

Rationalization of School Curriculum

Background

The conventional teacher centred and rote learning form of education has served us well through ages. As the education system in Bhutan embraces the 21st Century education framework and principles, it warrants a paradigm shift in curriculum design and development, including the pedagogy, commensurate the competency based learning. An approach, which underscores that learning in the 21st century, is for the development of competencies through active engagement of learners in learning experiences, guided by formation and utilisation of “working knowledge”. This empowers learners to take responsibilities of their learning and develop “portable skills or soft skills,” such as critical thinking, creativity, communication and collaboration, vital for all as individuals with unique talent and competencies. The current culture of curriculum design and practices in schools, however, do not render condition to facilitate realisation of the national aspiration of nurturing “nationally rooted and globally competent” citizen.

Amongst others, it has always been a concern for REC on the extent, relevancy and quality of the curriculum in all subjects. Thus, in order to facilitate quality learning for 21st Century education, REC has initiated major curriculum reform in all subjects.

Rationale

The Bhutan Education Blueprint 2014-2024 indicated that the existing curriculum was ‘heavy’. This was echoed as one of the major pointers in the National School Curriculum Conference 2016 that the curriculum was ‘vast’. These findings led to the need for curriculum “thinning” [Resolution 3.1.10 (IV)]. In response to these findings, REC started the rationalization of the existing curriculum by reviewing and screening out the obsolete and irrelevant content, and updating them with the most recent information and also rectifying errors in the textbooks. Therefore, some portions of the syllabi from several subjects, for instance, have been dropped. The rationalization or thinning of curriculum is one of the important considerations made while developing new textbooks based on new curriculum frameworks.

The curriculum rationalization process also aligns very well with Resolution 13 of the National Education Conference 2018 of “Doing away with the Saturday classes”. The para 13.4 of the resolution requires ‘REC to work on curriculum thinning and review of time allocation for each subject’. This resolution has further facilitated REC to expedite the curriculum rationalization and review the time and period allocation for each subject.

Rationalization of the school curricula is based on the following strategies:

- i. Review the goals and outcomes of each subject to identify topics, chapters, learning activities, exercises and assessment.

- ii. Develop rationalized syllabus for each subjects ensuring conceptual linkages and progression within the chapter or topic in the textbooks.
- iii. Minimize lexical density in text by reducing heavy textual materials from the textbooks.
- iv. Remove topics, learning activities or assessment items, which are redundant, overlapping irrelevant or inappropriate.
- v. Delete irrelevant or inappropriate illustrations or diagrams, and examples from the text.
- vi. Update and align the content width and depth with the teaching time available for each subject.
- vii. The revised syllabi for each subject are categorised and compiled under four subject classifications, namely STEM, Social Sciences, Language, and TVET & Commercial Studies.

The review of the instructional time allocation is based on the following

criteria:

- i. Maintain the instructional time requirement at the international standard.
- ii. Maintain gradual increase of instructional time across most of the key stages.
- iii. Reduce the instructional time for each subject across the grades based on the doing away of the Saturday classes.
- iv. Allocate time for personal development learning areas, such as HPE, Arts Education, Values Education, CGC, TVET Program (clubs and PVOP).
- v. Non-curricular activities and programmes are to be conducted outside the instructional hours.
- vi. Calculate 150 actual curricular instructional days (excluding examination days in June and November months) in an academic year based on 5 working days per week.
- vii. Calculation of instructional time is based on 8 periods a day of 40 minutes each.

Conclusion

Instructional time refers to the actual contact time in the classroom. This is the minimum time available for the delivery of the curriculum including assessment. Instructional Time equals to number of days multiplied by number of periods per day times duration of one period (180 x 8 x 40). The rationalization of the curriculum is based on 150 days of the actual instructional time.

Instructional days are the total number of days within which the curricular activities are conducted. Within these days, a maximum of 5.33 hours (320 minutes) are available for actual classroom instruction per day. This calculation is based on 8 periods a day of 40 minutes each. The average instructional time in the OECD countries ranges from 799 to 915 hours per year. This includes all the educational activities that happen in the school in a day. However, the calculation of instructional time for the rationalized curriculum is based on the actual contact time for curriculum delivery, which has resulted in more instructional time than in OECD countries.

