

# School Education in Karnataka

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## INTRODUCTION

As reported by Kamat (2002), the history of education is very interesting and can be traced back to its beginning in the third century B.C. It has evolved from education being imparted orally to written scripts; from temples and community centres being the place for education, to actual schools being built for education, and from vedic times into multiple fronts as present today. During vedic times, education was limited to the Gurukulas, Agraharas, Mathas, Bramapuris as well as Shāles, Kamat (2015a). Most of the education was limited to the Brahmin community. According to Kamat (2015b), the different agencies through which society provided instruction or the religious and spiritual education for different sections were Dharmaprasangas (religious discourses), Harikathās (recitation of purānas), and gōshthis (religious congregations). The main aim of education in those times was culture that would help people lead useful lives and not literacy, as they considered self-sufficiency, social service and spiritual knowledge as the actual goals of developing reading and writing skills.

As reported by Kamat (2015c), after the vedic system of education, the Jaina system of education entered, though the scholars and researchers have differed with dates, identity, opinions of the time of entry on the ancient educational system in Karnataka. The Jaina contribution to Karnataka has been tremendous and manifold. Most of the distinguished early poets like Pampa, Ponna, Ranna, and Janna were Jains. Bhadrabahu arrived in Karnataka to lay the foundation of Jainism. The fifty-seven feet-tall statue of Gommata at Shravanabelagola is the very embodiment of the teachings of Mahaveera.

As cited by Kamat (2015d), Buddhism flourished in Karnataka in ancient times, along with Vedic religion and Jainism. AshokaMaurya (274-236 B.C.), the great Indian emperor, may be considered to be the first emperor of Karnataka. Ashoka wanted to spread the teachings of Buddha. Therefore, he sent monks to various places in India, apart from Sri Lanka. Karnataka did not have a big university like Nalanda (Northeastern India), but there were more than a thousand vihāras in the land of Pulikeshi, with ten thousand bhikkus, as noted by Hiuen Tsang. All the three important schools of Buddhism, namely Hinayana, Mahayana, and later Vajrayana flourished in Karnataka over the centuries. In Jaina and Vedic

centers, the same curriculum prevailed at the elementary level, where the medium of instruction remained Kannada.

Kamat (2015e) reported that the organisation of the educational system remained the same among all sects -Buddhist, Jaina and Vedic. All sects agreed that self-realisation, and not mere wage-earning, should be the true aim of higher education. A common curriculum was established, and the study of the vedas, upanishads, darshans (different schools of philosophy), shastras, logic, and rhetoric was compulsory. Proficiency in grammar, oration, and debating were given importance. All sects encouraged debating talents because the superiority of each sect was established through argumentation and debating skills in large public gatherings of learned people. The system laid stress on education, through the regional language at the elementary level. Education was free. Hence, even the poorest students could always get admission into a temple school, matha or gurukula. Higher education was not the monopoly of the rich as it is today in India. The king did not intervene in the administration, though he, along with the nobles and wealthy merchants, contributed liberally for the cause of education.

With the Europeans occupying India, they reformed the education system that involved libraries, schools and teachers. It became a fashion to learn English during the initial English education times and their system of education is still being followed at present, Kamat (2002). Since then, the same system of education is followed, and the Planning Commission lays major plans on education for every five years along with the central government allocating tens of crores of rupees to improve quality of education as well as the policy of education for all.

### A. *The Educational Setup in Karnataka at Present*

The education system in Karnataka is mainly governed by three boards namely the Karnataka Secondary Education Examination Board, Council for the Indian School Certificate Examination (CISCE) and the National Institute of Open Schooling (NIOS). There are also the national and international boards namely Central Board of Secondary Education, International Baccalaureate and the Cambridge International General Certificate of Secondary Education (IGCSE) board. All these cater to primary, secondary as well as higher secondary education.

Apart from these, there is also the Pre-University Board which is run by the state for higher secondary education that offers the Pre-University course.

The school education in Karnataka is divided into four levels namely primary (Classes 1-5), upper primary (Classes 6-8), secondary (Classes 9-10) and higher secondary (Classes 11-12) levels as taken from statistical analysis by the National University of Educational Planning and Administration (2014). The education system in Karnataka has both formal and non-formal education. Formal education is provided by regularised schools and non-formal education is provided through open schooling, home schooling, alternative schooling and the anganwadis in order to provide education from pre-primary to higher secondary education.

