

Role of Model Residential Schools in the Educational Attainment of Tribal Students

**An Analysis of Performance of
Tribal Residential Schools in Kerala**

A study Report prepared by
**The Integrated Rural Technology Centre for
Kerala State Planning Board**

Role of Model Residential Schools in the Educational Attainment of Tribal Students: An Analysis of Performance of Tribal Residential Schools in Kerala

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The historical deprivation and marginalization of the tribal population have left them far behind the mainstream society in almost all aspects of life, including health, education, etc. We know that education is a potential tool for the empowerment of any vulnerable population. For enhancing school education among the tribes, the government started a number of schools such as Model Residential Schools, Ekalavya Model Residential Schools, Ashram Schools, Tribal schools, etc., exclusively for tribal students. Currently, there are twenty Tribal Residential Schools in Kerala.

The Social Science division of Integrated Rural Technology Centre has carried out a study for the Kerala State Planning Board to evaluate the overall performance of the Model Residential Schools. The primary objectives of the study were to assess the academic performance, infrastructure facilities, institutional and administrative mechanism and schooling experience of the students. The study is a collection of both primary and secondary data gathered from all the schools. Information was gathered from students, parents and teachers and pertinent details relating to the data on school, hostel, food, infrastructure, sports, health, etc., were directly collected from each school. Apart from group discussions with the students, alumni and parents, interaction with administrative staff, senior superintendent and school principals were also carried out.

The report tries to decipher in detail the above mentioned objectives and to bring out amicable suggestions to resolve the current gaps. We hope that the findings and suggestions of the study would help create better learning environment for students from vulnerable populations of the tribal society.

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Abbreviations

AIEC	-	Alternative and Innovation Education Centers
APRSS	-	Andhra Pradesh Residential School Society
CBSE	-	Central Board of Secondary Education
DEO	-	District Education Officer
DIET	-	District Institute of Education & Training
EMRS	-	Ekalavya Model Residential School
FGD	-	Focus Group Discussion
FTS	-	Full Time Sweeper
FYP	-	Five Year Plan
GRBT	-	Government Residential Basic Training
Gol		Government of India
Govt.	-	Government
HM	-	Head Mistress/ Head Master
HS	-	High School
HSS	-	Higher secondary school
ICSE	-	Indian Certificate of Secondary Education
JPHN	-	Junior Public Health Nurse
K-DISC	-	Kerala State Development and Innovative Strategic Council
KER	-	Kerala Education Rules
KIRTADS	-	Kerala Institute for Research Training and Development Studies of Scheduled Castes and Scheduled Tribes
LP	-	Lower Primary
LSG	-	Local Self Government
LSGI	-	Local Self Government Institution
MCRT	-	Manager cum Residential Teachers
MGNREGS	-	Mahatma Gandhi National Rural Employment Guarantee Scheme

MHRD	–	Ministry of Health and Rural Development
MLA	–	Member of Legislative Assembly
MOTA	–	Ministry of Tribal Affairs
MP	–	Member of Parliament
MPTA	–	Mother Parents and Teachers Association
MRS	–	Model Residential School
NCERT	–	National Council of Educational Research and Training
NUALS	–	National University of Advanced Legal Studies
NPE	–	National Policy on Education
PTA	–	Parents and Teachers Association
PVTG	–	Particularly Vulnerable Tribal Group
SCERT	–	State Council of Educational Research and Training
SS	–	Senior Superintendent
SSA	–	Sarva Siksha Abhiyan
SSLC	–	Secondary School Leaving Certificate
SDMC	–	School Development Management Committee
SMC	–	School Level Management Committee
ST	–	Scheduled Tribe
STC	–	Scheduled Tribe Component
TDO	–	Tribal Development Officer
TO	–	Tribal Officer
TSP	–	Tribal Sub Plan
U.P	–	Upper Primary
UNESCO	–	United Nations Educational, Scientific and Cultural Organization
UNICEF	–	United Nations International Children’s Emergency Fund
UT	–	Union Territory

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I. Introduction

Social progress, political development, cultural achievement and transformation are possible only with the attainment of minimum standards of living or we may say social progress is contingent upon economic development. Thus, economic condition is a decisive factor. When it is good, it results in a progressive cycle in the lives of the people, otherwise it results in poverty that puts the vicious cycle into motion.

Aryanayakam (1963) rightly remarks: "India, like other under-developed countries of the world, is a poor country. The majority of the people are underfed. They lack proper housing, clothing, sanitation and the like. Living under these uncongenial conditions, they have almost lost the faculty of clear thinking. It will indeed be wastage of efforts if we try to teach people about proper dietary requirements when they do not have the means to procure even one good meal a day. There seems to be no use in trying to teach them what an ideal home should be like or what should be the proper sanitary measures when they are hungry and without adequate clothing or shelter. The basic requirements must be supplied first before we think of educating them".

The Indian Constitution assigns special status to the Scheduled Tribes (STs).

According to the 2011 Census, Scheduled Tribes (notified by the Government of India under Article 342 of the Indian Constitution) constitute 8.6% of the total population of the country. In Kerala, 1.45% of the total population belong to indigenous communities comprising 36 unique Scheduled Tribes (ST). According to the 2011 Census, the literacy rate of the Scheduled Tribes of India is only 58.96% against the national literacy rate of 74.4%, which is pathetic. Even in Kerala with a high literacy rate at 94%, that of the Scheduled Tribes is far behind, at only 75.81%. It is clear that in an underdeveloped tribal community, where the poor people form the majority, owing to sheer poverty, they could not avail of the educational opportunities.

Thus, the educational development of the tribal people is interlinked with their socio- economic condition. Hence, before solving the problems associated with the educational backwardness of the tribes, initiatives must be undertaken to meet their dietary requirements. Soon after the independence, the Government of India has consistently reflected a strong commitment to uplift the weaker sections of the society through its various five-year programmes. In this continuation, several Model Residential

Schools were opened with the provision of free education, accommodation and stipends, exclusively for students who belong to the Scheduled Tribe (ST) community. The concept of these schools was conceived by the Government of India and implemented by the respective State Governments. One major objective was to attract the ST students towards education, so that these students, who were usually away from the mainstream of the country's development process are integrated into the society at suitable positions in the future.

For enhancing school education among the tribes, the government started a number of schools such as Model Residential Schools, Ekalavya Model Residential Schools, Ashram Schools, Tribal schools etc., exclusively for them. Besides, school going tribal students are provided with pre-metric hostel facilities along with financial assistance and other allowances. At the college level too, they are provided with free education along with a lump-sum grant and other scholarships.

This study attempts to evaluate the efficiency and performance of Model Residential Schools in Kerala.

The following section examines the socio-economic profile of the tribes and thereby assess its impact on tribal education policies, Model Residential Schools system in India and Kerala.

History of Tribal Education in India

India has the largest concentration of tribal people anywhere in the world except perhaps in Africa. The history of the marginalization of the tribal people goes long back. On the whole, tribal people are segregated in the society from the general people in various respects. Education is a precondition for removing the barriers of backwardness and marginalisation of any society. From this perspective, it is imperative to bring the

weaker, deprived and marginalised sections such as Scheduled Tribes (STs) in India to the forefront of the educational revolution and the mainstream of national development. Education imparts knowledge, and knowledge of self-identity will infuse a sense of confidence, courage and ability among the weaker sections of the society to know and overcome their problems associated with exploitation and deprivation, to avail socio-economic, political and educational opportunities extended to them.

Pre and Post-Independence Eras

During the pre-British period, tribal communities in India remained fully or partially isolated and largely backward; suffering from poverty, malnutrition, diseases, exploitation and ignorance to varying degrees. While Ghurye (1980 [1963]: 47) referred to earlier reports that some tribes were now better educated, mainly through contacts with Hindus and adopting Hindu patterns of life, including claims to Kshatriya origins, for the majority of tribal population this would not be the case. The colonial government paid little attention to tribal development. They mainly aimed at the maintenance of law, order and revenue collection. In 1935, the colonial government introduced the Excluded and Partially Excluded Area Act to make non-applicable the legislations of provisional governments in tribal areas (Kakali, 2004: 24). This further widened the socio-economic gulf between tribal and non-tribal communities. Significantly, Ghurye (1980 [1963]: 107) observes rather subtly that in many Scheduled Districts of British India, the exploitation of the natural resources of the region by British commercial interests 'creates a presumption that all that was being done was not necessarily in the sole interests of these people or even of the general community'. In other words, they

found in the uneducated tribal people a potential resource of cheap labour to extract precious natural resources. Nobody would be interested in their education.

During the post-colonial period, it was decided to put all communities hitherto recognised as aboriginals in separate Schedules of the Constitution of India (1950), where they were enlisted in the Fifth and Sixth Schedules. The Fifth Schedule contains provisions regarding administration and control of scheduled areas and STs in the states other than the north-eastern states, whereas the Sixth Schedule covers the north-eastern states. Thus, the welfare and development of the tribal communities have been part of the national goal and have become a special responsibility mainly of the various state governments. The Indian Constitution assigns special status to STs, traditionally referred to as Adivasis (native people), aboriginals, vanvasi (forest dwellers) and indigenous people, who constitute about 8.2 per cent of India's population according to the 2001 Census. Around 705 categories of STs live in different parts of the country (Ministry of Tribal Affairs, 2013: 1). Realising that STs are the most deprived and marginalised groups when it comes to education, many programmes were initiated after Independence. Regarding educational institutions, this meant planning, especially for elementary, secondary and higher secondary education.

Elementary education has been a priority for the tribal sub-plans from the Fifth Five Year Plan (1974–79) onwards (Planning Commission, 1974: 25). Education of ST children is considered important not only because of the constitutional obligations, but also for its crucial impact on the total development of tribal communities (Khullar, 2006: 14). After 1999, priority for tribal education became a major challenge, since

providing education to tribal children often involves setting up school facilities in small, scattered and remote tribal habitations.

Most of the ST population lives in sparsely populated habitations in the interior parts of India and the north-east, spread over often inaccessible hilly and forested areas. Nearly 22 per cent of tribal habitations have less than 100 persons, while more than 40 per cent have populations of 100 to 300. The rest have a population density of 300–500 (Khullar, 2006: 14).

History of Residential Schools in India

Historically, there were two basic kinds of residential schools in India. One was the 'ashram' or 'gurukuls' that were part of ancient India's narrative. Children of kings and other gentry went to stay with a 'guru' in an ashram to learn various skills and philosophical perspectives. However, only boys are admitted there. The second one was that of the elite 'residential schools' of colonial times, also called the boarding schools. Structured on the lines of British boarding schools, these schools essentially catered to elite Indians, both boys and girls. They did not aim at girls from disadvantaged sections from economically or/and socially backward classes. Another kind of residential school that emerged was Ashram school: there were two strands within Ashram schools. One was motivated by the thoughts of political thinkers and social reformers like Gandhi, Tagore and Vinoba Bhave. These were civil society organisations that initiated residential schools largely for Dalit and tribal children. However, their numbers were small and they were scattered across the different regions and states of India. Another was those started largely by NGOs backed by religious organisations with a purpose of 'refining' and integrating the tribes in the Hindu fold or some cases under Christian fold. Even now, there are a number

of them which continue to function in that manner.

In the first five year plan (1951-1956), suggestions were made to establish an ashram school for Tribal population. But little efforts were made in that direction. In the early 1960s a report on scheduled areas and scheduled Tribes, popularly known as Dhebhar Commission Report (Dhebhar Commission, 1962) recommended to establish more ashram schools in the remote areas to improve the educational status of Tribes. National Policy on Education 1986 (NPE, 1986) has also recommended Ashram schools for STs. In essence, all these reports and commissions considered Ashram schools as a viable and efficient strategy to impart quality education to tribal children. During the eighth (1992- 1997) and ninth five year plan (1997-2002), TRS got an additional boost. By adopting the model of Andhra Pradesh Residential School Society (APRSS), the Government of India started to establish modern TRSs from early 1990s. Providing high-quality education which is at par with national public schools, to tribal children was the key objective of setting up such schools. Though it is a centrally sponsored scheme, schools are operated and run by the state governments. Based on the funding pattern of schools, TRS's are classified into Ashram Schools (AS) and Ekalavya Model Residential Schools (EMRS) as per the guidelines of the Government of India. These schools are managed and coordinated by an autonomous committee under the administrative control of ST department of the state.

Model Residential Schools (MRS) / Ashram Schools

The concept of Ashram School [1] is based on the Gandhian philosophy of self-reliance and the practice started with an experiment by Thakkar Bupa, a Gandhian,

in Panchmahal district in Gujarat during pre- independence days (Jha and Jhingran, 2005). Ashram School is a centrally-sponsored residential school built to serve the tribal students from various clusters by providing free board and lodging. Many reasons are there to start such schools: first, the difficulty of establishing primary schools in tribal hamlets due to the existence of rigid conventional norms. Second, it aims at creating a congenial atmosphere for learning/teaching as the majority of the tribal households lack such an environment. Third, the policy is aimed to develop the total personality of children by imparting vocational skills, i.e., to help them equip with better occupational and employment opportunities (Sujatha, 2002).

There is only a slight distinction between MRS and Ashram Schools. Article 275 (1) defines MRS as schools with 100 percentage central government assistance for construction of school buildings, whereas Ashram Schools get only 50 percentage central assistance for the same.

Ekalavya Model Residential Schools (EMRS)

Ministry of Tribal Affairs initiated Ekalavya Model Residential Schools (EMRS) along the same lines as Jawahar Navodaya Vidyalaya. These co-educational schools were set up to enable ST students to avail reservation in higher and professional education courses as well as jobs in Government sectors. Admission to these schools is provided through examinations with preference given to children belonging to Primitive Tribal Groups and first-generation learners. An upper limit for capital (non-recurring) and recurring costs have been set by the Centre, beyond which the respective state/UT governments are required to contribute.

General Status of Education in Kerala Kerala is cited as a successful case in education

and human resource development in the third world context by social philosophers and economists like Amartya Sen and John Kenneth Galbraith. The extensive growth in the education sector has been a major contributing factor to the socio-economic development of Kerala. Any assessment of education in Kerala has to first take into account its outstanding success in achieving near-total literacy, universal enrolment of children at the primary level, rapid decline in the number of dropouts at the secondary level, and the availability of educational institutions in the immediate neighbourhood of most households in urban and rural areas. These achievements have received acclaim in India and abroad, so much so that parallels have been drawn with the developed countries.

