. Divide "Step 1" by "Step 2" and multiply with 100	▪ Number of classes with flag multiple classes set ▪ Number of classes with more than one student assigned ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	 A = student i enrolled in multi-class unit in school j B = student k enrolled single class unit in school j n = max no. of students enrolled in 2 multi-class units per school j m = max. no. of schools per GC t = max. no. of students enrolled in single-class units per school j

Notes:

1. KPI 3.1: The entity "**class**" does not yet exist in the current EMIS version. Therefore this should be created during the ETL process and a 1:1 relation between class and classroom should be automatically established. Students should be assigned to classes and not to classrooms. Additional information on the entity class is provided in the respective infocube.
2. KPI 3.3: Despite the term"2-shift schools", the morning and afternoon schools are recorded as separate schools, so that this is an issue of school building utilization. Care must be taken to ensure that this does not cause a duplication of data when both morning and afternoon schools record buildings data and are flagged as 2-shift schools".

1.2.4 KPI no. 4 and sub-indicators - school capacity

This KPI relates to KPI no. 2, linking class size to classroom size (in sqm.). By identifying the numbers of overcrowded classrooms and the numbers of students in those classrooms (by cycle), decision-makers can prioritise schools and districts where overcrowding is particularly problematic and focus school

building and extension initiatives in those areas. This is a more accurate indicator than the current calculation of numbers of students per classroom, because it takes account of available space.

Table 5: School capacity sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
4.1	% of overcrowded classrooms	▪ No. of overcrowded classrooms per GC ▪ Total no. of classrooms per GC	1. Select all classroom where average size per student is less than benchmark value per GC 2. Divide "1" by no. of all classrooms per GC 3. Multiply with 100	▪ Benchmark value (dimension table) ▪ Classroom national ID ▪ Class room size in sqm ▪ No. of classes per classroom ▪ Students per class ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	$\frac{\sum_{i=1}^{n} A_i}{\sum_{i=1}^{n} B_i} * 100$ A = total overcrowded classrooms per school i B = total classrooms per school i n = max. no. schools per GC
4.2	% of students in overcrowded classrooms	▪ No. of students assigned to a class with overcrowded classroom per GC ▪ Total no. of students per GC	1. Select all classroom where average size per student is less than benchmark value per GC 2. Aggregate number of student assigned to classes located in these classrooms 3. Divide "2" by no. of all students per GC 4. Multiply with 100	▪ Benchmark value (system table) ▪ Classroom national ID ▪ Class room size in sqm ▪ No. of classes per national classroom ID ▪ Students per class ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	$\frac{\sum_{i=1}^{m} \sum_{j=1}^{n} A_{ij}}{\sum_{j=1}^{m} \sum_{k=1}^{v} B_{kj}} * 100$ A = Total of students in overcrowded classroom i in school j B = No. of students with classroom k that is not overcrowded in school j m = max. no. of classrooms per school j m = max. no. of schools per GC v = max. no. of non-overcrowded classrooms per school j *Please note:*

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
						The threshold for defining overcrowding should be flexible. The current value is 1.2 sqm/student, although the UNESCO value is 1.4 sqm/student. This target value should be entered into a system table and should be updateable(not hard-coded)
4.3	% of under-utilised classrooms	▪ No. of classrooms with <25* students ▪ Total no. of class rooms	1. Select no. of classrooms per GC 2. Select no. of "under-utilised" classrooms 3. Divide "2" by "1" * 100	▪ National classroom ID ▪ Classroom type ▪ Students per class ▪ Classroom utilisation ID ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	 A = total under-utilised classrooms per school i B = total not-under-utilised classroom per school i n = max. no. of schools per GC
4.4	% of non-utilised classrooms	▪ No. of class rooms with status "unused" ▪ Total no. of class rooms	1. Select no. of classrooms per GC 2. Select no. of "unused" non-educational rooms 3. Divide "2" by "1" * 100	▪ National classroom ID ▪ Classroom type ▪ Classroom utilisation ID ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	 A = total non-utilised classrooms per school i B = total utilised classroom per school i n = max. no. of schools per GC

* adjust number over time and by cycle if necessary

Note: The threshold for defining overcrowding should be flexible. The current value is 1.2 sqm./ student, although the UNESCO value is 1.4 sqm/student. The MoE may at some stage decide to set separate targets for each cycle. The target value(s) should be entered into a system table and should be updateable (not hard-coded).

The next group of KPIs focus on students rather than schools as the basic building-block.

1.2.5 KPI no. 5 and sub-indicators – students' profile

The age, grade, gender and location of all students are identified in this KPI. The data can then be used with other KPIs to make decisions concerning educational provision for sub-sets of the student body – by gender, age-group or grade, or by administrative district. Student travel from home to school can eventually be calculated using GIS data. Key information will be about students living some distance from their school, defined perhaps as in a Tajammu or Hai other than that in which the school is located, in order to assess transport needs and provide data needed when planning new schools and school buildings.

Other student profile information will include:

- personal details – names, date of birth, family details (names, occupation(s), educational achievements, contact details), birth-place, religion, nationality & ethnic group;
- information on special needs and circumstances affecting students' academic performance (illness, absence, special needs, poverty factors etc.), and on any special provision made to meet those special needs, enabling process indicators which can inform decision makers about the extent to which educational provision matches student needs; and
- academic record – grade, class, test & examination results, attendance, previous schooling.

These can be used along with the Curriculum & Assessment KPIs (kpiS 14 & 15 - see below)

With this data, policy-makers should be able to determine:

- characteristics of the national school population requiring intervention policies;
- groups of students, within and/or across schools, requiring intervention strategies; and
- current student characteristics, against which policy-makers can set national, regional or local targets and benchmarks.

Table 6: Student profile sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
5.1	% of male / female students	▪ Student gender	1. Select all students of same gender per GC 2. Divide "1" by total no. of students per GC	▪ Student national no. ▪ Student gender ▪ GC data elements	1, 2, 3, 4, 5, 6, 7, 8	 A = total male students per school i B = total female students per school i n = max no. of schools per GC
5.2	Student age profile by grade	▪ Students age grouped (rounded up to age month) ▪ Student's grade	1. Calculate students age (system data minus birth date rounded up to age month) per GC 2. Select student's grade per GC 3. Aggregate total no. of students of the same age by grade per GC	▪ Student national no. ▪ Student's birth date ▪ System date ▪ GC data elements	1, 2, 3, 4, 5, 6, 7, 8	$\sum_{i=0}^{n} \sum_{j=1}^{m} \sum_{g=0}^{12} Aijg$ A = Student i of same age group (month, year) j per grade g n = max. no. of students of same age group j attending same grade g per GC g = max no. of grades (actually 0 to 12) m = max. no. of age groups (life age year and month e.g. 11.4, 12.11, etc) per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
5.3	Average student distance from home to school	Distance between building student's classroom is located in and student's home address	1. Select no. of students in each Qada* by school per GC 2. Select Qada* where school is located by GC 3. Select students whose home location is different from '2' by GC 4. Where 3 differs from 2, calculate distance between "2" and "3" in km 5. Aggregate all distances ("4") and divide by total no. of students ("1")	▪ Student ID ▪ Student's address (Qada) ▪ National school ID ▪ School address (Qada) ▪ GC data elements	1, 2, 3, 4, 5, 6, 7, 8	$\sum_{i=1}^{m}(\lvert Xt-Ys\rvert)$ Xt = Qada student's home address is located Ys = Qada school is located in *Note:* *To estimate the distance between Qada, a system table should be integrated as dimension table in the EDSS data warehouse*
5.4	% of schools in defined 'remote' rural areas	No. of schools located in remote areas Total no. of schools	1. Select all schools with remote area flag set for GC 2. Select all schools for GC 3. Divide "1" by "2" * 100	▪ National school ID ▪ Remote area flag at school level ▪ GC data elements	1, 2, 3	$\sum_{i=1}^{n}\sum_{j=1}^{m}$ A = school i in defined rural area j B = school j n = max. no. of schools in remote rural areas per GC m = max no. of schools per GC

* When sufficient GIS data becomes available, this can be refined to Tajammu or Hai level.

Notes:

1. It is proposed to calculate distances on the basis of a dimension table to be integrated into the EDSS data warehouse. For each of these territorial units the hypothetical distance between the units at each level should be defined and can then be used as an iteration for the calculation of distances between

schools, between teachers' and students' home and their schools, as well as other distances. This is a rather crude concept for measuring distances but until better data are available, this approach will allow at least a rough estimation of the required information.

2. (KPI 5.4) Remote rural areas are defined by the Land and Survey Ministry. The structure to integrate this table has to be added into the EDSS data warehouse as domain table (or part of the common coding system) as well as the ETL mechanism to update this data.

1.2.6 KPI no. 6 and sub-indicators – gross enrolment ratio (GER)

The National Agenda aims to increase the GER for basic students to 100% by 2012; for secondary students to 90% by 2012 & 95% by 2017; and for pre-school students to 50% by 2012 & 60% by 2017.

For this, the numbers of registered students by cycle will need to be compared to the total number of children of the respective school age using population data imported from the Department of Statistics (DOS). Decision-makers can use the GER to identify areas and cycles where efforts need to be made to increase school enrolment.