## **B. Educational Bodies based in Karnataka**

### **1) Karnataka Secondary Education Examination Board**

The Karnataka Secondary Education Examination Board commonly known as the Karnataka State Board is the board of education that is governed by the state itself. The schools affiliated to this board provide primary and secondary education. The curriculum is based on the Karnataka Curriculum Framework and as reported by Blur (2012), was implemented for the batch of 2013-2014 for Classes 1, 2, 6 and 9. For Classes 3, 4, 7 and 10, it was implemented from 2014-15. The curriculum, according to the Karnataka Curriculum Framework (KCF) framed by the Department of State Educational Research and Training (DSERT) (2007) along with Karnataka Text Book Society insists on the three language formula with Kannada being given predominance, thereby making it a compulsory language to be learnt as a first or second or third language from standard 1; English as second language to be learnt from standard 1 as well and third language to be learnt from standard 6. From standards 1 to 4, children learn in their mother tongue. The curriculum also includes learning of mathematics, sciences, social sciences as well as health and physical education. Students from standards 1- 4 are assessed through competency-based continuous and comprehensive evaluation, and students from standards 5- 9 are assessed and promoted through a school-level assessment of two semester evaluation tests, grading scheme and informal assessment of non-scholastic subjects. Along with the school level assessment, the Karnataka Schools Quality Assessment Organisation (KSQAO) conducts annual assessment of children and schools in order to assess the learning levels of children in various classes. The students of standard 10 are required to write a state-level public examination held at the end of standard 10, and on passing, the student is awarded the Secondary School Leaving Certificate (SSLC).

The senior school education offered by the state of Karnataka is known as the Pre-University education and the colleges offering them are known as Pre-University Colleges or Junior Colleges. There are 4321 Pre-University colleges throughout Karnataka comprising of Government, Aided, Un-aided, Private and Corporation Pre-University colleges, provided by the document given by the Department of Pre-University (2014a). Three main streams offered in the course are science, arts and commerce. On the whole, the course offers 23 subjects with 50 combinations in the curriculum (history, economics, logic, geography, carnatic music, hindustani music, business studies, sociology, political science, accountancy, statistics, psychology, physics, chemistry, mathematics, biology, geology, electronics, computer science, education, home science and basic math). 11 languages include (Kannada, English, Hindi, Tamil, Telugu, Malayalam, Marathi, Urdu, Sanskrit, Arabic, French and Optional Kannada) as reported by the Department of Pre-University Education (2014b) and the Department of Pre-University Education (2014a). The students leaving Pre-University after passing the state-level examination held at the end of the 2<sup>nd</sup> year of Pre-University will be awarded a Pre-University certificate. The curriculum followed is similar to the CBSE curriculum that was designed, implemented and was followed from 2013 onward.

### **2) Council for the Indian School Certificate Examination**

According to the Council for the Indian School Certificate Examination (CISCE) (2013), there are 301 schools that provide the Indian Certificate for Secondary Education (ICSE) in Karnataka and 45 schools that provide the Indian School Certificate (ISC), which are the same schools that provide ICSE. The ICSE schools provide primary and secondary education. There are only internal exams till Class 9 and at the end of Class 10, they have a national level board exam. On passing, the Indian Certificate for Secondary Education is provided to the student. The ISC level of education is a 2 year education programme in which Class 11 is assessed internally, whereas at the end of Class 12, there is a national level board exam and on successful completion, the student will be awarded the Indian School Certificate. It offers 61 subjects in ICSE and 52 subjects in ISC for the year 2015. As documented by ICSE (2015) and ICSE (2016), the curriculum for the two consecutive years 2015 and 2016 is divided into 3 groups; of which group one is compulsory which includes English, second language (an Indian language or foreign language) as well as a paper on History, Civics and Geography (HCG). Group two has 7 subjects, of which students are required to select 2 subjects and group three has 13 subjects out of which students are to select 1 subject. Apart from these, there is an optional recommendation to include Contemporary Studies as a component of Socially Useful Productive

Work (SUPW) as a. For ISC as documented by ISC (2015) and ISC (2016), the curriculum for 2015 and 2016 is divided into two groups in which group one has only English as the compulsory subject, whereas group two consists of 29 subjects as electives out of which a student can select 3,4 or 5 electives accordingly. Apart from these subjects, they have SUPW as well. The CISCE board also offers the Certificate of Vocational Education for a period of 2 years after which the candidate is awarded the certificate on passing the examination. As per the regulations stated in the Certificate of Vocational Education (2012), the curriculum consists of 3 compulsory subjects which include English, a subject on General Foundation, Industrial Sociology & Entrepreneurship along with a subject on Environmental Education. Apart from the compulsory subjects, the board offers 12 subjects as electives out of which the student can select any one.

