Performance Grading Index: A Few Observations
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Background

The Government of India through the Department of School Education & Literacy, Ministry of Education has initiated many programmes to improve School Education in India amongst which *Sarva Shiksha Abhiyan* Programme (SSA) and *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) are the most prominent ones which are now merged into *Samagra Shiksha*. It has been a practice to compute indices to know the health of the state school education system which are also helpful to look into the areas which need interventions. NIEPA also computed Educational Development Index (EDI) during the period 2005-06 to 2015-16, an index one each for the primary and upper primary level of education based on a set of 24 parameters all of which were based on the information generated through the since source i.e. UDISE. Recently two more indices, namely School Education Quality Index (SEQI) by the NITI Aayog (the first year 2016-17) and Performance Grading Index (PGI) by the Department of School Education & Literacy, Ministry of Education in consultation with the NITI Aayog were initiated. The objectives of both the SEQI & PGI being almost the same; one failed to understand the usefulness of more than one index for the same purpose. The objective of SEQI developed by NITI Aayog was to evaluate the performance of States & Union Territories (UTs) intending to provide them a platform to identify strengths and weaknesses so that necessary course corrections are initiated. The SEQI also strives to facilitate the sharing of knowledge and best practices amongst States & UTs. On the other hand, PGI envisages that the Index would propel States & UTs towards undertaking multi-pronged interventions to pinpoint the gaps and prioritize areas for intervention. Like SEQI, PGI is also expected to act as a good source of information for best practices to share amongst the States & UTs. Both the indices are based on a set of the same domains (see Table 1) but the number of indicators used and weightage assigned are different. While the review of SEQI is presented separately, the present article undertakes a critical review of the latest PGI 2018-19 undertaken by the Department of School Education & Literacy.

Table 1
Domain-specific Number of Indicators used in PGI 2018-19 & Weightage Assigned

Category	Domain	Number of Indicators	%age Indicators	Weightage	%age Weightsgae	Number of Indicators with Same Values used in 2018-19 of 2017-18	Number of Indicators used in SEQI, NITI Aayog
I: Outcomes	1: Learning Ourcomes & Quality	9	13	180	18	08	03 (360)
	2: Access	8	11	80	8	08	03 (100)
	3: Infrastructure & Facilities	11	16	150	15	00	03 (25)
	4: Equity	16	23	230	23	00	07 (200)
II: Governance & Management	1. Governance Processes	26	37	360	36	00	14 (280)
Total		**70**	**100**	**1000**	**100**	**16**	**30 (965)**

Source: The table prepared is based on PGI 2018-19, DoSE&L, Ministry of Education, Government of India.

Like 2017-18, 2018-19 Performance Grading Index (PGI) is also based on a set of 70 indicators spread over the following five domains:

- Learning Outcomes Government Quality
- Access
- Infrastructure Government Facilities
- Equity; and
- Governance Process

The first PGI based on 2017-18 data was undertaken by DSE&L in consultation with the NITI Aayog was based on a set of 70 indicators of which 16 indicators were based on the National Achievement Survey conducted by the NCERT in 2017 which have again been used in computing PGI 2018-19. The remaining set of data was updated by the internal mechanism of Samagra Shiksha through online portals of Shagun, UDISE+, and Mid Day Meal all of which are being maintained by the Department of School Education & Literacy of the Ministry of Education, Government of India. It is not known how data is updated and what the mechanism for monitoring of updated information by the states and whether data of the remaining 56 parameters/indictors are of the same year. The data used cannot be verified by independent users simply because of the reason that the raw data used in computing the indicators are not available in the public domain; even a full set of U-DISE 2018-19 is not available in the public domain. It is not possible to verify the reliability and authenticity of data used in computing PGI 2018-19. It

has been mentioned that the authenticity of data is verified internally by its officers but details have not been provided. Based on the PGI 2017-18 & 20118-19, each State/UT was provided domains on which they performed well and have had slow progress but indicator-specific details have not been made available in the absence of which it is not known how best the State/UT use the outcome in further improving their position about an indicator or a set of indicators or a domain. A few indicators are judged based on PAB approvals details of which are generally not available in the public domain. It would be of interest to know whether State/UT has initiate activities in the light of these observations and are reflected in the Annual Work Plan and Budget in the following year. If yes, has anyone evaluated the performance of State/UT concerning a few key indicators used or PGI is an independent exercise just to know the status of State/UT concerning a few indicators/domains and practically without any follow-up exercise?

Before we analyze PGI 2018-19, first we take a look at indicators used in computing PGI. At a glance, it looks both PGI 2017-18 & 2018-19 are based on the same set of indicators, weights assigned, methodology used, mode of analysis & presentation. Once the set of indicators are finalized, the same may be fixed for the next five years along with the methodology and the same sets of weightage assigned to each indicator parameter to see the usefulness of the whole exercise with regard to methodology used and consistency of results.