Table 7: GER sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
6.1	% of children enrolled at basic cycle	▪ Total no. of students of basic school age attending school ▪ Total no. of children of basic school age	1. Select all students of basic school age enrolled per GC 2. Select total no. of children of basic school age per GC 3. Divide "1" by "2" * 100	▪ National student ID ▪ Student's age ▪ Total number of population of basic school age per GC ▪ GC data elements	1, 2, 3	$\sum_{i=1}^{m} \sum_{k=6}^{s} \sum_{j=1}^{n} Aijk / \sum_{k=6}^{s} Bk * 100$ A = student i of age-group k enrolled in basic school j (age group equals actual date or system date – birth date rounded to years); B = Total population of the same age group k per GC n = max. no. of enrolled children of age-group k per school j m = max. no. of schools per GC s = max. no. of age groups (here 6 to 15 years, 1 age group per year)

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
6.2	% of children enrolled at secondary cycle	▪ Total no. of students of secondary school age attending school ▪ Total no. of children of secondary school age	1. Select all students of secondary school age enrolled per GC 2. Select total no. of children of secondary school age per GC 3. Divide "1" by "2" * 100	▪ National student ID ▪ Student's age ▪ Total number of population of secondary school age per GC ▪ GC data elements	1, 2, 3	$\sum_{i=1}^{m}\sum_{k=16}^{s}\sum_{j=1}^{n} Aijk / \sum_{k=16}^{s} Bk * 10$ A = student i of age-group k enrolled in secondary school j B = Total population of the same age group k per GC n = max. no. of enrolled children of age-group k per school j m = max. no. of schools per GC s = max. no. of age groups (here 3 age groups: 16, 17 and 18 years old)
6.3	% of children enrolled at kindergarten	▪ Total no. of students of KG age attending KG ▪ Total no. of children of KG age	1. Select all students of KG age enrolled per GC 2. Select total no. of children of KG per GC 3. Divide "1" by "2" * 100	▪ National student ID ▪ Student's age ▪ Total number of population of KG age per GC ▪ GC data elements	1, 2, 3, 4, 5, 6, 7	$\sum_{i=1}^{m}\sum_{k=3}^{s}\sum_{j=1}^{n} Aijk / \sum_{k=3}^{s} Bk * 10$ A = student i of age-group k enrolled in kindergarten j (age group equals actual date or system date – birth date rounded to years); B = Total population of the same age group k per GC n = max. no. of enrolled children of age-group k per kindergarten j m = max. no. of kindergartens per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
						s = max. no. of age groups (usually 3 groups: 3-year old, 4-year old and 5 year old)

Notes:

1. At present the MoE data focuses on the basics cycle for GER calculations. At a later stage this could be refined into 'primary' and 'lower secondary' cycles to assist international comparisons.
2. The KG data (KPI 6.3) focus on age-group 5 years, as that is the only year funded by the state, and this is a current policy priority. However, at a later stage this may be extended to earlier age groups – already private pre-primary schools take children from 3 years old, and some MoE schools have day-care facilities for employees' children For that reason the 3 age-groups all three age groups (3-year old, 4-year old and 5 year old) should be used.

1.2.7 KPI no. 7 and sub-indicators – net enrolment ratio (NER)

The NER is a more refined indicator, measuring as it does the numbers of enrolled students at each age-level as a proportion of the total number of children of given age-level. The %s enrolled at each age level will enable policy-makers to identify and take actions to increase enrolment at those cycles (e.g. pre-school, lower and upper basic, vocational and secondary) and districts where enrolment is below MoE targets or national averages.

Table 8: NER sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
7.1	% enrolled in each age-group regardless of grade	▪ Nos. of students enrolled in each age-group[6] (for all grades) ▪ Total persons of age groups 6 -15 (inclusive) by district & age-group	1. Select no. of students with same age (birth date – system date in years) per GC 2. Divide by total no. of persons of the same age group (6 to inclusive 15 years) living in the same GC 3. Divide "1" by "2" * 100 4. Present results graphically or in tabular form per age group	▪ Student's birth date ▪ Student's grade ▪ System date ▪ GC data elements	1, 2, 3, 4, 5, 6, 7	$\sum_{i=1}^{n} \sum_{k=6}^{15} \sum_{j=1}^{m} Aikj \,/\, \sum_{6}^{15} Bk * 100$ A = enrolled student i of the same age-group k of school j B= no. of total population of the same age group k per GC n = max. no. of students of age-group k per school j m = max. no. of schools per GC

[6] Age group equals years of age

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
7.2	% enrolment in secondary education	▪ Nos. of students enrolled in each age-group (for all grades) ▪ Total persons of age groups 16-18 (inclusive) by district & age-group	1. Select no. of students with same age (birth date – system date in years) per GC 2. Divide by total no. of persons of the same age group (16, 17, 18 years old) living in the same GC 3. Divide "1" by "2" * 100 4. Present results graphically or in tabular form per age group	▪ Student's birth date ▪ Student's grade ▪ System date ▪ GC data elements	1, 2, 3, 4, 5, 6, 7	$\sum_{\substack{i=1 \\ k=16 \\ j=1}}^{\substack{m \\ 18 \\ n}} Aikj \,/\, \sum_{16}^{18} Bk * 100$ A = enrolled student i of the same age-group k of school j B= no. of total population of the same age group k per GC n = max. no. of students of age-group k per school j m = max. no. of schools per GC
7.3	% enrolment in vocational education	▪ Total no. of students enrolled in vocational education by school/district & age-group ▪ Total of persons of respective age groups 16, 17 & 18	1. see above only for vocational students (attending a vocational school)	▪ Student's birth date ▪ System date ▪ GC data elements	1, 2, 3, 4, 5, 6, 7	$\sum_{\substack{i=1 \\ k=16 \\ j=1}}^{\substack{m \\ 18 \\ n}} Aikj \,/\, \sum_{16}^{18} Bk * 100$ A = enrolled student i of the same age-group k of school j B= no. of total population of the same age group k per GC n = max. no. of students of age-group k per school j m = max. no. of schools per GC

The next group of KPIs focus on Personnel and Staffing indicators.

1.2.8 KPI no. 8 and sub-indicators – teacher profile

The major investment in education, in Jordan as elsewhere in the world, is the investment in staff, and particularly in teaching staff. This KPI provides indicators concerning the numbers and quality of the teaching force. The required data should include:

- age, gender, marital status of all teachers
- address and location (GIS)
- contact details
- each teacher's subject specialism(s) and cycle
- qualifications & training (pre-service and in-service training, with each qualification linked to a qualifications master file, in which qualifications are classified uniformly for Jordan)
- responsibilities, employment status distinguishing between permanent staff (civil servants in government schools), and locally contracted (supply/temporary) staff; as well as any volunteer (unpaid) staff
- teacher contract
- deployment (hours, classes and subjects taught from the annual teaching schedule, the subjects and the classes taught
- previous employment using the unique school identification code for previous schools where staff worked, and recognised occupational codes (standard Ministry of Labour occupational codes) or job titles for non-teaching employment
- working hours
- all types of authorised and unauthorised absences including leave and authorised inactivity (maternity leave etc.)
- financial information – salary, additional payments, loans, etc. including any special entitlements, loans, housing allowances, etc.

Much but not all of this is (or will soon be) available in the new EMIS. It should form part of each school's internal management system (SMS). Other information is available in the Personnel records of all MoE employees, using the new Civil Service Bureau data structure. Data should also be available on the numbers and utilisation of the pool of supply teachers, including the schools, grades and subjects where they are utilised. The administrative and other staff employed at each Field Directorate should also be recorded, using standard occupational codes.

Policy-makers also need to know whether the numbers of available teachers are sufficient for the expected numbers of students and whether the current teaching force has the skills necessary to deliver the curriculum to a satisfactory level. They need, therefore, indicators of:

- teacher utilisation rates
- student/teacher ratios by cycle & sector
- average class size by cycle/sector
- staff absence & inactivity rates
- staff turnover rates and retirement forecasts
- in-service teacher training rates.