3) **National Institute of Open Schooling**

As presented by NIOS (2012a), the National Institute of Open Schooling (NIOS) is run by the MHRD, Government of India. The programmes offered are for school dropouts, marginalized women and children, out of school children and adults, neo-literates, 1<sup>st</sup> generation learners etc. The age group for the programme offered is for children below 14 years and adults, 14 years and above. Although there is no upper age limit, children below 6 years will not be registered for the programme. As stated by the NIOS (2012b), it offers Open Basic Education (OBE), equivalent to the elementary education programme, a Secondary Course equivalent to standard 10 and Senior Secondary Course equivalent to standard 12. NIOS also offers vocational education and a life skills program. The OBE program is offered in 3 levels namely OBE level A (equivalent to standard 1-3, consisting of 1 language, Environmental Science, Mathematics and a vocational subject), OBE level B (equivalent to standard 4-5, consisting of 1 language, Mathematics, Science, Social Science and a vocational subject) and the OBE level C (equivalent to standard 6-8, consisting of 1 language, Mathematics, Science, Social Science and a vocational subject). For learners of the age group 6-14 years, along with languages, Mathematics, Science and Social Science, one pre-vocational skills/ AHPL is to be selected rather than a vocational subject as in the case of adults above 14 years of age. To secure a pass in Level A, the learner should pass one language and three subjects (total of 4 subjects); for obtaining a pass in Level B, the learner should pass in one language and four subjects, and for securing a pass in Level C, the learner should pass in one language and four subjects as well. Subjects with a practical component requires that the candidate should have passed in total both practical and theory. The candidate will be awarded a certificate in the level completed and passed. There is no precise curriculum offered by NIOS, but the NIOS provides the required

material and the learners can also use the state government textbooks (NIOS, 2012c).

As presented by NIOS (2012d) and NIOS (2012e), the secondary as well as senior secondary course have a similar pattern which consists of subjects and languages, of which the learner is required to successfully complete a minimum of one language and at the most two languages (Group- A) along with 5 subjects from a range of subjects (Group-B) which are compulsory for securing a pass certificate in the secondary and senior secondary course. The learners can select 2 additional subjects as well.

**Table I Shows the Subjects Available for the Secondary and Senior Secondary Course as Obtained From NIOS (2012d) And NIOS (2012e)**

Course	Subject Offered
Secondary	Group-A Hindi(201), English(202), Bengali(203), Marathi(204), Telugu(205), Urdu(206), Gujarati(207), Kannada(208), Sanskrit(209), Punjabi(210), Assamese (228),Nepali(231), Malayalam(232), Oriya(233), Arabic (235),Persian (236), Tamil (237) Group-B *Mathematics(211),*Science and Technology(212), Social Science(213), Economics(214), Business Studies(215), *Home Science(216), *Data Entry Operation(E)(229), Psychology (222), Indian Culture & Heritage (223), *Painting (225)
Senior Secondary	Group-A Hindi(301), English(302), Urdu(306), Sanskrit (309), Bangla (303), Tamil (304) Group-B Mathematics(311), *Physics(312), Chemistry(313), *Biology(314),History(315), *Geography(316), Political Science(317), Economics(318), Business Studies(319), Accountancy(320), *Home Science(321), *Data entry Operation (E)(336), Psychology(328), *Computer Science(330), Sociology(331), *Painting (332), *Mass Communication (336), *Environmental Science (336)
Subjects with * have theory as well as practical works.	

For the secondary and senior secondary course, NIOS provides 2 types of examinations. A public exam held twice a year as well as a novel provision from 2002 of an On Demand Examination which allows learners to take up the exam when they are ready. The exam is held every month by NIOS. The students will be awarded a Pass certificate once

they clear the exams, both theory and practical examinations NIOS (2015).

### ***C. National and International based Education Bodies***

#### ***1) Central Board of Secondary Education***

According to CBSE (2015a), there are 653 Central Board of Secondary Education (CBSE) schools in Karnataka. As per the curriculum CBSE (2015b), the schools provide education from primary to higher secondary education. The subjects of secondary education consist of two languages from the languages offered apart from which, the students have mathematics, science, social science, work education or pre-vocational education, art education and physical education. Additional subjects are also offered for students based on certain criteria which include languages other than the ones already chosen by them commerce, painting, music, home science, foundation of information technology or information and communication technology. It is compulsory for a third language up to standard 8 and in case the student is not able to pass the third language, an opportunity is given in standard 9 and 10 to pass the exam, but it is mandatory that the student passes the third language (Hindi and English compulsory up to standard 8 and must be one of the languages studied in standard 9 or 10). Students also have community service after school hours. The medium of instruction is either Hindi or English as per the requirement of the school. Students have a choice between opting for the board exam (All India Secondary School Examination) or not, at the end of standard 10. Students who would like to continue education in CBSE need not opt for the board exams whereas, if students would like to pursue Pre-University education, it is mandatory for them to write the board exams offered at the end of standard 10. As published by Wikipedia (2015a), the students passing the exam are awarded the AISSE Secondary School Completion Certificate (All India Secondary School Certificate).

In the senior secondary curriculum (standard 11 and 12), as per CBSE (2015c), they have two languages either Hindi or English or both offered simultaneously. The choice of language should be different in the core and elective level. Three electives are to be chosen from a range of subjects. In addition, the students also have general studies, work experience, physical and health education. Students can also take up an additional subject depending on the criteria. The institution decides the medium of instruction which may be in Hindi or English. As published by Wikipedia (2015b), at the end of standard 12, the students are to take up the board exams (All India Senior School Certificate Examination) and successfully pass in order to obtain the All India Senior School Certificate as well as to qualify for higher education.