Education among the Scheduled Tribes

Article 366 of the Indian constitution has defined the Scheduled Tribes as those tribes or tribal communities which have been so declared by the Constitution Order under Article 342. There are 574 tribal groups who have been identified as Scheduled Tribe.

The data on school education points out low enrolment and high dropout among tribal students in Kerala at each level of schooling. This section highlights the inequality in schools and higher education institutions from gender as well as from the perspective of social groups.

Tribal Literacy

The overall literacy rate of Kerala is 93.91 per cent and that of the Scheduled Tribes is only 75.81 per cent, but it is much higher than the national average ST literacy rate which is just 59 per cent (Census of India, 2011). Male literacy has increased from 70.8 per cent to 80.76 per cent from 2001 to 2011 and there was tremendous improvement in the female literacy during the same period: it reached 71.08 per cent from 58.1 per cent of 2001. Even though there was a significant increase in the literacy rate of both male and female, it is far below the general literacy rate of the respective genders in Kerala. Besides, we can see a significant gap in the literacy rate between the general and STs for all the census years starting from 1961 to 2011.

Table 1.1 Literacy of Scheduled Tribes and General State Average

Year	1961	1971	1981	1991	2001	2011
General Literacy	55.08	69.75	78.55	89.81	90.92	93.91
ST Literacy	17.26	25.72	31.79	57.22	64.35	75.81
Gap in Literacy	37.82	44.03	47.06	32.59	26.57	18.1

Source: Census of India, (1961 - 2011)

The above data shows huge literacy gap which is a major concern and requires strong government intervention to reduce the gap. The policies aimed at the improvement in literacy rate have made only slow progress which is evident from the wide disparity existing between the literacy rates of the general population and STs. Also, the gender disparity existing within the STs is clear from this. This signifies the need for proper implementation of literacy campaigns

among the marginalized social groups including the Scheduled Tribes.

Elementary Education

There were 12,971 schools in Kerala in 2017-18. Among them, 4,695 (36.17 per cent) were Government schools, 7,216 (55.63 per cent) aided schools and 1,060 (8.17 per cent) were unaided schools. More Government schools function in Lower Primary (LP) sections than Upper Primary (UP) or High School

(HS) sections. Aided schools outnumber Government schools in all sections.

There are 1,478 schools in the State which offer syllabus other than the one prescribed by the State Government. These include 1,266 CBSE schools, 162 ICSE schools, 36 Kendriya Vidyalaya and 14 Jawahar Navodaya Vidyalayas. One Jawahar Navodaya Vidyalaya school functions in each district.

Gross Enrolment Rate

Gross Enrolment Rate is the number of students enrolled at a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education. The enrolment of students had an increase in 2018 - 19 to 37.03 lakh from 36.8 lakh in 2017 - 18. In the LP section there was a net increase of 32,575 students from 2017 - 18 to 2018 - 19. The net increase in UP sections was 10,995 students in 2018 - 19, while the High School section showed a decrease of 20,492 students over the previous year. Girls constituted 49.01 per cent of the total student enrolment in schools. Boys outnumbered girls in all the districts. But the gender gap is very narrow in Kerala in terms of enrolment. ST students constitute 2.02 per cent of total enrolment in schools in 2018 - 19. In 2018 - 19, the per cent of ST students in Government schools, private aided schools and private unaided schools were 3.81 per cent, 1.54 per cent and 0.46 per cent respectively.

Dropout Rate in Kerala

Dropout is defined as “any student who leaves school for any reason before graduation or completion of a program of studies without transferring to another elementary or secondary school”. As per the Ministry of Human Resource Development (MHRD), Government of India report on

‘Educational Statistics at a Glance’, 2018, the all India average dropout rate of primary students is 4.13 per cent while it is 4.03 per cent in upper primary and 17.06 per cent in secondary levels. Kerala has achieved the distinction of having the lowest dropout rate of school students in the country. It was per cent at lower primary level, upper primary level and secondary level respectively.

Table 1.2
State-Wise Dropout Rate in Kerala

Year	Kerala	ST
2013-14	0.27	2.63
2014-15	0.34	2.79
2016-17	0.22	2.27
2017-18	0.16	1.42

Sources: Kerala Economic Review

From the academic year 2013 to 2017 there was a decrease in the tribal dropout among the total dropouts in Kerala. The table shows the decrease in the dropout rate in both the sectors. There is a considerable decrease in the tribal dropout rate each year, but it is still higher than that of the students from the total population. Some of them left school after parents failed to buy study materials, lack of pre-metric hostels and transportation facilities. The academic backwardness of parents was another issue of relevance.

Higher Secondary Education in Kerala

The Kerala Higher Secondary Department was formed in 1990 to impart quality education. Over the years government issued several orders for the commencement of the higher secondary school education in the state. These orders facilitated the necessary steps to be taken to reorganise secondary and collegiate education in the state in accordance with the National Education Policy. There were 2,073 Higher Secondary Schools (HSS) in Kerala in the year 2018. The pass percentage of students in higher

secondary courses increased from 76.56 per cent in 2017 - 18, to 84.33 per cent in 2018 - 19. The pass percentage of ST students in Higher Secondary schools have increased to 62.22 per cent in 2017- 18 compared to 2016 - 17 with a pass per cent of 58.96 per cent.

Access to Higher Education

The rapid growth in the secondary education had serious repercussions on higher education. The growing unemployment among the secondary school pass outs induced parents to send their boys to colleges just to keep them busy and the rising age of marriage brought many girls to colleges in an attempt to utilise pleasantly the period of waiting to get married.

Admission to a college is thus a drift for some and a way of improving the prospects of employment for many students, resulting in greater pressure of numbers in colleges. As pointed out by the University Education Commission (1966), the colleges and the universities are considered by many as 'Waiting Rooms' till jobs are obtained.

There has been an unplanned and rapid expansion of higher education during the first four plans. At the formation of Kerala State, there were only 32 Arts and Science colleges with an enrolment of 26,402 students. In Kerala, the general education group constitutes nearly three-fourth of the share in total enrolment in higher education. There has been enormous growth in the number of graduate since 1970. Analysis of enrolment in regular system of higher education reveals that the number of students attracted to science subjects is more than the number going for studies in the arts. This phenomenon may be due to the intense desire of students for professional and technical studies for which the probability of success in the job competition in the organised sector is comparatively higher. The enrolment

of students under general education has increased from 9,508 in 1956 - 57 to 48,553 in 1990 - 91, recording eightfold increase, within a period of three and half decades. The majority of students in the professional categories were enrolled in the faculties of engineering and medicine.

University and Higher Education in Kerala

There are 14 State universities functioning in Kerala. Among them, four universities- Kerala, Mahatma Gandhi, Calicut and Kannur are general and offer various courses. Sree Sankaracharya University of Sanskrit, Thunchath Ezhuthachan Malayalam University, Cochin University of Science and Technology, Kerala Agricultural University, Kerala Veterinary and Animal Science University, Kerala University of Health Sciences, Kerala University of Fisheries and Ocean Studies and Kerala Technological University offer specialised courses in specified subject areas. The National University of Advanced Legal Studies (NUALS) and a Central University in Kasaragod are other higher education institutions functioning in Kerala. There are 219 Arts and Science Colleges in the State, covering 156 private aided colleges and 63 Government colleges. Apart from these, various un-aided/self-financing arts and science colleges are also functioning in the State with the affiliation of universities.

Enrolment of Students in Higher education

The total number of students enrolled in various arts and science colleges (excluding unaided colleges) under the four general universities in Kerala in 2017 - 18 is 2.96 lakh. Of this, 2.03 lakh (68.68 per cent) are girls. Out of the total students enrolled for degree courses, 42.62 per cent are enrolled in B.Sc. degree courses, 38.71 per cent enrolled for B.A and 18.67 per cent enrolled in B. Com degree courses.

Table 1.3: Percentage of ST students in higher education of Kerala

Name of Course	Total Students	ST Students	% of ST Students
B.A	92,753	3209	3.46
B. Sc.	1,02,134	972	0.95
B.Com	44,723	796	1.78
Total	2,39,610	4,977	2.08
M.A	14,756	828	5.61
M.Sc.	18,083	561	3.1
M.Com	6,056	235	3.88
Total	38895	1624	4.18
Grand Total	278505	6601	2.37

Sources: Kerala Economic Review 2018 - 19

The number of ST students enrolled in arts and science colleges is 6,601 in 2017 - 18. The enrolment of ST students in degree and postgraduate courses is 4,977 and 1,624 respectively. According to the report of ST development department, the state has never made an attempt in an equitable distribution of quality higher education. Access to it was virtually barred to the children of the marginalized groups like scheduled tribes. It was only on the shoulders of government-run and aided institutions that the principles of equity and access are laid upon. Even STs and other backward sections are unable to avail facilities that are statutorily made available to them. Though the government has reserved 20 per cent seats for SC/ST in government and government-aided Arts and Sciences Colleges in Kerala, their annual quotas are never filled.

Status of Employment

Around 700 million people live in rural areas in 600,000 villages of India. India's labour force is about 47.79 crores in 2011 as against 18.07 crores in 1971. Unemployment is a situation where a person is willing to work at an existing wage rate, but unable to find a job. India has been emerging as a fast-growing economy in the world scenario.

Chronic unemployment of a large portion of the active labour force has been the most serious socio-economic problem of Kerala during the last three decades. Due to the enormous increase in unemployment rate and its alarming nature, the unemployment issue has emerged as the foremost political issue of Kerala these days (B.A. Prakash, 1988). Unemployment related problems in Kerala are not only about educated unemployment, but also simple unemployment of semi-skilled workers, which is highest in the country. The unemployment rate among various social groups is the highest and the lowest among STs.

The relation between caste and traditional occupation is closely related. The historical background of the caste system itself attaches to the occupation. Every year, thousands of students step into the real world for the jobs after their studies. Only a few of them find jobs and the rest struggle a lot to get employed. The problem is mainly due to the lack of adequate skills for employment. Often, the educational institutions fail to equip the students with necessary skills either due to lack of training or due to the inefficient learning environment they possess.

Table 1.4 Distribution of Main Workers 2001-2011 (in percentage)

Category	ST		Total	
	2001	2011	2001	2011
Main Workers*	30.77	33.29	25.87	27.93
Male Main Workers	40.66	44.24	41.77	44.8
Female Main Workers	19.9	22.71	10.85	12.37
Percentage of Cultivators to Main Workers	13.67	12.94	7.12	7.18
Percentage of Agricultural Labourers to Main Workers	41.12	59.49	12.4	14.18
Percentage of Main Workers engaged in Household Industry	2.57	1.74	3.55	2.93
Percentage of Main Workers engaged in other services	46.65	25.83	77.13	75.71
Marginal Workers*	16.18	14.2	6.43	6.85
Work Participation Rate	46.35	47.49	32.3	34.78

**Percentage of distribution is based on total population*

Source: Population Census 2001, 2011

The employment patterns of scheduled tribes in 2011 finds that most of them are engaged in agricultural labour and other works, but are comparatively less in the service sector. The work participation of scheduled tribes in the labour market is increasing, which is in contrast to the non-tribals in the Kerala economy. Another notable change that occurred among the ST is that, even though the WPR has increased for both males and females, the main workers among both the males and females have declined. A change in the economy moved the tribes from main workers to marginal workers.

Employment Status of Tribes

The employment pattern of Scheduled Tribes can broadly be classified into three categories, namely; forestry sector, agriculture and allied sectors and non-agriculture and allied sectors. The forestry sector consists of collection of forest produce, traditional occupation, collection of herbal plants and other works related to the forestry sector. The agriculture and allied sectors include agriculture, animal husbandry and agricultural labour. The non- agriculture and allied sectors consist of petty trade, employment under Mahatma Gandhi National Rural Employment

Table 1.5 Employment Pattern of Families and Persons

Sector Employment	Families		Persons	
	Number	Percentage	Number	Percentage
Forestry Sector	8814	8.17	17138	4.45
Agriculture and Allied Sectors	75060	69.52	144264	37.48
Non Agriculture and Allied Sectors	22181	20.53	45666	11.86
No Income/ Employment	1910	1.77	177910	46.21

Source: KILA Tribes Report, 2008

Guarantee Scheme (MGNREGS), works under non-agricultural sectors, plantation labour, employment under government/quasi-government sector and employment in other sectors including the private sector.

Table 1.5 shows that the scheduled tribes are engaged in forestry and agriculture allied sectors. A total of 8.17 per cent of Scheduled Tribe families is engaged in the works under the forestry sector, 69.52 per cent in agriculture and allied sectors and

20.53 per cent in non-agriculture and allied sectors. No income families constitute 1.77 per cent. Also, 46.21 per cent of the Scheduled Tribe population is identified as individuals having no income and remaining

53.79 per cent have some type of employment. The total workers engaged in the forestry sector count to 4.45 per cent,

37.48 per cent depends on agriculture and allied sectors and 11.86 per cent workers are in non-agriculture and allied sectors.

This shows that a majority of the tribal population depends on agriculture and allied activity for their livelihood. Further, 46 per cent individuals have no income generation. Access to employment among schedule tribe is very less and agricultural activity depends upon seasonal variations.

Education Policies and their Impact on Scheduled Tribes

Indian education policies as framed today are not based on citizen-centric principles. Rather, they appear to be imposed in a top-down fashion. For example, the education system in India generally does not take into account the vernacular languages of tribes. This fails to provide for the holistic development of local cultures. In other words, here is a deficiency in instrumentalising 'unity in diversity'. While it cannot be denied today that education has brought some social mobility for some tribes

and has effectively allowed some individuals to grow (see also Ghurye, 1980 [1963]), the tribal society as a whole lags behind. Till now, education policies have not enthused India's tribes to a significant degree, indicated by lower literacy rates of tribes as compared to other communities. The 2001 and 2011 annual reports of the Ministry of Tribal Affairs indicate the increase in literacy rate from 47.1 to 59.2 per cent over the decade. Among males, the literacy rate has gone up from 59.2 per cent to 68.5 per cent and among females; the literacy rate has increased from 34.8 per cent to 49.4 per cent during the same period. The overall literacy rate for the total population of India has increased from 64.8 per cent in 2001 to 73 per cent in 2011. The data indicates a significantly lower ST literacy rate when compared to the overall literacy rate of the general population (Ministry of Tribal Affairs, 2015: 210). It is widely felt that the present education system is irrelevant to the life of tribal people and their culture.