The data from this indicator will provide a basis for the calculation of further indicators specific to these policy issues, including KPIs 9, 10, 13 & 25 below

Table 9: Teacher profile sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
8.1	% male / female teachers	▪ No. of active female and active male teachers	1. Select no. of active female teachers per GC 2. Select no. of active male teachers per GC 3. "2" / ("1"+ "2") * 100 for % of male teachers 4. "1" / ("1"+ "2") * 100 for % of female teachers	▪ Teacher's gender ▪ Teacher's active status ▪ GC data elements	1, 2, 3, 4, 5, 6	 A = female teacher i B = male teacher j n = max. no. of female teachers per GC m = max no. of male teachers per GC *Please note: Also the percentage of male teachers has to be calculated* 

Table 10: Teacher profile sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
8.2	Teacher age profiles	▪ Teacher's age ▪ Teacher's retirement age (as upper boundary) ▪ Minimum age of teachers (as lower boundary)	1. Select no. of teachers by age group per GC 2. Present no. of teachers by age group (graphic or tabular form) per GC	▪ Teacher's birth date ▪ Teacher's active status ▪ System date ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n}\sum_{j=1}^{m} Aij$ A = total teachers of the same age-group i per school j n = max. no. of age groups m = max. no. of schools per GC *Please note:* *The system should allow to define age groups by entering respective age ranges (e.g. <20 years, 20 to 39 years, 40 to 60 years, > 60 years)*

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
8.3	Teachers by subject specialism	▪ No. of active teachers by qualification (subject specialism) ▪ List of subject specialisms (including pedagogic specialisation in basic & pre-primary cycles)	1. Select no. of active teacher's by subject specialism per GC 2. Present the result per subject specialism (graphic or tabular form) per GC	▪ Teacher's subject specialism (position held) ▪ Teacher's active status ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n}\sum_{j=1}^{m} Aij$ A = total teachers of the same subject specialism i per school j n = max. no. of subject specialism m = max. no. of schools per GC *Please note:* *A teacher might teach more than one specialism. Double counting can therefore take place with this sub-indicator.*
8.4	% of teachers currently teaching their specialisation	▪ No. of active teachers teaching a specialism ▪ No. of those teachers with qualification in subject taught	1. Select active teacher per school 2. Select teachers actually teaching their specialisation 3. Divide "2" by "1" 4. Multiply by 100	▪ Teacher's specialisation taught in current school year ▪ Teacher's active status ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n}\sum_{j=1}^{m} Aij / \sum_{l=1}^{s}\sum_{j=1}^{m} Blj \cdot 100$ A = teacher i currently teaching his/her specialisation in school j B = teacher l of school j n = max. no. of teachers teaching their specialisation s = max. no. of teacher per school j m = max. no. of schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
8.5	Teachers by highest qualification	▪ Teachers by highest qualification ▪ Teacher's activity status	1. Select no. of active teachers' highest qualification per GC 2. Present the result per subject specialism (graphic or tabular form) per GC	▪ Teacher's highest qualification ▪ Teacher's active status ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{m}\sum_{j=1}^{n} Ai\,j$ A = total teacher with same academic qualification i in school j n = max. no. of academic qualifications m = max. no. of schools per GC
8.6	Teachers by employment status	▪ Teacher's employment status	1. Select teachers by employment status 2. Divide by total number of teachers	▪ Teacher employment status ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i,=1}^{n} Ai$ A = total teachers of the same employment status i per school j n = max. no. of employment statuses (defined at national level) m = max. no. of schools per GC
8.7	Teachers by locality	▪ Teacher's address (Qada) ▪ School address (Qada)	1. % of teachers living outside the locality (Qada) in which they work	▪ Teacher address ▪ School address ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i,=1}^{n} Ai$ A = total teachers of the same locality j n = max. no. of localities per GC

Notes:

1. Personnel age-groups: age-groups will normally be defined in decades (e.g. <20 years, 20 to 29 years, 30 to 39 years, etc. up to > 60 years). However, the facility for finer definition will be required in some situations, e.g. to calculate teacher replacement requirements on a 5-year or 3-year age-grouping.
2. Teacher specialisations (KPIs 8.3 & 8.4): Specialisations are determined by HE qualifications, so that it is possible for teachers to acquire two or more specialisms through 1st and higher degrees, but not through experience or in-service training. Max. number of specialisms = 3.

1.2.9 KPI no. 9 and sub-indicators – teacher training

A key MoE policy priority is to improve the competence of its teachers, administrative & technical staff with regard to IT, pedagogic and management skills. This indicator will assist in the development and monitoring of the training provision needed to enhance these skills. The EMIS and EDSS systems will demand further technical and decision-making capabilities, and users – principals, directorate and central Ministry staff – will need training building on the existing skill-base. The data on those holding the ICDL qualification provides a starting point for these needs assessment. Similarly, data on teachers trained in classroom management and practice will support the development of further pedagogic professional development.

Further sub-indicators can be added as MoE priorities change and new forms of training are made available.

Table 11: Teacher training sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
9.1	% of teachers with ICDL	▪ No. of teachers who have ICDL ▪ Total no. of teachers	1. Selection total no. of teachers per GC 2. Select no. of teachers who have ICDL per GC 3. Divide "2" by "1" * 100	▪ No. of teachers ▪ No. of teachers with ICDL qualification ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=0}^{n}\sum_{j=1}^{m} A_{ij} \geq \sum_{k=1}^{s} B_{kj} \Rightarrow 1\ C$ A = teacher i with ICDL of school j B = teacher k of school j n = max. no. of teachers with ICDL s = max. no. of teachers per school j m = max. no. of schools per GC
9.2	% of teachers with classroom practice training[7]	▪ No. of teachers with teachers classroom training ▪ Total no. of teachers	1. Selection total no. of teachers per GC 2. Select no. of teachers who have received classroom practice training per GC 3. Divide "2" by "1" * 100	▪ No. of teachers ▪ No. of teachers who received a training in classroom practice ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=0}^{n}\sum_{j=1}^{m} A_{ij} \geq \sum_{k=1}^{s} B_{kj} \Rightarrow 1\ C$ A = teacher i with classroom training of school j B = teacher k of school j n = max. no. of teachers with ICDL s = max. no. of teachers per school j m = max. no. of schools per GC

[7] Training Directorate definition of this training has to be added and verified.

1.2.10 KPI no. 10 and sub-indicators – Student-teacher ratio (STR)

The MoE has responsibility for setting staffing levels for each educational district by reference to the number and sizes of schools and the extent of the problems within the educational district. It needs, therefore, indicators of these.

The student-staff ratio indicator provides a measure of the system's efficiency. International research has demonstrated the links between learning effectiveness and class size/ teacher availability. Many Ministries of Education use the 'improvement' (i.e. reduction) in the STR as a key measure of system improvement. In Jordan, this is complicated by the large number of small schools, with resultant low STRs, so that the average STR is brought down to 19.7. It is important, therefore for MoE to be able to disaggregate STRs by district, school and gender. An indicator based on student-teacher ratios and aggregated average class sizes by grade, gender and location, can be used to set regional and national targets and make international comparisons.

A composite 'problem factor' indicator can also be calculated as a measure of system effectiveness. Four provisional problem factors are identified and weightings allotted to them. By rating the percentage of schools in each category by the rating scale below, priority problem schools and directorates can readily be identified as a basis for taking remedial actions.

Table 12: Student-teacher ratio sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
10.1	Student-teacher ratio	▪ No. of students per school ▪ No. of teachers per school	1. Select total no. of active teachers (equivalent of 100% position) per GC 2. Select total no. of students per GC 3. Divide "2" by "1" * 100	▪ Employee ID ▪ Employee type ▪ Employee's position ▪ Teacher's job position (% of full position) ▪ National student ID ▪ GC data elements	1, 2, 3, 4, 5, 6, 7	$\sum_{i=1}^{n} Ai \sum_{i=1}^{n} Ti$ A = total students per school i, T = total full teacher position equivalents per school i, n = max. no. of schools per GC
10.2	Problem factors	▪ See below	1. See below	▪ See below	1, 2, 3, 4, 5, 6, 7	not applicable

The problem weighing for KPI 10.2 is presented in the table below. The ranking of the 4 criteria considered should be flexible and follow the weighing model presented in the respective section "**Error! Reference source not found.**".

Table 13: Problem weighting for KPI 10.2

'Problem" weighting for KPI 10.2			
% of schools in socially deprived areas where pupils receive milk and fruit	Number of students receiving free milk and fruit by schools & FD	SIS/EMIS	4 x a)
% of students in socially deprived areas	No. of students and schools in designated socially deprived areas	Planning Dir./ Ministry of Internal Affairs	2 x a)
% students with health problems	No. & % of students identified as having specified health problems in annual medical check	Health Ministry/EMIS	4 x a)
of students in overcrowded classes %		KPI 4.2	2 x a)

a) with 0 = >20%, 1 = 21-40%, 2 = 41-60%, and 3 = >60%

Notes:

1. Socially deprived areas are identified using Ministry of Internal Affairs classification by Qada
2. Students with health problems are identified from EMIS on basis of annual MoE/ Ministry of Health school health check. For this KPI a simple yes/no classification is sufficient.

1.3 Priority 2 key performance indicator models

This second group of KPIs can be prepared using data currently available within one or more of the databases to be incorporated within the EDSS data warehouse. Some of the data required, while not currently accessible, will be available through the new release of the MoE EMIS, scheduled for August 2008.

1.3.1 KPI no. 11 and sub-indicators – student absence and dropout rate

The numbers of students who do not complete their basic education is an important indicator for any education system. Unauthorised student absence is a common precursor to student drop-out, so an indicator for aggregated absence rates is an indication of potential future drop-out problems.

