NEP-2020

POSITION PAPER ON SCHOOL COMPLEX

DSERT, Bengaluru

POSITION PAPER ON SCHOOL COMPLEX

CONTENTS

Executive Summary Members of Position Paper Group

Sl. No.	Chapter	Contents	Page No
1	Introduction	The Concept of School Complex	1
		Education System in Karnataka	4
2	The Present Status of School Education In Karnataka	Educational Scenario	10
3	Perspectives of School Complex as per NEP 2020	Efficient Resourcing and Effective Governance through School Complexes/Clusters	13
		Ending the Isolation of small Schools through School Complexes	14
		Better resourcing of Schools through School Complexes	15
		Fostering Integrated Education through School Complexes	16
		Improved support to Teachers through School Complexes	17
		Effective Governance through School Complexes	17
		Effective Governance and Management of Individual Schools within School Complexes	18
4	Epistemological Framework	Context and background	19
	of School Complex	Approaches of School Complex	25
		Arguments regarding the set-up of School Complex	26
		Relevance of School Complex	28
5	Issues and Challenges	The Complexities of School Complex Governance	29
		Constituting a School Complex	30
		Coverage	30
		Transportation and Facilities	31
		Management Issue	31
		Infrastructural issues	32
		Issues of the Curriculum	32
		Article 371J	32
		School complex in Forest and Tribal areas	32
		Formation of SDMC at School Complex	32
		Training of SDMC Members	33
		Political, Social, Psychological and Religious	33
		Appointment/selection/nomination of Social Workers in School Complex	33
		Holidays Management	33
		Management of staff	33
		Inclusive and Equitable Education	33
		Accountability of work	33
		Language diversity and 3 language formula	33
		Translingual practices in the Classroom	34
6	Recommendations	Preparations for Constituting School Complex	35
		Recommendations for establishing School Complexes	36
		Functioning of Schools under School Complex	37
		Monitoring and Supervision	37
		Hiring of Personnel for School Complex	37
		School Complex Management Committees	39
		Implementation of School Complex in Karnataka – S V Ranganathan Committee Report	39
		References and Bibliography	a-b

Executive Summary

The concept of School Complex (SC) originated from the report of Kothari Commission 1964-66 which was mooted as an innovation in School Education. School Complex is organized by taking a group of Elementary Schools, Secondary Schools and Senior Secondary Schools. Formation of school complexes breaks the benumbing isolation of schools and enables small group of Schools working in a neighborhood to make a cooperative effort to improve standards. It is also expected to share and exchange resources and experiences. The first National Education Policy – 1986 also emphasized the networking of schools and synergic alliances to encourage professionalism among teachers and enable the sharing of experiences and facilities. Various committees and commissions of NPE – 1986 also recommended the formation of School Complexes within the framework of local area planning.

As far as the needs and importance of School Complex are considered, it breaks the isolation of schools, provides for sharing instructional works, material facilities. In addition, it also provides cooperative efforts for improvement and provides to facilitate in-service training. Properly organized educational complex can admirably serve the purpose of closer supervision, upgrading the quality of education, optimum utilization of resources, both men and materials and improvement of human relations and professional consciousness of all workers.

Karnataka has one of the most highly educated populations in India. Most of the educational institutions nearly half of which are managed by the Government and the remainder are operated by local boards and private bodies. The mission of the state for Primary and Secondary education is to equip children of the state with specific knowledge, skills and values to enable them to become good human beings and productive citizens. The syllabus taught in schools is by and large State syllabus. In addition, the CBSE and ICSE syllabus is also being followed in some international schools functioning in the state. The Pre-University course lays foundation for higher education and helps students to select various professional courses. Primary Education covers five years, Upper Primary Education covers three years Secondary Education covers 2 years and Higher Secondary Education called Pre-University Education comprises two years of grades 11 and 12.

The Government educational institutions are owned by the Department of Public Instruction. Government aided schools receive financial support from the Government and those unaided institutions support themselves. There are School Management Committees in all Government Schools and the private un-aided schools have parent teachers association. SSA, RMSA, SSK have contributed for the quality improvement of education. There are in all 86,769 schools functioning out of which 63,707, are elementary, 17,511 are secondary and 5,551 are of higher secondary level. There are 80,54,015 students in elementary level, 19,18,039 students in the secondary level and 12,47,775 students in senior secondary level. (Class 11 and 12). In addition, a little over 62 thousand Anganwadi Centers and more than 3,000 mini Anganwadi centers are functioning in 204 Integrated Child Development Services (ICDS) projects in the State, covering all the 177 taluks. The transition rate for the grades 1-5, 6-8 and 9-10 is 97.87, 96.97 and 94.48 respectively. The promotion rate for the grades 1-5, 6-8 and 9-10 is 97.96, 97.02 and 89.95 respectively. Similarly, the Dropout Rate is 2.04, 2.98 and 10.05 respectively for the grades 1-5, 6-8 and

9-10. About 82.26% of Lower Primary Schools are managed by the Government. The overall private management participation in school education (up to class X) is 26.5%.

The epistemology on School Complex has shown various approaches to school complex. These point out the administrative powers to transfer of teachers, preparing plan of work, hiring vocational education teachers and so on. The various studies conducted have shown the success of formation of School Complexes. We also have the indications of improvement in educational indicators like GER, NER, PTR. The studies also have revealed advantages and limitations of setting up of school complex. The relevance of school complex is related with two aspects ensuring the quality of education and improvements in quality of education. The epistemological studies on School Complex have shown wide variation so far as the scope is concerned. In one case School Complex heads are given the authority to move staff and resources between the schools. On contrast at some other places school complex are formed for the specific purposes of in-service training. There has been a much note on the success of formation of School Complexes in different countries as well in India.

The issues and challenges concerned with the formation of School Complexes are seen from the complexities of school complex governance bring Government and Private schools under one roof, bringing together the schools following different curriculum, institutional coverage and geographical coverage. The geographical coverage includes formation of school complexes in the habitations of tribal population in the territory of reserved forest area. Providing proper transportation facilities, issues concerned with management of different types of schools under one complex, infrastructural issues, issues of different medium of instruction, issues of curriculum are the other main issues to be addressed. Formation of SDMCs and training SDMC members is other major issue to be addressed. In addition, holiday management of different schools under one complex, providing for inclusive and equitable education needs due care.

Before forming school complexes some preparations are to be duly considered. They include mapping of different schools, infrastructure facilities available, financial implications and identification of social workers and local artisans. Sparsely and densely populated areas are to be given priority while forming School Complexes. The head of the SC should be the principal of senior secondary school. He should be given administrative and academic powers. The principal should be trained properly with all aspects related with school complex administration. Technical assistants are to be provided to maintain data related with school administration. One trained personnel to be appointed for SC to look after CWSN. For optimal utilization of facilities, a central library may be established at one convenient center of SC. The library must be kept opened beyond school hours and holidays. In the same way a wellequipped laboratory should also be established. A Para-Medical staff shall be appointed/hired to SC to care of issues related with health and well-being of school children. A functional dispensary may also be formed. Common working days, holidays and examination days are to be worked out at SC level. Whenever, SCs are established in border sharing areas of 2 taluks or 2 districts the authority to supervise and monitor should be appropriately decided. The supervising academic and administrative authorities should be given the responsibility of assessing all components of schooling. Vocational teachers, social workers and local artisans are to be hired to SC. The SCMC once constituted, the members are to be given proper training regarding their roles and responsibilities.

MEMBERS OF POSITION PAPER COMMITTEE ON SCHOOL COMPLEX

T K Raghavendra Chairperson

Senior Lecturer, DIET, Kolar.

S K B Prasad Member

DDPI(dev)& Principal, DIET, Chitradurga.

Dr. Ashok M Limkar Member

Senior Lecturer, DIET, Vijayapura.

Manjula, Member

Retired Reader, CTE, Mysore.

Sheik Jinna Member

Faculty, APF, Bengaluru.

Chidambar Bandagar, Member

Co-Ordinator, BRC, Indi, Vijayapura district.

A Gurudatta., Member

Teacher, GMPS, Doddakallasandra,

Bengaluru South 1.

S Jameeluddin, Co-ordinator

Lecturer, DIET, Kolar.

Director, Nodal Officer **DIET,** Nodal DIET

DSERT, Bengaluru. Bengaluru South

(Urban).

1 - INTRODUCTION

1.1. The Concept of School Complex

The concept of School Complex originated from the report of Kothari Commission 1964-66. It was mooted as an innovation in school education. The Commission realized that modern education is a process of learning from real life and from the pulsating, dynamic society around us. Learning should be at the choice and pace of the learner.

Learning must stem from the roots of society. Co-operative efforts will help us to achieve the objectives of Learning. Education can make its own contributions to the development of individual, as well as the well-being of society, only when we can establish a face-to-face relationship between different schools within easily accessible distances. This can be done only when we develop all Schools as a Complex.

School Complex is organized by taking a group of elementary schools, secondary schools and senior secondary schools. This facilitates equal educational facilities and experiences to all students.

The Education Commission, 1964-66 which observed that "such an organization would have several advantages in helping to promote educational advances. Firstly, it would break the benumbing isolation under which each school functioned; it would enable a small group of schools working in a neighborhood to make a cooperative effort to improve standards; and it would enable the state education department to devolve authority to functional levels". So, the networking of schools in a school complex is expected to facilitate sharing and exchanging of resources and experiences. In this context, there is much importance of school complex.

1.2. National Education Policy - 1986 on School Complex

National Policy on Education, 1986 says, "School Complexes will be promoted on a flexible pattern so as to serve as network of institutions and synergic alliances to encourage professionalism among teachers, to ensure observance of norms of conduct and to enable the sharing of experiences and facilities. It is expected that a developed system of school Complexes will take over much of the inspection functions in due course."

1.3. Recommendations of various Committees and Commissions of NPE-1986 on Educational Complex

The Program of Action, 1986 speaks of School Complexes as already brought earlier. But it is a limited concept of bringing schools together for sharing and exchanging of resources including personnel. While they have been envisaged as institutions with wide-ranging functions relating to the running of schools, they are not apparently conceived within an autonomous framework. The inspection functions of the school complex, according to the POA, are also to be in addition to the normal inspection functions of the district/ block level inspecting authorities.

The Central Government, in May 1990, appointed a committee to review NPE, 1986, under the chairmanship of Acharya Ramamurthy. The Committee submitted its report on 26th, December, 1990. The Committee views the concept of Educational Complexes within the framework of local area planning'.

It recommended that," On a pilot basis, at least one Educational Complex may be established in every district during the Eighth Five Year Plan so as to develop a functional model". At the pilot stage full administrative and financial support should be given to these complexes.

In July 1991, CABE (Central Advisory Board of Education) constituted a Committee to review the various parameters of NEP 1986.

The committee in its report submitted in January 1992 mentioned the following on School Complex:

"School complexes will be promoted as a network of institutions on a flexible pattern to provide synergic alliances to encourage professionalism among teachers, to ensure observance of norms and conduct and to enable the sharing of experiences and facilities. The school complex will serve as the lowest viable unit of area of planning and will form a cluster of 8-10 institutions in which different institutions can reinforce each other by exchanging resources, personnel, materials, teaching aids etc. and using them on a sharing basis."