Domain I: Learning Outcomes

The first set of indicators we review below fall under Domain I: Leaning Outcomes which has a set of nine indicators with a total weight of 180, except one the source of the remaining eight indicators is the National Achievement Survey conducted by the NCERT in 2017. In the last part, we shall discuss the weights assigned and the methodology of assigning the weights. The remaining lone indicator, namely the percentage of Government & Aided elementary schools which have displayed class-wise learning outcomes and reported on the Shagun portal. Is it elementary schools or elementary stage? is not specified. Since the data uploaded on the Shagun portal is not available in the public domain, it is not possible to know whether the same is reported by the schools or states that have reported the percentage of such schools? Is the percentage reported for the entire state as a whole or district-specific percentage has also been reported? It would have been better to use the percentage of districts having displayed class-wise learning outcomes which should have been converted into the state-specific indicator. A state

having 80 percent may be treated as good compared to other states but within the state, it may not present the true picture of displaying school-wise outcome. Instead of the percentage of schools having displayed learning outcomes, a better indicator would be to consider the percentage of schools having displayed student-wise learning outcomes. It would be of interest to know how this indicator was authenticated by the officers engaged in the PGI exercise which is otherwise impossible to check and there is no option to accept the information as submitted by the State/UT. Another important limitation of the entire PGI exercise is that most of the indicators used are computed only for the Government and Aided schools which is of limited use and does not present the true picture of the entire State/UT. Percentage of schools displayed class-wise learning outcomes means one time or concurrently in an academic session also need to be specified or whether the same is part of the periodic evaluation or for the same a special learning outcome on the pattern of NAS is supposed to be conducted by each of the Government & Aided school. The questions raised must find answers in PGI during the next round of computation.

Category 1: Outcomes
Domain I: Learning Outcomes & Quality of Education Indicators

Sl. No.	Total Domain Weight 180	Source of Information	Weight
1	Percentage of Elementary schools which have displayed class wise Learning Outcomes	**Shagun Portal**	20
2	Average Language score in Class 3 - Government and Government schools	**NCERT (NAS)**	20
3	Average Mathematics score in Class 3 - Government and Government schools		20
4	Average Language score in Class 5 - Government and Government schools		20
5	Average Mathematics score in Class 5 - Government and Government schools		20
6	Average Language score in Class 8 - Government and Government schools		20
7	Average Mathematics score in Class 8 - Government and Government schools		20
8	Average Science score in Class 8 - Government and Government schools		20
9	Average Social Science score in Class 8- Government and Government schools		20

NAS: NationalAchievement Survey

As has already been mentioned that the remaining eight indicators used in both the PGI 2017-18 & 2018-19 are related to the quality of education measured through the NCERT National

Achievement Survey conducted in 2017 concerning average scores in Grades III, V, and VIII in subjects like Language, Mathematics, and Science. Not only the same set of indicators have been used but their values of 2017-18 have also been used in computing PGI 2018-19 which makes no sense which should have been avoided. Better would be to use only those indicators which have got provision for the annual collection on regular basis and part of the administrative data. So far as possible, information that is not available in the public domain and limited to the Sanagra authorities/State should have been avoided in computing any index, such as PGI.

Whatever scores have been used all which relates to Government & Aided schools just because of the reasons that NAS doesn't cover private unaided schools. Alternative indicators should find the place during the next round of PGI computation in the absence of which PGI will never present the true picture of learning outcome in the entire State/UT. It may also be of interest to know that in case of a few other indicators both the Government as well as Private schools including the private Unadied schools have been considered in computing PGI 2017-18 & 2018-19. Further, it has also been observed that on the one hand some indicators concerning elementary education have been used on the other hand indicators concerning secondary education have also been used. Better would have been to compute like previously computed Educational Development Index separate indices one each for elementary and secondary level of education. Both indices should therefore be based on a separate set of indicators concerning the elementary and secondary levels of education.

Domain II: Access

PGI 2018-19 used a set of eight indicators under the Domain II: Access source of which except one indicator, namely percentage of identified Out-of-School children mainstreamed in the last completed academic year in case of Grades I to VIII is Unified-DISE. The source of information on Out-of-School children is state sources reported through the Shagun portal maintained by the DSE&L, Ministry of Education. In the absence of a mechanism for collecting information on Out-of-School children on regular basis, it is not known on what basis state report percentage of identified Out-of-School children who were mainstreamed in the last completed academic year? and on what basis the information submitted by the state on out-of-school children is being checked in the absence of which there would always be a question mark about the reliability of indicators being used in computing PGI. Still, it would be better to use (i) the percentage of out-

of-school children identified to total out-of-school children; and (ii) the percentage of identified out-of-school children mainstreamed.