Tribal Education System in India and Kerala

Statistics show that the tribal population lag much behind the mainstream population in all the developmental aspects including education. There are numerous reasons for this poor state of education among tribes such as the lack of sufficient educational institutions in tribal areas, high rate of poverty, lack of efficient nutritional and health care programmes, lack of proper policies to improve the enrolment or to prevent the dropouts of students, etc. All these problems highlight the shortcomings in promoting education among the Tribes. Education is regarded as an important catalyst for social development and through this, social and economic development of a community or individual can be made possible. During the period immediately after the Indian independence, tribal education

did not get the attention it deserved from the authorities. Only a few strategies were introduced in the subsequent Five Year Plans for the upliftment of tribes and these policies were inadequate to address the problems faced by the tribes in India. It was only in the Fifth Five Year Plan (i.e. for the period 1974-79) that specific programmes aimed at the development of education among tribes were introduced. Tribal Sub-Plan (TSP) approach, a comprehensive strategy for the socio-economic development of the tribal people was the major highlight of this Plan.

There are several policies and laws to safeguard the Scheduled Tribes apart from the constitutional provisions. The constitution has made some provisions for the protection of the interests of STs. The Central government formed a few Educational Commissions post-independence to frame proposals to modernise education system, but it took a long time to frame an educational policy for the country and the first of its kind came into existence during the year 1968 (National Policy on Education) based on the recommendations of the Education Commission (1964-68). But this policy was silent about the educational developments of the tribal people. A major development in tribal education emerged after the implementation of the new National Policy on Education (NPE) which came in to effect in 1986. This policy addressed problems faced by the tribes pertaining to education.

Apart from these policies, Sarva Shiksha Abhiyan (SSA) has made certain significant interventions in tribal education as part of the objective of universalising elementary education in the country. The schemes run by SSA have positively impacted education in Kerala, especially in universalising primary education to the socially excluded. The major policies implemented include District

Primary Education Programme (DPEP) and Alternative and Innovation Education Centres (AIEC). The tribal students were mostly benefited from AIECs as the preference in setting up these Centres was given to tribal and coastal areas of Kerala. Identifying the importance of education, the Indian Parliament passed the Right to Education Act on 4th August 2009.

Tribal Residential School in Kerala

Residential mode of school education for the tribal children has a long history in Kerala. Government Residential Basic Training (GRBT) was a single teacher primary school where students from class 1 to 4 are taught in one class. GRBT schools existed in the districts of Kannur, Kozhikode, Malappuram, Palakkad and Idukki till the end of the 1980s. These schools were administered by Harijan Welfare Department of Schools, a former type of Tribal

Residential Schools in Kerala (Mathur, 1977). As a consequence of the policy thrust for TRS at the national level, two TRS were established in Kerala during the 1990s. To provide high-quality education to students belonging to scheduled tribes, Model Residential Schools have been opened, one at Nallurnadu in Wayanad for boys and another at Kattela in Thiruvananthapuram for girls. The core objective of the Model Residential School (MRS) is to give high-quality education to the bright young students belonging to the tribal communities. The functioning of the school will be in accordance with the public school, which is good indeed for the tribal students who face the problem of greater inaccessibility to such a kind of quality education. At present, there are 20 MRS/ Ashram Eklavya Model Residential Schools and three post-metric 106 pre-metric hostels functioning under the Scheduled Tribe Development Department. Among these, five

schools located in Nilambur (Malappuram), Noolpuzha (Wayanad), Thirunelli (Wayanad), Malampuzha (Palakkad) and Kasaragod are specifically meant for Primitive Tribal Groups (PTGs). All these schools function under the control of Kerala Scheduled Caste/ Scheduled Tribe Educational Society.

Why This Study?

Studies have attempted to evaluate the efficiency of ashram schools in various states (Sharma & Sujatha, 1983; Ananda, 1994). After the introduction of modern TRS in 1990, no systematic efforts have been made to evaluate the functioning of the TRSs in Kerala. It necessitates an analysis of following aspects: Characteristics of catchment i.e., students who attend TRS, institutional mechanism, teaching and learning, post-schooling education, parent-teacher relationship, health care and occupational mobility and the role of community and parents in the management of schools. Such a study can contribute to improving the academic performance, institutional mechanism, administrative processes, and school-community relationships of the Tribal Residential Schools.

Research Gap

A study by Kakoth (2012) on the perception of tribal school dropout of the Ashram school in Malppuram district identified a large number of school dropouts among Ashram School, Manjeri. Even though the school provides free food, accommodation, uniform, etc., the students were reluctant to return to school once they go back to their home during vacation. The study identified that the Ashram School had a high dropout rate during 2006 - 07 to 2010 - 11 and indicated it to be as 38.8 per cent, which is alarming. From this analysis, we can conclude that dropouts are not only a major

threat to a non-residential school in the tribal areas, but it emerged as a challenge for residential schools such as MRS/ Ashram Schools as well. Most of the model residential school studies focus on a single issue unlike this study which covers several domains. This can contribute to improving the academic performance, institutional mechanism, administrative processes, and school-community relationships of the Tribal Residential Schools. This study looks at several aspects of the schools that are as follows:

- Socio-economic background of the students
- Institutional aspects
- Pedagogic aspects and academic performance
- Administrative aspects – Centre-State- Local Self-Governments
- Management and administrative aspects

Scope and Relevance of the Study

This study intends to evaluate the overall performance of the Model Residential Schools. The study is a collection of both primary and secondary data gathered from all the schools. Information was gathered from students, parents, and teachers and pertinent details relating to the data on school, hostel, food, infrastructure, sports, health, etc. were collected. Group discussions with the students, alumni and their parents were conducted. Interactions with administrative staff, senior superintendent and school principal were also done. A brief questionnaire was prepared to collect various data from students, teachers, parents and the staff.

Objectives of the study

The major aim of this study was twofold:

1. To evaluate the functioning and performance of TRSs.
2. To suggest reforms to improve the performance of TRSs.

With these broader objectives, the following objectives are delineated for this study.

Specific Objectives

1. To evaluate the functioning and performance of TRSs in terms of
 - a) Academic performance of the students
 - b) Quality of infrastructure facilities
 - c) Schooling experience of the students
 - d) Post schooling achievement of students
 - e) Efficiency of institutional and administrative mechanism
2. To suggest reforms to improve the performance of TRSs in terms of
 - a) Improving academic performance of students
 - b) Improving quality of institutional and administrative mechanism
 - c) Developing strategies for better post schooling outcomes
 - d) Creating and maintaining better school- community relationships

Methodology

There are twenty Tribal Residential Schools in the state of Kerala. Since the study is intended to develop a comprehensive understanding about the status and functioning of the tribal residential schools in the State, a combination of qualitative and quantitative methods will be adopted in the methodology of this research. This kind of an approach would be useful to bring out the subjective and objective aspects of the ground reality. Quantitative methods were followed to collect data on school infrastructure and academic performance of the students. Qualitative methods were adopted to capture the various aspects of management of the schools, post-schooling experiences of students, and school- community relationship.

Tools and Methods

The following tools have been developed for the purpose of this study

- Checklist for collecting data from 20 schools
- Discussion points for Focus Group Discussions with students in 9th standard and 11th standard, alumni, parents

- Interview guides for personal interviews with
 1. Headmaster/Headmistress, Teachers, Superintendent
 2. Non- Teaching staff, Counsellor, Residential Tutor, Caretaker, Ayaha

Methods of data collection

Data on the performance of Model Residential Schools was gathered through surveys, interviews, academic evaluation and focus group discussions.

Detailed survey

Detailed surveys using questionnaire were administered to collect information on the following aspects of inquiry

- Student performance
- Infrastructure facilities
- Financial sources and expenditure

A common questionnaire was developed for this. The questionnaire was administered in 18 schools to yield a basic understanding.

Interviews with key stakeholders

In-depth interviews with the various key informants was conducted as part of the study. State and district level officials involved in the administration and management of TRSs were selected for key informant interviews. These interviews acted as a tool to gain a detailed understanding of the administrative processes and barriers therein.

Academic tests to evaluate the capabilities of students

An academic test was administered in the selected classes to assess the capabilities of students. Academic capability analysis tools for the tests was developed based on the approved standards used in other educational surveys. The tool was used in limited classrooms of schools selected for the case study. We have conducted

academic evaluation process for 8th and 10th standard students from 10 MRS schools which was attended to 300 students. This included evaluation questions related to the subjects such as Malayalam, English and Mathematics of previous classes.

Focused Group Discussions

Focused group discussions (FGD) with different stakeholders were conducted as part of the school level case studies. FGDs with parents, students, alumni, and local body members are included in this. The FGDs of parents was focused on the points to understand the family atmosphere, background, the educational process of the students, involvement of parents in the educational activities of students, and to understand the overall feedback of parents regarding the schooling and management of schools. FGDs of students focused on understanding the hurdles in their educational performance, feedback about the functioning of schools, parental support, and also to collect the suggestions of students- as the ultimate beneficiaries- in order to improve the academic performance and functioning of the schools. The FGDs with former student were conducted to track the after-school performance and long- term outcomes. For this purpose 19 student FGDs, 4 alumni FGD and 2 parent FGDs were conducted.

In-depth Interviews in Schools

In-depth interviews with the help of semi-structured interview guides were conducted in selected schools among the different key informants. Principal/Head of the school, office bearers of PTA, selected

students, non-teaching staff, and local body authorities were inducted as respondents for the interviews. These interviews provide a detailed understanding about the schools.

Methodology Adopted in the Study and Activities Undertaken

We have collected basic information about 20 Model Residential Schools under the tribal department of Kerala government, by using a checklist which includes information regarding academic and non-academic areas, curricular and co-curricular activities and infrastructure. After the administration of general checklist in all schools, further study has been limited to ten cases all over the state. Two schools from Wayanad, and one school from Kasaragod, Malappuram, Palakkad, Thrissur, Idukki, Pathanamthitta, Kollam and Thiruvananthapuram districts were selected for the case study.

Criteria for Selecting Schools

- Regional representation
- Management System such as MRS, Ekalavya, Ashram
- School for specific Tribal community
- Type of school, based on gender
- School with better infrastructure and good academic performance
- School with poor infrastructure and weak academic performance

Administration of the Study

This study intends to explore the issues related to the academic performance, infrastructure facilities, and management of Tribal Residential Schools in Kerala. It is targeted to submit policy recommendations to improve the quality of schooling and performance of Tribal Residential Schools (TRS) in the State.

Academic performance of the students

The primary information about the academic performance of the students was collected during the period of May- June 2019. This includes mark list of 10th and 12th standard of students based on last year performance. In order to understand the role of MRS in the tribal education, we made an interschool comparison of the result of SSLC and Higher Secondary final examinations (2018 - 19) of 16 MRS and 10 MRS respectively. In addition, we have conducted an academic evaluation test in 8th and 10th standards of the selected 10 MRS, based on the 7th and 9th standard syllabus. Three hundred students participated, 150 students from each standard. From each school 30 students participated and we randomly selected 15 students from 8th and 10th standards. The test was conducted during the period between June and July 2019, in Malayalam, English and Mathematics. The languages were selected with the intention of knowing the capacities of the students in writing, reading, analytical and comprehensive skills. The test in Mathematics was conducted to assess the basic arithmetic skills (Addition, Subtraction, Multiplication and Division) and analytical skills. The Simple Percentage Analysis was used for the preparation and interpretation of tables on the analysis about the performance of various MRSs all over Kerala.

Quality of Infrastructure facilities

We used listed questions for primary data collection and observation methods for identifying the quality of infrastructure facilities in 20 MRS Schools. In addition, for detailed case study of 10 MRS Schools, information was gathered from students, non-teaching and administrative staff in the month of March, April and May 2019. The preparation of the checklist and index variable was based on the guidelines of KER

and E-MRS.

- Academic infrastructure
- Quality of services and amenities

Schooling Experiences

For gathering information regarding the schooling experiences of students, we have collected diary notes and conducted Focus Group Discussion of students and parents during the period between February and June 2019.

Post Schooling Achievements of Students

The project team conducted four alumni meetings with the support of Tribal Department and former students of Model Residential Schools all over Kerala. These were conducted in the Middle and North zones such as Nallooradu, Marayur and Attapady regions and nearly 150 former students participated.

Efficiency of Institutional and Administrative Mechanism

To examine the efficiency of institutional and administrative mechanism of selected MRS Schools, we have conducted detailed interview with various stakeholders and focus group discussion with students. The stakeholders are Superintendent, Head Mistress/ Head Master, Principal, academic and non-academic staff. In addition, we collected secondary data on the sources of funding for the three schools under various managements, like Ashram, Ekalavya and MRS in order to understand the nature of fund flow.

Table 1.6: Brief information about Interviews and Focus Group Discussions conducted

Sl. No	Activities	Stake holders	Numbers
1	Primary Investigation	Superintendent & Head Mistress/ Master	45
2	Focus Group Discussion	Students (9th & 11th)	19
3	Personal Interview	Teachers	18
4	Personal Interview	MCRT	10
5	Personal Interview	Counsellor	6
6	Personal Interview	Aayah	15
7	Personal Interview	Nurse	4
8	Personal Interview	Superintendent	10
9	Personal Interview	Head Mistress/ Master	10
10	Personal Interview	Principal	3
11	Focus Group Discussion	Parents	2
12	Focus Group Discussion	Alumni	4

II. The Evolution of Tribal Education

Introduction

The Scheduled Castes and Scheduled Tribes are the most disadvantaged, marginalised, economically backward and socially excluded population in India. The disadvantage here signifies the struggles of people to gain societal and spatial access to the resources and participate in the social life (Anderson and Larsen in Gurung and Kollamair, 2005).

Marginalisation is a multi-layered concept which is linked with the social status of an individual or a community. In the case of ethnic groups, they have been suffering marginality in their lives for long time and that has led to social discrimination and socio-economic backwardness (Kagan et.al, 2005). From the colonial period onwards, the weaker classes in the country have been facing vulnerability and uncertainty in their lives. When compared to the general population, Scheduled Castes and Scheduled Tribes have been facing a whole lot of social discrimination, poverty, low literacy, insufficient infrastructure facilities and poor health status. They need special attention from the government to overcome the socio-economic backwardness through the attainment of better education and health status with the support of welfare and development schemes.