"Although a number of states have experimented with the scheme of School Complexes, the program is yet to emerge as a comprehensive and systematically administered one. As the institutional resource endowment varies from place to place, there can be no single model for creation of School Complexes. Every state has to evolve its own operational model based on experiences or by drawing upon experiences of other states. The states may prescribe necessary guidelines for creation and functioning of School Complexes and define the nature, mode, type of planning and inspection work to be performed by them. While developing the educational complexes, support form institutions like DIET, Teacher Education College, ITIs, Polytechnics, particularly community polytechnics may also be sought."

The report of CABE Committee on NEP 1986 quotes

"...... that educational complex is a proven institution which can be entrusted with entire responsibility of management of education and major program like operation Blackboard in the area as falling in its jurisdiction. Given the present stage of higher education, it seems to be rather farfetched to expect colleges and universities everywhere to play a leading role in educational complexes".

1.4. Review Committee on National Policy on Education

The National Policy on Education Review Committee (NPERC) assigned a very important role to the Educational Complexes in planning and implementation.

The networking of schools in a School Complex was expected to facilitate sharing and exchanging of resources and experiences. National Policy on Education (NPE) assigned a key role to School Complex and the Program of Action (POA) elaborated the NPE perception.

The Central Advisory Board of Education (CABE) in its meeting held on 8-9 March, 1991 examined the procedure to be adopted for consideration of the report of NPERC.

Following is the report of this Committee as regards the Educational Complexes.

"We find that the educational complexes suggested by the NPERC are an enlargement of the idea of school complexes in that college, and universities are also brought into the network. We find a certain measure of uncertainty in the NPERC'S approach to the educational complexes. The NPERC had advocated experimentation with the idea of an Educational Complex in this chapter, while in other chapters the recommendations relating to Educational Complex proceed from the premise that Educational Complex is a proven institution which can be entrusted with entire responsibility of management of education and major programs like Operation Black Board in the area as falling in its jurisdiction".

1.5. Needs and Importance

- 1. No isolation of schools: The School Complex brings the schools of an area together and helps to break the terrible isolation of schools which in-turn provides for raising quality of education. It will enable a group of schools working in a neighborhood to make a cooperative effort to improve Standards of Education.
- **2. Sharing Instructional Works:** The school complex provides scope for the sharing of instructional work among the different constituent schools. The expert teachers of the complex may visit other schools, teach and plan new educational experiments. It will help to follow improved methods of teaching.
- **3. Sharing material facilities:** The school complex can provide new teaching aids like computer, digital gadgets, projector, a good library, a good laboratory in each secondary school as a unit and make them functionally available to all the schools in one area.
- **4. Co-operative efforts for improvement:** The different schools work in close co-ordination for mutual benefit. It will help for educational reforms and development of the country. It will mobilize both human and material resources for the progress of education.
- **5.** In-service Training: The School Complex provides to facilitate in- service training to teachers and to upgrade the standards of teaching. It provides for teachers to develop their own programs based on the needs of students. By this we can make each school to be more dynamic. The School Complex can coordinate its works with the local communities and can derive as much help from this source as possible.

1.6. The Features of School Complexes

- 1. The Management model may be that of local college, in high school or group of high schools and the associated middle and primary schools coming together in a cluster.
- 2. The complex may work in coordination with local artisans and other skilled people (Pottery, Horticulture, music, drama art and so on). The school complex may be developed further by

appointing local artisans as said in NEP 2020. The School Complex be provided with adequate intellectual resources as well.

- 3. The management of education in the Complexes should be the teaching community, various aspects like curriculum, syllabi, content and process, evaluation, monitoring, teacher training and modes of delivery of education to different segment of the society will be the responsibility of the teaching community itself.
- 4. In discharging this responsibility, teachers will closely interact with the community, where they are serving. In this arrangement, the quality of education will not be determined by a body of Inspectors or functionaries external to the educational system. Consequently, education being directly in the hands of those for whom it is a matter of day-to-day concern, its quality should significantly improve.
- 5. The Educational Complexes should be autonomous registered societies in structures.

From the above, we derive the following on School Complex:

The School Complex brings the faculties of neighborhood schools together. It will help to interrupt the terrible isolation under which each school functions at the present and like with other schools during a particular area for raising the standard of education and to arrange similar units throughout the country.

It assumes that High and Higher Secondary schools have better learning facilities, which can be utilized by the primary and middle schools. So also, the local artisans and other skilled workers services may also be utilized throughout the School Complex.

Lastly, we can conclude that properly organized educational complex can admirably serve the purpose of closer supervision, upgrading the quality of education, optimum utilization of resources, both men and materials and improvement of human relations and professional consciousness of all workers. The idea of a school complex gives us potential to rethink our schools.

1.7. Education System in Karnataka

Karnataka is located on the western coast of the subcontinent. It is surrounded by Goa and Maharashtra to the North, Telangana to the East, Tamil Nadu to the Southeast, and Kerala to the South. There are 204 taluks(blocks) in Karnataka. Kannada, which is a Dravidian language, is spoken by a large majority of the population and is the official language of the State. Towards the borders of the state, other languages, such as Tamil and Telugu, both Dravidian, and Marathi and Konkani, both Indo-Aryan, are also spoken. The State has 34 educational districts divided into 04 divisions for all administrative purposes.

With a literacy rate of 75.36% (a rate higher than the national average), Karnataka has one of the most highly educated populations in India. The state has many schools and educational institutions, nearly half of which are managed by the Government; the remainder are operated by local boards and private bodies. Compulsory free primary education is provided in all towns and villages.

The mission of the State for Primary and Secondary education is to equip children of the state with specific knowledge, skills and values to enable them to become good human beings and productive, socially responsible citizens and to achieve excellence in whatever they do.

1.7a. School Education

The 30 Revenue Districts of the State are recomposed into 34 Educational Districts. The thirty districts of the State are grouped into four Educational Divisions with headquarters at Bengaluru, Belagavi, Kalburgi and Mysuru. Besides, two divisions - Belagavi and Kalburgi are having Additional Commissioners for streamlining of administration.

There are three kinds of schools in the state, viz., Government-run, Private Aided (financial aid is provided by the government) and private unaided (no financial aid is provided). The primary language of instruction in most schools is Kannada apart from English, Urdu, Marathi, Telugu and other languages.

The syllabus taught in the schools is by and large the State syllabus defined by the Department of Public Instruction of the Government of Karnataka. The CBSE and ICSE syllabus is followed in case of certain private unaided and Kendriya Vidyalaya schools; IGCSE and IB syllabus are also offered by some of the International Schools functioning in the State.

State-wide board examinations are conducted at the end of the period of Class X and students who pass with a minimum of 35 marks in all the subjects can pursue a two-year pre-university course; after which students become eligible to pursue under-graduate Degrees or Diplomas.

1.7b. Pre-University

Pre-University is a very significant stage of learning. It lays foundation for higher education and better personality development. It plays an important role in helping students to select various professional courses.

1.8. Schools at different Levels

1.8a. Early Childhood Education

ECCE has begun in Karnataka Public Schools across the state from 2018-19. KPS provide education from kindergarten to Class 12.

1.8b. Primary Education

Primary education in Karnataka covers five years (grades) typically from ages six (5.5 years) to 10. Subjects in these classes include Kannada, English, Mathematics and Environmental science (this includes science as well social science).

The NEP-2020 envisions a greater variety of subjects at primary level with renewed emphases on art, music and physical education. The retention in upper primary has improved since 2000 as per statistics of the government.

Upper primary education, also sometimes referred to as middle school (and middle 'stage' in the 2020 NEP), lasts three years from grades 6–8 (ages approximately 11–14), and within the Government sector is often located in larger schools that include primary and/or lower-secondary grades (larger private schools often offer all grade levels, with the exception of low-cost private schools which often offer only primary grades). The number of subjects taught increases and becomes more specialist as we move from primary levels.

According to Language formula in Karnataka, three languages are taught in Government Schools: First Language – Kannada, Second Language – English and the Third Language varies like Hindi, Sanskrit, Urdu, Kannada and so on. In English medium schools, the first language will be English, followed by second and third languages English and usually Hindi. There are multiple combinations for I, II and III languages in different types of management schools.

Secondary Education covers two grades, 9 and 10 (ages approximately 15–16), leading to the first major high-stakes exam, the SSLC (Board Exam).

Higher Secondary Education called Pre-University Education in Karnataka comprises two years grades 11 and 12 (ages approximately 17 and 18).

1.9. School Days

Typical school weeks and years in the Government school runs from Monday to Saturday, with either a half or full day on Saturdays. In some locations – mainly urban – oversubscription of enrolment means that some schools offer a double shift: morning classes, followed by a repeat in the afternoon for a different cohort.

The school year usually includes around 220 days of study, typically from June to April or early May. May is the time of the longest school holidays. October and November include a number of public holidays (e.g., Diwali, Vijyadashami). Exam preparation typically begins as early as February, with exams in March or April.

1.10. Grades and Promotion

The Draft NEP (Ministry of Human Resource Development, 2019) is suggesting significant changes to the structure of schooling at different grades. The proposed revised system with a strong focus on Early Childhood Education (ECE) that transitions into early primary education (foundational stage), followed by a preparatory stage (previously upper primary), then middle and high stages that continue until Grade 12. The terms 'standard', 'grade' and 'class' are all commonly used to refer to different grades.

School Based Assessment is being followed in all the Government Schools. The progress of students is recorded in Students' Profile.

1.11. School Ownership and Management

Schools and other educational institutions in Karnataka are owned either by the Government or by private sectors. There are two types of private sector institutions – Government Aided and Unaided Schools.

Those that are 'aided' (often called 'Government aided' schools) receive financial support from the government and are largely free to students (although nominal fees may be collected). Those that are 'Unaided' support themselves most commonly through student fees. In practice, therefore, both Government and Government-Aided schools constitute what are internationally often called State Schools.

According to 2021 figures, in all Karnataka has 24,285 Lower Primary Schools: 30,883 Upper Primary Schools: 55,160 Elementary Schools: 16,970 Secondary Schools and 3,632 Higher Secondary Schools and in total 75,863 schools.

1.11a. Government Educational Institutions

These are run by the State Governments or public sector bodies and are wholly financed by the Government. Examples of these types of schools include State Government Schools Murarji Desai Schools, Kittur Rani Chennamma schools.

1.11b. Private aided (or government-aided) Institutions

These are managed privately but receive regular maintenance grants from the Government, local body or other public authority, and as such are subject to regulations applied to Government Schools. Curricula, study materials, syllabus and examinations at all level are similar to or the same as Government Schools. Even the recruitment of faculties here follows norms of Government Schools.

1.11c. Local body Institutions

These are run by Social Welfare Department. These schools include Murarji Desai Schools, Kittur Rani Chennamma schools. There are schools run by Corporation in Bengaluru city.

1.11d. Private Unaided Institutions

These are managed by a private organization, trust, society or NGO and do not receive maintenance grants either from Government, local bodies or any other public authority. The fee structure for the students may vary greatly, from low-cost private schools to elite institutions more common in larger cities. Students are often admitted to private schools according to criteria (entrance examinations, interviews, etc.) designated by the school management. These schools carry on with the curriculum and examinations like the Government Schools. In addition, we have ICSE, CBSE, IGCSE and IG Schools in the State.