Figure 1: Student absence & drop-out sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
11.1	Percentage of students absent more than x days per year without permission	Students identified as absent for more than x days/month ▪ Absence classification	1. Select no. of students classified as absent >x days without permission per GC 2. Aggregated no. of absences 3. Calculate total no. of teaching days for the analysed period 4. Select total no. of students per GC 5. Multiply "3" with "4" 6. Divide "2" by "5" * 100	▪ Student attendance record ▪ National student ID ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{n}\sum_{j=0}^{m} Aij \,/\, \sum_{i=1}^{n}\sum_{j=0}^{m} Bij) * 100$ A = number of students absent without permission for more than x days/year for class i in school j B = total number of for class i in school j n = max. no. of classes pre school j m = max no. schools per GC

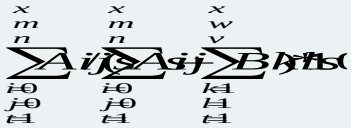
No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
11.2	Percentage of students absent more than x days per year with permission	Students identified as absent for more than x days/month ▪ Absence classification	1. Select no. of students classified as absent >x days without permission per GC 2. Aggregated no. of absences 3. Calculate total no. of teaching days for the analysed period 4. Select total no. of students per GC 5. Multiply "3" with "4" 6. Divide "2" by "5" * 100	▪ Student attendance record ▪ National student ID ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{n}\sum_{j=0}^{m} Aij / \sum_{i=1}^{n}\sum_{j=0}^{m} Bij) * 100$ A = number of students absent with permission for more than x days/year for class i in school j B = total number of for class i in school j n = max. no. of classes pre school j m = max no. schools per GC
11.3	Percentage of dropped out students	▪ Students with 'drop-out' status in school year t+1 who have been active in school year t ▪ All students in year t	1. Select no. of students who dropped out per GC 2. Aggregated no. of dropped out students 3. Select total no. of students per GC 4. Divide "1" by "2" * 100	▪ Student's status ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{n}\sum_{j=0}^{m} Aij \sum_{i=1}^{n}\sum_{j=0}^{m} Bij * 1\,C$ A = number of students absent without permission for more than x days/year for class i in school j B = total number of for class i in school j n = max. no. of classes pre school j m = max no. schools per GC

1.3.2 KPI no. 12 and sub-indicators – special needs students

One of the five “strategic directions” for ERfKE II is the need for a strategy to address learning opportunities for students with special needs. This indicator will support that strategy. It will facilitate the identification of gifted and special needs students, identify their presence in mainstream education and in those schools indicate the facilities and qualified teachers available for them.

Table 14: Students with special needs sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
12.1	% of students identified as 'gifted'	▪ Information if a student is gifted or not (default value)	1. Select all gifted students per GC 2. Select all students per GC 3. Divide "1" by "2" * 100	▪ Student's gift ID ▪ National student ID ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = Gifted student i B = Not-gifted student k n = max. no. of gifted students per GC m = max. no. of non-gifted students per GC
12.2	% of students assessed for special needs	▪ Information if a student has special needs	1. Select all SEN students per GC 2. Select all students per GC 3. Divide "1" by "2" * 100	▪ Student's SEN status ▪ National student ID ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = SEN-student i B = Non-SEN-student k n = max. no. of SEN-students per GC m = max. no. of non-SEN-students per GC
12.3	% of assessed special education needs (SEN) children in mainstream schools	▪ Information on numbers of children assessed as having special needs ▪ Total no. of assessed children currently attending a mainstream school	1. Select all Students per mainstream school and GC 2. Select SEN students per mainstream school and GC 3. Divide 2" by "1" and multiply with 100	▪ Student's SEN status ▪ Student ID ▪ School national no. ▪ School specialisation ID ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = Total SEN-students in mainstream school i B = Non-SEN-student k in mainstream school i n = max. no. of mainstream schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
12.4	% of assessed SEN children taught by teachers with special needs training	▪ Teachers with special needs training ▪ No. of SEN students taught by these teachers ▪ Total no. of SEN students	1. Select all assessed SEN students per GC 2. Select SEN students taught by teachers with special needs training and GC 3. Divide 2" by "1" and multiply with 100	▪ Student's SEN status ▪ Student ID ▪ Teacher ID ▪ Teacher's training information (ID for SEN training) ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = SEN-student i taught by teacher j who received SEN training in school s B = SEN-student k taught by teacher l who did not receive SEN training in school s n = max. no. of SEN children taught by teacher j with SEN training per school s m = max. no. of SEN trained teachers teaching SEN children per school s v = max no. of children taught by teachers without SEN training per schools w = max no. of teachers teaching SEN children without receiving SEN training so far per school s x = max. no. of schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
12.5	% of schools with facilities for SEN	▪ Schools with SEN facilities ▪ Total number of schools	1. Select all schools per GC 2. Select schools with SEN facilities per GC 3. Divide 2" by "1" and multiply with 100	▪ SEN facilities available at school level ▪ School national ID ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = total schools with SEN facilities B = total schools without SEN facilities n = max. no. of schools with SEN facilities per GC n = max. no. of schools without SEN facilities per GC

Notes:

1. Special needs facilities and equipment will be identifiable in a future release of EMIS.
2. Teachers with qualifications for special needs/ gifted teaching are identifiable through Human Resources Directorate records.
3. For KPI 13.5 a respective classification has to be integrated into the EMIS e.g. as school building particularity or as separate inventory item to collect data on the SEN facilities available in schools

1.3.3 KPI no. 13 and sub-indicators – teacher performance

The KPI-sub-indicators aiming to measure teacher performance are presented in the following table.

Table 15: Teacher performance sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
13.1	% teachers evaluated as satisfactory or above	▪ Teacher evaluation results	1. Select no. of teachers evaluated as satisfactory or better per GC 2. Aggregate no. of evaluated teachers per GC 3. Divide "1" by "2" * 100	▪ Teachers' evaluation results ▪ GC data elements	7	$\sum_{i=1}^{n} A_i \Big/ \sum_{i=1}^{n} B_i * 100$ A = teachers evaluated as satisfactory or better for school i B =teachers evaluated per school i n = max. no. of schools where evaluations took place per GC
13.2	Aggregated grade averages per class undertaking last year's NAfKE tests and national assessments	▪ Grade averages per class ▪ Class or subject teacher ID	1. Select all class test results per NAfKE test 2. Calculate grade averages of these students for the respective term 3. Aggregate "2" and divide by total no. of students considered	▪ Class and subject grade averages ▪ Teacher ID ▪ GC data elements	7	$\sum_{i=1}^{m} \sum_{j=1}^{n} A_{ij}$ A = grade average of student i taught by teacher j n = max. no. of students per teacher j m = max. no. of teachers per GC

Notes:

1. Teacher appraisal information is available through the EMIS using the three-yearly Civil Service Bureau assessment procedures. At a later date the more refined teacher and administrator procedures being piloted by SJE in five directorates might be developed in ways which can provide more comprehensive data on teacher performance.
2. Although the NAfKE and national assessment data do not provide information on every class (and therefore every teacher) in any one year, the available data can be used as a basis for the analysis of sample teacher performance against other criteria e.g. CSB grade, gender, qualifications etc.

1.3.4 KPI no. 14 and sub-indicators - student performance

Student performance is one of the most crucial measures of education performance. The KPI-sub-indicators designed to measure the performance of individuals or groups of students are presented in the following table.

Table 16: Student performance sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
14.1	Performance of sample of students in national & international tests at selected grades	▪ Test results per Student ▪ Grade students is assigned to	1. Select student's test results 2. Select student's grade	▪ Student ID ▪ Student gender ▪ Grade students is assigned to ▪ NAfKE results per student ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{m}\sum_{j=0}^{n} Aij$ A = test results for one student attending class i in school j (only same genders should be considered) n = max. no. of students per class m = max. no. of classes with same gender and grade per GC

1.3.5 KPI no. 15 and sub-indicators – Tawjeehi

The Tawjeehi exam at the end of Grade 12 is the most significant measure of secondary student performance. When aggregated it can provide indications of school and district performance and compare these over time..

Table 17: Tawjeehi sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
15.1	National pass rate % on "Tawjeehi" exam	▪ No. of students successfully passing Tawjeehi exam per school year ▪ Total no. of students participating in Tawjeehi exam	1. Select no. of students participating in Tawjeehi per GC 2. Select successful students who passed 3. Divide "2" by "1" and multiply with 100	▪ Student ID ▪ Student's Tawjeehi performance ID ▪ GC data elements	1, 2, 3,	 A = student i who passed Tawjeehi exam B = students j who did not pass Tawjeehi exam n = max. no. of student who have passed Tawjeehi per GC m = max. no. of student who have not passed Tawjeehi per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
15.2	Variation between male and female average national and educational district pass rates in "Tawjeehi" exam	▪ No. of male / female students successfully passing Tawjeehi exam per school year ▪ Total no. of male / female students participating in Tawjeehi exam	1. Select no. of students of same gender participating in Tawjeehi per GC 2. Select successful students of same gender who passed 3. Divide "2" by "1" and multiply with 100	▪ Student ID ▪ Student's gender flag ▪ Student's Tawjeehi performance ID ▪ Data elements for GC	1, 2, 3,	 A = students of same gender group j who passed Tawjeehi exam B = students of same gender group j who did not pass Tawjeehi exam n = max. no. of students of same gender who passed per GC v = max. no. of students of same gender who did not pass.

1.3.6 KPI no. 16 and sub-indicators – repetition rate

Repetition rates measure the phenomenon of pupils from a cohort repeating a grade, and its effect on the internal efficiency of educational systems. In addition, it is one of the key indicators for analysing and projecting pupil flows from grade to grade within the education system.