The rest of the seven indicators used in computing PGI are related to enrolment which is adjusted-NER, retention, and transition rate at the elementary and secondary level of education. It is good to use adjusted-NER to view the participation of children in the elementary and secondary education programmes. It would be still better to use adjusted-NER separately for primary and upper primary levels of education instead of the entire elementary level of education together. It may be recalled that a huge decline (59 million) in enrolment in 2017-18 was observed from its previous level in 2016-17 which continued in 2018-19; the lions share in decline in enrolment was contributed by the primary and upper primary level of education which has got serious implications for universal school enrolment. Enrolment in the upper primary level cannot grow independently to the primary level of education (in terms of graduates). Unless the primary level of education sends an adequate number of primary graduates to the elementary level, the elementary level cannot grow independently because of which it is important to use efficiency-related indicators in computing any index in the future, such as PGI. Therefore, it is suggested that at least average annual, as well as grade-to-grade drop-out rate be considered in the future computation of PGI. Better, it would be to use separately for boys and girls and that too for elementary, as well as a secondary level of education. It is further observed that gender-specific rates are not used which is otherwise essential to know participation of girls, as well as boys in educational programmes because of which it is suggested to use Gender Parity Index based on adjusted-NER both at the elementary as well as secondary levels of education. Further, it has been observed that enrollment-based indicators are used only at the state level, and as such no district-specific indicators have been used in computing PGI which can easily be computed based on UDISE data. Even adjusted-NER may not be free from limitations as the same need age-specific child population in a year which is generally not readily available from the Census of India sources in the absence of which the projections based on up to 2001 actual Census figures are modified by the Ministry of Education in the light of 2011 total population which is not free from limitations. It has also been observed even revision in the projected age-specific population in the recent past because of which even published figures were changed. In the district-specific age-specific population, states have also been using district-specific population as per their convenience; this does not always present the true picture of children's participation

in educational programmes. The DoSE&L had taken up the issue of projected child population with the Office of the Registrar General of India but without any results. Neither the Expert Committee on Population Projections was set up by the Planning Commission (now NITI Aayog) which was otherwise a regular exercise (up to 2001 Census) used to be initiated immediately after the Census operations were over nor it has provided a single estimate of the age-specific population required in the computation of enrolment based indices, such as GER, NER, Age-SER, and Adjusted-NER for the entire period of 2012 to 2021 in the absence of which it was left to the district to use their estimates. However, the author of this article has undertaken the exercise based on the single-age actual child population of Census 2011 and made available 6 to 11 and 11 to 14 years population initially up to the year 2016 both state and district-wise which were observed to be used by states in computing district-specific GER and NER.

In view of the decline in enrolment a few indicators, such as the percentage of schools showing increase/decline in primary and upper primary enrolment and the percentage of blocks and districts showing increase/decline in enrolment can be used as an alternative indicator. Districts showing the decline in enrolment for the two consecutive years may be dealt with separately and appropriate indicators may be added. Lastly, it may also be observed that not a single indicators giving information on the availability of schools have been used under Domain II: Access Indicators which otherwise means that there is no shortage of schools in India which may not be true for secondary and higher secondary education because of which at least the ratio of elementary to secondary schools/sections should have found a place in PGI indicators.

Category 1: Outcomes
Domain II: Acess Indicators

Sl. No.	Total Domain Weight 80	Source of Information	Weight
1	Adjusted Net Enrolment Ratio at Elementary level	UDISE	20
2	Adjusted Net Enrolment Ratio (NER) at Secondary level		20
3	Retention rate at Primary level		20
4	Retention rate at Elementary level		20
5	Retention rate at Secondary level		20
6	Transition rate from Primary to Upper Primary level		20
7	Transition rate from Upper Primary to Secondary level		20
8	Percentage of identified Out-of-School Children mainstreamed in the last completed academic year i.e.2017-18, Grades Class I to VIII	States through Shagun Portal of DSE&L, MoE	20

UDISE: Unified District Information System

Domain III: Infrastructure & Facility Indicators

About ten indicators have been used under Domain III: Infrastructure & Facility Indicators main source of which is UDISE, Shagun, and Mid-day Meal portals all of which is being managed by the DoSE&L, Ministry of Education. Indicators concerning primary, as well as elementary and secondary education concerning only the government & aided management, have been used. The focus of this set of indicators is on the infrastructure which includes Computer-Aided Laboratories (CAL) in case of upper primary and integrated science and computer laboratory in case of secondary level, mid-day meal scheme, a host of reading material including textbooks both in case of elementary, as well as secondary education, uniforms, and functional drinking water facilities.

Category 1: Outcomes
Domain III: Infrastructure & Facility Indicators

Sl. No.	Total Domain Weight 150	Source of Information	Weight
1	Percentage of schools having Computer-Aided Laboratory in Upper Primary Level	UDISE	20
2	Percentage of Secondary schools having Laboratory Facility		
	a) Integrated Science Lab		10
	b) Computer lab		10
3	Percentage of schools having Book Banks/Reading Rooms/Libraries		20
4	Percentage of schools covered by Vocational Education subject		
	(a) Grades IX & X		10
	(b) Grades XI & XII		10
5	Percentage of Primary schools provided Graded Supplementary Material	**Shagun Portal**	20
6	Percentage of Elementary school children taking Mid-day Meal against target approved in PAB - Government & Aided schools	**MDM Portal**	10
7	Percentage of days Mid-day Meal served against Total Working days – Government & Aided Elementary schools		10
8	Percentage of schools having Functional Drinking Water Facility: All Schools	**UDISE**	10
9	Percentage of Elementary Level Students getting Uniform within three months of the start of previous Academic year i.e. 2017-18: Government Schools		10
10	Percentage of Elementary Level students getting Free Textbook within one month of the start of the previous academic year i.e. 2017-18		10

UDISE: Unified District Information System

Despite the significant improvement, a good number of schools are yet to be provided with functional toilets which are evident, if a glance at the UDISE 2017-18 data is made which reveals that only 92.70 percent of schools have had the same in 2018-19, In absolute number, as many as 55,321 schools were yet to be provided toilet facility in schools in 2018-19 as against 1,13,278 schools are still without functional toilets. Further, it has been observed that by and large schools under most of the government managements have had an even lower percentage of such schools in 2017-18. Therefore, in addition to boys and girls functional toilets in schools used in PGI computation, the percentage of schools (all schools including private unaided schools together for both boys & girls) with functional toilets should have been used in PGI computation. In the case of a few indicators, such as transition rate overall as well as separately of boys and girls have been utilized in PGI 2018-19 computation.