1.12. School Management Committees

According to RTE (Ministry of Law and Justice, 2009), each school must have a functioning School Management Committee (SMC), comprising parents and guardians (75 per cent), local authority officials, teachers and 'local educationists or children' to create a bridge between the school administration (usually head teacher) and the local community. All Government schools of the state have SMCs.

While the private unaided schools, typically have Parent– Teacher Associations which are getting stronger and more powerful in many cases.

1.13. Initiatives towards Quality Improvement

DSERT is the premier institute that works for quality improvement of teachers. DSERT is continuously striving to improve the pre-service teacher education by revising the syllabus as well as by re-working the guidelines for teacher educator recruitments and the re-structuring of DIETs. One of the biggest reforms in the State has been the re-conceptualizing of the Teacher Professional Development Program of in-service teachers. The State conceptualized a revolutionary teacher professional development program based on a Teacher Training Management System (TTMS) develop exclusively for this purpose. Through this technology-based management system, the Teacher Professional Development in the State has been customized to the needs of more than 1.5 lakh individual teachers.

Two prominent initiatives of the Indian Government, Sarva Shiksha Abhiyan (SSA – 'Education for All Campaign' in Hindi) in 2001 and the Right of Children to Free and Compulsory Education (RTE) Act, 2009, have promoted greater foci on issues of access, inclusivity and quality in education.

While pupil retention rates have improved over the last ten years in both urban and rural areas, dropout rates from government schools remain comparatively high (12.3 per cent at primary level in 2016) and enrolment gaps from primary to secondary are matters of concern.

1.13a. Sarva Shiksha Abhiyan and Rashtriya Madhyamik Shiksha Abhiyan

SSA was launched in 2001, with the aim of achieving universal primary education through the provision of new schools, the strengthening of existing school facilities, increasing teacher capacity and support, and improving teaching-learning materials.

The RMSA was launched in 2009, aiming to achieve secondary gross enrolment ratios of 75 per cent within five years, Universal Access by 2017, and Universal Retention by 2020. While the last of these is likely to take longer to achieve, significant progress has been made so far. The program has also included a focus on quality and equity.

1.13b. Rashtriya Avishkar Abhiyan

Launched in 2015, Rashtriya Avishkar Abhiyan ('National Invention Campaign') aims to encourage greater enquiry, creativity and interest, specifically within the areas of science, mathematics and technology in education. The campaign, which received Rs. 198 crore in 2017–18, intends to create stronger links between schools and higher educational institutions through school mentoring programs, student exchanges and development of science labs, linked to RMSA initiatives.

1.13c. Samagra Shiksha Abhiyan

More recently, the Samagra Shiksha Abhiyan ('Composite Education Campaign'), launched in 2018 aims to bring together SSA and RMSA along with Teacher Education under one scheme that

views education more holistically from preschool to higher secondary education. The focus on full access, quality education and greater equity and inclusion are continued in line with Sustainable Development Goal 4, along with vocational, digital and physical education elements and further strengthening of Teacher Education Institutions.

In conclusion, we can say that,

In Karnataka Primary Education covers from class 1 to 5, Middle School Education 6 to 7/8 and Secondary Education from class 8/9 and 10. Classes 11 and 12 belong to Pre-University Course.

There is no detention policy till 8th class. Board exams are conducted for classes 10 and 12 for further promotion. The assessment mode is formative and summative.

The schools in Karnataka belong to Government, Private, Government Aided, Local body institutions, residential schools. The private schools have the governance of their own. School Management Committees are effectively functioning in Government schools.

In addition, we have different types of schools following different medium and curriculum. We find the schools following different curriculum in different schools like CBSE, ICSE, IGCSE, KVS, JNVS and so on.

The mission of the State for Primary and Secondary Education is to equip the children with specific knowledge, skills and values to enable them to become good human beings, productive and socially responsible citizens to achieve excellence in whatever they do.

Many initiatives have been taken by the Government of Karnataka to enhance the quality of education. These focus upon improving physical infrastructure, training of both pre-service and inservice teachers. In addition, SSA, RMSA, RAA have contributed significantly for the quality improvement in different sectors.

2 – THE PRESENT STATUS OF SCHOOL EDUCATION IN KARNATAKA

2.1. Educational Scenario

The Karnataka State with an area of 1,91,791 square kilometer lies between 15.3173° N, 75.7139° E longitudes and latitudes and extended for about 675 kilometer from North to South and for about 480kilometer from East to West with its coastline for about 320 kilometer. As per Census 2011, the population of Karnataka State is 6,11,30,704. The State shared the border with Goa and Maharashtra to the North, Telangana to the East, Tamil Nadu to the Southeast, and Kerala to the South and the Arabian Sea to the West. The Kalyana Karnataka districts shared the border with Telangana, Andhra Pradesh and Maharashtra whereas the Kittur Karnataka districts shared the border with Maharashtra and Goa states.

The 30 revenue Districts of the State are recomposed into 34 educational districts. The 30 districts are grouped into four educational divisions with headquarters at Bengaluru, Belagavi, Kalburgi and Mysuru. Besides, two divisions - Belagavi and Kalburgi divisions are having Additional Commissioners for streamlining of administration.

There are 204 taluks (blocks) in Karnataka. Kannada, which is a Dravidian language, is spoken by a large majority of the population and is the official language of the State. Hindi and English are used in trade and business. Towards the borders of the state, other languages, such as Tamil and Telugu, both Dravidian, and Marathi and Konkani, both Indo-Aryan, are also spoken.

- 1) With a literacy rate of 75.36% (a rate higher than the National Average), Karnataka has one of the most highly educated populations in India.
- 2) The Statehas 34 educational districts divided into 04 divisions for all administrative purposes.
- 3) There are in all 86,769 total schools are functioning out of which 63707, are elementary, 17,511 are secondary and 5,551 are higher secondary level.
- 4) There are 80,54,015 students in elementary level, 19,18,039 students in the secondary level and 12,47,775 students in senior secondary level. (Class 11 and 12)
- 5) In addition, a little over 62 thousand Anganwadi Centers (AWCs) and more than 3,000 mini Anganwadi centers are functioning in 204 Integrated Child Development Services (ICDS) projects in the State, covering all the 177 taluks (181 rural projects,12tribaland11urbanprojects).
- 6) ECCE in Karnataka is predominantly delivered by ICDS scheme in 62580 Anganwadi centers and 3,331 mini Anganwadi centers.
- 7) The rapid survey of children conducted by the Ministry of Women and Child Development showed that the percentage number of the children in the sample survey attending pre-school stood at 86.6%. Out of this number, 57.2% attended ICDS Anganwadis.
- 8) With the commencement of Karnataka Public Schools in 2018-19, where the K12 concept was introduced by consolidating different sections (Pre-primary, lower primary, higher primary, secondary and senior secondary) of the schools, Government of Karnataka started a new dawn in the school education space(One campus)being run under one roof.

- 9) There are 908 pre-primary sections with 2,62,602 children enrolled.
- 10) In all 1,16,73,642 students have been covered under school education which includes 60,04,286 boys and 56,69,356 girls belongs to various categories viz., SC, ST, OBC and GM.
- 11) The estimated GER is 101.58 for the Primary level and the actual GER is 101.01 for upper primary levels and 90 for High School. There is marginal increase in GER for upper primary levels and secondary levels. However, the GER is not spread evenly in all the districts. No major gender gap is noticed in GER at State level.
- 12) The NER data at upper primary level is 86.66 and 83.91 at secondary level indicating further efforts at secondary level. The lower NER (83.91) indicates that there are still a large number of children who are not into the formal system of education.
- 13) The transition rate for the grades 1-5, 6-8 and 9-10 is 98.95, 98.31 and 96.61 respectively.
- 14) The retention rate for the grades 1-5, 6-8 and 9-10 is 97.87, 96.97 and 94.48 respectively.
- 15) The promotion rate for the grades 1-5, 6-8 and 9-10 is 97.96, 97.02 and 89.95 respectively.
- 16) Similarly, the Dropout Rate is 2.04, 2.98 and 10.05 respectively for the grades 1-5, 6-8 and 9-10.
- 17) The numbers of Teachers working in the Department of Public Instruction at Elementary level is 1,53,308 as against sanctioned Posts of 1,75,931, and similarly at secondary level 42,054 teachers are working against 48,906 sanctioned posts.
- 18) Accordingly in the schools run by other departments, at Elementary level 7,563 teachers are working against 10,230 sanctioned posts and at Secondary level 7,265 teachers are working as against 9,887 sanctioned posts.
- 19) In Private Aided Elementary level 14,663 teachers are working against 18,350 posts sanctioned and at Secondary level 25,030 are working against 30,628 sanctioned.
- 20) In Private Un-Aided Elementary level 1,46,012 teachers are working against 1,58,649 sanctioned posts and at Secondary level 1,02,031 are working as against 1,10,387 sanctioned posts.
- 21) There is no district in the State, where PTR in 2020-21, for sanctioned teachers is above the RTE norm of 1:30 at all three levels. Highest PTR (sanctioned posts, LPS) is observed in Yadgir district (1:24) and the lowest is in Kodagu district (1:8).
- 22) Similarly, the average PTR for the State at higher primary level is 1:22. A total of 15 districts record an average higher than the State average; the highest PTR is observed in Yadgir district (1:30) and the lowest is again in Kodagu district (1:14)
- 23) The Government teacher numbers are more in elementary level than the teachers in the Private sector.
- 24) The Private school teachers are larger in the Secondary School level compared to Government schools.

- 25) 3 out of every 4 elementary schools in the State are either run by the Government or supported by the Government.
- 26) 82.26% percent of the lower primary schools are managed by Government.
- 27) It is only at the high school level that private participation is considerable. It is still observed that nearly 3 out of 5 high schools are either managed or supported by Govt.
- 28) The overall private management participation in school education (up to class X) is 26.5%.
- 29) There are three kinds of schools in the state, viz., Government-run, Private Aided (financial aid is provided by the government) and Private Unaided (no financial aid is provided).
- 30) The primary language of instruction in most of the schools is Kannada apart from English, Urdu, Marathi, Telugu and other languages.
- 31) The syllabus taught in the schools is by and large the State syllabus defined by the Department of Public Instruction of the Government of Karnataka.
- 32) The CBSE and ICSE syllabus is followed in case of certain private unaided and Kendriya Vidyalaya schools; ICGSE and IB syllabus are also offered by some of the International Schools located in the State.
- 33) State-wide board examinations are conducted at the end of the period of Class X and students who pass with a minimum of 35 marks in all the subjects can pursue a two-year Pre-University Course; after which students become eligible to pursue under-graduate degrees or diplomas.
- 34) The State plans to conduct the assessments on an annual basis. Other than these assessments, there are separate Boards of Examination for Class X and Class XII which conducts the annual board exams.

The above status of schools across the state leads to the following:

PTR, Enrolment rate, dropout rate and such other educational indicators are not uniform across the districts of the State.

The percentage of Lower Primary schools run by the Government is very huge (82.26%) and Private Management participation in School Education up to class X is 26.5%. The Government teacher numbers are more in elementary level than the teachers in the Private sector. The Private school teachers are larger in the Secondary School level compared to Government schools.