In CBSE, there is also a provision for vocational education that is incorporated along with the general curriculum in standard 11 and 12. The board offers 40 different subjects for the course of vocational education, from which the students are to select two subjects (CBSE 2015b).

#### ***2) Cambridge International Examinations (IGCSE)***

There are 35 schools that are affiliated to the Cambridge International Examinations (IGCSE) in Karnataka (Cambridge International Examination, 2015). The Cambridge programme offered are Cambridge Primary (for the age group 5 to 11 year olds), Cambridge Secondary 1 (for the age group 11 to 14 year olds), Cambridge Secondary 2 (for the age group 14 to 16 year olds) and the Cambridge Advanced (for the age group 16 to 19 year olds). The secondary school curriculum (Cambridge IGCSE) offers around 70 subjects to choose from, out of which the student can choose a minimum of 5 to a maximum of 14 subjects. The core subjects include first language, second language, mathematics and sciences (Physics, Biology, and Chemistry). Apart from these, the students can choose other subjects as well. Students will be awarded a certificate in each course selected. The number of subjects to be taken up by the students varies from school to school as well as depends upon individual preference (IGCSE, Centre 2015a).

In Karnataka, students are required to take up the Cambridge IGCSE examination and on qualifying, can further (upgrade) their studies to A-Level (Advanced Level) (IGCSE Centre, 2015b) or the International Baccalaureate Diploma Programme. Some schools even provide the opportunity to qualify for the International Certificate of Education (ICE) which requires a student to pass seven or more papers instead of five (as needed to qualify the IGCSE examination).

The Cambridge AS Level is a one year course extended to a Cambridge International A-Level, making it a two year course. This level is similar to the Pre-University education level, and on qualifying will indicate the eligibility of the student to enter a university for further education. Qualification for entry to the AS or A-Level includes at least 5 A-C grades from GCSE or O-Level, including English and Mathematics. The curriculum includes 55 subjects from which students can select any combination to study either specializing in a particular subject area or study a range of subjects. Students may choose to take four to six subjects in A-Level, from the sciences category (Advanced Math, Math, Physics, Biology, Chemistry, etc.) or the arts category (Business Studies, Economics, Accounting, Arts, Music, Sociology etc.) (ICGCSE Centre, 2015c).



### **3) *International Baccalaureate Organisation (IBO)***

As per the International Baccalaureate Organisation (IBO 2015a), it offers the International Baccalaureate programme which provides the Primary Years Programme (PYP) for ages 3 to 12 year olds, Middle Years Programme (MYP) for ages 11 –to 16 year olds, Diploma Programme (DP) for ages 16 to 19 year olds and Career- Related Programme (CP) for ages 16–to 19 year olds. There are 12 schools that offer the IB curriculum in Karnataka as listed by the IBO (2015b).

The Middle Year Programme comprises of eight subject groups of 50 hours of teaching each and in the fourth and fifth year, students have the option of taking up six courses out of the eight subject groups within certain limits. In addition, students are also engaged in an interdisciplinary unit involving two subject groups. Along with this, students also complete a long-term project involving the process of identifying what they want to learn about, what they already know, discovering what they will need to know in order to complete the project, thereby creating a proposal or criteria for its completion, IBO (2015c). Students were presented with the IB MYP certificate on the basis of continuous assessment which was internal, but in 2016 a new approach to assessment is being introduced which includes the mandatory project assessment that is internal as well as an option external assessment (e-assessment) along with which the student must complete the community service recommended by the school IBO (2015d) and IBO (2015e).

IB Diploma Programme includes the two year course that requires a student to select one subject from the six subject groups provided and three core elements namely Theory of Knowledge in which students reflect on the nature of knowledge and on how we know what we claim to know The extended essay written by the student which is an independent, self-directed piece of research, completed with a 4,000-word paper and Creativity, Action and Services (CAS) in which students complete a project related to the three concepts that is creativity, action and services, IBO (2015f). The student is offered the IB Diploma on the basis of the assessment pattern set by the IBO that includes both internal and external assessment (IBO, 2011).

### ***D. Karnataka Government Initiatives for the Evolving Role of Educators***

In order to increase the quality of education in Karnataka, the Government of Karnataka have initiated and implemented different schemes with the intention of promoting, encouraging and motivating students and teachers to improve quality in education for all, as well as to make accessible and use technology for teaching and learning. Among the

many innovative practices, few practices that were initiated and are currently being implemented in schools and Pre-University colleges of Karnataka have been briefly described. The practices have been categorised as: practices to promote education for all and quality education, practices that provide support to increase quality in education, practices to encourage and motivate students and teachers, and ICT practices in education.