Analysing the percentage of students repeating a grade measures the extent and patterns of repetition by grade, as part of the internal efficiency of an education system – a highly efficient system would have no repetition as all pupils would be taught sufficiently well to reach the standard required for progress to the next grade.

Table 18: Repetition rate sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
16.1	% male/female repetition rates	▪	1. Select total no. of students of a grade for a school year t-1 2. Select students of same gender for "1" 3. Select no. of repeaters by gender of this grade and school year t 4. Divide "3" by "2" * 100 for each gender	▪ Student ID ▪ Student's gender flag ▪ Student's grade in year t-1 ▪ Student's grade in year t ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i,j,g=1}^{n,m,2} A_{ijg} \sum_{s,j,g=1}^{v,m,2} B_{sgj} * 10$ A = students of same gender g repeating a grade j in year t B = students of same gender g attending grade j in the previous school year (year t-1) n = max. no. of repeaters with same gender of grade j per GC m = max. no. of grades (actually 12) v = max. no. of passed students of same gender g per GC

1.3.7 KPI no. 17 and sub-indicators - completion & destination rates

Completion and destination rates are important measures for the overall effectiveness of the education sector and form a central element in monitoring the educational developments. The relevant sub-indicators, the required data elements and the algorithm to be applied are presented in the following table.

Table 19: Completion & destination rates sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
17.1	% enrolled students completing each grade	▪ No. of successful students completing a grade at the end of each school year ▪ Total no. of students enrolled by grade	1. Select students who successfully completed a grade in year t 2. Select total students of this grade in year t 3. Divide "2" by "1" and multiply by 100	▪ Student ID ▪ Student's grade ▪ Student's pass ID ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n}\sum_{j=1}^{m} A_{ij} \Big/ \sum_{i=1}^{v}\sum_{j=1}^{m} B_{ij} * 100$ A = students passing a grade j in year t B = students attending grade j in the previous school year (year t-1) n = max. no. of passed students of grade j per GC m = max. no. of grades (actually 12) v = max. no. of students per grade in school year t-1 per GC
17.2	% students unemployed 6 months after leaving basic school	▪ No. of unemployed basic school students 6 months after leaving school ▪ Total no. of graduates of the respective school year	1. Select basic school ex-students with status unemployed in school year t (6months after school end) 2. Select all basic school graduates of year t-1 3. Divide "2" by "1" and multiply by 100	▪ Employment status ID of graduates of basic schools ▪ Student ID of basic school graduates in year t-1[8] ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} A_i \Big/ \sum_{i=1}^{m} B_i * 100$ A = basic school graduate who is unemployed 6 months after leaving basic school (school year t + 6 months) B = all basic school graduates of school year t n = max. no. of unemployed basic school graduates (school year t + 6 months) m = max. no. of basic school graduates in year t

[8] This is one of the few indicators that is calculated for "non-active" students as only graduates "or inactive students) are considered.

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
17.3	% students progressing to higher education from government & private schools	▪ No. of students inscribed in higher education 6 months after leaving school ▪ Total no. of graduates of the respective school year	1. Select ex-students of basic schools progressing to higher education year t (6months after school end) 2. Select all basic school graduates of year t-1 3. Divide "2" by "1" and multiply by 100	▪ Student ID for students enrolled in higher education ▪ Student ID of basic school graduates in year t-1[9]		$\sum_{i=1}^{n} A_i \Big/ \sum_{1}^{m} B$ A = secondary school graduate who progressed to higher education 6 months after leaving secondary school (school year t + 6 months) B = all secondary school graduates of school year t n = max. no. of graduates who progressed to higher education (school year t + 6 months) m = max. no. of secondary school graduates in year t

1.3.8 KPI no. 18 and sub-indicators –vocational education

This indicator focuses on two aspects of the effectiveness of vocational education. The first is the internal sub-indicator of its capacity to convert its student intake into trained graduates. A low ratio of graduates to numbers enrolled is usually an indicator of internal inefficiencies (unless the vocational system is geared to placing students in work at the earliest opportunity – this is not the case in the Jordanian system).

The second sub-indicator is of external effectiveness – the responsiveness of the vocational curriculum to the local labour market. This requires evidence – from the Ministry of Labour's industry surveys and the vocational schools' destination surveys - of the extent to which local labour market needs are being

[9] This is one of the few indicators that is calculated for "non-active" students as only graduates "or inactive students) are considered.

met by the vocational school curriculum. A future release of EMIS may require schools – and particularly vocational schools – to provide this information by conducting destination surveys of recent graduates

A 'customer satisfaction' response from "not met at all" through to "met completely" by local employers reviewing their employees from the vocational schools is the clearest measure of this. This should be used alongside Indicator 17.3 (% students unemployed 6 months after leaving vocational school) as a proxy measure of the responsiveness of vocational education to the labour market.

Table 20: Enrolment in vocational education sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
18.1	ratio of vocational students graduating to number enrolled	▪ No. of students enrolled at start of vocational programme ▪ % of this cohort completing vocational programme ▪ % of this cohort completing programme successfully	1. Select total enrolment by vocational school and programme in Year X 2. Select % of this cohort surviving until end of vocational school 3. Select % of survivors who graduate with qualification	▪ Student IDs for vocational school enrolment in Year X ▪ Student IDs for cohort enrolled in Year X enrolled at end of vocational programme ▪ Student IDs for cohort enrolled in Year X graduating with vocational qualification ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} A_i \sum_{j=1}^{m} B_j$ A = graduate of vocational school (school year t+1) B = student of vocational school n = max. no. of vocational graduates per GC m = max. no. of students of vocational schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
18.2	% enrolled vocational students completing each course by grade	• No. of successful vocational students completing a grade at the end of each school year • Total no. of students enrolled by grade	• Select vocational students who successfully completed a grade in year t • Select total vocational students of this grade in year t • Divide "2" by "1" and multiply by 100	• School specialisation / type • Student ID • Student's grade • Student's pass ID • GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} A_i \sum_{j=1}^{m} B_j$ A = vocational school students who have completed successfully their course (school year t+1) B = enrolled students of vocational school n = max. no. of successful students per GC m = max. no. of enrolled students of vocational schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
18.3	% students unemployed 6 months after leaving vocational school	▪ No. of unemployed vocational students 6 months after leaving school ▪ Total no. of graduates of the respective school year	1. Select ex-students of vocational schools with status unemployed in school year t (6months after school end) 2. Select all basic school graduates of year t-1 3. Divide "2" by "1" and multiply by 100	▪ Employment status ID of graduates of vocational schools ▪ Student ID of basic school graduates in year t-1[10]		 A = vocational school graduate who is unemployed 6 months after leaving basic school (school year t + 6 months) B = all vocational school graduates of school year t n = max. no. of unemployed vocational school graduates (school year t + 6 months) m = max. no. of vocational school graduates in year t
18.4	responsiveness of vocational school curriculum to local labour market	▪ Employer records of recruitment of vocational school graduates ▪ Employer views on employability of vocational school recruits	1. Select total graduates from vocational schools in Year X 2. Select % of those graduates employed by surveyed employers 3. Calculate employer ratings of vocational school recruits	▪ Student IDs graduating in Year X with vocational qualification ▪ Tracer study findings of destinations of graduate vocational students ▪ MoL employer survey findings	1, 2, 3, 4, 5, 6	 A = vocational school graduates employed locally and rated satisfactory or above by local employer B = all vocational school graduates of school year t employed locally n = max. no. of vocational school graduates employed locally m = max. no. of vocational school graduates in year t

[10] This is one of the few indicators that is calculated for "non-active" students as only graduates "or inactive students) are considered.

1.3.9 KPI no. 19 and sub-indicators - illiteracy

Adult literacy rate shows the accumulated achievement of basic education and literacy programmes in imparting basic literacy skills to the population, thereby enabling them to apply such skills in daily life and to continue learning and communicating using the written word. Literacy represents a potential for further intellectual growth and contribution to economic-socio-cultural development of a society. Illiteracy rates indicate the extent of need for policies and efforts in organizing adult literacy programmes and quality basic education.

According to the UNESCO the adult literacy rate is defined as the percentage of population aged 15 years and over who can both read and write with understanding a short simple statement on his/her everyday life. Adult illiteracy is defined as the percentage of the population aged 15 years and over who cannot both read and write with understanding a short simple statement on his/her everyday life.

The first sub-indicator provides a standard measure of adult illiteracy. The second indicates the effectiveness of the 500 Illiteracy Elimination Centres by identifying the percentage of the illiterate population who are (or have) attended those Centres.

Table 21: Illiteracy sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
19.1	% illiterate population attending illiteracy elimination centres	▪ Literate persons aged 15 and above attending illiteracy elimination centre ▪ Illiterate persons aged 15 and above	1. Select total of illiterate persons attending a respective centre per GC 2. Select total of persons (literate and illiterate) per GC 3. Divide "1" by "2" and multiply by 100	▪ Person's literacy status (illiterate vs. literate) ▪ Students of literacy centres ▪ Person's age	1, 2, 3	$\frac{\sum_{i=1}^{n} A_i}{\sum_{i=1}^{m} B_i} * 100$ A = illiterate person aged ≥ 15 years attending illiteracy elimination centre B = illiterate person aged ≥ 15 n = max. no. of illiterate persons aged ≥ 15 years attending a respective centre per GC m = max. no. of illiterate persons aged ≥ 15 years per GC

1.3.10 KPI no. 20 and sub-indicators – IT resources

The MoE has as a policy objective to "ensure clarity of purpose and direction in the application of ICT policies". For this it needs indicators of not only the technology – computers, software, connectivity – but also of ICT content. The first three sub-indicators provide a calculation of the availability of the technology. The fourth and most important sub-indicator calculates the usage. It leads to the question as to whether low usage reflects unavailable or unsuitable ICT curriculum content or teacher failure to make use of available and appropriate ICT resources.