Different districts of the state share their borders with other states – Tamil Nadu, Andhra Pradesh, Telangana, Kerala, Goa and Maharashtra. Medium of instruction and curriculum followed in schools also vary.

3 – PERSPECTIVES OF SCHOOL COMPLEX AS PER NEP 2020

The perspectives of School Complex as mentioned in National Education Policy 2020 are briefly described here.

3.1. Efficient Resourcing and Effective Governance through School Complexes/ Clusters

According to U-DISE 2016–17 data, nearly 28% of India's public primary schools and 14.8% of India's upper primary schools have less than 30 students. The average number of students per grade in the elementary schooling system (primary and upper primary, i.e., Grades 1–8) is about 14, with a notable proportion having below 6; during the year 2016–17, there were 1,08,017 single-teacher schools, the majority of them (85743) being primary schools serving Grades 1–5.

These small school sizes have rendered it economically suboptimal and operationally complex to run good schools, in terms of deployment of teachers as well as the provision of critical physical resources. Teachers often teach multiple grades at a time, and teach multiple subjects, including subjects in which they may have no prior background; key areas such as music, arts, and sports are too often simply not taught; and physical resources, such as lab and sports equipment and library books, are simply not available across schools.

The isolation of small schools also has a negative effect on education and the teaching-learning process. Teachers function best in communities and teams, and so do students. Small schools also present a systemic challenge for governance and management. The geographical dispersion, challenging access conditions, and the very large numbers of schools make it difficult to reach all schools equally. Administrative structures have not been aligned with the increases in the number of school or with the unified structure of the Samagra Shiksha Scheme.

Although consolidation of schools is an option that is often discussed, it must be carried out very judiciously, and only when it is ensured that there is no impact on access.

One possible mechanism for accomplishing the above would be the establishment of a grouping structure called the School Complex, consisting of one secondary school together with all other schools offering lower grades in its neighborhood including Anganwadis, in a radius of five to ten kilometers. This suggestion was first made by the Education Commission (1964–66) but was left unimplemented. This Policy strongly endorses the idea of the school complex/cluster, wherever possible. The aim of the school complex/cluster will be greater resource efficiency and more effective functioning, coordination, leadership, governance, and management of schools in the cluster.

The establishment of school complexes/clusters and the sharing of resources across complexes will have a number of other benefits as a consequence, such as:

• Improved support for children with disabilities, more topic-centered clubs and academic/sports/arts/crafts events across school complexes,

- Better incorporation of art, music, language, vocational subjects, physical education, and other subjects in the classroom through the sharing of teachers in these subjects including use of ICT tools to conduct virtual classes.
- Better student support, enrolment, attendance, and performance through the sharing of social workers and counselors, and School Complex Management Committees (rather than simply School Management Committees) for more robust and improved governance, monitoring, oversight, innovations, and initiatives by local stakeholders.

Building such larger communities of schools, school leaders, teachers, students, supporting staff, parents, and local citizens would energize and empower the schooling system, and in a resource-efficient manner.

The governance of schools will also improve and become far more efficient with school complexes/clusters. First, the DSE will devolve authority to the school complex/cluster, which will act as a semi-autonomous unit. The District Education Officer (DEO) and the Block Education Officers (BEO) will interact primarily with each school complex/cluster as a single unit and facilitate its work. The complex itself will perform certain tasks delegated by the DSE and will deal with the individual schools within it. The school complex/cluster will be given significant autonomy by the DSE to innovate towards providing integrated education and to experiment with pedagogies, curriculum, etc., while adhering to the National Curricular Framework (NCF) and State Curricular Framework (SCF). Under this organization, schools will gain in strength, will be able to exercise greater freedom, and will contribute towards making the complex more innovative and responsive. Meanwhile, the DSE will be able to focus on the aggregate level goals that need to be achieved, improving overall system effectiveness.

3.2. Ending the Isolation of small Schools through School Complexes

3.2a. Composition of the School Complex: Each school complex will be a semi-autonomous unit that will offer education from the Foundational stage (age 3-8 years) till Grade 12 (age 18). The complex will consist of one secondary school (covering Grades 9-12) and all the public schools in its neighborhood that offer education from pre-primary till Grade 8. If for any reason a school complex does not have a secondary school where Grades 9-12 are being taught, then these grades must be introduced in one of the schools. The school complexes will also have pre-school centres/Anganwadis, vocational education facilities, an Adult Education Centre (AEC) etc., associated with them.

It will be up to the individual State governments to group schools into school complexes according to the population distribution, road connectivity, and other local considerations.

3.2b. Leadership of School Complexes: The principal of the secondary school will be the head of the school complex. S/he will be endowed with administrative, financial and academic powers to oversee the coordinated development of all the schools within the complex. S/he will be given adequate administrative support by the functionaries of the DSE, the DEO and the BEO, and be

assigned an adequate number of staff members for general administration, finance and accounting, and so on.

3.3. Better resourcing of Schools through School Complexes

The grouping of schools across the country into school complexes will enable the sharing of resources across schools including subject teachers, sports, music and art teachers, counselors, social workers and so on, and also material resources such as laboratories, libraries and so on.

3.3a. School Infrastructure: While each individual school will be resourced adequately for their basic functioning, school complexes can house shared facilities and equipment at the secondary school that cannot be provided separately to each individual school. For audio-video systems with a portable generator can be taken around from school to school. The secondary school can maintain a large circulating library from which books can be sent out to schools in the neighborhood. All shared resources will be in the charge of the principal of the secondary school who will ensure their optimal use.

3.3b. Teachers: Teachers can also be shared among the schools in the complex. Areas/subjects, which by the nature of the curriculum, do not require a teacher for every school (accounting for the number of students), may have teachers appointed to the overall school complex thus making it possible for resourcing to happen optimally.

It is generally difficult to provide leave substitutes for teachers in primary schools, because of the small sizes of the schools. With the school complex concept, it will become possible to attach one or two leave reserve teachers to the secondary school so that they can be sent to schools within the complex as and when the need arises. School complexes shall have adequate numbers of teachers for all areas/subjects in the curriculum on behalf of all schools within the complex.

3.3c. Social Workers: Adequate numbers of social workers will be appointed to the school complexes depending on the student population and the population of adult learners in that geography.

The social workers will engage deeply with the community being served by the school complex. They will work pro-actively with parents and students, to ensure enrolment and attendance, and to eliminate the phenomenon of children 'dropping out' of school.

Social workers will help teachers in identifying and managing CWSN including managing relationships with their families and the community. Social workers will help in making the SMC more effective. They will also work with counselors and families to help students identify vocations of their choice, and identify and mobilize adults who can benefit from participation in adult education programs. The school complex will support social workers in every way to achieve these aims.

3.3d. Counselors: While the teachers will have the central role in student care and well-being, each school complex will have one or more capable counselors available. The counseling available

will range from career guidance to mental health. While there may be other areas of counseling that can be identified and mechanisms established to offer them, the following will be provided:

- a)Counseling on choice of subjects in secondary grades, including vocational subjects, and on choices in higher education, leading to potential career choices
- b) Support and counseling on age related growth and development issues, especially during the adolescent years
- c) Support and counseling on mental health issues, including stress and mood disorders.
- **3.3e. Optimal utilization of Institutional Facilities:** Since the physical infrastructure of educational institutions is investment intensive, it is important to utilize these as fully as possible, for the longest time during each day and for all the days in the year, by making suitable administrative arrangements.

Given that vocational education and adult education will all be administered through the school complex, utilizing the physical infrastructure outside of school hours will be possible.

However, the libraries, laboratories, workshops, craft sheds, sports fields, play grounds etc., should be open all the year round and should be utilized for at least eight hours a day, if not longer, by anyone interested in learning through the use of these facilities.

With an encouraging climate for the sustained use of facilities, teachers, students and the local communities will discover innumerable ways of utilizing school facilities to their maximum potential throughout the year.

3.4. Fostering Integrated Education through School Complexes

- **3.4a.** Integrating Early Childhood Care and Education: The requisite focus and emphasis on ECCE will be enabled through the school complexes by providing academic, resource and administrative support to all public institutions engaged in ECCE within the geographic area of that school complex. Schools that already have or will start pre-primary education, will run these classes fully integrated with the school complex system.
- **3.4b. Integrating Vocational and Adult Education:** School complexes will collaborate with institutions such as ITIs, Polytechnics, etc., with local businesses (industry, service, agrarian, etc.), health centers and hospitals, artists and artisans, and those with expertise in local crafts and traditions, to offer a range of vocational education courses
- **3.4c.** Children With Special Needs: Every school complex will create the infrastructure necessary to ensure that appropriate support is available to all CWSN, within the complex. Irrespective of the type of support that a child requires, s/he should be able to study at one or the other of the schools within the complex, with transport provided as needed.
- **3.4d. Role of higher education institutions:** Universities, colleges, and polytechnics in the vicinities of schools will contribute to improving school outcomes using the capacities relevant to school education that they may have.

3.5. Improved support to Teachers through School Complexes

- **3.5a.** Continuous Professional Development for teachers: The CPD of teachers will be an important responsibility of the school complex. A comprehensive teacher development plan (TDP) will be drawn up for the purpose, including multiple modes of development
- **3.5b.** Aligning the Teacher Support Systems: The academic and teacher support system, and its institutions, will be aligned to the school complex system by the DSE and the SCERT. This will include the CRCs, BRCs, BITEs, and DIETs.

3.6. Administration and Management of School Complexes

- **3.6a.** Organization of schools into School Complexes: Individual State governments will group schools into complexes according to the population distribution, connectivity, and other local considerations.
- **3.6b.** Upgrading Infrastructure of Schools and ensuring maintenance through School Complexes: The process of organization of schools into complexes will also be used as an opportunity to assess the status of infrastructure at all schools and to allocate adequate one-time funding to upgrade them.
- **3.6c. School Complex Management Committee:** Each school complex will have an SCMC comprising representatives from all the schools in the complex. The SCMC will be led by the head teacher/principal of the secondary school in the complex and will have the head teachers/principals of all schools within the complex as well as one teacher and a civil society member from the SMCs of each of the schools. Besides this, the SCMC will also have membership from all the other institutions that are attached to the school complex such as AECs, academic support institutions such as CRCs and so on
- **3.6d. Managing School Complexes:** Only a small fraction of schools in the country has support staff associated with them, with the result that teachers are generally in-charge of everything, from the midday meal to accessing supplies for the school. With the creation of school complexes this will change. School complexes will be assigned an adequate number of staff members by the DSE, to ensure smooth functioning of the school complex.

3.7. Effective Governance through School Complexes

- **3.7a.** Improved Governance through School Complexes: The DSE will devolve authority to the school complex and each complex will be a semi-autonomous unit. The DEO and the BEO will interact primarily with each school complex as a single unit and facilitate their work.
- **3.7b.** Nurturing the Culture of Planning: The culture of working to a plan, both short-term and long-term ones, will be developed across the leadership of all educational institutions. Schools will develop their School Development Plans (SDPs) with the involvement of their SMCs.
- **3.7c.** District Education Council Zilla Shiksha Parishad: Each district will have a DEC/ZSP for oversight of the functioning of the school system in the district, and to enable the functioning and empowerment of the schools, school complexes, SCMCs, and SMCs.