#### ***1) Education for all and Promoting quality Education***

Promoting education and to provide quality education is sought after through the process of increasing enrolment, promoting education for girls and children with special needs, and preventing students from dropping out. Schemes like distribution of school bags and uniforms, distribution of bicycles, mobile schools and flexi schools along with campaigns such as Enrolment Drive, Baa Marali Shaalege, Coolyinda Shaalege, Samudayadatta Shaale and Baa Baale Shaalege were launched. Few other prominent schemes have also been launched and implemented. Nali-Kali (Department of Public Instruction, 2010a) was an innovative project launched in 1995 with the assistance of UNICEF, as a pilot study in order to provide a joyful learning experience for multi-grade teaching, and multi-level learning in a classroom, and is activity-based, interactive, and adopts cooperative approaches to learning. Learning is through multiple sensory simulations, through play, peer guidance and self-evaluation. This approach is limited to class I and II. The project was successful and in 2009-10, Nali- Kali was introduced in all government Kannada medium schools of Karnataka. Chinnara Angala (Department of Public Instruction, 2010b) and (Nanjunda, 2009, p.187) is a summer bridge course program first implemented as a pilot programme in April-May, 2001 which aimed at bringing back children of ages 7- 14 years who had not enrolled or those who dropped out either at the lower primary level or higher primary level into the mainstream schools. This programme was extended to the entire state from 2001-2002 and is presently running successfully in Bangalore with the active involvement of the Akshara Foundation and support from other NGOs like MAYA, Mobility India, APSA, REDS and Rashthrothana Parishat. The programme by 2013 was reported to have enrolled 6486 children with residential facilities and 5509 children without residential facilities (Deccan Herald, 2013). Akshara Dasoha, as presented by the Department of Public Instruction (2015c), was the mid-day meal Scheme implemented as a pilot study by the State Government integrating the centrally sponsored scheme in June 2002 which was later extended to all government primary schools from July 2003 (Comptroller and Auditor General of India, 2007), in order to achieve Universalisation of Elementary Education. Apart from meals, children are also provided with Vitamin A

tablets (two tablets per year, once in 6 months), Iron and Folic acid tablets (three tablets per week for 36 weeks in a year) and Albendazole de-worming tablets (two tablets per year, once in 6 months). Suvarna Arogya Chaitanya Programme as reported by the (Department of Public Instruction, 2015d) is a large-scale health check-up programme for all students from standard 1 to standard 10 belonging to government schools, aided and unaided schools. The programme exists from 2006-07. Health check-ups are conducted by doctors of Primary Health Centres and Government hospitals and in the case of any detection of serious problems in children, free medical treatment is provided. A health card is issued to all students of standard 1 to 10 as well as travel expenses for doctors are also reimbursed from the budget allotted to the Mid-Day meal Scheme.

In 2005, the Government of Karnataka established the Karnataka School Quality Assessment Organisation (KSQAO) to assess the quality of learning by students (Department of Public Instruction, 2006) which was similar to the Learning Guarantee Programme implemented by AzimPremji in collaboration with the Government of Karnataka (Karopady&Giridhar, 2009). Geetha (2014) as published by Centre for Innovations in Public Systems (CIPS) presented that KSQAO provides information on the learning achievement levels of students of different classes and subjects, across the state and had also initiated the Karnataka Schools Towards Quality Education (KSQE) facilitated by the Policy Planning Unit to provide necessary interventions to address the problems related to quality (Department of Education, 2008). KSQAO was transformed to Karnataka School Quality Assessment and Accreditation Council (KSQAAC) on November 16, 2011. Akshara Ganitha as published in Centre for Education Innovations (2015) initiative of the Government of Karnataka in collaboration with Akshara Foundation launched in 2011 in order to aid learning of Mathematics using the activity-based approach for children of standards 1-5 in government schools. Karnataka has planned to provide AksharaGanitha Kits for students in 2015 (Vishukumar, 2015, p.7).

## **2) Provide Support to Increase Quality in Education**

The Government of Karnataka has put into action numerous support services like State Teachers Forum (Head Teacher Forum and Subject Teacher Forum) and various training programmes for teachers such as Prerana, Chaitanya (I and II), ChaitanyaTarani, training for SMDC members, and training for students in order to increase the quality of teaching and learning. The Government of Karnataka along with SSA, has also implemented the initiative School Development and Monitoring Committee which was to be set up by 2001 as published by the Centre for Child Law and Policy Planning Unit (2004) and

Department of Public Instruction (2015e) which involved community participation and community ownership in education and to ensure the management of the school, issues related to academic aspects and developmental activities. The Head Master of the school functions as the secretary and the main members will be nine parents whose children are studying in the said school apart from other members. Further enhancement to the initiatives is under consideration of the Government of Karnataka, in co-ordination with the Rural Development and Panchayath Raj Department.