Table
Schools with Toilet & Functional Toilet Facility, 2018-19

Management	Total Number of Schools	Schools with Toilet Facility	%age Schools with Toilets	Schools with Functional Toilet Facility	%age Schools with Functional Toilets
Department of Education	835488	816461	97.72	795851	95.26
Tribal Welfare Department	45409	42371	93.31	40157	88.43
Local body	196530	191625	97.50	169981	86.49
Government Aided	84623	78768	93.08	76586	90.50
Private Unaided (Recognized)	326228	312252	95.72	303407	93.00
Other Govt. Managed Schools	1322	1174	88.80	1140	86.23
Unrecognized	32366	25960	80.21	24618	76.06
Social Welfare Department	2413	2288	94.82	2186	90.59
Ministry of Labor	356	288	80.90	268	75.28
Kendriya Vidyalaya	1566	1537	98.15	1525	97.38
Jawahar Navodaya Vidyalaya	505	499	98.81	498	98.61
Sainik School	64	64	100.00	62	96.88
Railway School	80	80	100.00	80	100.00
Central Tibetan School	14	14	100.00	14	100.00
Madarsa Recognized (By Wakf Board/Madarsa Board)	19150	17772	92.80	17043	89.00
Madarsa Unrecognized	4886	4526	92.63	4306	88.13
Total	**1551000**	**1495679**	**96.43**	**1437722**	**92.70**

It is further observed that the exercise of PGI 2018-19 computation was undertaken before the COVID19 pandemic maybe because of which not a single indicator concerning electricity connection in school, availability of functional computer and internet facility was considered which is now become essential in future PGI computation because of online learning for last more than a year. Still, it is not sure when normal studies through the actual classroom transactions will resume. Since one of the main sources of PGI is UDISE+, it has also become more important to have a look at the availability of electricity connections in school and functional computers and internet connection which is briefly analyzed below. In an online system, such as UDISE+, the quality of data also depends upon the availability of an internet connection and functional computer in school.

Schools having Electricity & Computer Facility

Schools having electricity connection, computer, functional computer, and internet connection presented at the all-India level for the year 2017-18 and in a few selected states reveal that our schools are not equipped to meet challenges paused by the pandemic. Even the basic requirement such as, the electricity connection is yet to be provided to the majority of schools which is true for both the rural and urban areas. A glance at the table reveals that of the total 1.5 million schools engaged in school education in the country, only 63.14 percent of schools have got the electricity connection compared to a little more than 50 percent of such primary schools. It is also true that just schools having electricity connections don't necessarily mean that schools get an uninterrupted power supply. It has also been observed in the past that schools generally do not have separate funds to pay electricity bills because of which is generally observed that even schools have a connection but they do not have the power in school in the real sense.

Percent of Schools having Electricity, Computer and Internet Connectivity in School: 2017-18

Facility	Primary Only Schools	All Schools
Electricity Connection	51.85	63.14
Computer	12.20	29.57
Internet Connection	3.54	13.61
Functional Computer	4.19	13.07
Computer Laboratory (Hr. Secondary Schools)	-	45.17

Source: U-DISE

Another crucial indicator is the availability of computers and internet connection in schools both of which are yet to be provided in the majority of schools in India. Of the total 1.5 million schools, only about 20 percent of schools have got a computer as against 12.20 percent such primary schools. Unfortunately, the percentage of working/functional computers in schools is as low as 13.07 percent in case of all schools and 4.19 percent in primary only schools. The state-wise percentage of schools with working computers further reveals that the same in Bihar is as low as 0.51 percent compared to 3 percent in Uttar Pradesh, about 5 percent in Jharkhand, 4 percent in Assam, 5 percent in Madhya Pradesh, and 3 percent in Odisha. On the other hand, schools in a few states such as Andhra Pradesh, Delhi, and Gujarat have got electricity connections in most of the schools but the percentage of schools with a working computer, except Delhi (68.25 percent) is still very low. Schools with working computers need not have an internet connection as only about 14 percent of schools have an internet connection compared to only about 4 percent of primary schools. In the light of the above discussion, it is envisaged that the percentage of schools (all schools) with electricity connection, functional computer, and internet connectivity in school will be added to the list of PGI indicators in the years that follow.