After independence, the Constitution of India incorporated several safeguards for the protection and promotion of the weaker sections of the society especially of Scheduled Castes and Scheduled Tribes. The post-independence government envisaged various Articles for the welfare and development of tribal communities in the country. Article 46 of the Constitution of India states that, "The States shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Caste and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation" (Lokur Committee Report, 1965). During 1970s, the then Prime Minister of India, Indira Gandhi took the first initiative for the implementation of the development and welfare activities for the backward or weaker classes in the country. They provided special care to the tribal population by implementing Tribal Sub Plan schemes to the selected states other than the general schemes. The Ministry of Tribal Affairs was established in 1999 for the welfare and integrated development of tribal communities all over the country (MoTA, 2017).

This chapter covers the formation of educational policies and existing initiatives of the central and state ministries to the promotion of tribal education in Kerala.

Tribal education in India: - An Overview

Tribal education during the colonial period

The British Government followed the isolationist approach in the tribal development programmes and did not take any initiative for strengthening education and economic stability of tribal communities in the country. In the final phase of the colonial regime, the policy makers deviated from the isolationist approach and suggested two different approaches on tribal welfare and administration as 'National Park Policy and Total Assimilation'. The National Park Policy promotes an isolationist approach by restricting the interaction of tribal community with the public in the name of the protection of tribal culture and ethos. The Total Assimilation Approach promotes the tribes to interact with non tribes and granted permission to follow the life of mainstream society (Guriya and Thakkar in Sujatha, 1999).

The British Colonial Education Policy did not consider the downtrodden people in the society but provided educational support to the upper classes. The government had to spend huge amount of money to start a school in the tribal localities, especially in the remote areas. Moreover, the tribal communities had never been exposed to organized education system. Based on these realities, the colonial government approached Christian missionaries in 1854 to educate the tribal people. They started their work, especially in the socio-economic transformation of tribal communities by encouraging the education and health sectors

by way of constructing and facilitating schools, hospitals, etc. But their services were limited to a few tribal areas across the country (MoTA, 2014; Sujatha, 1999).

Tribal education in the post-independence period

As the outcome of the new democratic ruling and socialism, the government of post-Independence India formulated mass movement in the promotion of education sectors in the country, especially to give more priorities to the backward groups in the society like Scheduled Tribes, for shaping them as equal citizens of the country through educational empowerment (MoTA, 2014). For that purpose, they framed various safeguards for the protection and promotion of education of tribal communities such as New Policies for Education, established Committees for the development of Scheduled Tribes and started various schemes under Plan and Non-plan schemes.

Safeguards on Tribal Education

The Constitution of India provides various safeguards for the protection and promotion of education and culture enhancement of tribal communities in the country.

According to the National Commission for Scheduled Tribes, the educational and cultural safeguards are:

- (i) Article 15 (4) empowers the State to make any special provision for the advancement of any socially and educationally backward classes of citizens or for SCs and STs. This provision was added to the Constitution through the Constitution (First Amendment) Act, 1951, which amended several Articles. This provision has enabled the State to reserve seats for SCs and STs in educational institutions, including technical, engineering and medical

colleges and in scientific and specialised courses. In this Article as well as in Article 16 (4), the term 'backward classes' is used as a generic term and comprises various categories of backward classes, viz., Scheduled Castes, Scheduled Tribes, Other Backward Classes, De-notified Communities (Vimukta Jatiyan) and Nomadic/Seminomadic communities.

- (ii) Article 29 (1) provides that "any section of citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same". This Article has special significance for all the Scheduled Tribes. But this provision need not be understood as to educate the tribal population in their vernacular language alone and thereby making them isolated. They should be educated in the commonly used language in their respective States and should be exposed to the outside knowledge.

- (iii) Article 350 A provides that "It shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups, and the president may issue such directions to any State as he considers necessary or proper for securing the provision of such facilities". Most of the tribal communities have their own languages or dialects, which usually belong to a different family of languages than the one to which the State's official language belongs."

In addition, the Ministry of Tribal Affairs provides funds through the Central Sectoral Schemes, Grants under Article 275 (1) of the Constitution of India, for the welfare of Scheduled Tribes such as the development of infrastructure facilities in the areas of health, education etc. (NCST, 2007).

National Policies on Education (NPE) and the Tribal Education

The Central Government appointed an Educational Commission in 1964 for the promotion and modernisation of education sector in the country. The apex national body of education in India, the Central Advisory Board of Education (CABE), valued the importance of education of the people for nation-building, who lived under the slavery of colonial rulers for a long period. As an initiative of CABE, the first National Policy on Education came into existence in 1968 which prioritized the secondary education than the primary level. And also, it prescribed the need to take efforts, for the promotion of education among the backward communities as part of maintaining equality in educational opportunity in the country. However, it failed to provide suggestions regarding the ways of promotion of education among the backward communities.

Later, the second National Policy on Education prepared in 1986 emphasized 'Child-Centered Approach'. This has given priority to the Early Childhood Care and Education programme. Moreover, it has given more priority to the promotion of tribal education, such as the establishment of primary schools in tribal areas; address the need for starting Model Residential Schools for tribal students in the country, starting Anganwadis in tribal hamlets, etc. Due to the drawback of excluding the primary level schooling from the policy making of the education system in the country, NPE 1986

was modified in 1992 in accordance with the recommendations from Ramamurthi Committee, which points to all levels of education in the country such as childhood learning up to that of higher education. Also, this has given prior importance to tribal education by way of recommending the construction of Model Residential or Ashram schools, increasing the financial assistance of educational expenditure, etc. But the committee gave very less attention to solution for the prevention of dropouts and inaccessibility of schools in remote areas (Kothari Commission Report, 1966; Suresh, 2014).

The Central Ministry strengthened the NPE in 2002, with the support of 86th Amendment of the Constitution of India, as the fundamental right to get free and compulsory education to the children between the age group of 6 - 14 years. It was enacted by the Supreme Court as the Right of Children to Free and Compulsory Education Act in 2009. It ensures school admission to all children who are above the age of 6. But, in the case of tribal communities, it is not practical to admit the children at school in the first standard at the age of six especially those who have been living in geographically isolated areas without schools in nearby locations.

In addition, from the year 2000, the Government of India launched three missions in the education sector, such as Sarva Shiksha Abhiyan for elementary education, Rashtriya Madhyamik Shiksha Abhiyan for secondary education and Rashtriya Uchchar Shiksha Abhiyan for higher education. These policies have taken care of protecting and promoting the tribal interest through alternative education. In 2018, the MHRD introduced Samagra Shiksha by integrating all the school level education programmes such as Sarva Shiksha Abhiyan, National Educational Campaign and Teacher

Training Institute (DIET Centres). These missions were implemented in the tribal areas in order to solve the issues related to tribal education which were noted in the earlier studies. The outcomes of the missions stated that the disparities between the tribal communities and the other social groups were narrowed, improved the infrastructure facilities of the schools in the rural areas, increased the proportion of teachers and students in the schools, etc. (MoTA, 2014). But recent studies show that the rate of dropouts has been increasing among the school going children of tribal communities.

Commissions for Tribal Education

The Government of India recommended the formation of two commissions, namely, Scheduled Areas and Scheduled Tribe Commission (1960 - 61) under the Chairmanship of U.N Dhebar and the Indian Education Commission (1964 - 66) chaired by D.S. Kothari. Both commissions have closely examined the issues related to tribal education and the disparities from the general population.

The Dhebar Commission followed the Gandhian concept of 'basic education' for promoting education among the tribal children and also concerned Nehruvian concepts on tribal development. The Commission recommended educating the tribes by using vernacular language as the medium of instruction with the support of trained teachers from the tribal communities in the nearby places. The commission suggested promoting tribal culture and arts, by adding folklore, songs, etc. in the curriculum. The commission also identified the basic issues related to the educational backwardness of tribal communities and the dropout of the students. This led to the formation of new tribal education policies. The major recommendations of the Dhebar Commission are:

- To provide mid-day meals, reading and writing materials, free books and clothing to all tribal children in educationally backward areas.
- To open new schools in the tribal locality due to the geographical isolation, where the number of school-going children is at least 30.
- To create tribal ambience in the school
- To adjust the timings of vacation/ holidays of tribal schools, according to the festivals or the demand of tribal communities.

The Kothari Commission supported the recommendations and suggestions of Dhebar Commission, by adding notes on the importance of the need for promoting parental education among tribal population, and also gave suggestion to take immediate action on the early childhood learning of tribal children in the next five years (Dhebar Commission Report, 1961; Kothari Commission Report, 1966).

Initiatives of Five-Year Plan for Tribal Education

The Central Government assistance for tribal education in the Five-Year Plan periods under the Central and State sector schemes is divided into three phases; each phase includes four Five Year Plan periods. The phases are:

- a. Phase I: First Five Year Plan (1951 - 56) to Fourth Five Year Plan (1969 - 74)
- b. Phase II: Fifth Five Year Plan (1974 - 789) to Eighth Five Year Plan (1992 - 97)
- c. Phase III: Ninth Five Year Plan (1997 - 2002) to Twelfth Five Year Plan (2012 - 17)

During the First Phase, the government got strongly involved in tribal development

activities with the purpose of solving the issues already addressed among the tribal communities in the country. They gave more attention to the empowerment of tribal communities in the long term by providing assistance for livelihood, education, health, etc. For the educational attainments of tribal students, the Ministry allocated funds for various educational schemes like training programmes to tribal teachers for increasing their numbers in the tribal schools, modified curriculum for tribal schools which included tribal culture and arts, prepared special text books for tribal students, considered the tribal dialects as teaching medium, provided additional assistance like pre and post-metric scholarships, grants for books, free hostel facilities, etc. In addition, nearly 4000 schools were started in the tribal areas which included Ashram and Sevashram schools, Sanskar Kendras, Balwadies, Community Centres, etc. in the tribal concentrated states (Five Year Plan Reports, 1957; 1962; 1967 & 1975).

In the Second Phase, a drastic change took place in tribal development activities through the implementation of Tribal Sub Plan in 1974 which allocated higher degree of devolution of funds for various sectors, especially education sector. During the 6th Five Year plan period, 3000 hostels and 9000 ashram schools were opened in tribal locations all over the country. The scheme of book banks was started in 1978 - 79 for tribal students studying medical and engineering courses. In addition, 8000 seats in 101 pre-examination centres giving training for attending central and state competitive exams came into effect in the 7th Five Year Plan. Based on the recommendation from NPE 1986, the Ministry initiated opening primary schools in the tribal areas to strengthen the learning at an early age during the 8th Five Year Plan period. In addition, the government revised the curriculum of tribal

students and promoted teaching in their own dialects or regional languages (Five Year Plan Reports, 1979; 1986; 1991 & 1998).

During the Third Phase, the government took initiative to implement the National Programme of Nutritional Support or Midday Meal programme in primary schools of tribal localities for increasing the retention rates. It also enabled reservation of seats for Scheduled Caste/ Scheduled Tribe students in the Central Government Institutions of Higher Education, and also provided relaxation on the minimum percentage of cut off marks needed for admission to universities. There was a new approach implemented in the 11th Five Year Plan known as 'Inclusive Growth' that focused on the broad-based improvement in the quality of life of the weaker sections of the society. The Rajiv Gandhi National Fellowship Scheme for ST students was launched in 2006 that provided financial assistance to 667 MPhil/PhD students. In addition, the government recommended National Overseas Scholarship (NOS) scheme for 15 ST students, who seek admission in Master/ PhD programmes abroad (Five Year Plan Reports, 2003; 2008; 2013 & 2018).

Evolution of Tribal Residential Schools in India

Educational empowerment has a very important role in human development process across the world. When we evaluate the educational status of the people in Kerala or India, based on the statistical data, we can find that the economically backward sections or the backward communities, particularly SC/ST have a poor educational status. They struggle due to poverty and financial crisis. The Central Ministry identified this and provided better educational facilities to the children from these backward societies so that, the government could empower the members in the future. In the

case of Scheduled Tribes, the remoteness of habitations, lack of travelling facilities, insufficient infrastructure facilities, illiteracy of parents and segregated population are the primary constraints of the educational attainment of tribal children in the country. To overcome these difficulties, the planners and policy makers of the Central Ministry recommended starting residential schools in the tribal areas as an 'ashram' model (MoTA, 2017). Based on this concept, the Central Ministry promoted the State governments to open Ashram Schools and Ekalavya Model Residential Schools for tribal students in the Tribal Sub Plan areas.

In 1939, the first Ashram school was established in Gujarat, by the initiative of Thakkar Bapa, for the advancement of formal education of tribal children along with vocational training (Sharma and Sujatha in Sujatha, 1999). Based on the success of these schools, from the First Five Year Plan onwards some state governments have started Ashram Schools for the promotion of primary education of tribal children who belong to geographically isolated areas (First Five Year Plan Report; 1957).

From 1990 - 91 onwards the Central government has been taking initiative for the construction of the Ashram schools in the TSP States as part of tribal development programmes. The main objective was to increase the literacy rate of the tribal students and bring them at par with the performance of students from the mainstream society of the country, by providing residential educational facilities (MoTA, 2017). The Central and State governments have been responsible to provide funds for the infrastructure facilities and academic materials to the children studying in the ashram schools as part of their annual budget allocations. This is a Centrally Sponsored Scheme, based on

the cost sharing between the Central and State governments. However, the Central Government provides 100 per cent central assistance to the construction of Girl's Ashram Schools and 50 per cent assistance for Boy's Ashram Schools. In addition, the recurring expenses are handled by the State government and the Central Ministry provides 50 per cent funds for other non-recurring items like purchase of furniture, books, equipment, etc. (Guidelines of Ashram School, 2008). According to the Annual Report 2017 - 18 of the Ministry of Tribal Affairs, the Central Ministry has decided to discontinue the funding of Ashram Schools from 2018 - 19, due to the evaluation of the Project Appraisal Committee (PAC) regarding the fund allocation of ashram schools under SCA to TSS / Grants under Article 275 (1) of the constitution / by the State government from their own funds for tribal development.