3.7d. Planning and review for development at every level: A culture of rigorous planning and review will be established at all levels by the corresponding apex governing bodies; the SDP, SCDP, and DEDP will form the basis for such reviews.

3.8. Effective Governance and Management of Individual Schools within School Complexes

This includes the following points:

- Making SMCs effective for improved local governance of Schools
- SMCs as a mechanism for community support and supervision
- Enabling SMCs to function effectively
- Addressing School Management Committee Issues and Grievances

4 – EPISTEMOLOGICAL FRAMEWORK OF SCHOOL COMPLEX

The epistemological frame work of School Complex is discussed under the following components:

- 1. Context and background
 - a. Review of literature exiting studies on School Complex
 - b. Significance and validity of the concept of School Complex
- 2. Approaches of School Complex
 - a. Multiple ways

- b. Encouragement for Innovations
- 3. Arguments regarding the set-up of School Complex
 - a. Rationale

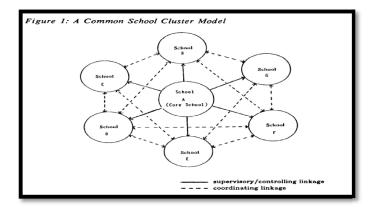
- b. Advantages & Limitations
- 4. Relevance of School Complex
 - a. How School Complex can contribute to ensure the quality of education

4.1. Context and Background

4.1a. Review of Literature on School Complex

According to UNESCO, the School Complex existed in the third world was termed as School Clusters. Since School Clusters are unfamiliar to many people, it is necessary to begin with a definition. In the context of this study, a Cluster is a grouping of schools for administrative and educational purposes. In Latin America, Clusters are usually called Núcleos.Other names are complexes, Zones and school learning cells.

The meaning of the concept may be clarified by focusing on structures. Figure 1 shows a common cluster model in which one school is made a 'core' or 'central' institution, and is the leader of several 'satellite' institutions. The head of the core school coordinates the work of the cluster. He usually pays particular attention to sharing of resources and to staff development.



The Purposes of Cluster Schemes(termed as School Complex in NEP 2020)

Survey of cluster schemes shows(survey made by Mark bray, University of Hong-Kong) many common purposes. Chief among them are:

Economic

- Sharing of facilities
- * Sharing of staff
- Bulk ordering of materials and
- * Fostering community financial support

Pedagogic

- Allowing schools to gain access to extra resources
- Encouraging teacher development
- Promoting curriculum development
- Providing an environment for innovation
- Encouraging cooperation in school projects
- Encouraging pupil competition, e.g., in sports and examinations
- Integration of the different levels of schooling, and
- Integration of schools with non-formal education

Administrative

- Acting as a focal point to which instructions from higher levels in the hierarchy may be sent
- Acting as a centre for collection of information on enrolments, staffing, etc.,
- Local decision-making, e.g., on teacher posting and leave arrangements, improved planning,
- Providing a better framework for teacher inspections.

Political

- Raising consciousness about the causes of underdevelopment and of the actions that can be taken by individuals and communities
- Increased community participation in decision making, and
- Reduced regional and social inequalities

Schools Mapping – Project in Colombia

School maps are particularly valuable instruments for micro planning, for they help identify the existing distribution of resources and the major developmental gaps. It is no coincidence that the **nuclearization project in Colombia**, for example, is coordinated by the National Technical Team for Educational Mapping, for the initial awareness of the benefits of nuclearization. Seen in this light, the growth of the school cluster concept results from the intersection of concerns about micro planning, school mapping, decentralisation and popular participation. Viewing the matter from a different angle, school clusters are widely seen as a way to improve the use of scarce resources and to upgrade educational quality.

The cluster concept has partly grown from developments in micro planning. Advocates of micro planning point out that even in the smallest country it is impossible for the central Ministry of Education to know the specific circumstances of every school and community. It is of course essential to integrate all plans into a national framework; but it is also essential to treat each locality as an entity in itself. *Micro planning, which implies a degree of decentralisation, can also permit a stronger local participation in decision making.*

Cluster Schemes also show wide variations in their Scope as the two extremes:

Sri Lanka – Introduction of school clusters have required partial federation or *amalgamation* of neighbouring schools. The cluster head has authority to move staff and resources between schools and heads of ordinary schools have much less authority than they would in an un-clustered system.

Papua New Guinea— By contrast, schools are only grouped for the specific purpose of in-service training and for common use of Education Resource Centres. Clusters are relatively loose, and team leaders have little formal authority. This account first outlines an early scheme launchedin1945, before moving to the more important initiatives launched in 1972. It then comments on the latter's aims, structure, and operation in practice.

The First Project: The first nuclearization project was launched after an inter government meeting about Lake Titicaca in 1945. The lake is shared by Peru and Bolivia, and the two governments wanted both to develop the region around it and to provide special support for the indigenous population. The meeting proposed 'Núcleos Escolares Campesinos' [which was a slightly different name from the later nuclearization initiative], modelled on a famous institution in Bolivia called Warisata. That school had been founded in 1931, and was the first in the continent to employ the nuclear concept.

School Complex in India – Different Studies

School complexes (as they are called in India) were first recommended by an Education Committee in Maharashtra State in1948. No action was taken, however, and in 1966 the recommendation was repeated by a National Government Education Commission. Some state governments responded in the late 1960s and early 1970s, though with different models and varying degrees of success. This account, which is chiefly based on Singhal (1983)describes the schemes in six states. For ease of reference, the projects are summarised in Table.

State	History and Scope
Bihar	Launched in 3 districts in 1975, but little political support.
Haryana	Launched 1969 with new push in 1974. Main focus on teacher upgrading. Many complexes quite successful.
Maharashtra	600 complexes set up in early 1970s. By 1982 expanded to 1,200 complexes and 8,500 schools.
Rajasthan	71 complexes launched 1967; rose to 168 in 1972. New thrust in 1972 following report of shortcomings. No evaluation since then.
Tamil Nadu	Initiated late 1960s; by 1982 2,000 complexes existed.
Uttar Pradesh	Confined to five development blocks: very small.

01. Bihar

In 1975, the government of Bihar introduced complexes in three of its 28 districts. The complexes were made formal units in the administrative hierarchy of those districts. Their duties were preparation of annual plans. In addition the duties included the following also:

- intensive, regular and surprise inspections by education officers
- panel supervision of teaching, by subject group
- organization of student activities, Parent-Teacher Association meetings at the complex level
- conduct of examinations at the complex level, and evaluation of schools on the basis of

results

processing of requests for casual leave, and preparation and collection of pay-bills

However, the scheme is said to have lacked adequate preparation, and in 1977 a new Minister of Education mentioned that the system might have to be abolished. The Minister's statement removed further support from an already shaky system, and although Sinha's 1981 evaluation noted that 32 complexes still existed, he added that they were just limping.

At the same time, some achievements were reported. Supervision of teachers was said to have increased, which in turn improved teachers' punctuality and techniques, and had some impact on pupil achievement. And resources were said to be used more efficiently: library books were used more frequently, laboratories shared, and teachers used as substitutes when colleagues were away. Nevertheless, Singhal's conclusion (1983, p.9) was that "owing to lack of political will and indecision about the continuance of the scheme, the future of the school complexes in the State has been rendered bleak".

02. Haryana

School complexes were introduced in Haryana in 1969-70. Six higher secondary schools in all districts except one were made core schools, and middle and primary schools within a radius of eight kilo meters were attached to them. By 1973,36 complexes were in operations. In 1974 the project was modified and greatly expanded. Particularly with the focus of teacher upgrading, 909 high and 'Junior Basic Training' schools were made in-service centres. Each served primary and middle school teachers within a radius of eight kilometres. A special training course was organized and attended by 542 of the 909 heads of central schools. The scheme envisaged that about 35 primary school teachers would go to each central school on the last working Saturday of every month. Many institutions organized demonstration lessons and various kinds of competition for the children. A school-complex bulletin, *Prathmik Adhyapak*was distributed free of charge to every primary school, and often formed the focus for discussion.

In 1975, the scheme was rationalized. Central schools with fewer than 12 primary schools attached to them were dropped from the list, thus bringing the number of central schools down to 841. Although performance in some complexes was disappointing, in 1979, 816 of them were said to be active. On the financial side, every complex in 1974-75 was given a non-recurring grant of Rs.500 (US\$32) per annum. This was later reduced to Rs.250, but District Education Officers were given Rs.I5,000 to purchase books for complexes and Rs.I,000 to support innovative projects. Production of the bulletin cost about Rs.90,000 each year.

03.Maharashtra

Although an education committee recommended school complexes in Maharashtra as far back as 1948, they were not actually introduced until the early 1970s. Six hundred complexes were then established within a short period of time, and a further thrust in the late 1970s raised the number to 1,200. Although some complexes only grouped primary schools, the majority grouped

both primary and secondary schools. Each complex had an average of seven schools. At the end of 1981, the scheme catered for 14% of all primary schoolchildren and 10% of all secondary school children. The initiators of the second thrust argued that: "isolation is a curse to a number of schools which calls for humane consideration and concerted action. External inputs or rapport are all that has been wanting all these years".

The initial premise about the need for rapport rather than support (instead of both rapport and support) might seem rather questionable, and the acronym might appear rather gimmicky. However, the campaign had the personal support of the Director of Education and had a big impact.

Three of its distinctive features were:

- Individual education officers volunteered to become 'godfathers' to specific complexes. This
 role was outside the normal frame of their duties.
- The project specifically focused on weak schools. Even the central schools were selected because they were weak. Leadership therefore came more from the education officers than from the principals of the central schools.
- Cluster membership was voluntary

The emphasis was on non-monetary inputs. Even when teachers came for meetings, they had to meet costs from their own pockets. Strong emphasis was placed on periodic grading of schools and self-assessment of teachers. Singhal (1983)presents figures suggesting that, at least in some cases, the scheme had strongly beneficial results. For example, he presents a specific case study of Charholi School Complex, and indicates improvements in school facilities, pupil attendance and pupil performance. However, the fact that much of its success has arisen from the personal initiatives of the Director of Education is both strength and a weakness. If the scheme is not institutionalized by the time the director leaves, it is likely to collapse. The fact that the scheme relies on rapport rather than financial and material inputs are also both strength and a weakness: it is immune from budgetary cuts, but is totally reliant on the enthusiasm of individuals. Experience elsewhere shows that such interest can be very hard to maintain.

04.Rajasthan

The Rajasthan scheme was launched on a voluntary basis in 1967. Inspectors and individual school heads were allowed to propose institutions as central schools. Each complex normally had three to five secondary schools and up to 25 primary schools. The education authorities stipulated that no teacher should be more than one hour from the central school. Separate complexes were permitted for girls' schools, and no head teacher was forced to join a complex. The initial number of 71 complexes rose to 168 in 1972.

A survey in 1971-72 found that:

- 53% of complexes had prepared plans
- 47% had appointed subject committees, five had shared laboratory equipment or library books,

- 64% had arranged demonstration lessons
- The headmasters and senior teachers of 54% visited the complex members and
- 56% had arranged common examinations.

This seems a notable achievement, though the authorities had hoped for more. Accordingly, the Department of Education embarked on another thrust and issued detailed guidelines. According to Singhal (1983, p.ll), no further studies have been made to assess impact.