Schools having
Electricity, Computer and Internet Connectivity in Schools (All) in Selected States
2017-18

Facility	Assam	Bihar	Jharkhand	Odisha	UP	MP	Andhra Pradesh	Delhi	Gujarat	All India
Electricity Connection	24.28	45.82	47.46	36.50	44.76	32.58	92.80	99.93	99.91	63.14
Functional Computer	3.98	0.51	4.84	3.22	3.17	5.99	24.03	68.25	38.65	13.07

Source: U-DISE

Category 1: Outcomes

Domain IV: Equity Indicators

As many as 16 indicators have been used in computing PGI under Domain IV: Equity Indicators of which eight indicators are based on the National Achievement Survey conducted by the NCERT in 2017 with this the total indicators based on NAS comes out to be 16 out of a total 70 indicators which have an aggregate weightage of 280 out of total 1,000 weightage. Since most of the school education programmes centered around improving the quality of learners ability, it is quite natural that the emphasis of PGI is largely on quality-related indicators but the same is not available on the regular basis and the NAS is the only source of information that is occasionally

being conducted nation-wide the latest of which was conducted in 2017 and the next such survey is planned to be conducted sometime in 2021 till such time there is no option but to use the 2017 data irrespective of PGI whether it is 2017-18 or 2018-19 or 2019-20. But the moot question is whether it is essential to use the already used indicators (with the same values) in a year? Better it would be to use only such indicators which have a regular source of information and is also part of the administrative survey.

The next four indicators are related to transition rates all of which are based on UDISE data. This set of indicators are the extension of transition rate from primary to upper primary and from elementary to secondary level already used under access indicators in case of the minority population, Scheduled Castes & Scheduled Tribes category and boys and girls transition rate all of which are important for next level of an educational level to grow.

The next indicator used under Domain IV: Equity indicators are Gross Enrolment Ratio of Children with Special Need (CWSN) for the age-group between 6-18 years; the main source of which is said to be Shagun, UDISE, and Ministry of Social Justice and Empowerment. Having worked with UDISE for decades, it can simply be said that GER for CWSN is neither required nor it is possible to construct the same. Despite all efforts, even the number of CWSN students is not adequately reported under the UDISE because of which it always remains an underestimate of the total CWSN students. For computing GER for CWSN, apart from CWSN enrolment, corresponding age-specific child population with disability in the current year is required which is next to impossible to get the real number. It may be observed that even the reliable annual age-specific child projected population is not available; how one could envisage that the age-specific child population with a disability will be available. It may even be difficult for the data custodian i.e. Ministry of Social Justice and Empowerment to get the same in the requisite year because of which it would be better to drop the GER for CWSN in any future PGI computation.

Category 1: Outcomes
Domain IV: Equity Indicators

Sl. No.	Total Domain Weight 230	Source of Information	Weight
1	Difference in Student performance in Language between Scheduled Castes (SC) and General category in Govt. and Aided elementary schools: Class 3, 5 & 8	**NCERT: National Achievement Survey**	20
2	Difference in Student performance in Mathematics between Scheduled Castes (SC) and General category in Govt. and Aided elementary schools Class 3, 5 & 8		20
3	Difference in Student performance in Language between Scheduled Tribes (ST) and General category in Govt. and Aided elementary schools : Class 3, 5 & 8		20
4	Difference in Student performance in Mathematics between Scheduled Tribes (ST) and General category in Govt. and Aided elementary schools : Class 3, 5 & 8		20
5	Difference in Student performance in Language between Urban and Rural areas in Govt. and Aided elementary schools : Class 3, 5 & 8		10
6	Difference in Student performance in Mathematics between Urban and Rural areas in Govt. and Aided elementary schools : Class 3, 5 & 8		10
7	Difference in Student performance in Language between Boys and Girls in Govt. and Aided elementary schools: Class 3, 5 & 8		10
8	Difference in Student performance in Mathematics between Boys and Girls in Govt. and Aided elementary schools: Class 3, 5 & 8		10
9	a) Difference between SCs and General Category's Transition Rate from Upper Primary to Secondary level	**UDISE**	10
10	b) Difference between STs and General Category's Transition Rate from Upper Primary to Secondary level		10
11	Difference between boys' and girls' Transition Rate from Upper Primary to Secondary level		10
12	Difference between Minorities and General Category's Transition Rate from Upper Primary to Secondary level		20
13	Gross enrolment ratio of CWSN (age group 6-18 years)	Shagun: UDISE & MSJE for population	10
14	% of entitled CWSN receiving Aids and Appliances for Govt and aided schools	Shagun & PMS	10
15	Percentage of schools having ramp for disabled children to access school building	**UDISE**	10
16	Percentage of schools having functional CWSN friendly toilets		10
	Percentage of schools having a functional toilet		
	a) Boys toilet		10
	b) Girls toilet		10

UDISE: Unified District Information System MSJE: Ministry of Social Justice and Empowerment

The source of the next indicator i.e. the percentage of entitled CWSN receiving aids and appliances for government & aided schools is reported to be the Shagun portal and project monitoring system being maintained by DSE&L, Ministry of Education. One fails to understand why UDISE has not been the main source of this indicator which is otherwise being collected annually under it. The main source of the next three indicators concerning ramp and toilet for CWSN students as well as a functional toilet for boys & girls is UDISE all of which is termed minimum required to assess the infrastructure been provided to CWSN students.