Namma Shaale was a pilot programme initiated by the Government of Karnataka in association with the AzimPremji Foundation between 2007-2010 to bring the community and the schools closer in order to enhance primary education in government schools (Department of Public Instruction, SSA &AzimPremji, 2015). It was to bring about community participation, attitudinal change among different stakeholders, thereby resulting in quality primary education, enabling the community to demand expected learning from the education system and to build accountability in schools towards the parents of children studying in the schools (AzimPremji, 2010).

The state has also set up an autonomous body called the State Institute for School Leadership Educational Planning and Management (SISLEP) from the funding of the Government of Karnataka in 2010. SISLEP works within the framework of the RTE and promotes all RTE activities (Department of Public Instruction, 2015e) and (Department of Public Instruction, 2015f). They organise and conduct many programmes, seminars and workshops for school/institutional heads and school administrators, educational planners, and various other stakeholders. They are mainly concerned with leadership and educational planning, management and finance. They also assist the State Secretariat in the preparation of the annual and quin quennial (recurring every five years) educational planning as well as project-specific perspective plans. They facilitate and promote the usage of educational technology in schools and the school system (e-governance). They link MHRD, NUEPA, NCERT, IGNOU, IIM, ISAC, RIE, APF, AKSHARA FOUNDATION, UNIVERSITIES and other National and State Level Institutions and the State Department of Education in matters related to Capacity Building and Research in the areas of educational planning, management and finance. It has an Academic Council comprising of DPI DSERT, DPI Primary, DPI Secondary, SSA and RMSA Director as well as two DIET Principals (by rotation) as members. The Academic Council ensures the running of the overall mandate of the institutions into programmes.

As documented in the report of the 38<sup>th</sup> RMSA and PAB meeting (Rahstriya Madhyamik Shiksha Abhiyan & Project Approval Board, 2014) State Teachers Forum is set up and run by a professional group of Head Teachers and Subjects Teachers to provide help and support to other teachers in their subject handling. It is stated that around 5000 teachers across all 34 districts have learnt to use various digital methods, tools, and resources for their subject teaching as well as for their overall professional development. The Subject Teacher Forum started in 2011-12 is the most recent initiative started as an in-service teacher education programme for secondary school teachers and run by RMSA, Karnataka. STF connects 14,000 teachers and teacher educators across the state and 5,000 web resources have been created and published on Karnataka Open Educational Resources portal (KOER) by the network participants (International Development and Research Centre, 2015). Chaitanya Training Programme: This training programme is the modified version of Special Orientation for Primary teachers (SOPT) for lower primary teachers in order to empower them and promote joyful learning for children. It focuses on issues such as Nali-Kali, activity-based methodology, minimum levels of learning (MLL), multi-grade teaching, education for the physically challenged and gender sensitisation. The modules were prepared in Kannada, Urdu and Marathi (International Development and Research Centre, 2015). Similarly, Chitanaya II is a programme for teachers of Higher Primary Schools which is an advanced version of the training programme Chaitanya in five disciplines namely Kannada, English, Mathematics, Science and Social Science. The training modules were prepared in Kannada with the intention of mastery in content by children (Department of State Education Research and Training, 2015) and (Department of Public Instruction, 2015g). Likewise, another training programme for teachers developed by the DSERT was Chaitanya Tarani in order to enable teachers to prepare teaching-learning materials from low-cost and no cost materials which thereby resulted in improving classroom transaction through the use of innovative techniques (Department of Public Instruction, 2015g). Another training programme implemented as reported by (Department of State Education Research and Training, 2015) and (KCF, 2007) was the Shikshanadalli Rangakale with the purpose of enabling lower primary teachers to use dramatisation techniques in the teaching-learning process. Various dramatisation techniques included to enhance learning were storytelling, role play, mono acting, question – answer sessions, use of tableau, story boxes, activity-based storytelling, use of various types of dolls, masks, crowns, effigies, and several other low cost materials effectively.

Bahumukhi as reported by (Department of State Education Research and Training, 2015) was a

multi-grade and multi-level teaching programme for teachers in order to train teachers in multi grade and multi-level teaching techniques.

Sangama prepared in 2012-13 and continued in 2013-14 along with Samadharshi are two training modules prepared and implemented to train SDMC members (Sarva Shiksha Abhiyan, 2014).

The document by Rahstriya Madhyamik Shiksha Abhiyan & Project Approval Board (2014) also reports the approval for a special training for learning enhancement of 18,600 students of standard IX at Rs. 500 per student which was a methodology adopted by Uttarakhand for remedial teaching. In addition, according to the report published by the Rahstriya Madhyamik Shiksha Abhiyan & Project Approval Board (2014), the state was also advised to endeavour to train at least one teacher from each school in guidance and counselling as well as adolescent issues as a part of in-service training for teachers. It was put forth that a sensitisation programme be a part of the in-service training of subject teachers and headmasters. Likewise, grants have been released for training special education teachers at Rs. 300 per day for 5 days for 8651 teachers, principals, educational administrators, parents/ guardians etc.