Lastly, it must be noted that the instructional time and days are suggested guide. Thus, it is envisaged that schools will make adjustment in instructional time as deemed applicable.

Class: PP
Subject: Mathematics

Sl.no	Units	Time(min)	Weighting (%)	Changes	Reasons
1	Patterns and Relationship	1728	6	Status quo	
2	Number	2304	8	Chapter 2 (12-16) Lesson revised and grouped together	Questions are rephrased and activities are reduced and made simpler for students to solve
3	Measurement	1152	4	status quo	
4	Geometry	1152	4	status quo	
5	Data Management and Probability	864	3	status quo	
Total		7200	25		

Class: I
Subject: Mathematics

Sl.no	Units	Time(min)	Weighting (%)	Changes	Reasons
1	Numbers (Fractions, Decimals and Numerals)	2016	7	status quo	
2	Operations (Addition and Subtraction)	1440	5	status quo	
3	Patterns	576	2	status quo	
4	Measurement (Length, Area)	1152	4	status quo	

5	Geometry	1440	5	status quo	
6	Data Management and Probability	576	2	status quo	
Total		7200	25		

Class: II
Subject: Mathematics

Sl.no	Units	Time(min)	Weighting (%)	Changes	Reasons
1	Numbers	3024	9	Chapter 4 Lesson 5 (Number of activity reduced)	Too many activities and problem to solve
2	Operations (Addition and Subtraction)	1680	5	Chapter 2 Lesson 4 and 5 (Number of activity reduced)	Too many activities and problem to solve
3	Measurement (Length, Area, Mass, Capacity and Time)	2016	6	status quo	
4	Geometry	672	2	status quo	
5	Data Management and Probability	1008	3	status quo	
Total		8400	25		

Class: III
Subject: Mathematics

Units	Time(min)	Weighting (%)	Changes	Reasons
Numbers (Fractions, Decimals and Numerals)	1512	9	Lesson 5 Mixed Numbers is removed	This lesson is covered in previous lesson
Operations (Addition, Subtraction, Multiplication and Division)	2520	15	status quo	

Measurement (Length, Area, Mass, Capacity and Time)	1344	8	Lesson 9 and 10 are removed and moved to class IV	This lesson is shifted to next great to maintain flow of content /lesson
Geometry	1344	8	status quo	
Data Management and Probability	840	5	status quo	
Patterns and Relationship	840	5	status quo	
Total	8400	50		

Class: VI
Subject: Mathematics

Sl.no	Units	Time(min)	Weighting (%)	Changes	Reasons
1	Fractions and Decimals	1268	15	status quo	
2	Geometry	1268	15	status quo	
3	Decimal computation	1172	14	status quo	
4	Measurement	1268	15	The 24-hour Clock System (122) is removed and moved to class V	To maintain content flow
5	Ratio ,Rate and Percent	980	12	status quo	
6	Number Relationships	980	12	status quo	
7	Data and Probability	1464	17	status quo	
Total		8400	100		

Class: V
Subject: Mathematics

Sl.no	Units	Time(min)	Weighting (%)	Changes	Reasons
1	Whole Number Computation	1556	18	Status quo	

2	Geometry	1556	18	Status quo	
3	Fractions and Decimals	1172	14	Status quo	
4	Decimal Computation	888	11	Status quo	
5	Measurement	1076	13	24 hour clock system:- Added	To have content flow
6	Number	1076	13	Status quo	
7	Data and Probability	1076	13	Status quo	
Total		8400	100		

Class: IV
Subject: Mathematics

Sl.no	Units	Time(min)	Weighting (%)	Changes	Reasons
1	Numeration , Addition and Subtraction	1268	15	Status quo	
2	Multiplication and Division Facts	980	12	Status quo	
3	Multiplication and Division with Greater Numbers	1172	14	Status quo	
4	Measurement	1272	15	3.2.1 Describing Angles (81) is removed and moved to class III. Lesson 9 and 10 (121-123) are added from class III	To have content flow
5	Fractions and Decimals	980	12	Status quo	
6	Geometry	1556	18	Status quo	
7	Data and Probability	1172	14	Status quo	
Total		8400	100		