Category 2: Governance & Management

Domain I: Governance Processes

The next set of indicators that we discuss below falls under Category 2: Governance & Management and Domain I: Governance Processes which has a set of 26 parameters/indicators with a total weightage of 360 of the overall total weightage of 1,000 have been used as Governance Processes indicators source of most of which is either the UDISE or the Shagun portal being maintained by the DoSE&L; thus clearly showing the importance of governance indicators in the overall development of school education in India. Apart from these sources, Project Monitoring & Project Financial Monitoring Systems internally developed for SSA/Samagra Shiksha are the other sources of information used in case of a few other indicators.

A cursory look at the list of equity indicators one can get the idea that a few indicators should have been avoided and a few others, there is no mechanism to check and validate the information. Whatever information is provided by the States/UTs through the Shagun portal is treated as final and there is no option but to use it in the PGI computation which raises serious questions about the usefulness of the whole exercise. For example. Percentage of Children whose Unique ID is seeded in SDMIS reported through the Shagun portal has been used. One fails to get information about what is the source of information on this indicator especially when there are no such guidelines to maintain the SDMIS portal from DSE&L, MoE to States/UTs. On what basis State/UTs reported information would be of interest to know along with the actual data reported on the Shagun portal. It may however be observed that during 2016-17, an attempt was made through the SDMIS portal maintained by NIEPA, New Delhi to collect information on 35

student-specific parameters in sync with the UDISE and its varied first-year information of about 210 million children was collected but the same was discontinued in the following years for unknown reasons. Even before the SDMIS was put in place, with a similar purpose a few states, such as Andhra Pradesh developed their portal which apart from a few other states, such as Haryana is continuing. In the absence of the guidelines from the MoE, states still maintaining SDMIS or alike portal as their state-specific initiatives will be at the advantage stage. Another such variable is the percentage of teachers whose Unique ID is seeded in any electronic database of the State Government/UT Administration, percentage of average daily attendance of students captured digitally, percentage of average daily attendance of teachers recorded in an electronic attendance system, and percentage of schools at elementary level displaying a photo of elementary teachers most of which are reported to be covered only government & aided schools. One fails to get the idea of how indicators, like the percentage of schools at elementary level displaying a photo of elementary teachers, will help in the attainting goal of school education in India. Is there any notification from MoE to states to make such arrangements or the already advanced states will again be at the advantage stage is a moot question that must be answered.

Instead of a separate set of teacher indicators, several teacher-related indicators have been used under Domain IV: Equity indicators which, like other indicators are based on UDISE as per the requirement of the Right-to-Education Act 2009. It is unfortunate that even after 12 years of RTE enactment, many schools still do not fulfill the RTE requirement a majority of such schools are government-managed schools. A composite indicator computed by NIEPA based on a set of 10 parameters suggested that only 12 percent of the total schools in the country have had all the 10 facilities but the same under UDISE being managed by the DoSE&L, no such statistics are made available in the public domain for recent years. The National Commission for Protection of Child Rights (NCPCR) must take up the issue with the States/UTs and ensure that at least all government & aided schools must fulfill RTE requirements. At least, the percentage of elementary schools having fulfilled all the 10 RTE parameters must find a place in the equity or facility indicators which can still be computed by using **UDISE+** 2019-20 data.

Category 2: Governance & Management
Domain I: Governance Processes

Sl. No.	Total Domain Weight 360	Source of Information	Weight
2.1.1	% of Children whose Unique ID is seeded in SDMIS	**Shagun & PMS**	10
2.1.2	% of Teachers whose Unique ID is seeded in any electronic database of the State Government/UT Administration		10
2.1.3	% of average daily attendance of students captured digitally (States & UTs may set digital mechanism similar to AMS of MDM		10
2.1.4	% of average daily attendance of teachers recorded in an electronic attendance system		10
2.1.5	% of Schools at Elementary level covered Under Twinning/ Partnership	**Shagun Portal**	10
2.1.6	% of Schools at Elementary level displaying photo of elementary teachers: Government & Aided schools		10
2.1.7	% of single teacher primary schools		10
2.1.8	% of elementary schools having PTR as per RTE norm		10
2.1.9	% of primary and upper primary schools meeting head-teacher norms as per RTE	**UDISE**	10
2.1.10	% of secondary schools having principals/ headmasters in position		20
2.1.11 a.	% Upper Primary schools meeting norms of subject-teacher as per RTE		10
2.1.11 b.	% Senior Secondary Schools who have teachers for all core subjects (classes 9 to 12)		20
2.1.12	% of academic positions filled in state and district academic institutions (SCERT/SIE & DIETs) at the beginning of the given academic year i.e. 2018-19	**Shagun**	10
2.1.13	Average occupancy (in months) of District Education Officer (or equivalent) in last 03 years for all Districts		10
2.1.14	Average occupancy (in months) of Principal Secretary/Secreary (Education), SPD (SSA) & SPD (RMSA) for last 03 years		10
2.1.15	Details of visits to the elementary schools during the previous academic year:	**UDISE**	10
	(a) % of schools visited at least 3 times for academic inspections		
	(b) % of schools visited at least 3 times by CRC Co-ordinator		
	(c) % of schools visited at least 3 times by Block Level Officer (BRC/BEO)		
2.1.16	a) Average number of days taken by State Government/UT Administration to release total Central share of funds to societies (during the financial year 2017-18)	**PFMS**	10
	b) Average number of days taken by State Govt./UT Administration to release total State share due to societies (during the financial year 2017-18) (not applicable to Uts without legislature)		10
2.1.17	% of teachers evaluated (during the year 2017-18)	**Shagun Portal** (State/UT/ PINDICS)	10

Contd…..