05.Tamil Nadu

Tamil Nadu's scheme was founded in the early 1970s as a pilot project in every district. It was considered worthwhile, and was expanded. By 1982 there were over 2,000 complexes. The standard model was one high school, three or four middle schools, and 10 to 20 primary schools. In general, its aims are similar to schemes in other states. However, detailed information on performance is hard to obtain.

06. Uttar Pradesh

Although Uttar Pradesh is the state with the largest population, its school complex scheme is very small. In 1982 it was confined to just five development blocks with about 20 complexes altogether. Each complex consisted of 10 to 15 primary schools linked to a middle school. The roles and strategies of the complexes were similar to those in other states. Among other functions, they were expected to:

- Undertake censuses of school-going populations
- Set enrolment targets for each school
- Identify weak students in each school and decide on appropriate remedial action
- Set up laboratories in the central schools organize demonstration lessons, and
- Organize competitions, e.g., in art, handwriting and story-telling

4.1b. Significance and validity of the concept of School Complex

In 1993 the Annenberg foundation sponsored a program to encourage networking among schools for mutual learning and support, strengthened accountability and improved student achievement in urban school districts in the United States. The project which was launched in Losangeles in 1994 received US53 million Dollars for a 5-year project funding 27 network of schools termed school families. Voluntary group of schools consisting of a high school and one or more of its feeder middle and elementary schools were eligible for funding. The school families were larger than anticipated averaging about nine schools per network. School families collaborated by sharing information on curricula instruction and students in order to spread improvement initiatives.

The programs elaborated in various educational zones were very diverse, having their purpose on the following goals:

Raising the quality of learning, Raising the quality of teaching, Providing support for school families, Providing support for pupils, Tackling social exclusion and working with partners. First the

zone drew up a project bid, after receiving the necessary approval and funding. It came up with a detailed project plan, with the consultation of local educational professionals.

It contains the zone objectives, a summary of its targets and of the progress made towards achieving them. The programs for coming years and outlined plans for the remainder of the lifetime of the zone. This resulted in improvement of quality in school families and also enrollment increased considerably. (School clusters and teacher resource center by Elizabeth A Giordano page-67)

4.2. Approaches of School Complex

From the above epistemological back-ground we observe the importance of school complex for its successful functioning. The members of the committee, the District Educational Officer and the Inspector of schools mainly should be in touch with each school complex and as far as possible, should help in making the system more elastic and dynamic. If the system is to function effectively and successfully adequate powers and responsibilities will have to be delegated to the complex.

They include the following:

- (i) The school complex should be authorized to modify, within prescribed limits and subject to the approval of the District Education Officer, the usual prescribed curricula and syllabus.
- (ii) It is very difficult to provide leave substitutes for teachers in primary schools, because the size of each school is so small that no leave reserve teacher can be appointed. It is more difficult in case of single teacher schools, where if the teacher is on leave, the school has to remain closed. The function of the school complex is to attach one or two leave reserve teachers to the central secondary school and they can be sent to schools within the complex as and when the need arises.
- (iii) The headmasters of the schools within the complex should prepare a plan of the work in detail for the ensuring academic year.
- (iv) The headmasters should meet together and decide on broad principles of development in the light of which each individual school can plan its own program.
- (v) The complex should arrange periodical meetings of all the teachers in the complex, at least once a month, where discussions on school problems could be had.
- (vi) The in-services-education of the teachers can be arranged during the vacations. Here short special courses can be organized for groups of teachers.
- (vii) The central high school can maintain a circulating library from which books could be sent out to schools in the neighborhood.
- (viii) The services of the special teachers, like the teachers for physical education for art can be utilized for all the schools of the complex.
- (ix) The services of B.E.O., the Tahsildar, The Medical Officer, the Subject Inspectors of schools and other officers of the locality can be effectively used for planning and executing the scheme of school complex.
- (x) The headmasters and teachers of high schools of the complex should visit the higher primary schools in the neighborhood at least once in a month and some lower primary schools in the same manner.

4.2a. Multiple Ways

The Basis for Cluster Formation

The range of models may be illustrated by three examples on a continuum. The first model is far-reaching, the second is intermediate, and the third is the least extreme.

01. The Extreme Model

In this system, the School Complex committees have very wide powers. Among powers in Sri Lanka and Thailand, for example, are determination of cluster budgets and recommendation of staff for promotion. In Sri Lanka, cluster committees can also transfer staff within their clusters. In both countries the roles of cluster heads are set out in official regulations, and in the Thailand case they are enshrined in a national law.

02. The Intermediate Model

In this situation, schools are formally grouped together by higher authorities, but the controlling committees have much less extensive powers. The director of the centre organizes workshops and distributes materials around the schools, but cannot transfer staff among the schools or make recommendations for promotion. Among 28 other countries, this type of model exists in Indonesia, Malaysia and Papua New Guinea.

03. The Least Extreme Model

In the least far-reaching model, membership of a cluster is voluntary. Schools group themselves together, and can abandon the association if they wish. The schools hold joint meetings of ParentTeacher Associations. Usually, they appoint committees to organize meetings and supervise implementation of decisions, and may formalize their association with written constitutions. The Chairman rely entirely on voluntary cooperation, and have very few sanctions to enforce control. The chief advantage of the informal operations is that they are entirely self-help schemes. They can greatly improve the nature of education provision, without requiring financial or other support from Governments.

4.2b. Encouragement for Innovation

Centralized systems are well suited to innovations initiated at the top, since the central authorities are likely to have both the authority and the resources to introduce changes. However, centralized systems tend to discourage local initiatives. Even when low-level officers perceive local problems and ways to solve them, they rarely have the authority to introduce changes. Decentralized systems can therefore be much more flexible, and can encourage local innovation.

4.3. Arguments regarding the set-up of School Complex

The concept of School Complex came into existence in India since the report of Kothari Commission in 1964-66. The first National Education Policy 1986 also laid importance for the setting of School Complexes across the country. The review committee on NEP 1986 mentioned 'the networking of schools in School Complex facilitates sharing and exchanging of resources and experiences. The schools that have better learning facilities can share the same among the schools in School Complex. The very concept of School Complex mainly brings the neighborhood schools together and removes isolation of schools.

Various educational indicators like GER, NER, PTR can considerably be improved. The performance of students in achievement tests also be improved by providing necessary academic support from among the schools in the complex. The children in specific School Complex may be provided with the skills they are interested in by hiring local artisans. The disparities among the schools can be considered with due care. The complexities involved in School Governance may also be addressed. All these factors lead us to justify the causes for establishing School Complexes.

Advantages and Limitations of School Complex

The Epistemology of School Complex shows and different studies had done have shown some advantages and limitations of constituting School Complex. Few important of them are mentioned here:

Advantages

- (i) The linking of secondary schools and primary schools under this program can break the isolation. All the schools under the scheme can work together for the common good.
- (ii) Selected School Complexes can be used for trying out and evaluating new text books, teachers, guides and teaching aids.
- (iii) The ill-equipped primary schools can be provided certain facilities and equipment to impart instructions successfully.
- (iv) The Complex may be used as a unit for the introduction of better methods of evaluation and for regulating the promotion of children from class to class or from one level of school to another.
- (v) Better library and laboratory facilities can be provided to the primary schools.
- (vi) For the professional growth and development of teachers in-service training facilities can be provided.
- (vii) Students may be provided training in vocational skills by hiring local artisans for School Complex.

Limitations

- (i) Rapid expansion of student enrolment at the primary stage of education, create difficulties in extending facilities available in the secondary schools to the primary schools at a particular Complex.
- (ii) If the dominant headmasters in any unit happen to be through going educational conservatives, the imaginative classroom teacher may face difficulties to experiment dynamic ideas in the classroom.
- (iii) The program of in-service education, will also involve expenditure.
- (iv) Linking of schools following different curriculum other than state curriculum poses certain problems.

If the students of the primary schools are to be taught science in the high school laboratory during vocations, some payment will have to be made to the teachers concerned. If the scale of this expenditure will not be managed, then the system may not function. Even problems may arise out of linking together of schools. A large group may stand in the way of successful functioning of the School Complex. Hence, it is wise to form small groups. It will facilitate better face to face human relationships.

In spite of the above limitations, the school complex has many more advantages as discussed earlier. Therefore, attempts must be made to remove these difficulties for planning education in a new direction.

4.4. Relevance of School Complex

Ensuring Quality of Education: The system of education has to satisfy constantly rising demands, general desires for higher qualification and thereby ensure the concerns for enhancement of quality. In Latin America, school clusters have been introduced in Bolivia, Colombia, Ecuador, Panama, Peru and other countries. This has been proved a way to improve the use of scarce resources and to upgrade educational quality.

Improvement of Quality of Education: The chief way that clusters can help improve school quality emerges from the discussion on sharing resources through a cluster. Individual schools gain access to the facilities and staff of other schools. In addition, if no school in the cluster currently has certain resources, the fact that several schools are grouped together improves their quality of education.

School complexes in India have two important roots: the recommendation of an education committee in Maharashtra State as far back as 1948, and a similar recommendation by a National Education Commission in 1966. Only in the late1960s and 1970s was there any action, however the account presented here highlights developments in six states. It shows a wide variation in models and in coverage. Although in most cases the positive aspects have to be balanced by shortcomings, the balance remains positive. The complexes seen generally to have been welcomed by the teachers and to have helped achieve both the quantitative and the qualitative goals of education. The schemes in Maharashtra and Tamil Nadu seem to have been particularly worthwhile. This review has shown that clusters can indeed play a positive role, helping to improve the operation of school systems. They are not a panacea, and international experience shows the evidence of shortcomings and failures as well as successes. However, much can be achieved provided policymakers are realistic in their aims and pay careful attention to design and implementation.

The epistemological studies on School Complex have shown wide variation so far as the scope is concerned. In one case School Complex heads are given the authority to move staff and resources between the schools. On contrast at some other places school complex are formed for the specific purposes of the service training. There has been a much note on the success of formation of School Complexes in different countries as well in India.

5- Issues and Challenges

5.1. Introduction

In 1986, India drafted the National Education Policy with the aim of improving education in the country. They decided to do this by increasing the number of schools and the number of teachers who join the system. The other big goal of that policy was to reduce gaps in education by focusing on basic literacy and numeracy. In 2015, a committee headed by K Kasturirangan came together to draft a new NEP of which the aim now had shifted to transform India's education system.

Is the system designed to accommodate this new idea of world-class education? It talks about methods of using the schools more optimally by clustering schools and creating School Complexes. If one reads the NEP, the word school complexes will come up multiple times but its chapter 7 that talks in detail about the structure and governance of school complexes.

There are several issues with respect to School Complex and there are many challenges in front of us while constituting School Complexes across Karnataka. These issues have to be taken as challenges and while forming School Complexes, these issues have to be addressed. School Complex has its own advantages in rising infrastructure and quality in education.