Table 22: IT resources sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
20.1	% of schools with sufficient computers for ICT	▪ PCs per school ▪ Active status / maintenance status of PCs ▪ MoE target of students per PC by cycle	1. Select no. of active PC per school 2. Aggregate all schools with at least 1 active PC per GC] 3. % of those schools with PC provision below MoE standard	▪ PCs for ICT in school inventory ▪ PCs status ID ▪ School national no. ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = school i with ICT PCs below MoE standard B = school l with ICT PCs at or above MoE standard n = max. no. of schools with 'sufficient' active PCs per GC m = max. no. of schools per GC
20.2	ratio of students per computer	▪ Total students per school ▪ Total PCs per school	1. Select no. of active PC per school 2. Select no. of active students per school 3. Divide "2" by "1" 4. Aggregate for GC and divide by no. of units considered	▪ Student ID ▪ PC ID ▪ PC status ▪ GC data elements	1, 2, 3, 4, 5, 6,	 A = student i of school j B = PC k of school j n = max. no. of students per school j k = max. no. of PCs per school j m = max. no. of schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
20.4	% of pupils working online at least once per month	▪ No. of students going online at least once per months per GC ▪ Total no. of students per GC	1. Select all students going online at least once per month per GC 2. Select all student per GC 3. Divide "1" by "2" and multiply with 100	▪ Student's ID ▪ Student's online connections per month ▪ GC data elements	1, 2. 3, 4, 5, 6,	$\sum_{i=1}^{n} A_i \sum_{B=1}^{m} B_{\#1} C$ A = pupils working online at least once per month B = pupils n = max. no. of pupils working online per GC m = max. no. of pupils per GC

Note: definition of "sufficient computers for ICT" to be determined by ICT Directorate. This will change as resources permit higher student: computer ratios.

1.3.11 KPI no. 21 and sub-indicators - textbooks

The provision of textbooks for secondary students is an indication of the Ministry's support for the national curriculum. At a later stage this can be refined to distinguish between types of secondary education and education cycles.

Table 23: Textbook sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
21.2	% secondary students provided with new, revised text books	▪ School specialisation / type ▪ Students' textbook ID ▪ Textbook status ID	1. Aggregate secondary education students with new and revised textbooks 2. Aggregate all secondary education students per GC 3. Divide"1" by "2" and multiply by 100	▪ Student's textbook status (new, revised, others) ▪ Student's ID ▪ School specialisation/type ▪ GC data elements	1, 2, 3, 4, 5, 6,	See above only for schools classified as secondary education schools

Note:
For a number of these KPIs, the standard MoE distinction between basic and secondary cycles does not permit more detailed discrimination on a school-by-school basis, particularly as schools with just one secondary class are defined as 'secondary'. At a later date, this KPI can be refined to provide information on individual students irrespective of the status of their school.

1.3.12 KPI no. 22 and sub-indicators – building construction

School building has been an important feature of the ERfKE Programmes. This indicator is a simple measure of the extent to which plans are completed on schedule. At a later stage, more refined sub-indicators can be developed to identify types of building (extensions, renovations, etc.) and the distribution of improved building opro0vision across education cycles. The impact of new building on educational achievement can then be examined.

Table 24: Building construction sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
22.2	Ratio of actual building completions to planned	See above only for completed projects	See above only for completed projects	See above only for completed projects	1, 2	See above indicator only for completed and not for started buildings

1.4 Priority 3 key performance indicator models

We recommend that this group of 8 KPIs should be the final phase to be incorporated in the EDSS. This is because at present either (i) the data requirements are either unavailable or difficult to obtain; or (ii) the processes to be measured by data collection are either undeveloped or as yet not in place, although MoE plans and the National Education Strategy anticipate their introduction in the future

1.4.1 KPI no. 23 and sub-indicators – school costs, income & expenditure

The current financial system within MoE does not yet permit the accurate calculation of total school costs. However, the analysis of costs on a school-by-school basis is an important planning tool – and an essential tool when controlling educational expenditure.

At present the EMIS collects data on school income and expenditure from donations and other non-governmental sources – estimated at only about 1% of total educational expenditure. Data on total personnel costs can be calculated from teacher and other salary information held in the Human Resources Directorate database. Other costs – facilities, maintenance, textbooks, student support etc. can be calculated on a proxy basis by calculating the total costs of these school-based expenditure items in the education budget and dividing them by the total number of students. Aggregating these costs based on the total student numbers will then provide a proxy cost per school.

As MoE's financial management systems become more sophisticated, more accurate calculations of total school costs will become possible and this KPI and its sub-indicators can be modified.

Table 132: School income sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
23.1	Donations as % of school expenditure	• Donations in year t • School expenditure/ costs in year t	1. Aggregate all donations in year t for a school 2. Aggregate all expenditures /costs for a school in year t 3. Divide"1" by "2" and multiply by 100	▪ School accounts in year t ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{n}\sum_{j=0}^{m} A_{ij} \Big/ \sum_{j=1}^{m} B_j * 1\,C$ A = donations i (in JD) of school j in year t B = Total costs of school j (in JD) in year t n = max. no. of donations per school j m = max. no. of schools per GC
23.2	Total cost per student per school	• Total cost of employee salaries per school • Total costs of buildings per school • Total costs of facilities & equipment per school • total 'other' costs per school • Total number of students	1. Aggregate personnel, buildings, facilities & equipment, 7 'other' costs 2. Divide '1' by total number of students	▪ School expenditure from school accounts ▪ Personnel costs from HR Dir. ▪ Other school costs by proxy ▪ GC data elements	1, 2, 3, 6,	$\sum_{i=1}^{n}\sum_{j=1}^{m} A+B+(C/x)_{ij} \Big/ \sum_{j=1}^{m} D$ A = school expenditure in school i B = personnel costs in school i C = total costs of education at relevant cycle excluding personnel costs x = total number of students at relevant cycle D = total number of students in school i

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
23.3	Cost of educational provision per pupil in schools by school size	▪ School size (no. of students) ▪ Costs/expenditure per school	▪ Group schools by size criteria11 ▪ Aggregate total school costs for each school ▪ Aggregate expenditure/costs by school size group ▪ Divide '3' by '1'	▪ Total school costs per school ▪ GC data elements	1, 2, 3, 6, 8	$\sum_{i,=1}^{n}\sum_{j=1}^{m} Aij / \sum_{j=1}^{m} Bj$ A = average cost of educational provision per pupil in school i classified in school size category j B = school size category j n = max. no. of schools per GC m = max. no. of school size categories.
23.4	School teaching costs	▪ Aggregated total school total costs ▪ Total cost of teachers' salaries & expenses	▪ Calculate % of total school costs expended on teachers	▪ Total school costs per school ▪ Aggregated teacher costs – salaries & expenses ▪ GC data elements	1, 2, 3, 6, 8	$\sum_{i,=1}^{n}\sum_{j=1}^{m} Aij / \sum_{j=1}^{m} Bj$ A = aggregated costs of all teacher salaries & expenses per school B = aggregated total costs per school

[11] Suggested categories: .40 students; 41-100 students; 101-200 students; 200-400 students; 401-600 students; 601-800 students; >800 students

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
23.5	Private school per capita expenditure & income	▪ School balance sheet	▪ Aggregate private school expenditures per GC ▪ Aggregate private school income ▪ Aggregate population per GC ▪ Divide "1" by "3" (or "2" by "3")	▪ Total private school income ▪ Total private school expenditure ▪ GC data elements	1,2,3,8	$\sum_{i,=1}^{m}\sum_{j=1}^{n} Aij / \sum_{j=1}^{m} Bj$ A = total income per school B = total expenditure per school

1.4.2 KPI no. 24 and sub-indicators – facility provision

The forthcoming data on school inventories will provide a basis for analysis of that data in terms both of their intrinsic quality and their impact on teaching and learning. These two sub-indicators assess the latter first, identifying where poor quality facilities directly impact on teaching and learning. The other sub-indicators require that MoE establishes quality benchmarks for school facilities, and then assesses school facilities against that benchmark. An overall %age rating of facilities below that benchmark will enable priorities to be set and targets established.