Since 1997 - 98, the Central Ministry has started Ekalavya Model Residential Schools in the country for the purpose of providing quality education to the tribal children in middle and higher-level classes at par with the educational status of non-tribes. In addition, it also aimed at training the students in EMRS to get the best job opportunities in public and private sectors. The recurring and non-recurring costs of EMRS have been met by the Grants under the Article 275 (1) of the Constitution of India and the Special Central Assistance to Tribal Sub Schemes. The capacity of one EMRS is 480 students, started based on the pattern of Jawahar Navodaya Vidyalayas, Kendriya Vidyalayas etc. (EMRS guidelines, 2008 & 2010). For better performance and smooth functioning of these schools, the Central Ministry has published guidelines for EMRS in 2008 which was revised in 2010. As on 2017, the Central Ministry has sanctioned 271 EMRS, out of which 190 EMRS have been functional and

the others are under construction (MoTA, 2017).

Tribal education in Kerala

The State government has taken great initiatives for the educational attainment of the tribal children as part of the tribal development programmes and schemes such as Pre and Post-metric hostels for boys and girls, Model Residential Schools, stipend, etc. The main objective is to uplift the tribal communities like that of the mainstream society by providing better educational facilities to the tribal children and reduce the rate of dropouts among the tribal students.

As part of the Birth Centenary Celebration of Dr. Ambedkar, during the period 1989 - 90, the State government took the initiative to start two residential schools for tribal boys and girls in Wayanad and Thiruvananthapuram districts respectively (G.O. 23/2009/STDD). They constructed these school buildings with the support of 50 percent Central Assistance in order to start tribal residential schools across the country in accordance with the recommendations of policy makers (SPB, 2006). Since 1991, the State government has started 11 Model Residential Schools, 2 Ekalavya Model Residential Schools, 5 Ashram Schools and 2 CBSE Schools in Kerala under the Tribal Development Department (G.O. 107/2008).

The District Level Administrative Committee managed the Model Residential Schools in the State during the period 1990 - 95 (SPB, 2006). Later, the Kerala Ministry passed a Memorandum of Association in August 1995, regarding the establishment of Scheduled Castes/Scheduled Tribes Residential Educational Society for the administration of MRS. This society was registered with number 663/95 on 11 August 1995 under the Travancore Cochin Literary Scientific and Charitable Societies Act. In order to

ensure the smooth functioning of this, the Educational Society is entrusted with the power of administrative control over the functions of MRS in Kerala since 1996 (G.O. 24/95/SCSTDD). As per the by-laws, it has two governing bodies - State and District level- to look after the functions of MRS. At the State level, the Principal Secretary of Scheduled Castes and Scheduled Tribes Development Department act as the Chairman of the Educational Society. At the district level, the district collector acts as the chairman of the Executive Committee formed to ensure the swift functioning of the MRSs. In addition, the government suggested to start an Advisory Committee in all residential schools like pre and post-metric hostels for the functions of residential schools to become more transparent and democratic (G.O.112/2008).

Conclusion

From the First Five Year Plan onwards, the Central Ministry is implementing various tribal development activities for the upliftment of tribal communities all over the country. For that purpose, they have given primary concern to the tribal education and health sectors by executing various enhancement programmes like starting ashram schools, hostels, hospitals etc. In addition, based on the recommendations of National Education Policies, Dhebar Commission and Kothari commission, both the Central and State governments allotted funds in the budget plans for starting ashram schools in remote areas, pre and post-metric hostels, stipends and scholarship for higher education, formation of new curriculum for tribal schools, etc.

Along with the Central Ministry, State government has executed a lot of promotional activities for tribal education by allocating plan and non-plan funds as part of the annual budgets. However, various government reports shows that the rate of dropouts of tribal students is increasing in higher education when compared to other school going children.

III. Infrastructure of Model Residential Schools in Kerala

Infrastructure can be defined as the basic physical and organizational structures and facilities needed for the operation of a society or enterprise (Oxford Dictionary). The infrastructure of a school, especially in a residential school has an important role in moulding the educational status and profile of the present and future generation. A residential school is different from other schools in the sense that the students here are not only studying, but also co-exist i.e., staying in the same compound. The act of residing together beyond classroom hours has significant impact for management, the living environment, relationships and learning. The very act of residing and learning together along with an exposure to the rigorous academic environment and access to facilities for sports, science and the arts made possible by higher allocations and better infrastructure will help students achieve their educational goals.

A draft on National Education Policy 2019 is administered to regulate the education system in the country as a whole. According to this policy, each individual school will be resourced adequately for their basic functioning. School complexes can house shared facilities and equipment. In cases where these facilities cannot be provided

separately to each school, the audio-video systems with a portable generator can be taken around from school to school. Similarly, a secondary school may have a good laboratory, musical instruments and playgrounds with sports equipment that students from the pre-primary, primary and upper-primary schools in the complex may be given access to, on a regular basis.

During the last three decades, major emphasis has been given to improving school environment by different educational programmes like operation Black Board, DPEP, SSA, RMSA, etc. and it is a major factor for regular participation of students and finally resulting in the improvement of their learning. An attempt has also been made to provide adequate physical facilities, as per the needs of schools, as recommended by education policy in India, National Policy on Education (NPE) 1986. The policy has recognised that, 'unattractive school environment, unsatisfactory condition of buildings and insufficiency of infrastructural material function as de-motivating factors for children and their parents. According to this policy, primary schools have to be provided with at least two rooms for conducting the learning process. Further, Right To Education (RTE) Act 2009 has recommended that each

school should be equipped with 'All weather building consisting of at least one classroom for every teacher and an office-cum-store room-cum-Head teacher's room; barrier free access; separate toilets for boys and girls; safe and adequate drinking water facility to all children; a kitchen where mid-day meal is cooked in the school; playground arrangements by securing the school building with boundary wall or fencing'

But in the Kerala context, the tribal residential schools have been following Kerala Educational Rules (1959) for the construction of building and infrastructure facilities except two Ekalavya Model Residential Schools [EMRS] (KER 1959). There are separate guidelines for Ashram Model Residential Schools too. Ashram Schools also must follow either this guideline or State proposed guidelines. Therefore, Ashram Model Residential Schools in Kerala follow Kerala Educational Rules of 1959 in the case of establishment and maintenance of infrastructure.

Ekalavya Model Residential Schools with much greater financial allocations for physical infrastructure and other facilities have better norms than Kerala State Model Residential Schools and Ashram schools. Nevertheless, it is not necessary that allocations for Residential Schooling Strategies for developing these norms translate themselves into reality, and even when complied with, these do not inevitably produce an enabling environment for tribal students for better education infrastructure. Although no formal rating is available, some MRSs seem to stick to the norms to build infrastructure, as per the data and response by most of the key informants interviewed. But, it is not true of most Model Residential Schools in Kerala for Scheduled castes. Wide variations exist in norms and conditions for Model Residential Schools supported by

both State and Union governments.

The EMRS has its own proposed guidelines such as Revised Guidelines for setting up Ekalavya Model Residential Schools 2010, prepared by the Central Ministry which specifically mentions the building design and layout. The State Ministry is liable to follow this guideline in the case of construction and maintenance of building and infrastructure facilities.

Methodology Adopted For Ranking the MRS in Kerala

The data required for setting an index variable for the infrastructure of MRS were collected through a primary visit and the variables were selected as per the facilities available in each MRS. The school infrastructure data collected through the administration of a checklist contains listed questions about the overall infrastructure performance, its establishment and maintenance of the schools. Focused Group Discussions were conducted among students from each MRS, and personal interviews were conducted among teaching, non-teaching, administrative staff and hostel staff of MRS who were the main sources of primary qualitative data that details about the status of infrastructure among Model Residential Schools across Kerala.

The ranking of Model Residential Schools across Kerala was done by providing scores for each MRS according to their performance. The 13 attributes that were enlisted under infrastructure were:

- Basic infrastructure facilities at school
- Infrastructure facilities at classroom
- Academic infrastructure facilities
- Lab infrastructure facilities in high school
- Lab infrastructure facilities in Higher

Secondary School.

- Student’s amenities at school
- Teacher’s infrastructure facilities at school
- Drinking water facilities at school
- Student’s toilet facilities at school
- Hostel infrastructure facilities for students
- Student’s toilet facilities in hostels
- Facilities available in kitchen and dining hall.

- Concrete roof
- Nature of floor
- Nature of wall
- Location of the school
- Owned vehicle
- Availability of playground
- Availability of water
- Visiting rooms/ space
- Compound wall

With the support of different variables, these indices were prepared to assess the infrastructure status of each school. These main categories are sub-divided further into its sub-attributes to evaluate the status of exact infrastructure conditions prevalent in each MRS. Each attribute was ranked according to the status of these divided sub attributes and taking the average of the scores. In short, average of index variables is the deciding factor behind ranking.

School basic infrastructure

School infrastructure or academic infrastructure of Model Residential Schools plays an important role in evolving tribal education and moulding a productive younger generation. Having better school basic infrastructure is one of the primary needs and basic rights of the students in Model Residential Schools.

The rank of Model Residential Schools is prepared based on the average of the index value of the basic infrastructure facilities available in the schools. It includes facilities such as:

- A Minimum land Area of 7.5 Acres
- Ownership of land
- Ownership of building

Table 3.1

Ranking of school: Based on basic infrastructure facilities

Average value of variables	Rank	Name of MRS
1	1	MRS, Njaraneeli
0.93	2	MRS, Paravanadukkam
0.87	3	MRS, Kalppetta
0.87	3	MRS, Malambuzha
0.8	4	MRS, Munnar
0.8	4	MRS, Painav
0.8	4	MRS, Nilambur
0.8	4	MRS, Pookkode
0.8	4	MRS, Noolpuzha
0.73	5	MRS, Kattela
0.73	5	MRS, Kulathoppuzha
0.73	5	MRS, Vadasserikkara
0.73	5	MRS, Nalloornadu
0.73	5	MRS, Pattukam
0.73	5	MRS, Mukkali
0.67	6	MRS, Ettumanoor
0.6	6	MRS, Chalakkudi
0.47	7	MRS, Thirunelli
0.4	8	MRS, Kuttichal
0.4	8	MRS, Koraga

Source: Primary Data

Table 3.1 shows the ranking of MRSs in Kerala based on infrastructure facilities.

The result shows that the maximum and minimum value of the average of the index variables is placed in between 1 and 0.4 respectively. The dominant trend shows that almost all schools have above average score status in the matter of basic infrastructure facilities. Only three schools exhibit below average status in basic infrastructure facilities. Among 20 schools, MRS Njaraneeli has better basic infrastructure facilities followed by MRS Paravanadukkam, MRS Kalppetta and MRS Malampuzha. Being an English medium school, MRS Njaraneeli got special consideration in terms of financial allocation as well. It may be the reason for the better infrastructure in this school. The rank of MRS Thirunelli, Kuttichal and Koraga is placed below average of the maximum value such as 0.47 and 0.4. It is understood that these schools possess very poor basic infrastructure facilities when compared to other schools. Except last three schools in the table, other schools have more than half of the maximum value (1) and they possess moderate level of infrastructure facilities.

When compared to schools where students top the list of marks scored, MRS Koraga, Kuttichal and Thirunelli lack many of the relevant facilities. MRS Koraga and Kuttichal lack minimum land of 7.5 acres own land, buildings, vehicle, playground, water, rainwater harvesting techniques, visiting room and compound walls. MRS Thirunelli lacks minimum land requirement of 7.5 acres, availability of bus services, playground, rainwater harvesting facility and visiting room/ space.

Class Infrastructure Facilities at School

Class infrastructure comprises of facilities like individual sitting facilities and storage facilities like:

- Availability of individual sitting facilities
- Facility of almirah or shelf
- Facilities of writing boards
- Availability of lightning facilities and fan
- Proper ventilation
- Classroom announcement facility
- Availability of other furniture

Table 3.2 Ranking of school: Based on Classroom infrastructure facilities

Average value of variables	Rank	Name of MRS
1	1	MRS, Kattela
1	1	MRS, Njaraneeli
1	1	MRS, Kulathoopuzha
1	1	MRS, Ettumanoor
1	1	MRS, Kalppetta
1	1	MRS, Noolpuzha
1	1	MRS, Paravanadukkam
1	1	MRS, Malambuzha
1	1	MRS, Mukkali
0.86	2	MRS, Vadasserikkara
0.86	2	MRS, Munnar
0.86	2	MRS, Painav
0.86	2	MRS, Chalakkudi
0.86	2	MRS, Nilambur
0.86	2	MRS, Nallooradu
0.86	2	MRS, Pattukam
0.86	2	MRS, Koraga
0.71	3	MRS, Kuttichal
0.71	3	MRS, Pookkode
0.71	3	MRS, Thirunelli

Source: Primary Data

Table 3.2 indicates the rank given for classroom infrastructure facilities in the MRSs in the State. The rank is prepared based on the average value of the classroom infrastructure facilities available in the schools.

The table reveals that there is less difference between the maximum (1) and minimum (0.71) values in the average of index variables. It indicates that the schools are having slight differences in the possession of class room infrastructure facilities. Among 20 Model Residential Schools, the first 9 MRS have owned 100 per cent class infrastructure facilities at school. Compared to other schools, the least performers are MRS Kuttichel, Thirunelli and Pookkode. Even they do not hold much difference with other schools in terms of classroom infrastructure.

Academic Infrastructure Facilities in MRS

Academic infrastructure recognizes the importance of a good library, spacious classrooms, a large playground, well equipped laboratories and the positive reinforcement that can be given with the use of modern technological aids like the computer and audio- visual equipment. It is worth mentioning that as part of a new initiative of the Government, the high school classrooms are converted into smart classrooms with ICT facilities. Academic infrastructures of these 20 Model Residential Schools were evaluated based on the guidelines that are elaborately discussed and mentioned in chapter 4 of Kerala Educational Rules. The major variables used in the index are:

- Availability of ICT facilities
- Usage of ICT
- Availability of Science laboratory
- Usage of Science laboratory
- Availability of Computer laboratory

Table 3.3 Ranking of School: Based on Academic Infrastructure Facilities

Average value of variables	Rank	Name of MRS
1	1	MRS, Kattela
1	1	MRS, Ettumanoor
1	1	MRS, Kalppetta
1	1	MRS, Noolpuzha
1	1	MRS, Nalloornadu
1	1	MRS, Pattuvam
1	1	MRS, Paravanadukkam
0.88	2	MRS, Kulathooppuzha
0.88	2	MRS, Vadasserikkara
0.83	3	MRS, Njaraneeli
0.75	4	MRS, Painav
0.75	4	MRS, Pookkode
0.75	4	MRS, Thirunelli
0.63	5	MRS, Munnar
0.63	5	MRS, Chalakkudi
0.63	5	MRS, Nilambur
0.63	5	MRS, Malambuzha
0.63	5	MRS, Mukkali
0	6	MRS, Kuttichal
0	6	MRS, Koraga

Source: Primary Data

- Availability of Sathraposhini laboratory
- Availability of library facilities

Table 3.3 describes the ranks of the MRSs based on the academic infrastructure available in the schools. The data on the availability and usage of Information and Communication Technology, accessibility and usage of science laboratories, facilities of computer labs, library and Sasthraposhini lab and its use have been included in the preparation of the index of academic infrastructure. It is noted that the MRS Kuttichal and Koraga are functioning in a rented building and the academic facilities

are very limited. Moreover, these are primary schools and there are no laboratory or library facilities. It is noted that the maximum (1) and minimum (0.63) values of the average of the index variables have some differences. The dominant trend shows that except a few, almost all schools have secured good or above average rank for laboratory infrastructure.