Sl. No.	Total Domain Weight 360	Source of Information	Weight
2.1.18	% of Government Head-Teachers/Principals who have completed School Leadership (SL) training in the financial year 2017-18 - Measured against sanctioned number by Central Government - At a minimum, the training should include all aspects of School Leadership Development Programme laid out by NCSL, NIEPA, New Dlhi	**Shagun Portal**	20
2.1.19	% of schools that have completed self-evaluation and made school improvement plans during the financial year 2017-18	**Shagun Portal & PMS**	10
2.1.20	% of teachers provided with sanctioned number of days of training during the financial year 2017-18: Government & Aided		20
2.1.21	Number of new teachers recruited through a transparent online recruitment system as a percentage of total number of new teachers recruited during 2017-18		20
2.1.22	Number of teachers transferred through a transparent online system as a % of total number of teachers transferred during 2017-18		20
2.1.23	Number of head-teachers/principals recruited through a merit-based selection system as a percentage of total number of head-teachers/principals recruited during 2017-18		20
2.1.24	Percent State/UT budget share spent on scool education to total State/UT budget of 2017-18	**Shagun Portal**	20
2.1.25	Funds (including value of goods and services in kind) arranged through PPP, CSR etc. as a percentage of State/UT budget on school education during 2017-18		10
2.1.26	Percentage of each of the following registered under PFMS: (a) Schools (b) SCERT/SIE (c) DIETS		10

UDISE: Unified District Information System PINDICS: Performance indicators for elementary school teachers.

Leadership at the top at the state level plays an important role in successful planning and execution of large scale programmes, such as Samagra Shiksha because of which three indicators, namely percentage of academic positions filled-in SCERT/SIE and DIETs, average occupancy of District Education Officer and Principal Secretary/Secretary (Education), State Project Director for last 03 years have been used in computing PGI source of all of which is Shagun portal. However, the same in case of SIEMATs have not found a place maybe because of the reason that barring a few, none of the other SIEMATs are functional in the real sense. Time has come that these institutions are made operational as a separate body independent of the Office of the State Project Director. Details of visits to the schools during the previous academic year for academic inspections, and percentage of elementary schools visited by the CRC Coordinators and Block level officer is another indicator which has been used source of which is

UDISE but over a period of time, it has been observed that incomplete information being furnished by schools on academic and other inspections. It is hoped that since these parameters are now part of PGI, the quality of the same may improve in the years that follow.

The success of any programme largely depends upon the availability of funds and that too timely release of funds, keeping this in mind two indicators, namely (i) the average number of days taken by State Government/UT Administration to release total Central share of funds to societies; and (ii) the average number of days taken by State Government/UT Administration to release total State share due to the Societies. There must be a third indicator which must indicate whether (i) PAB was held on time to approve the plans; and (ii) the average number of days after the PAB meeting, the Central Government has taken to release its share to States/UTs to know on an average how many months in a year were available to State Implementation Society to implement its PAB approved plans. One of the other indicators used is the percentage of teachers (self) evaluated during the previous year i.e 2017-18 source of which is Performance Indicators for Elementary School Teachers (PINDICS) of which practically no or little information is available in the public domain. It is not known whether self-evaluation is mandatory or optional and whether each of the 9.4 million teachers is given login credentials?

The next set of indicators are dedicated to teachers transfer and recruitment in case of only government management source of which is Shagun and PMS portal; the indicators used are:

- Percentage of teachers provided with a sanctioned number of days of training during the previous financial year i.e. 2017-18;

- Number of new teachers recruited through a transparent online recruitment system as a percentage of the total number of new teachers recruited during the previous year i.e. 2017-18; & Number of Head-Teachers/Principals recruited through a merit-based selection system as a percentage of the total number of head-teachers/principals recruited during the previous year; and

- Number of teachers transferred through a transparent online system as a percentage of the total number of teachers transferred during the previous year i.e 2017-18

In addition, the number of teachers provided in-service during the previous year can also be used as an alternative indicator which is readily available from UDISE so as the percentage of schools having trained teachers in the use of computer and teaching through a computer can be another

indicator which can be added to list of teacher indicators. Teachers appointed through an online system are given weightage which is also true for transfers of teachers which may encourage states to develop an online dedicated portal to meet information on all aspects of teachers. Emphasis is laid down on recruitment of new teachers which can be further classified under regular and contractual teachers which have become important because of state appointing only contractual teachers in the recent past which is also evident in UDISE data which reveals that about 12 to 15 percent of the total teachers at the elementary level are the contractual teacher. Therefore the percentage of male & female contractual/para-teachers at the elementary level along with academic and professional qualification can be a good addition to teacher indicators. Another moot question that needs to be answered is why the percentage of schools with educational and professionally qualified teachers has not been used in PGI computation; may there are specific reasons which need to be spelled out. Percent share of the state budget on school education to the total state budget is the next indicator used; instead, it would be better to use percent expenditure on school education to total expenditure on education in the previously completed financial year which may be considered a better indicator to judge the state's commitment towards school education so as the percentage of funds utilized at the state level received through PPP and CSR to the total support received during the previous year. The last indicator used in PGI is the percentage of schools, SCERT/SIE, and DIETs registered under PFMS without spelling out details after registration may not be considered a useful indicator.