Here are few issues related to formation of School Complex:

5.2. The Complexities of School Complex Governance

'School will be organized into School Complexes which will be the basic unit of governance and administration.' The principal of the secondary school will be the head of the whole School Complex and take decisions for all the schools under the complex with regard to resource allocation, finances and accounting. What makes all of this ambiguous is the lack of clarity, raising some key questions:

- O1. How will the principals/ heads be up skilled and trained to manage multiple schools? The current scenario with schools has shown multiple times that principals struggle with managing one school strategically. This has multiple reasons ranging from overburdening the Principals with administrative tasks to lack of motivation. With more schools, the efficiency and the quality of the work will further diminish resulting in unequal attention to all schools in the Complex.
- 02. What will be the role that power will play when it is concentrated in the hands of a topfew? Power plays a very important role in seeing actions take place effectively and equitably. With power being centralized towards one school's principal, resource allocation, competition and financing may become extremely imbalanced. If a principal for one school is taking decisions for all the schools in the complex, these might not serve the same benefits for everyone as it's not possible for the principal to have complete context of all the schools.

- 03. Under the New Policy of Education (1986), at least one Educational Complex may be established in every district during the Eighth Five Year Plan, so as to develop a functional model An educational complex was intended to be established for the same reasons as the current School Complex proposition. Hence this idea of school governance has been in implementation for more than 35 years and has not completely been functional in urban and rural India. What currently making us believe is with the NEP-2020 is the implementation be stronger?
- 04. And finally, as the infrastructural compositions of schools change, principals/heads of schools also need to get accustomed to the other big changes, as mentioned above, that come with the implementation of the NEP. Even bringing one small shift into the school system requires training and developing teachers, informing and investing stakeholders and making time for long-term strategic planning.

5.3. Constituting a School Complex

The number of schools across the state is more in numbers, so it is of great challenge in constituting school complex. The number of lower primary schools is more compared to higher primary schools, but number of secondary schools are lesser compared to primary schools, now according to NEP 2020, even pre-primary schools like Anganawadi, Balvatika, nursery, LKG and UKG schools are also have to be the part of school complex.

The number of Government Lower Primary Schools is 82.26%. These are mostly located in rural areas. The percentage of Private Management Schools is 26.5% (up to class x) which is mostly located in Urban areas. Bringing this 26.5% of private school under School Complex poses critical issue.

Educational Indicators are different at different geographical areas. Achieving optimal standards on these indicators poses a challenge.

5.4.Coverage

Two aspects of coverage may be considered here: (a) the nature of the institutions that clusters can include, and (b) the geographical areas that they may cover

5.4a. Institutional Coverage

As mentioned in the Introduction, some clusters embrace only primary/secondary schools, and some embrace both. Three main arguments favor clusters composed of only primary or secondary schools:

- 1. If primary and secondary schools are grouped in the same cluster, the secondary schools are likely to dominate. The staff of secondary schools may not be sympathetic to the needs of primary schools, and the operation of the cluster may be unbalanced.
- 2. For most matters, the schools need to cooperate only with other schools at the same level. It is unsatisfactory, for example, for sports meetings to require competition of primary school children against secondary school ones; and in curriculum matters the chief needs are for staff to discuss problems with other staff who face similar problems.

3. Formal linkage of primary and secondary institutions reinforces the idea that all primary children should aim to proceed to secondary school. Few Governments can yet afford universal secondary education, and the arrangement may raise unrealistic expectations. On the other hand, several arguments can also be found to support mixed clusters.

5.4b. Geographical Coverage

How to involve all schools, where schools are scarcely scattered geographically in places like Malenaadu Karnataka, South and North Canara, schools in tribal areas and border districts of Karnataka?

The habitation of Tribal population is in the territory of reserved forest area and some families are also living in reserve forests. (Nagarahole and Dubare in Kodagu district, Malekudias in Bhagamandala of Kodagu, HD Kote, Hunsur and Periyapatna of Mysore district, Beligiriranga betta of Kollegal, Hanur in Chamarajanagar district, Koragas and Malekudias in South Canara and Udupi, HalakkiGowdas in North Canara, Lambanis scattered in and around 3 districts Chitradurga, Davanagere, Shivamogga, Hakki-Pikkis and so on). The customs, culture and traditions of these people are different. No structures are allowed inside the reserve forest and forest area. Establishing School Complexes in these areas poses a big challenge.

Contrary to these issues, there are hugely populated places like B.B.M.P and other corporations. Here number of schools is more in number compared to other places. There is another issue to be looked into especially at border areas of a block or a district while constituting School Complex.

Establishing school complex in areas that share border with the other district and taluk also a challenge to be addressed.

5.5. Transportation and Facilities

It is of a huge challenge to bring foundational learners like nursery, LKG, UKG & Anganwadis under the school complex. Mobilizing the learners to the feeder school is of a challenge in all aspects due to their age. Regular change of teachers might have an impact on their learning.

There are areas where the families live largely apart and segregated into different localities. In some areas like Malenadu region, Coastal area in South Canara, Western Ghats schools are sparsely situated. Arranging transportation facilities requires special attention in terms of both expense and time.

5.6. Management Issue

There are many Government aided, unaided, local body schools, residential schools, Kendriya Vidyalaya schools and other schools functioning in a geographical area by different managements and administrators. So, while constituting School Complex and to manage, it is important to bring harmony of all the people involved in it. While many managements school might not be interested to involve in School Complex due to administrative, financial, political and social perspectives. While involving private management schools, utmost care needs to be taken so that the policies are not violated.

There are schools run by local bodies like BBMP, schools run by Social Welfare department like Murarji Desai Schools, Kittur Rani Chennamma Schools, Ekalavya Schools and so on. Schools managed by Central Board of Secondary Education – JNV Schools, KVS; Sainik Schools managed by Defense Ministry. Brining all these schools under one single concept of School Complex is an issue.

There are schools with different medium of instructions. Bridging these schools for a School Complex is also an issue.

5.7. Infrastructural issues

If the feeding school has more strength compared to feeder school, then feeder school needs to be given infrastructural support and vice versa also possible. If any school has school field and rest of the schools in the complex doesn't have, then mobilization and accommodation will be a huge challenge. In this event even time management also to be looked into.

5.8. Issues of the Curriculum

While constituting School Complex in a region, we can find schools following different curriculum and different medium of instruction. Then care has to be taken while forming a school complex. (There are C.B.S.E,I.C.S.E,I.G.C.S.E and State run schools).

Though majority of schools across the state are governed by State Curriculum, there are schools which follow CBSE and ICSE, IGCSE, CIE (Cambridge International Education) curriculum. Brining the schools with different curriculum under one School Complex is a challenge.

5.9. Article 371J

While constituting School Complex in Kalyana Karnataka and Kittur Karnataka area care has to be taken to see that, the provisions of article 371J is not violated. (especiallywhile forming school complex at border districts). Transfer of teachers to different school complex also poses a challenge(inter or intra).

5.10.School complex in Forest and Tribal areas

While forming school complex in forest and tribal areas which involve tent schools, care has to be taken regarding infrastructure and medium of instruction. (Kodagu, Chamarajanagara, Belgum etc)

5.11. Formation of SDMC at School Complex

Care has to be taken while forming SDMC at School Complex. Importance must be given to all schools because they will have their own SDMC too. Schools might also be with different legislative constituencies and panchayaths.

Ensuring various rights in RTE, there are SMCs in all Government Schools. The committee is responsible for development of yearly School Development Plan as well monitoring the utilization of grants. In private schools all decisions regarding school

development are made by the management. Constituting a SMC in private school with a member from the Government sector is an issue.

5.12. Training of SDMC Members

The SDMC members of a School Complex are from different backgrounds. One cannot expect the same understanding among the members towards the development of School Complex. They are expected to develop School Development Plan, Improve Learning Outcomes of Students, mobilizing physical and financial resources, endorse the performance appraisal of teachers and so on. Designing a robust training program and making them obligatory to be compulsorily a part of such training is utmost essential.

5.13. Political, Social, Psychological and Religious

These aspects pose issues for forming School Complex. Stake holders are also mentally set for independent institutional aspects. Even teachers need to face the new challenges of School Complex and to be involved in it.

5.14. Appointment/selection/nomination of Social Workers in School Complex

The nomination of social workers to help school complex, should be free from any ambiguity. There has to be no pre-judice and only pre-determined guidelines and merit should be the criteria.

5.15.Holidays Management

While framing the annual academic calendar of events for School Complex, working days, holidays, conduct of other events are to be considered with due care.

5.16. Management of staff

In a school complex if different language formula is used, then managing staff for quality improvement is a challenge. (Urdu medium, languages, heterogeneous)

5.17. Inclusive and Equitable Education

While forming School Complex enough space must be given to inclusive education. Special children might have scattered across the schools and these children are to be taken care of for providing equitable education to meet their special needs.

5.18. Accountability of work

Fixing the accountability of teachers working under a School Complex need to be given due consideration. Work distribution and having cadre wise job chart need special attention.

5.19. Language diversity and 3 language formula

Twenty-two languages are afforded official status in India, referred to as 'scheduled languages' in the Constitution.

Kannada is the official language of Karnataka and is spoken as a native language by approximately 76% of the population. In addition, the state comprises the speakers of Urdu-9.72%, Marathi -3.95%, Tulu-2.28%, Kodava -0.25%. There exists a script in Tulu and no script exists for Kodava. Kannada script is used for Kodava.

In Government schools, Kannada is taught as the first language (exceptions are Adarsha Schools where the first language is English, In Urdu Schools; the first language is Urdu). Private un-aided schools have both English and Kannada as the first language. We have Marati and Urdu schools in Karnataka. The issues related with the language are to be addressed while setting up of school complexes across the state. This creates a complex situation in having the languages in schools as the language culture and ethnicity are inextricably linked.

5.20. Translingual Practices in the Classroom

Separate medium of instruction may give the impression that what happens in each classroom happens in one language. However, the reality is different particularly when teacher and learner proficiency in Medium of Instruction is low. Reality of language use in English lessons involve a more complex, pragmatic mixture of languages — a practice known as trans languaging — both among learners and in interaction with teachers in ways that mirror the reality of languages. This needs attention.

6 – Recommendations

The review of different studies on School Complex has shown many advantages of having School Complexes. The epistemology of School Complex has indicated the success of School Complex in overcoming isolation of school, effective, proper and advantageous usage of resources – physical and infrastructure. The varied geographical conditions pose certain challenges in improving quality of school education in our state. The educational indicators like GER, NER, PTR and so on also different in different geographical areas. These can be addressed to a considerable extent by having School Complexes. Academic related challenges like students' performance, achievement of learning outcomes can also be addressed by constituting School Complexes appropriately. With the insights derived from various studies, educational indicators, geographical conditions of the state, the following are the recommendations for constituting School Complex.

6.1. Preparations for Constituting School Complex

6.1a. Mapping of Schools

The schools functioning in a locality – schools managed by Government and other local bodies, private management schools, school different curriculum and medium of instructions, different level of schools – primary, middle, secondary, senior secondary, day schools and residential schools are to be mapped appropriately before constituting School Complex.

Schools in urban area, rural area, tribal area, forest area, coastal area and areas that share borders with other states, districts, blocks should also be mapped.

6.1b. Infrastructure

Infrastructure facilities available in different schools must be taken care of. In addition, facilities for establishing laboratories, libraries, sports rooms, and playgrounds are also to be taken note of.

6.1c. Financial Implications

Financial implications – finance required for transportation, providing infrastructure, educational facilities. The financial implications required for ensuring safety and security of students in tribal and forest areas.