MRS like Kuttichal and Koraga are newly established schools and lack academic infrastructure. The data shows that 100 percent academic infrastructure facilities are provided by MRSs at Kattela, Ettumanoor, Kalpetta, Noolppuzha, Nallooradu, Pattuvam and Paravanadukkam. They are closely followed by MRS Kulathuppuzha and Vadasserikkara (0.88) and Njaraneeli (0.83). MRS Munnar, Chalakkudi, Mukkali, Nilambur and Malambuzha are placed last in the list with 5th rank.

It is clear that those schools with ICT facilities, science and computer laboratory and Sasthraposhini laboratory and make use of it effectively and perform better than the other.

MRS Munnar and Pookode do not possess adequate ICT facilities compared to other MRSs. The infrastructure status of Pookode MRS and its deficiencies makes it less conducive for the students. The students commented about the library facilities of MRS Pookode as:

“We have books and library. As there is no facility to sit and read there, we take the books to the classrooms.”

MRS Koraga and Kuttichal lack almost all infrastructure except furniture. Being a new-sprung Model Residential School, infrastructure of MRS Koraga and Kuttichal are still in their initial stage. Almost all MRS facilitates laboratory and library infrastructure except MRS Kulathoopuzha,

Kuttichal and Koraga. MRS Kulathoopuzha has not succeeded in building sufficient infrastructure, even as it got upgraded to higher secondary school. MRS Pookode lacks ICT facilities due to the shortage in the number of smart classrooms.

Laboratory Infrastructure

Laboratory is an essential part of a school. According to KER, in higher secondary school the laboratory has to be equipped with primary lab facilities as also additional facilities to exhibit certain demonstrations to carry out prescribed experiments in the syllabus according to each specialization which requires laboratory facilities such as Bio-maths, Computer Science, etc. However, high school laboratories need only primary laboratory facilities to demonstrate, to test basic experimental substances and equipment which will help to develop a better clarity of ideas among the students. The ranking of the MRS on the ground of laboratory facilities was done based on certain criteria such as:

- Availability of lab facility
- Rooms for labs
- Availability of reasonable space
- Availability of chair
- Availability of table
- Availability of almirah
- Availability of light
- Availability of fan
- Water facility
- Washing area
- Facility for fire and safety
- First aid facility
- Ventilation facilities

Table 3.4 Ranking of School: Lab infrastructure facilities in High School

Average value of variables	Rank	Name of MRS
1	1	MRS, Painav
1	1	MRS, Paravanadukkam
0.92	2	MRS, Noolpuzha
0.92	2	MRS, Pattukam
0.92	2	MRS, Malambuzha
0.85	3	MRS, Nilambur
0.85	3	MRS, Kalpetta
0.85	3	MRS, Mukkali
0.77	4	MRS, Kattela
0.77	4	MRS, Njaraneeli
0.77	4	MRS, Vadasserikkara
0.77	4	MRS, Munnar
0.77	4	MRS, Chalakkudi
0.69	5	MRS, Ettumanoor
0.69	5	MRS, Nalloornadu
0.62	6	MRS, Kulathooppuzha
0.54	7	MRS, Pookkode
0.46	8	MRS, Thirunelli
0	9	MRS, Kuttichal
0	9	MRS, Koraga

Source: Primary Data

By analysing the dominant trend, most of them have attained above average status except three schools. The above table shows that MRS Painav and Paravanadukkam have the best of laboratory facilities in high schools by satisfying almost all criteria of laboratory infrastructure. The average value

of index variables of laboratory facilities in high school ranges from 1 to 0 among the 20 MRS of Kerala. Model Residential Schools like Malampuzha, Noolpuzha, Mukkali, Pattukam, Nilambur and Kalpetta also have good laboratory infrastructure. Among the MRS high school laboratory infrastructure status, schools in Kuttichal and Koraga are of poor status. This is because they are primary schools and are less practical oriented.

In MRS like Thirunelii and Pookode, the school lack reasonable space to accommodate essential equipment for the laboratory and primary facilities like chair, water, washing area and first aid facilities. The laboratory of MRS Pookode lacks primary facilities for it to be operational. Students opine that: "We don't have enough facilities in the science laboratory. The lab lacks samples for experiments."

MRS Vadasserikkara also faces such situation with regard to laboratory which makes science education without any practical knowledge. The comments of students substantiate the statement: "We have a Sasthraposhini lab (science enrichment lab), but we don't have exclusive lab staff. Teachers do all the works in the lab. There is no water availability in the lab. We fetch water in buckets to the laboratory."

The statements of students from MRS Pookode also validate the poor performance of facilities of MRS Pookode. They expressed their concern in these words - "There are no essential facilities in the lab; computers are less in the IT lab."

Table 3.5 Ranking of School: Lab infrastructure in Higher Secondary Schools

Average Higher Secondary School lab infrastructure	Rank	Name of MRS
0.92	1	MRS, Njaraneeli
0.85	2	MRS, Nalloornadu
0.85	2	MRS, Pattukam
0.85	2	MRS, Paravanadukkam
0.77	3	MRS, Kattela
0.77	3	MRS, Kalppetta
0.77	3	MRS, Noolpuzha
0.69	4	MRS, Chalakkudi
0.62	5	MRS, Kulathoopuzha

Source: Primary Data

Table 3.5 shows the ranking of lab infrastructure of Higher Secondary Sections in the MRS of Kerala. Only nine schools have higher secondary sections. The dominant trend reflects a positive wave that among them, MRS Njaraneeli exhibits comparatively better infrastructure. The average value of index variable of best performing schools is 0.92 and the least performing schools scored 0.62 average value and in other schools, average value range lies in between these values. MRS like Nalloornad, Pattuvam and Paravanadukkam have above average infrastructure. MRS Kulathoopuzha lacks reasonable space in the lab, water availability, wash area, fire and safety and, first aid measures inside lab.

Availability of Facilities for Co-Curricular Activities and Student Development at School

Infrastructure mentioned under the title of availability of facilities for co-curricular activities and student development at school are essential facilities that should be included in school infrastructure apart

from academic infrastructure. These are the basic amenities such as playground facilities, availability of multi-purpose court, availability of essential sports equipment, availability of store room facilities, dressing room, availability of school radio, stage facility, availability of open halls, facilities for conducting assembly and news reading hall.

Table 3.6 Ranking of Schools: Infrastructure of Students' amenities

Average value of index variables	Rank student's amenities in-frastructure	Name of MRS
1	1	MRS, Njaraneeli
1	1	MRS, Paravanadukkam
0.9	2	MRS, Kattela
0.9	2	MRS, Vadasserikkara
0.9	2	MRS, Painav
0.9	2	MRS, Nilambur
0.9	2	MRS, Nalloornadu
0.8	3	MRS, Kulathoopuzha
0.8	3	MRS, Pattukam
0.8	3	MRS, Malambuzha
0.8	3	MRS, Mukkali
0.7	4	MRS, Noolppuzha
0.7	4	MRS, Kalppetta
0.6	5	MRS, Chalakkudi
0.4	6	MRS, Pookkode
0.3	7	MRS, Ettumanoor
0.3	7	MRS, Munnar
0.2	8	MRS, Kuttichal
0.2	8	MRS, Thirunelli
0.1	9	MRS, Koraga

Source: Primary Data

Table 3.6 describes the rank of infrastructure related to student amenities at school. The average value of index variables of availability of facilities for co-curricular activities and student development at schools show vast difference between its maximum value of 1 of MRS Njaraneeli

and minimum value of 0.1 of MRS Koraga. While analyzing the ranking structure, MRS Njaraneeli and MRS Paravanadukkam exhibit good infrastructure. MRS Kattela, Vadasserikkara, Painav, Nilamboor and Nallornadu possess above average infrastructure related to availability of facilities for co-curricular activities and student development at school. But in the case of MRS Koraga the only facility that is provided is the availability of newspaper because it is mandatory for all schools. All other facilities enlisted in students' amenities category is completely absent in MRS Koraga. The scenario is not different in the case of MRS Kuttichal and Thirunelli. Both the schools lack all the facilities but they are slightly better than MRS Koraga. Newspaper is available in all schools. But in the case of playground and multipurpose court, the establishment of the ground according to their need and effective management is very poor.

Deficiency of space is the obstacle in establishing playing space in these MRS. Meanwhile MRS Munnar faces a different problem. The school lacks an indoor stadium which is inevitable in the special climatic context of Munnar. In the words of Physical Education teacher of MRS Munnar, "Due to the special weather condition of Munnar, the multi-purpose court is not practically functional. It usually rains half of the year, so it will be better if an indoor stadium and gymnasium are constructed so that the problem can be resolved. In the case of MRS Munnar, indoor stadium is the only solution.

Infrastructure for Teachers at Schools

Infrastructure for teachers are also important for the achievement of proposed objectives of effective education. Teachers have to acquire, update and nourish the knowledge and skills to carry out the process of teaching to aid the process of learning.

Table 3.7
Ranking of Schools:
Teacher's Infrastructure at school

Average value of index variables	Ranking of Teacher's infrastructure facilities at school	Name of MRS
1	1	MRS, Kattela
1	1	MRS, Njaraneeli
1	1	MRS, Kulathoppuzha
1	1	MRS, Painav
1	1	MRS, Chalakkudi
1	1	MRS, Nilambur
1	1	MRS, Noolpuzha
1	1	MRS, Nallooradu
1	1	MRS, Pattukam
1	1	MRS, Paravanadukkam
1	1	MRS, Koraga
1	1	MRS, Malambuzha
1	1	MRS, Mukkali
0.75	2	MRS, Vadasserikkara
0.75	2	MRS, Munnar
0.75	2	MRS, Kalpetta
0.5	3	MRS, Kuttichal
0.5	3	MRS, Ettumanoor
0.5	3	MRS, Pookkode
0.5	3	MRS, Thirunelli

Source: Primary Data

The variables considered to evaluate the teachers' infrastructure in the schools are availability of separate staff rooms, individual furniture for each teacher, availability of toilets specified for teaching staff and availability of residential facilities. Table

3.7 explains that, except a few schools, all the other schools provide the best or above average infrastructure for the teachers.

MRS Kattela, Njaraneeli, Kulathoopuzha, Painav, Chalakkudy, Nilamboor, Noolpuzha, Nalloornadu, Pattuvam, Paravanadukkam, Koraga, Malampuzha and Mukkali schools exhibit good teachers' infrastructure.

Kutiichal, Ettumanoor, Pookode and Thirunelli MRS show average infrastructure in teachers' infrastructure. MRS Vadasserikkara and Munnar have moderate level infrastructure. But the most relevant thing is that MRSs in Kuttichal, Vadasserikkara, Ettumanoor, Pookode and Thirunelli do not have residential infrastructure for teachers. MRS Kulathoopuzha lacks basic amenities in their residential space provided for teachers.

When compared to best performing schools, average performing schools like Kuttichal, Ettumanoor, Pookode and Thirunelli MRS lack residential facilities and availability of furniture. At the same time, 13 Model Residential Schools have all essential facilities as compared to other schools.

Facilities for Availing Drinking Water in Model Residential Schools

Facilities for availing drinking water in Model Residential Schools were evaluated based on certain variables such as:

- Availability of drinking water facilities at school
- Distance between class room and source of drinking water
- Nature of drinking water
- Availability of filter facilities
- Availability of water filters

Table 3.8 Ranking of School: Health Infrastructure facilities at school

Average value of index variables	Ranking of health infrastructure	Name of MRS
1	1	MRS, Njaraneeli
1	1	MRS, Kalpetta
1	1	MRS, Noolpuzha
1	1	MRS, Paravanadukkam
1	1	MRS, Malambuzha
0.8	2	MRS, Kattela
0.8	2	MRS, Ettumanoor
0.8	2	MRS, Chalakkudi
0.8	2	MRS, Pookode
0.8	2	MRS, Thirunelli
0.8	2	MRS, Mukkali
0.6	3	MRS, Kuttichal
0.6	3	MRS, Kulathoopuzha
0.6	3	MRS, Vadasserikkara
0.6	3	MRS, Painav
0.6	3	MRS, Nilambur
0.4	4	MRS, Munnar
0.4	4	MRS, Nalloornadu
0.4	4	MRS, Pattukam
0.4	4	MRS, Koraga

Source: Primary data

Table 3.8 describes the status of facilities for availing drinking water present in Model Residential Schools in Kerala. The dominant trend reflects that most of the schools have achieved above average score in attaining adequate health infrastructure except four. Model Residential Schools like Njaraneeli, Kalpetta, Paravanadukkam and Malambuzha have comparatively better drinking water facilities, whereas, Munnar, Nalloornadu, Pattukam and Koraga possess below

average status. While comparing the best performing schools with the least performing schools, the MRS in Munnar, Nalloornadu, Pattukam and Koraga lack certain criteria such as distance between classroom and source of drinking water (below 15 metres), availability of filtered water, functioning of filter, etc. During the field work it was noticed that two schools such as Vadasserikkara and Kulathoopuzha are facing acute water scarcity and is purchasing water from outside. It is figured that MRS Kulathoopuzha is spending a large amount of money on that. A small portion of this unwanted expenditure can be avoided by well recharging and rain water harvesting.

Students Toilet Facilities

The student's ability to learn may be affected by inadequate water, sanitation and hygiene of toilets in several ways. Girls and boys are likely to be getting affected differently by inadequate water, sanitation and hygiene in schools, and this may contribute to unequal learning opportunities. Sometimes, girls and female teachers are affected greater than boys because the lack of sanitary facilities stops them from attending schools during menstruation. There are high level risks of transmission of communicable disease at the Model Residential Schools, because of community dining, sleeping, sanitation and hygiene in boarding schools unless adequate water, sanitation and hygiene facilities are provided for all children.