Table 133: Facility provision sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
24.1	Numbers of school disruptions due to inadequate facilities, furniture and equipment	▪ FD records of school disruptions and causes	1. no. of days lost per school by school disruptions in Year X 2. % of those disruptions caused by inadequate facilities etc. 3.	▪ School days recorded as lost because of disruption ▪ Recorded causes of disruptions ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} A_i \sum_{i=1}^{n} B_i = GC$ A = total days lost to disruptions caused by facilities problems per school i B = total days lost to disruptions per school i n = max. no. schools per GC
24.2	Facility quality measure	▪ MoE quality standards for each facility ▪ Facilities per school by quality standard	1. Facilities per school rated by quality standards 2. % of schools with facilities below MoE standards	▪ MoE quality standards ▪ School inspection records of facilities by quality standard ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} A_i \sum_{i=1}^{n} B_i = GC$ A = total facilities below MoE quality standards per school i B = total facilities per school i n = max. no. schools per GC

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
24.3	Furniture quality measure	▪ 'Lifespan' standards for each major furniture item ▪ Major furniture per school by age	1. Furniture per school rated by 'lifespan' quality standards 2. % of school furniture requiring replacement 3. % of schools with priority levels of furniture replacement needs	▪ MoE lifespan quality standards ▪ School inspection records of furniture by lifespan quality standard ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=1}^{n} A_i \Big/ \sum_{i=1}^{n} B_i * 100$ A = total furniture below MoE quality standards per school I, graded as <25%, 26-50% & >50% B = total furniture per school i n = max. no. schools per GC
24.4	Equipment replacement rate	▪ Total equipment purchased in year t by equipment type ID ▪ Total equipment by equipment type ID in year t	1. Select total no. of purchased equipment of same type ID per GC 2. Select total no. of available equipment of same type ID per GC 3. Divide "1" by "2" and multiply with 100	▪ Equipment ID ▪ Equipment type ID ▪ Equipment purchase date ▪ GC data elements	1, 2, 3, 4, 5, 6	$\sum_{i=0}^{n} \sum_{j=1}^{m} A_{ij} \Big/ \sum_{l=0}^{s} \sum_{j=1}^{m} B_{lj} * 100$ A = new equipment i of type j purchased in year t B = equipment l of type j in year t n = max. no. of new equipments of type j purchased per GC m = max. no. of equipment types (IDs) s = max. no. of equipment of type j per GC

1.4.3 KPI no. 25 and sub-indicators – teacher utilisation

These sub-indicators identify where teachers are under- and over-utilised. They can be used to identify schools with 'surplus' teachers and subject areas where teachers are required either to teach well under or well over the norm and where teachers are required to teach subjects for which they are not qualified, providing a tool for planning teacher-training.

Table 134: Teacher utilisation sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
25.1	% of teachers teaching xx hours above & below standard weekly total[12]	▪ Teacher's teaching hours as defined in teaching schedule ▪ Standard weekly teaching hours per cycle, adjusted for teachers teaching across cycles	1. Select actual teaching hours as defined in the teaching schedule per teacher assigned to GC 2. Divide total hours taught by no. of teachers to achieve average value as benchmark 3. Divide"1" by "3" and multiply by 100 4. Set benchmark target to compare each teacher with the respective benchmark	▪ Teacher ID ▪ Teacher's teaching hours as defined in school's teaching schedule ▪ Benchmark value ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	$\sum_{i=1}^{n} Aij / \sum_{j=1}^{m} Bj$ (i=1, j=1; n, m) A = teacher i teaching xx hours above average weekly total teaching hours in school j B = 100% teaching position of school j n = max. no. of teachers teaching xx hours above weekly average m = max. no. full teacher position per school j

[12] 24-27 periods per week (= 18 – 20.25 hours/week for basic classes; 20 hours/week for secondary classes

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
25.2	% schools with average teaching load higher and lower than MoE standards[13]	▪ Total teaching hours as defined in teaching schedule ▪ Numbers of teachers ▪ Standard weekly teaching hours per cycle, adjusted for teachers teaching across cycles	1. Select actual teaching hours as defined in the teaching schedule per teacher assigned to GC 2. Aggregate for all teachers per GC 3. Divide total hours taught by no. of teachers to achieve school average value as benchmark 4. Divide"1" by "3" and multiply by 100 5. Set benchmark target to compare each teacher with the respective benchmark	▪ Teacher ID ▪ Teacher's teaching hours as defined in school's teaching schedule ▪ Benchmark value ▪ GC data elements	1, 2, 3, 4, 5, 6, 8	$\sum_{i,=1}^{n}\sum_{j=1}^{m} Aij / \sum_{j=1}^{m} Bj$ A = total teaching hours per school j i = number of teachers in school j B = notional teaching hours expected in school j n = number of teachers required to deliver ….. m = max. no. full teacher posts per school j
25.3	% of teachers teaching specialisms for >50% teaching time	▪ teaching schedule ▪ specialisation(s) for each teacher	1. Teacher teaching schedule by subjects taught & total teaching periods 2. Periods teaching teacher specialisation(s) 3. Divide '1' by '2'	▪ Teacher ID ▪ Teacher's specialisation defined by qualification ▪ Teacher teaching schedule ▪ GC data elements	1,2,3, 6	$\sum_{i,=1}^{n}\sum_{j=1}^{m} Aij / \sum_{j=1}^{m} Bj$ A = Teacher teaching their respective specialism > 50% of their teaching time as defined in the teaching schedule in school j B = 100% teaching position of school j n = max. no. of teachers teaching their respective specialism > 50% of their teaching time per school j

[13] as above

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
						m = max. no. full teacher position per school j per GC

1.4.4 KPI no. 26 and sub-indicators – staff absences and turnover

This KPI provides indicators for unauthorised teacher absences (identified through the payroll) and staff turnover. They provide one proxy measure of school management and a planning tool when reviewing teacher recruitment.

Table 135: Staff absence sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
26.1	% staff-days unauthorised absences monthly	▪ Teacher ID ▪ Teacher's time sheet / information on absences ▪ Absence type ID	1. Select all absence days for month t by teacher per GC 2. Select absences classified as "unauthorised" (from "1") 3. Calculate staff days to be provided per GC for month t 4. Divide "1" by "3" and multiply by 100	▪ Absence days per staff member per month ▪ Absence ID (authorised vs. unauthorised) ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{m}\sum_{j=1}^{12} A_{ij} \Big/ \sum_{i=1}^{m}\sum_{j=1}^{12} B_{ij} * 10$ A = Total of unauthorised absences in staff days in month i for school j B = Total no. of staff days provided in month i in school j n = max. no. of months m = max. no. of schools per GC per GC

Table 135: Staff absence sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
26.2	% staff-days authorised absences monthly	▪ Teacher ID ▪ Teacher's time sheet / information on absences ▪ Absence type ID	1. Select all absence days for month t by teacher per GC 2. Select absences classified as "authorised" (from "1") 3. Calculate staff days to be provided per GC for month t 4. Divide "1" by "3" and multiply by 100	▪ Absence days per staff member per month ▪ Absence ID (authorised vs. unauthorised) ▪ GC data elements	1, 2, 3, 4, 5, 6,	$\sum_{i=1}^{12}\sum_{j=1}^{m} A_{ij} \Big/ \sum_{i=1}^{12}\sum_{j=1}^{m} B_{ij} * 100$ A = Total of authorised absences in staff days in month i for school j B = Total no. of staff days provided in month i in school j n = max. no. of months m = max. no. of schools per GC per GC
26.3	% staff departures annually	▪ Staff member's status change	1. Select all staff that has changed to inactive status in year t 2. Select status change ID classified as "departures" (from "1") in year t 3. Divide "1" by "2" and multiply by 100	▪ Staff member's status ▪ Date of status change ▪ Status change ID ▪ Staff member ▪ GC data elements		$\sum_{j=1}^{m} A_{j} \Big/ \sum_{j=1}^{m} B_{j} * 100$ A = Total no. of annual staff departures in year t for school j B = Total no. of 100% staff positions in year t in school j m = max. no. of schools per GC

Note:
Unauthorised staff absences identified from school principal's formal note to FD – could be included in future EMIS release: also identifiable through deduction by Human Resources Directorate in payroll.

1.4.5 KPI no. 27 and sub-indicators – teacher supervision

This KPI is not currently actionable, as neither the data nor the processes for calculating the KPI are presently available. Current and planned investment in supervisor training, and shifts to greater decentralisation of FD responsibilities will focus on the effectiveness of supervisors in monitoring and supporting schools. At that time, this indicator will identify the effectiveness of current support mechanism and point to alternative forms of school and teacher support.

The recent work of SJE in its five pilot directorates provides some markers for initiating this KPI. Data in the CMS (Content Management System) should include supervisor reports and assessments, which can illuminate the outcomes of SJE rating-scale performance assessments.