6.1d. Governance

Governance related aspects – who should lead the School Complex? When there are more than two PU Colleges in one complex, when there is no PU College in the School Complex.

Governance in areas that share borders with neighboring districts or taluks when School Complexes are established in such border areas.

6.1e. Identification Social workers and Local Artisans

The Social Workers who are willing to work between students, parents and schools should be properly identified. The requirement of social workers and their availability should also be considered duly before constituting School Complex. In the same way, the availability of local artisans should also be surveyed.

6.2. Recommendations for establishing School Complexes

6.2a. Geographical Conditions

- Sparsely and densely populated areas are to be given priority while establishing School Complex, so also to the areas where the schools are existing in isolation.
- Wherever the School Complexes are established in sparsely populated areas, adequately transport facilities may be arranged for the students to access the schools well in time.
- The School Complex may also be established in border areas connecting 2 taluks or 2 districts provided there are similarities in local customs and traditions. Availability of adequate required resources is to be ensured.
- While constituting School Complex in Forest and Tribal areas due considerations may be given for the security of the students and transport facilities.
- All the necessary support in terms of transport, academic facilities, medical support and such other aids are to be given for the children with different abilities.

6.2b. Governance of School Complex

- The head of the School Complex should be the principal of senior secondary school. He should be assisted by the senior teacher at 5+3+3 (foundation, preparatory and elementary) schools.
- The Head of the School Complex needs to be given Continuous Professional Development in modular form to handle effectively his subordinates, students and community.
- The School Complex head should be given administrative and academic powers. He
 needs to complete an academic and administrative course that may run for at least
 6 months.
- School Complex heads may be directly recruited or may be given promotion on seniority basis. A Professional Development Course is to be designed exclusively to develop him/her as an effective academician as well administrator.
- Wherever there are a greater number of schools and teachers, School Complex head may be given an additional teacher (vice principal) to assist him/her.
- Technical assistants should be recruited/hiredfor each school complex to maintain all data related to school and school administration.
- All schools should be included under School Complex irrespective of the curriculum and medium of instruction.
- One trained personnel to look after Children With Special Needs be appointed to the School Complex.

6.2c. Utilization of Institutional Facilities

- For optimal utilization of Institutional facilities, a central library may be established at one convenient centre of the School Complex area so that everyone belonging to School Complex may use it. The librarian should be a qualified person. The library must be kept open beyond school hours and during holidays.
- In the same way laboratory resources and sports material can also be provided at a central place for the benefit of all students of the School Complex.
- Trained personnel for these may be hired to the School Complex and be made available beyond school hours and during holidays.
- A para-medical staff shall be appointed/hired to the School Complex to care of minor issues
 related with health and well-being of school children. Functional dispensary may also be
 formed at the central area of School Complex. This should be exclusively meant for the
 students and teachers.

6.3. Functioning of Schools under School Complex

- Common working days and holidays are to be considered for all the schools under the School Complex.
- While conducting examinations and declaring holidays, the autonomy should be given to the head of the School Complex. Any such decisions should comply with the instructions from the Government/Department.
- The background of teachers who work in these School Complexes should also be given due consideration regarding the familiarity of customs and tradition of that location.

6.4. Monitoring and Supervision

- Whenever the School Complexes are established in border sharing areas of 2 taluks or 2 districts, the authority to supervise and monitor should be appropriately decided.
- Monitoring and Supervision authorities are to be given due training regarding establishment, functioning, sharing resources, managing physical and human resources, their role in improving the quality and educational indicators and so on. This helps to strengthen the School Complexes further.
- The supervising academic and administrative authorities should be given the responsibility of assessing all components of schooling in the entire school complex. (the authority for this administrative aspects be different at 5+3+3 and 4 levels)

6.5. Hiring of Personnel for School Complex

- Vocational Teachers, local artisans may be hired to School Complex, whose services can be utilized for the entire School Complex. These special teachers may be appointed on contract basis for a tenure of minimum 5 years.
- In addition, two extra teachers may also be appointed/hired so that their services can be utilized whenever some teachers go on long leave.

• Social workers, local artisans, vocational teachers whoever may be hired/appointed be duly trained regarding the discharge of their duties to the optimal level.

6.6. School Complex Management Committees

- While forming SMCs opportunities should be given to all the representing schools of the School Complex. The norms of the Government should be followed while forming SCMCs.
- The SMC should meet once a month and prepare a yearly School Development Plan. They should also monitor the utilization of grants and the whole school environment. The tenure of the SMC member should be maximum 3 years.
- SCMCs play a major role in improving the standards and quality of School Complex system. They also have the task of improving Learning Outcomes of schools within the complex. They have the great responsibility of endorsing the performance of teachers. Keeping these points in mind, once the SCMCs are established as per the norms the members are to be trained intensively regarding preparation of School Development Plan, improving Learning Outcomes, resources management, improvement initiatives, their roles and responsibilities and obligations as SCMC members. As we have CPD for teachers, the same modular type of training to update SCMCs should be designed.
- The SCMCs should involve parents and community in decision-making and holding school's accountability.

6.7. Implementation of School Complex in Karnataka – S V Ranganathan Committee Report

The KPS is well positioned to be made the centre of a School Complex. Adequate planning and resource allocation will ensure that KPS can turn onto a School Complex as envisaged in NEP 2020. Certain KPSs based on their performance over the last couple of years should be identified as pilot School Complex centres.

A detailed planning with all the select KPS leadership should lead the exercise. KSEC should think through a robust leadership program for the identified KPS leaders. A tenure posting for the Heads of KPS can ensure that the leaders of these KPS can do long-term planning as well as short-term and mid-term planning. The KPS heads are expected to map their immediate area and also come up with the network schools of the complex and develop the SCDP along with the SDMC of the individual school.

An initial teacher voluntary transfer scheme into School Complex should be worked out by the department. This could be the pre-cursor to the teacher recruitment to the school complex that should be in place once the rules are revised accordingly. Further, private schools also should be encouraged to create a mutually beneficial network wherein a set of educational institutions in a specific geographical region come together and share resources. Funding for private school networks could be done by well-established institutions in that specific geographical region. Through such a mechanism the private schools can develop a collaborative relationship with other private schools and raise the overall quality of education. There will have to be appropriate guidelines in this regard so that the schools, particularly the larger ones which will have to share their resources also see these collaborations providing benefits; these guidelines should be developed by SSSA.

ABBREVIATIONS

SL no	Abbreviations	Expansion
1	AEC	Adult Education Centre
2	AWC	Anganwadi Canters
3	BEO	Block Education Officer
4	BRP	Block Resource Person
5	CABE	Central Advisory Board Of Education
6	CBSE	Central Board for secondary Education
7	CPD	Continues Professional Development
8	CRP	Cluster Resource Person
9	DEO	District Education Officer
10	DSE	Department of School Education
11	DSERT	Department of State Education Research & Training
12	ECCE	Early Childhood Children Education
13	ECE	Early Childhood Education
14	GER	Gross Enrolment Ratio
15	ICDS	Integrated Child Development Scheme
16	ICSE	Indian Certificate of secondary Education
17	ICT	Information Communication Technology
18	IGCSE	International General Certificate for Secondary Education
19	ITI	Industrial Training Institute
20	KPS	Karnataka Public School
21	NCF	National Curriculum Framework
22	NEP	New Education Policy
23	NER	Net Enrolment ratio
24	NGO	Non-Governmental Organisations
25	NPE	National Policy of Education
26	NPERC	National policy of education review committee
27	POA	Programme of Action
28	PTR	Pupil Teacher Ratio
29	RAA	Rashtriya Avishkar Abhiyan
30	RMSA	Rashtriya Madyamika Shiksha Abhiyana
31	RTE	Right To Education
32	SCF	State Curriculum Framework
33	SDMC	School Development & Monitoring Committee
34	SMC	School Management Committee
35	SSA	Sarva Shiksha Abhiyaan
36	SSLC	Secondary School leaving Certificate
37	TTMS	Teacher Training Management System
38	U-DISE	Unified District Information System for Education

Reference Books & Web Links

Draft educational policy 2019

https://www.education.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN_Revised.pdf

Education in contemporary scene; Chapter-6, universalisation of Primary education

School clusters in the third world; making them work by Mark Baray, University of Hong Kong

https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.700.6148&rep=rep1&type=pdf

School clusters and resource centers by Elizabeth A Giordano

School mapping and micro planning by NCERT

S V Ranganathan task force report on implementation of NEP in Karnataka

https://www.yourarticlelibrary.com/schools/school-complex-needs-and-features/45254

https://journals.sagepub.com/doi/full/10.3102/0013189X19826958

https://achilleaskostoulas.com/2018/08/08/describing-a-school-as-a-complex-system/amp/

https://www.flame.edu.in/newsroom/restructuring-of-schools-in-india-under-the-new-education-

policy#:~:text=A%20school%20complex%20is%20primarily,up%20to%20higher%20secondary%20levels

https://www.yourarticlelibrary.com/schools/school-complex-needs-and-features/45254

https://www.thehindu.com/news/cities/Vijayawada/school-complexes-need-more-focus/article29446414.ece

https://wideeducation.org/concept-of-school-complex/

https://www.preservearticles.com/articles/what-is-the-importance-of-a-sound-school-complex-in-india/6707

https://www.preservearticles.com/education/what-are-the-main-aims-and-objectives-of-a-great-school-complex/6688

https://www.preservearticles.com/education/notes-on-the-advantages-and-disadvantages-of-school-complex/6686

https://www.preservearticles.com/articles/what-is-the-importance-of-a-sound-school-complex-in-india/6707

https://www.thehindu.com/news/cities/Vijayawada/school-complexes-need-more-focus/article29446414.ece

https://timesofindia.indiatimes.com/city/goa/we-need-to-revive-concept-of-super-school-

complex/articleshow/78989250.cms https://teachers9.blogspot.com/2011/06/school-complex.html

https://www.yourarticlelibrary.com/schools/school-complex-needs-and-features/45254

https://youtu.be/JGFnfjJGTQ0 https://www.mra.gr/european-school-complex-crete/

Karnataka State Achievement survey (CSAS) ,Key learning attainments By KSQAAC

ಗಣತಿ ಆಧಾರಿತ ರಾಜ್ಯ ಕಲಿಕಾ ಸಾಧನ ಸಮೀಕ್ಷೆ, ಸಂಕಲನಾತ್ಮಕ ಮೌಲ್ಯಮಾಪನ ಅಧ್ಯಯನದ ವರದಿ by KAQAAC

KAQAAC Programs by KSQAAC

Annul Work plan of Karnataka 20-21 by SSK

Implementation Plan - Karnataka National Education Policy 2020, A REPORT

by Task Force for Implementation of NEP 2020 in Karnataka

School cluster system: A qualitative study on innovative networks for teacher development Mphahlele L. K

https://telanganatoday.com/school-clusters-for-better-learning

Clustering together to advance school improvement: working together in peer support with an external colleague by

Alison Lock Head teacher, St Lawrence Church of England Primary School, Lechlade

https://dera.ioe.ac.uk/3759/1/download%3Fid%3D149401%26filename%3Dclustering-together-to-advance-school-

<u>improvement-full-report.pdf</u> <u>http://www.indiancenus.net/states/karnataka</u>

KPS Blue Book, March 2019







DSERT, Bengaluru