### *3) Encourage and Motivate Students and Teachers*

In order to encourage teachers and students, the Government of Karnataka have implemented ideas such as Students Welfare Fund and Teachers Benefit Fund and have also implemented cultural programmes for teachers and students. According to the Department of Public Instruction (2015h) and Department of Public Instruction (2015i), the idea of Students Welfare Fund and Teachers Benefit Fund was set up by the Government of Karnataka in 1963 which was established for the welfare of students and teachers of Karnataka. The contribution towards the fund is collected from students of high school and higher education every year. Life membership fees are collected from every teacher and the amount collected from both the funds is utilised for providing benefits to teachers and students of Karnataka. Through this fund, various awards for teachers such as Rajiv Gandhi Memorial award as well as 357 awards for both primary and secondary teachers for their meritorious and innovative work, and awards for students and institutions are provided along with giving scholarships for students, paying fees for students belonging to an economically backward category, providing incentives to merit students and arranging suitable students welfare programmes. The fund is also used as a Students Safety Insurance Scheme that provides compensation fees for the families of students who become victims of accidents and is utilised as Medical Assistance to Students for

their medical treatment. The fund is used for teachers and their dependants towards their medical treatment as well. Financial assistance towards the family of the teacher who passed away while in service on the condition that the pension is yet to be settled as well as towards the family of the deceased teacher who has already retired. Financial assistance for teachers are provided towards the education of only one child per year (irrespective of the condition if either one parent is a teacher or both) studying from Pre-University to Degree level (including Diploma). Merit scholarship is also sanctioned for eminent children of teachers studying in S.S.L.C (District level), P.U.C (District level), Degree (University level) and Post Graduate (University level). As reported by the Department of Public Instruction (2015i), literary and cultural competitions are conducted for teachers at the taluk, district and state levels for which teachers are awarded varied amounts of prize money for acquiring any of the 1<sup>st</sup> three places and teachers are also offered money for participating in the preparation of teaching aids as contingent expenses. Likewise, Prathiba Karanji as published by the Department of Public Instruction (2015j) is an innovative programme conducted for cultural and literary competitions for students from standard 1 to 10 at the cluster, block, district and state levels. Successful students are given certificates and also the best are selected for higher level competitions. This was introduced to develop the personality and non-cognitive skills of students, to bring out the talents of students, provide education, entertainment, and as an extracurricular activity. Apart from these, the Government of Karnataka in collaboration with AzimPremji Foundation had launched the Learning Guarantee Programme in seven districts of North East Karnataka in 2002. The scheme aimed at identifying and encouraging good Primary and Higher Primary schools in the region and to provide recognition and rewards to schools that were evaluated on certain criteria. This scheme was extended to the entire state in 2004-05 (Department of State Education Research and Training, 2015b).

#### **4) *Integration of ICT in Education***

Karnataka has a history of integrating technology into education for teachers and students to a great extent ([http://www.teachersastransformers.org/upload/resource\\_doc/shiksha-sangam.pdf](http://www.teachersastransformers.org/upload/resource_doc/shiksha-sangam.pdf)) through the implementation of various programmes such as implementing Computer Assisted Learning Centres (CALC), development of open educational resources (KOER) and even collaborating with private organisations and NGOs in order to implement computer education.

Mahiti Sindhu was a project in operation from 2000-01 to 2005-06 which was revived again from 2007-08 till 2009-10. The project was implemented with the intention of providing computer

education to students as well as to provide computer-aided instruction and to enable students to understand and apply internet applications, Sivanandan, (2008). The AzimPremji Foundation partnership with the Government of Karnataka in 2003 set up 55 CAL centres in 11 districts of Karnataka after the pilot program by AzimPremji Foundation was provided with good feedback. From then on, CAL centres along with other required infrastructural and training programmes such as Sudheepthi and Ubuntu have been provided to make the scheme successful (Chand & Choudhury, 2006, p.12), Sarva Shiksha Abhiyan (2006) , p.4, Vidya Bhawan Society & Azim Premji Foundation, (2008). The Government of Karnataka also launched the EDUSAT programme for primary schools in Karnataka launched in 2004-05 in collaboration with the ISRO. This programme helped provide quality instruction through video-based programs to children belonging to the educationally backward areas of Karnataka. As a part of the EDUSAT programme, the Keli- Kali programme was launched with the intention of using the radio as a medium of instruction through which lessons were taught. The Education Development Centre has produced 288 Chinnara Chukki and Chukki Chinna lessons and 134 Lei- Kali lessons for radio programmes for the grades 1- 5. In the year 2009-10, 20 programs were produced in English for standards 1-3 and was broadcasted by the All India Radio. The programmes are available and broadcast for standards 1- 8 at different timings of the day. As published in (<https://klp.org.in/partners/>), Karnataka Learning Partnership is a collaborative project with Akshara Foundation, National University of Educational Planning and Administration (NUEPA), Karnataka Secondary Education Examination Board (KSEEB) and AkshayaPatra. It was launched in 2006 (Akshara Foundation, 2015) to provide a common platform for all stakeholders involved in public education to participate and ensure better schools and education for all children in Karnataka. Through this web platform, data from different non-profit organisations working across multiple areas such as education, health, nutrition etc., are brought together for sharing as well as for hosting a common public platform to engage the community. RMSA Karnataka along with DSERT in 2013-14 designed and implemented the Karnataka Open Educational Resources (KOER) which is a repository of resources to support practicing teachers for classroom processes as well as professional development. It is built by educators and embedded into the Subject Teacher Forum. KOER also has built digital learning materials for standard IX and X; text book topics for mathematics, science and social science subjects (Rahstriya Madhyamik Shiksha Abhiyan & Project Approval Board, 2014), (Karnataka Open Educational Resources, 2015a) and (Karnataka Open Educational Resources, 2015b).