Table 3.9 Ranking of School: Students' toilet facilities at school

Average value of index variables	Ranking of students toilet facilities at school	Name of MRS
1	1	MRS, Kattela
1	1	MRS, Njaraneeli
1	1	MRS, Painav
1	1	MRS, Chalakkudi
1	1	MRS, Kalpetta
1	1	MRS, Noolpuzha
1	1	MRS, Nalloornadu
1	1	MRS, Thirunelli
1	1	MRS, Paravanadukkam
1	1	MRS, Koraga
0.8	2	MRS, Ettumanoor
0.8	2	MRS, Pattukam
0.8	2	MRS, Mukkali
0.6	3	MRS, Kuttichal
0.6	3	MRS, Munnar
0.6	3	MRS, Pookkode
0.6	3	MRS, Malambuzha
0.4	4	MRS, Vadasserikkara
0.4	4	MRS, Nilambur
0	5	MRS, Kulathoopuzha

Source: Primary Data

Table 3.9 reveals the ranking of MRS on the basis of student's toilet facilities. Students toilet facilities at school evaluates certain attributes like the toilet facilities, availability of water, ventilation or light, waste disposal facility and the availability of buckets and mugs.

According to table 3.9, most of the schools exhibit above average performance and three out of twenty schools show a deviant trend by lacking essential toilet and sanitation facilities. MRS Painav, Kattela, Njaraneeli, Chalakkudi, Kalpetta, Noolpuzha, Nalloornadu, Thirunelli,

Paravanadukkam and Koraga exhibit decent sanitation and toilet facilities. Among the MRSs, Kulathupuzha dissatisfies almost all essential facilities in the case of toilet and sanitation. It could be inferred that the poor management of toilet and ineffective water management are the main reasons for the poor status of toilet facility at this school. MRS Vadasserikkara and Nilambur also face water scarcity. In the case of Vadasserikkara MRS, most of the toilets are damaged creating difficulties for the students.

In the residential schools like MRS, toilet and hygiene is an essential and the most important requirement. Table 3.10 explains the ranking status of toilet and sanitation facilities available in hostel buildings of all the MRSs.

For the purpose of this evaluation, the criteria followed to create the ranking of toilet facilities in the hostels are as follows:

- Availability of toilets
- Availability of bathrooms
- Availability of light
- Availability of space in toilets
- Availability of water in toilets
- Cleanliness of toilets
- Availability space in bathroom
- Availability of water in bathroom
- Cleanliness of bathroom

**Table 3.10 Ranking of School:
Students toilet facilities at hostel**

Average value of index variables	Ranking of hostel toilet facilities	Name of MRS
1	1	MRS, Chalakkudi
0.89	2	MRS, Koraga
0.78	3	MRS, Kattela
0.78	3	MRS, Njaraneeli
0.78	3	MRS, Painav
0.78	3	MRS, Nilambur
0.78	3	MRS, Pattukam
0.78	3	MRS, Paravanadukkam
0.78	3	MRS, Mukkali
0.78	3	MRS, Ettumanoor
0.67	4	MRS, Kalppetta
0.67	4	MRS, Malambuzha
0.56	5	MRS, Noolpuzha
0.44	6	MRS, Pookkode
0.44	6	MRS, Nalloornadu
0.44	6	MRS, Thirunelli
0.33	7	MRS, Munnar
0.22	8	MRS, Vadasserikkara
0.11	9	MRS, Kuttichal
0	10	MRS, Kulathoopuzha

Source: Primary Data

The average index of the table shows an entire range of 0 to 1 numeric value. As per the general trend of the table, the majority of the schools show above average rank when it comes to toilet facilities available in hostels. MRS Chalakkudi tops the list. They have maintained good toilet and bathroom facilities for the hostel inmates. MRS Koraga too has maintained good toilet facilities, even though it is a newly sprung school. Eight out of twenty MRS such as Mukkali, Pattuvam, Paravanadukam, Nilambur, Painav, Ettumanoor, Njaraneeli and Kattela possess moderate toilet infrastructure in the hostels. The status of toilet and sanitation facilities in Kulathoopuzha School seems to be poor. Kulathoopuzha could not satisfy any of the criteria enlisted in the index table.

When the best performing schools are compared to the other schools, MRS Nilambur, Mukkali and Pookode do not have a proportionate number of toilets and bathroom facilities since it is overpopulated as per the existing infrastructure of the hostels.

Hostel Infrastructure in MRS

The hostels of Model Residential Schools are literally the second home for the students. The absolute necessities that are included in hostel infrastructure verified through the checklist are:

- Nature of ownership of building
- Nature of roof
- Nature of floor
- Nature of wall
- Availability of room
- Availability of dormitory
- Number of students in a room
- Number of students in a dormitory
- Availability of table
- Availability of chair
- Availability of fan
- Availability of bedstead
- Availability of Foam bed
- Ventilation facilities
- Availability of T.V
- Availability of study room

Table 3.11 shows the ranking of MRS based on the infrastructure facilities available in students' hostels. By analysing the status of the hostel infrastructure of Model Residential Schools in Kerala, the average index variable obtained during the evaluation ranges from 0.6 to 1. From this table it is clear that all

**Table 3.11 Ranking of School:
Hostel infrastructure facilities**

Average value of index variables	Ranking of hostel infrastructure	Name of MRS
1	1	MRS, Painav
1	1	MRS, Kalpetta
0.94	2	MRS, Noolpuzha
0.93	3	MRS, Pookode
0.88	4	MRS, Kattela
0.88	4	MRS, Njaraneeli
0.88	4	MRS, Paravanadukkam
0.81	5	MRS, Munnar
0.81	5	MRS, Nilambur
0.81	5	MRS, Malambuzha
0.79	6	MRS, Kuttichal
0.79	6	MRS, Ettumanoor
0.79	6	MRS, Thirunelli
0.75	7	MRS, Vadasserikkara
0.75	7	MRS, Nalloornadu
0.71	8	MRS, Pattukam
0.69	9	MRS, Kulathooppuzha
0.69	9	MRS, Chalakkudi
0.64	10	MRS, Mukkali
0.6	11	MRS, Koraga

Source: Primary Data

schools have attained above average hostel infrastructure.

MRS Painav and MRS Kalpetta have better hostel infrastructure by addressing almost all facilities required for a hostel. However, the facilities of other schools vary slightly from that of the above-mentioned. Comparatively, poor hostel infrastructure prevails in MRS Koraga. The MRS Koraga shows a lacuna in establishing basic

infrastructure as it is a newly sprung one. MRS Mukkali and Kulathoopuzha also exhibit poor infrastructure due to the ineffective infrastructure management of hostel building and related amenities. MRS Mukkali, Pookode, Kuttichal and Nilambur are over populated for the existing infrastructure in the hostel building. Hostels of higher secondary schools are overpopulated due to the recent upgradation to the higher secondary level. MRS Kulathoopuzha has poor infrastructure and many of the facilities remain unused.

The data indicate that even if many schools have good hostel infrastructure, it is not backed with adequate furnishing or other tools for effective learning environment. Students from MRS Njaraneeli responded about their study room as: "We have a study room, but there are no tables or other necessary infrastructure in the room."

Kaniyampatta, Njaraneeli and Kulathupuzha MRS provides study rooms only for 10th and 12th standard students and others cannot avail this service. A teacher of MRS Kulathoopuzha expressed: "Students have a study hall, but there is no essential infrastructure or resources for its smooth functioning. There is no ample lighting, and the hall is not spacious enough to accommodate all the students at a time."

Most of the students leave their study materials and bags in classrooms because of the shortage of space. Students too expressed their opinion. The students from MRS Njaraneeli and MRS Vadasserikkara opined about the non-availability of study space and storage space, as follows: "Our books and other kinds of stuff are stockpiled in the shelves at the school."

The overall data regarding the facilities of hostel indicate that, contrary to school facilities, many hostels lack proper facilities,

particularly space. This is visible, especially in the case of schools which have upgraded from high school to higher secondary level. The majority of the schools lack proper study room facilities and other basic amenities for studying. This underscores the relevance of expanding hostel facilities where the higher secondary batches have been started. Such an expansion is also needed in the case of study rooms. These schools should be able to provide a dignified living environment and sufficient space, particularly in the hostels.

It is also noted that many health issues related to hygiene are manifested in the schools. Many of the hostellers indicated that they do not have specific areas for drying clothes. This in turn forces them to wear wet clothes, particularly undergarments. It is observed that this leads to several dermatological issues which are contagious too.

The uncleanliness of hostel and toilets also lead to several health issues. It is noted during the fieldwork that hostel and toilets are not kept clean in most of the schools. The staff pattern of MRS indicates that there are a proportionate number of cleaning staff; some are full time while others are part time cleaning staff. However, it is baffling to note that the cleaning tasks are assigned to students. This highlights the need of cleaning protocols and monitoring mechanisms.

It is also worth mentioning that gender sensitive or girl student's friendly systems are needed in the hostels where they stay for a long time. The facilities for supply and processing the sanitary napkins such as napkin vending machines and incinerators are needed in the hostels.

Kitchen and Dining Hall Facilities

Kitchen and dining halls are meant to ensure that every student consumes a balanced

diet. Certain variables used to assess the kitchen and dining hall facilities at the MRS include:

- Water availability
- Cleanliness of kitchen
- Availability of store room
- Area of serving food
- Availability of dining hall
- Availability of furniture in dining hall
- Availability of light in dining hall
- Area of dining hall
- Waste management facility

According to table 3.12, the average of index variable value ranges from 0.18 to 1. Except Kuttichel, all other schools score above average points in the ranking of kitchen and dining facilities available in the hostels. MRS Njaraneeli and Malambuzha have better kitchen and dining hall infrastructure compared to others.

Schools in MRS Painav, Chalakkudi, Nilambur, Vadasseikkara, Ettumanoor, Munnar, Noolpuzha, Pattuvam, Paravanadukkam and Koraga have good infrastructure. Most of the schools lack proper waste management system in the kitchen and dining hall. The worst school of it all in facilities pertaining to the kitchen and dining hall is MRS Kuttichal.

While comparing the best performing Model Residential Schools, it was found that MRS Kuttichal lags in terms of adequate space for dining hall, waste management and in facilitating basic amenities such as table, chair, cleanliness etc.

Table 3.12 Ranking of School:

Facilities available in Kitchen and dining hall

Average value of index variables	Ranking of kitchen and dining hall facilities	Name of MRS
1	1	MRS, Njaraneeli
1	1	MRS, Malambuzha
0.89	2	MRS, Painav
0.89	2	MRS, Chalakkudi
0.89	2	MRS, Nilambur
0.78	3	MRS, Vadasserikkara
0.78	3	MRS, Ettumanoor
0.78	3	MRS, Munnar
0.78	3	MRS, Noolpuzha
0.78	3	MRS, Pattukam
0.78	3	MRS, Paravanadukkam
0.78	3	MRS, Koraga
0.67	4	MRS, Kattela
0.67	4	MRS, Kulathoopuzha
0.67	4	MRS, Kalpetta
0.67	4	MRS, Pookkode
0.67	4	MRS, Nalloornadu
0.67	4	MRS, Mukkali
0.56	5	MRS, Thirunelli
0.18	5	MRS, Kuttichal

Source: Primary Data

MRS Kalpetta- Better infrastructure for better performances

MRS Kalpetta is a girls Model Residential School in Wayanad. This school is endowed with good infrastructure which has a prominent role in the better performance of students. School holds better hostel facilities to the students and most of the classrooms are smart class rooms. They have a modern kitchen with all equipment and spacious dining halls with sufficient furniture.

The students are provided with adequate facilities for sports and athletics. They have a good indoor stadium, open stage and a multi-purpose court with high standards. A synthetic athletic track is also under construction. All these facilities provide opportunities to the students for better practice and performance in sports and games. The involvement of the elected representative such as Member of Legislative Assembly in the welfare and other activities of the school is noteworthy.

Analysis of Overall Performance in terms of Infrastructure

The analysis of the status of infrastructure in Model Residential Schools evaluates their overall performance of in establishing and maintaining essential infrastructure facilities in schools, hostel building and other amenities. Analysing the infrastructure in a totalitarian approach, MRS Njaraneeli is rated as the best school among the schools as it meets the concerned criteria enlisted in the checklist.

MRS Njaraneeli, Paravanadukkam, Kattela, Kalpetta and Painav are the best performing schools after the evaluation of overall infrastructure of MRS. They lag only a little bit in aspects such as toilet facilities at the hostel, infrastructure of the hostel in MRS, academic infrastructure, etc.

Findings and Summary

The following are the findings arrived at from the above observations:

1. The study indicates that the majority of the schools possess good basic infrastructure facilities such as ownership of building, area of land, etc.
2. Being an English medium school, special pumping of money from different Government sources have contributed in the outstanding performance in the Njaraneeli School in maintaining the infrastructure.
3. Two schools, (Kuttichal and Koraga MRS) are not functioning in own land and the schools do not have proper buildings. They function in rented buildings. It is also worth mentioning that the new land identified for MRS Thirunelli is situated in a disaster-prone area, which needs to be relocated.
4. Nine out of twenty schools possess better classroom infrastructure facilities, whereas the quality of infrastructure in three schools is comparatively poor. At the same time, some schools which envisaged special categories (PVTG), like MRS Nilambur faces a deficit of classroom infrastructure. The rule of uncontrolled admission is the reason for this trend. Hence, some special assistance to build classroom infrastructure is needed in such cases. The overpopulation of Nilambur School can be solved by starting another school in this region by considering the number of potential students in the area.
5. The other category of schools which have felt limitations in classroom infrastructure are the schools that were upgraded from high school to higher secondary level. It is also noted that there is no long-term plan regarding the expansion of the building and initiation of courses. A long term plan to ensure adequate facilities is needed before allotting additional courses.
6. The majority of schools possess good academic infrastructure, whereas five out of twenty of them still lag behind in this aspect. It is noted that even if the schools have infrastructure,

many of them remain unused, which acts as an impediment in anticipating better academic outputs. This is highly reflected in the case of labs, ICT facilities and use of libraries.