Concluding Observations

As has been presented above a total of 70 indicators (96 parameters including sub-categories) falling under the categories, Outcomes and Governance & Management with a total weightage of 1,000 have been used in 2018-19 but updated values of only 54 out of the 70 indicators have been used and the rest, mostly based on NAS, it's 2017-18 values which had already been used in PGI 2017-18 had again been used in computing PGI 2018-19 (see Table above). However, details of how parameters/indicators have been selected, what methodology have been used to identify and retain indicators, and who had identified indicators, was it recommended by a group of experts or individuals or whether national institutions previously engaged in computing such indices were engaged in the process of selection of parameters. There is the scientific procedure of identifying indicators; however initial list of indicators can be developed by the experts based

on the understanding of the school education system. National Workshop on Educational Development Index (EDI) of Experts conducted by NIEPA views that *"parameters/indicators are likely to highly correlate with each other and therefore one needs to carefully look for possible removal of some of these variables. It was suggested that the correlation matrix need to be calculated that would help in identifying variables that are highly correlated with each other and therefore some of them can be removed and that are unique and that can be used in calculating EDI"*. The whole exercise of PGI and classification of States/UTs by levels and grades largely depends upon how weights are assigned, each parameter was assigned weightage of either 10 or 20 points, what methodology has been used in assigning weights, who has assigned weights, was it an individual or a group of experts are the details of the basic question of which must be available in the public domain. NIEPA used Principal Component Analysis in assigning weights of each of the 24-parameters used in the computation of EDI: 20015-16 to 2015-16. The School Education Quality Index initiated by NITI Aayog also didn't specify the methodology based on which weights have been assigned in computing SEQI for the years 2016-17 & 2017-18.

PGI 2018-19 also presents a brief analysis and distribution of States/UTs by levels and also highlights state-specific domains with maximum and lowest improvement. Within the domain, it would still be better to highlight parameters/indicator-specific distribution of states that need further improvement to appropriate indicator-specific strategies which shall eventually help a state in improving a particular domain or a set of domains. With the state-specific indicators, it is not possible to form appropriate strategies unless indicators used in computing PGI are disaggregated to analyze at the district and lower levels. It is believed that PGI is not just to know the status of a State/UT about different domains and its score but to improve the overall school education in India. Apart from disseminating scores & grades, it is equally important to put the values of indicators in the public domain. Equally important would be to thoroughly study states that have shown significant improvement in PGI 2018-19 over 2017-18 as well states those values in terms of grades/levels have gone down. Better to ensure that indicators that have an authentic regular source of information and are made available in the public domain should only be sued in any future PGI computation. No point in using the same values of a set of indicators over time or at least ensure that the indicator used is sure to be generated during the

year for which the next PGI is planned to be computed. Since the PGI 2018-19 is based on provisional data, it is hoped that soon PGI based on the final freeze set of 2018-19 data will see the light of the day. At the time PGI 2018-19 was made available, a good number of states were still finalizing their 2018-19 data.

The following indicators may be considered in the further computation of PGI:

- percentage of districts having displayed class-wise learning outcomes
- percentage of schools having displayed student-wise learning outcomes
- percentage of out-of-school children identified to total out-of-school children
- percentage of identified out-of-school children mainstreamed
- average annual, as well as grade-to-grade drop-out rate separately for boys and girls in case of for elementary as well as a secondary level of education
- Gender Parity Index based on adjusted-NER both at the elementary as well as secondary levels of education
- percentage of schools showing increase/decline in primary and upper primary enrolment
- percentage of blocks and districts showing an increase/decline in enrolment
- the ratio of elementary to secondary schools/sections
- percentage of the total number of schools (including private unaided schools) with functional toilets
- percentage of schools (all schools) with electricity connection, functional computer, and internet connectivity in school
- percentage of elementary schools having fulfilled all the 10 RTE parameters
  the average number of days after the PAB meeting, the Central Government has taken to release its share to States/UTs
- average months in a year available to State Implementation Society to implement its PAB approved plans
- percentage of teachers provided in-service during the previous year
- percentage of schools having trained teachers in the use of computer and teaching
- indicators on recruitment of new teachers can be further classified under regular and contractual teachers
- percentage of male & female contractual/para-teachers at the elementary level along with academic and professional qualification
- percentage of schools with educational and professionally qualified teachers
- percent expenditure on school education to total expenditure on education in the previously completed financial year etc.

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