### Drawbacks of the Initiatives:

The Government of Karnataka has taken major initiatives in order to increase the quality of education but there have been certain problems highlighted. As per the document, the scheme 'Inclusive Education for the Disabled at Secondary Stage' was reported for low quality and hence a three-member committee was constituted for better implementation. It was also reported that only some of the special education teachers have valid RCI numbers, most of the special education teachers as given by the state do not have the qualifications as required under the IEDSS norms and the salary structure of special education teachers has not been given by the state.

The report also documents that the districts Yadigiri, Koppal, Raichur, Bidar have poor educational indicators. In addition, there is a decreasing trend in Gross Enrolment ratio at secondary level from 84.54% in 2012-13 to 75.99% as per the UDISE which requires clarification. There are also 41 government schools and 14 government aided schools that have zero enrolment as per UDISE which has been stated in the report. It is also reported that there is an acute shortage of mathematics, science and social science teachers in Government and government-aided schools. Furthermore, it is reported that the department of curriculum within the state council of educational research and training or the CDME wing of the DIET was structurally disengaged in the process of curriculum renewal and also that the textbooks, teacher's handbook, resource books, students' workbooks, laboratory manuals were either not available or was not developed along with the textbooks. It was also put forth that out of 4925 libraries available in government schools, there were only 252 (5% of total libraries) librarians available.

As documented in the report (Department of School Education and Literacy in Karnataka) - It was presented that 7155 schools till date were approved for coverage under ICT@ Schools component since 2005-06, but there were discrepancies reported in . Reports on ICT @ Schools component only for secondary schools and not for Higher Secondary Schools has also been documented.

Poor implementation of Mahiti Sindhu in Chintamani has been reported during the execution phase. Lack of facilities, basic amenities with irregular power supply affected the implementation. A five-year contract was given by the Government to NIIT, Aptech, Educom and other organisations to implement this scheme. The first phase was successfully implemented, however the second phase lost its clutch. This scheme came with many complaints as the students did not benefit from it. They were to be taught e-mail, internet and other e-facilities, however, the schools and organizations had not even subscribed to the broadband facility. The parents voiced that rural students must be given this facility and concrete

measures must be taken by the government in implementing the scheme (M Ramakrishnappa, Chintamani, Jan 10, 2013, DHNS)

Karnataka School Quality Assessment and Accreditation Council (KSQAAC) conducted a survey in 2013 and came to a conclusion that, yet again there was poor quality in 1020 government schools. The idea of this survey was to give an A-plus grade which apparently did not come through and only five schools were graded with an 'A'.

In Karnataka, Chikkakodi district had the most number of schools which was graded 'A' as they had secured top scores in SSLC, and on the contrary, Bidar fared very badly with a 'D' grade as they had fared poorly in SSLC, successively for four years. The schools were graded based on various parameters namely physical environment and facilities, learning environment, leadership, community participation, and innovative activities. Based on the parameters, most of the schools failed to fulfil the criteria of 'innovative activities', 'physical environment and facilities', however, the ones who fulfilled the criteria were graded with an 'A' (Kulkarni, Tanu Bangalore, November 22, 2013).

A year later, the same survey was conducted by the Karnataka School Quality Assessment and Accreditation Council (KSQAAC). The survey was conducted under the same parameters (physical environment and facilities, learning environment, leadership, community participation, and innovative activities), however, the results were the same as it was in 2013. Chikkakodi district still continued to fare well with an 'A' grade, whereas Bidar did poorly and had most of its schools with a 'D' grade followed by Bangalore North, Bellary, Chitradurga and Mysore. Mohammed Mohsin, Commissioner for Public Instruction said, that the loopholes would be soon rectified, and he also opined that it was unfair to conduct such surveys only on government schools but also certain private and aided schools should be looked into. All these schools must be given a holistic approach and specific remedies should be proposed. (Express News Service, Bangalore 28th September 2014).

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