Table 136: Teacher supervision sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
27.1	% supervisors trained to provide structured advice on improving classroom performance	▪ Trained supervisors ▪ Total no. of supervisors	1. Select no. of supervisor trained to provide structured advice on improving classroom performance per GC 2. Select no. of teachers per GC 3. Divide "1" by "2" * 100	▪ No. of supervisors ▪ Supervisors' qualification in structured advice to improve classroom performance ▪ GC data elements	1, 2, 3, 4, 5,	$\sum_{j=1}^{m} A_j \sum_{j=1}^{m} B_j$ C A = Trained supervisor per GC (e.g. FD) B = Total no. of supervisors per GC (e.g. FD)

Table 136: Teacher supervision sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
27.2	% schools where teachers receive structured advice from supervisors	▪ Supervisor reports ▪ Ratings by expert panel of quality of supervisor advice	1. Ratings 0-7	▪ No. of schools where teachers have received structured advice ▪ Assessed quality of that advice ▪ GC data elements	1,2,3,6, 8	$\sum_{j=1}^{m} A_j \sum_{j=1}^{m} B_j \mid C$ A = Teachers (100% position) who received structured advice by supervisors in school year t-1 per GC B = Total no. teachers in school year t-1 per GC
27.3	numbers of schools where constructive feedback is structured as part of quality assurance	▪ Total number of schools ▪ Number of schools where constructive feedback integrated	1. Select total number of schools 2. Calculate % where constructive feedback integrated	▪ No. of schools receiving structured feedback as part of QA ▪ GC data elements	1,2,3,6, 8	$\sum_{j=1}^{m} A_j \sum_{j=1}^{m} B_j \mid C$ A = School with constructive feedback in school year t-1 per GC B = Total no. schools per GC

1.4.6 KPI no. 28 and sub-indicators – educational expenditure

This KPI will provide an overview of the MoE's performance in managing its budget. These are 'macro-indicators' of the extent to which the MoE under- or over-spends and the budget allocations on a total and per capita basis.

Table 137: Educational expenditure sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
28.1	Total & per capita educational expenditure and sources	▪ MoE budget and expenditures for year t by item / account ▪ Total budget expenditures	1. Aggregate relevant MoE budget lines for year t 2. Divide public education expenditure ("1") by total population of year t 3. Aggregate educational expenditure by source (e.g. public vs. private)	▪ Education budget ▪ Education expenditure ▪ GC data elements	1, 2	PEEt PEE = Public expenditure on education in JD in year t PCEE = PEEt/Popt PCEE = Per capita expenditure on education (in JD) PEE = Public expenditure on education in JD in year t Popt = Total no. of population in year t
28.2	Ratio of actual expenditure to budgeted expenditure	▪ MoE budget and expenditures for year t by item / account ▪ Total budget expenditures	1. Aggregate relevant MoE budget lines for year t 2. Aggregate actual educational expenditure by source & budget line 3. Divide '2' by '1'	▪ Education budget (all sources) ▪ Education expenditure ▪ GC data elements	1,2	 A = Actual expenditure per GC in year t B = Budget per GC in year t

1.4.7 KPI no. 29 and sub-indicators – Central Directorate effectiveness

The final three KPIs are overall indicators of MoE efficiency and effectiveness. At the final GOPA workshop (16 July 2008) participants emphasised that a single composite indicator was preferable to a number of sub-indicators. In consequence, the three composite indicators use a mixture of quantitative (objective) and qualitative (subjective) measures to provide an overall indicator that can be used to assess year on year progress against benchmarks and towards specified goals.

The ratings scales used by SJE in their pilot project can be developed as bases for the subjective measures used here.

Table 138: Central Directorate effectiveness indicator

No.	Indicator	Required information	KPI weighting	Major data elements	Grouping criteria (GC)	Algorithm
29.i	Central directorate effectiveness measure	▪ Rating scale by MDs and SGs	40%	▪ Rating 0-7 ▪ GC data element	1.	$\sum_{i=1}^{n}(i*4)+(ii*3)+(iii*2)+(iv*1)/100$
29.ii	Performance improvement (ISO) measure	▪ ISO evidence	30%	▪ Rating 0-7 ▪ GC data element	1.	
29.iii	% of recurrent budget on central administration	▪ Total local recurrent budget for past 3 years ▪ Total expenditure on central administration for past 3 years	20%	▪ % increase of decrease year to year (see notes below)	1.	
29.vi	Complaints about central administration	▪ Complaints recorded by Complaints Dept of Quality Directorate	10%	▪ Rating 0-7	1.	

Notes: Ratings for i, ii & iv using techniques piloted by SJE for composite rating scales
Rating for iii also on 0-7 scale with 'no change' = 4, % increases rated 0-3 and % decreases rated 5-7.

Note: (KPIs 29 & 30) Complaints are recorded at each Field Directorate and can be accessed through the CMS. Serious/ complex complaints and complaints about central administration are recorded by the Complaints Department of the Quality Directorate and again can be accessed through the CMS.

1.4.8 KPI no. 30 and sub-indicators – Field Directorates efficiency

The efficiency of the field directorates can be measured both subjectively, using rating scales by field director and senior central MoE officials, based on SJE pilot measures; and objectively, using quantifiable evidence of complaints, relative costs and personnel deployment. The single composite indicator can be used to compare individual field directorates and to assess progress from year to year, both individually and collectively.

Table 139: Field Directorates efficiency sub-indicators

No.	Indicator	Required information	KPI weighting	Major data elements	Grouping criteria (GC)	Algorithm
30.i	District quality ratings for each FD	▪ Rating scale by FD, MDs and SGs	40%	▪ Rating 0-7 ▪ GC data elements	1, 2	$\sum_{i=1}^{n}(i*4)+(ii*3)+(iii*2)+(iv*1)/100$

No.	Indicator	Required information	KPI weighting	Major data elements	Grouping criteria (GC)	Algorithm
30.ii	Ratio of administrative costs per educational district to numbers of pupils	▪ No. of students per FD ▪ Total expenditure on administration per FD	20%	▪ Student IDs per FD ▪ Administration costs per FD ▪ Rank FDs by % admin staff from lowest to highest ▪ GC data elements	1,2	
30.iii	Ratio of administrative staff to teachers	▪ No. of teachers in FD ▪ No. of administrative staff in FD	20%	▪ Select administrative staff as % of total staff ▪ Rank FDs by % admin staff from lowest to highest ▪ GC data elements	1, 2	

No.	Indicator	Required information	KPI weighting	Major data elements	Grouping criteria (GC)	Algorithm
30.iv	Complaints about FD administration	• Complaints recorded by Complaints Dept of Quality Directorate	20%	▪ No. of complaints recorded by Complaints Department ▪ GC data elements	1, 2	

Notes: Ratings for i using techniques piloted by SJE for composite rating scales
Rating for ii & iii based on ranked FDs. Top decile (lowest % admin costs) = 7; 9th deciles = 6; 8th & 7th deciles = 5; 6th & 5th deciles = 4; 4th & 3rd deciles = 3; 2nd decile = 2; lowest decile = 1
Rating for iv also on 0-7 scale with 'no change' = 4, % increases rated 0-3 and % decreases rated 5-7.

1.4.9 KPI no. 31 and sub-indicators – system quality indicator

This KPI provides an overview of the education system's effectiveness. The sub-indicators can be used separately to calculate year-on-year changes along several key dimensions – student learning, planned delivery & customer satisfaction. The most important of these are, of course, the measures of student learning for both international comparisons (TIMMS, PIRLS & PISA) and internal year-on-year improvements.

The three sub-indicators can be weighted as indicated below, to provide a composite indicator, to be used to assess overall progress against benchmarks and targets. The weightings, as with KPIs 29 & 30, can be altered – but MoE should set its preferred weightings when EDSS is implemented and use those for year on year comparisons.

Table 139: Quality sub-indicators

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
31.1	Improved learning nationally	▪ NAfKE test results per year ▪ Tawjeehi examination results per year	1. Select NAfKE results per grade/year over X years 2. Select Tawjeehi results per year over X years 3. Aggregate average NAfKE and Tawjeehi results for each year 4. Measure year on year difference (+ or -)	▪ Aggregated NAfKE results ▪ Aggregated Tawjeehi results	1	 A = aggregated NAfKE normalised results in Year x B = aggregated Tawjeehi normalised results in Year x C = aggregated NAfKE normalised results in Year x+1 D = aggregated Tawjeehi normalised results in Year x+1
31.2	TIMMS, PIRLS & PISA	▪ Latest TIMMS, PIRLS, PISA results for Jordan ▪ Results for other participating nations	1. Select latest TIMMS, PIRLS, PISA results for Jordan 2. Compare results with earlier Jordan results 3. Compare Jordan's international ranking with previous years	▪ Aggregated results of respective tests	1	$\sum_{i=1}^{m}\sum_{j=1}^{n} Aij$ A = aggregated normalised results in Year x n = max. no of results per same evaluation group m = max. no of evaluation groups (e.g. students scoring > 90%)

No.	Indicator	Required information	KPI calculation	Major data elements	Grouping criteria (GC)	Algorithm
31.3	MoE Plans on target	▪ ERfKE II plans ▪ Other Directorate (central & field) action plans ▪ Reports on extent to which planned actions implemented on schedule	1. Ratings 0-7 for each element	▪ Group ratings for each element	1	$\sum_{i=1}^{n}(A/3)+(B/3)+(c/3)/10$ A= rating 0-7 for expert panel assessment of progress in ERfKE planning; B = rating 0-7 for expert panel assessment of quality of action plans C = rating 0-7 for expert panel assessment of extent to which plans implemented on schedule

Table 141: Weightings for overall system indicator

Measure	Weighting	Algorithm
Improved learning nationally	50%	$\sum_{i=1}^{n}(A*5)+(B*2.5)+(C*2.5)+(iv*1)/100$ A = rating for imp[roved learning nationally B = rating for TIMMS, PIRLS & PISA C = rating for MoE plans on target
TIMMS, PIRLS & PISA	25%	
MoE Plans on target	25%	