7. The majority of the schools face the issue of dearth for reading space in the libraries. The absence of special library staff also is a hurdle in efficient use of library at least in some schools.
8. The general trend of higher secondary labs is satisfactory. However, some schools like Kulathuppuzha and Mukkali face deficiency of labs at the higher secondary level. The initial class 12 batches had to complete their courses without proper laboratory facilities for last two years. Some schools lack sufficient space in the labs and most of the schools have to address the issue of the deficiency specific to necessary equipment in the lab.
9. The experience from the study indicates that the tribal students perform well in sports and arts. Many schools attempted to provide special coaching and infrastructure to the students. Studies indicate that the nurturing of sports and arts in students can even contribute to a greater level of employability in these sectors. However, such a concerted approach to provide special facilities in each school by realising the contributions of the students is missing.
10. Notwithstanding the fact that MRSs are envisaged as residential schools, even now, four out of twenty do not have residential facilities for teachers, and one school faces limitation in residential infrastructure for teachers. A residential school may be considered residential only if the teachers stay along with the students. However, the absence of residences for teachers makes the vision go meaningless.
11. Majority of the schools face seasonal scarcity of water during summer. This leads to the need to create a special system like that of rainwater harvesting and recharging of wells. It was noted during the study that, schools like Kulathoopuzha spend considerably on purchase of water. It highlights the absence of proper water management in the school.
12. Majority of the schools do have proper toilet facilities except a few. At the same time, they have largely failed to ensure the proportionate number of toilets, both in the hostels and the schools. The performance of MRS Chalakkudy that has a proportionate number of toilets is worth mentioning.
13. The overall study indicates that majority of the high school possess better hostel infrastructure except the schools which were upgraded to higher secondary schools with the exception of Koraga and Kuttichal schools. However, the schools upgraded to higher secondary level are specifically facing the dearth of hostel facilities. Schools like MRS Kattela, MRS Mukkali and MRS Nilambur are examples of the dearth in hostel facilities. The majority of the schools face a lacuna of study spaces in the hostels. It is noted that these spaces are limited to 10th and 12th standard students. The dearth of study space in hostel forces the students to spend most of the time in the classroom, even after school time. This could be even considered as a negation of

providing dignified environment for the students.

14. It is alarming to note that toilets in most schools are cleaned by students even if sufficient number of cleaning staff are available. This indicates the need of a cleaning protocol and its regular monitoring. The lack of cleanliness of toilets in schools would also lead to many health issues among students.
15. Girl friendly toilets with sanitary napkin vending machines, and incinerators are missing in most of the schools.
16. Waste management systems are absent in most of the schools.
17. Majority of the hostels lack washing and drying areas which leads to many dermatological issues to the students.
18. Overall, the evaluation of infrastructure indicates that MRS Njaraneeli, MRS Paravanadukkam, MRS Kattela, MRS Kalpetta and MRS Painav are best performing schools, and MRS Kuttichal, MRS Thirunelli, MRS Munnar and MRS Kulathuppuzha perform poorly.

The overall performance of schools in relation to infrastructure provides a satisfactory picture. Two schools function in rented land and building. Long-term infrastructure development plan is missing in the majority of schools, which creates difficulties for students while new courses are allotted and this is highly reflected in the case of hostel infrastructure. The overpopulation of some PVTG schools like Nilambur points out the necessity of either expanding the infrastructure with a long-term approach or starting additional school in the region. Though tribal students perform

exemplarily well in sports and fine arts, they are not receiving the support they rightfully deserve.

Recommendations

- A long-term infrastructure master plan would be advisable in all the schools visualizing the expansion potential of the school at least for the next two decades. The possibilities of allotting class 12 batches and basic facilities needed for co-curricular activities also could be considered. The master plan must seriously address schools to be inclusive in terms of girl students and for children with disabilities. Potential explorations in ICT need to be brought into the master plan.
- There should be a reasonable gap between the allotment of Class 12 batches and starting of classes. A gap of two years would be advisable in this context. Sufficient funds to create infrastructure needs to be allotted along with the sanctioning of batches. This would enable them to establish basic infrastructure needed for additional intake of students.
- Special assistance to all schools in developing their basic infrastructure for facilitating co-curricular activities are relevant. This can be done by considering the best performing areas of the schools in arts and sports activities.
- A common guideline is necessary by compiling the provisions of EMRS and KER rules regarding the infrastructure of the schools. Common standards should be ensured for all the MRSs.

IV. Well-being of Students in Model Residential Schools

Introduction

The word wellbeing can be literally defined as 'the state of feeling healthy and happy' (Cambridge Dictionary). In broad terms, wellbeing can be described as the quality of a person's life. It needs to be considered in relation to how we feel and function across the several areas in which our cognitive, emotional, social, physical and spiritual wellbeing is reflected. The concepts on the well-being of adult, adolescent and children are entirely different from one another. In the case of adolescents and children, their academic excellence has been closely linked with the wellbeing of the family and educational institutions. The model of school well-being is mainly categorised as the conditions of the school (school organisation and punishments), social interactions (student-teacher relationship, peer group interactions), means of self-fulfilment (value of student work) and health status (Konu in Tobia *et.al*, 2018). The academic culture and the welfare facilities of residential and non-residential schools are entirely different. When compared to the day scholars, the students in the residential schools stay far away from their relational assets like home, friends, etc.,

and spend more time with their teachers and other school staff during the entire academic period (Martin *et.al*, 2014). Thus, the residential school authorities are more responsible to provide adequate welfare facilities to their students.

The students of MRS have been living under the same environment throughout the entire school period. Moreover, there are strong associations between the wellbeing of the students and their academic excellence. So, the evaluative study of MRS focus on the welfare schemes in the hostels and schools. The chapter deals with the analysis of well-being facilities available in the Model Residential Schools. This is prepared based on the support of primary and secondary data. For gathering information, we used various tools such as Checklist for 20 MRS, Focus Group Discussion and Personal interviews with various stakeholders in the selected 10 residential schools. This mainly included the information regarding the healthcare facilities, emotional care and support, production and supply of food and quality of services and amenities. Each of the factors is discussed in detail and sub classified under different heads.

Emotional Care and Support

The social and emotional health is an intrinsic part of the overall health and well-being of children and adolescents. This includes the building of positive relationships in such a way as to express and experience the feelings and the capacity of managing challenging situations. If a child possesses a healthy mental state, he or she is more likely to go to school, study the lessons regularly, make a better relationship with others, etc. But, a child with poor mental health is always backward in academic performance, showing destructive tendencies etc. (NHPS, 2009).

Interaction with Teachers

On an average, students spend 7751 h with their teachers during their primary to secondary education (Organization for Economic Co-operation and Development, 2013). With many hours of instruction and interaction, teachers help students obtain academic knowledge and skill. Providing emotional support is one aspect through which teachers can impact the student's well-being (Buyse *et al.*, 2009), and academic engagement (Skinner *et al.*, 2009). In the case of Model Residential Schools, students not only interact with their teachers, but also mingle with other non-teaching staff. It is observed in the field that the students have more intimacy with teachers and staff who take care of co-curricular activities like, physical education, music, drawing, etc.

In the Focus Group Discussion, a 9th standard student from MRS Mukkali commented, "We like our music teacher the most; she is truly jovial with us".

A plus one student from MRS Paravanadukam commented, "We are not able to share our personal matters with teachers, we were attached with our NSS programme coordinator, but he went on leave".

Another student in 9th class from MRS Kalapetta stated, "Our drawing sir is superb. He takes us out for programmes and he is very friendly".

The above comments throw light on pertinent questions such as, why the students are more interested in mingling with co-curricular teachers rather than the teachers handling particular subjects in the classrooms. It is evident that, this happens not only because of students' interest in the subject, but because of the nature of the subject which opens possibilities for an interactive space.

The teachers' involvement is crucial in satisfying the emotional needs of students as a reliable support. This refers to the quality of interpersonal relations with students and is manifested through teachers providing time to care for the students, express positive feelings for the children and being flexible to their needs. The study suggests that teachers' involvement seems to be the strongest predictor of students' academic engagement (Furrer and Skinner 2003; Skinner and Belmont 1993).

A student from MRS Kalapetta opined, "Teachers should be friendlier, some teachers are not friendly, they are very serious in the class."

Another student from MRS Kulathuppuzha stated "Personal matters cannot be discussed with teachers. They will discuss this in the staff room and when we later go there alone, we feel like getting teased by them".

The above mentioned are some examples of students' feeling about the teachers, and it is evident that the student-teacher relationship amongst them is not satisfactory. From the field observations, we found that there are some exceptions to these tendencies. However, the study indicates that the

student-teacher relationships in the majority of the MRS are not satisfactory.

Since the permanent teachers are appointed from education department, they would have to be trained on the issues related to the education of tribal students and the tribal culture. Presently, these trainings are limited to one week which is not followed by the refresher trainings. It is also significant that temporary teachers do not get any kind of induction training and follow up training. The teachers are sometimes less sensitive about the emotions and feelings of the tribal students due to lack of proper training. It is also noted that some teachers exhibit aversion to attend external trainings. This underscores the relevance of mandatory provisions to make them attend training in order to continue in the service. To improve the student-teacher relationship, teachers should be trained and made aware of tribal culture and context. (The experience from the States of Chhattisgarh emphasise the need to initiate special training programmes for teachers in tribal schools to make them more sensitive towards the issues of students. This pattern can be followed in Kerala).

Interaction between Students and Non-teaching Staff

The age at which students are to be enrolled in a Model Residential School especially in an Ashram school is five years and they have to stay in the school up to the age of 17. The students will undergo physical and mental transition from childhood to early adolescence during this period. Since they are staying away from home, they do not get any parental care and support to adapt to the changing life situations. This creates many kinds of issues relating to adjusting to their hostel life. Hence, the role of care-takers and non-teaching staff of MRS in moulding the children is extremely important.

As per the guidelines of MRS, the senior superintendent, manager and office assistant are responsible for the operation of the boarding school compound and the safety of its students, but generally do not have daily direct contact with the students. Apart from the administrative staff, Ayahs, Counsellors, and MCRT act as parent-surrogates and also intend to provide emotional care and support to the students. They are also expected to conduct close supervision of their daily activities. The Nurse is in-charge of all medical care, including dispensing routine medication, immediate triage of injuries, determining the need for physician referral, daily consultation for health concerns, monitoring health status (e.g., height, weight, blood pressure) and providing vaccinations. During the field study, it was noted that the post of nurse is limited to girls' only schools and mixed schools. Their service is not available to the boys' schools. Counsellors are appointed in the schools for guiding them on emotional grounds and to ensure therapy for the needy students.

From the field information it was also noted that in many places the relationship between students and non-teaching staff was not cordial and productive.

MCRT from MRS Vadasserikkara commented "Children are rebellious, some of them have restrictive or deviant characteristics and also behavioural disorders. If there arise any problems related to food, they protest. We cannot control the grown up students by shouting or lashing them. They have a tendency to oppose whatever is proposed by the authority. Students in smaller classes alone can be controlled by beating."

A 9th standard student from MRS Mukkali stated, "If we say we are not well, hot water and needed food are served in our room through our friends by our ayah".

Ayah of MRS Paravanadukkam expressed

“I have been working here for many years. Children share their personal matters and also their family issues with me. They consider me as their own mother”. The above comments indicate that there are mixed responses from students and non-teaching staff regarding their relationship with each other. The relationship with non-teaching staff is one of the important factors that determine the students’ well-being.

At the same time, it is noted that the female ayahs in boys’ only schools often have to undergo difficult situations while dealing with students. This trend is particularly visible in the case of higher secondary schools. Since, MRS students spent their entire school period within the school environment, all the non-teaching staff should be trained and made to take care of students’ matters professionally.

The field study indicates that there are different factors influencing the relationship between non-teaching staff and students. Many of the staff, particularly, ayah, counsellor and MCRT have raised complaints about their workload. The student-staff proportion, particularly in the case of Ayah is presently high which makes it impractical to provide individual attention to the students. Ayah from Njaraneeli School commented “Our workload is too high. Our work starts from morning 6 and extends up to 11 at night. The field data shows that every Ayah has to take care of 100 or more students in almost all the schools. These issues aggravate in Ashram schools where the children join when they are in their class I. It is also noted that the emoluments paid to the ayahs appointed on contract basis are too low while their workload is high.

There is no permanent post for students’ counsellors in MRS. Many of them who are appointed in MRS have additional charges along with their responsibilities in the pre

and post metric hostels. Technically, MCRT post is a sanctioned permanent post. The field observations indicate that there are permanent MCRTs only in one school out of 20 Model Residential Schools. Many administrative heads commented that MCRTs who are recruited from Education Department on ‘Addition to Cadre’ basis is not willing to work at residential schools for a long time. APO, Attappady commented “The post of the MCRT is permanent in MRS, they are considered as high school assistant”. This highlights the need for a special recruitment drive for the post of MCRT in tribal schools. It is worth mentioning that nurses work on contract basis and their salary structure is too low. This in turn affects the job satisfaction and quality of services of nurses. The above-mentioned factors influence the job performances of non-teaching staff, which has direct implications on the relationship between the students and non-teaching staff. Hence, it is indispensable to address these issues in order to ensure better student-staff relationship.

Parents and Teacher’s Relationship

The field observations indicate that parents of MRS do not frequently visit the schools. The reasons such as geographical isolation of tribal settlements, lack of availability of MRS schools in the nearest locations, poor financial conditions of the family and educational backwardness of parents affect the frequency of parents’ visits to the MRS. One of the students from MRS Kulathuppuzha stated “PTA meetings happen regularly on the 3rd Saturday of every month. Parents do not come to the meeting as the schools are far away and because of financial constraints. Moreover, they go to work every day/ they are daily wage labourers. Most of our parents are illiterate. They are scared of interacting with outsiders.

So, they don't travel long distances." There were wider comments about the distance from the settlements to the schools.

The Superintendent of MRS Vadasserikara commented "We have established good rapport with the parents. But, parents from far off places very rarely visit the school. So PTA and general body meetings are generally conducted in times of emergencies, Onam vacation and Christmas vacation. In addition to this, PTA meetings are conducted for each class and they are more effective. This helps the parents to meet each teacher separately and evaluate the performance of their children.

The field data shows that parents are more concerned about health, security, food and other facilities available to their children in MRS. Majority of the parents are scarcely educated and have poor knowledge about the academic matters of their children. Parents' education and knowledge level might be the hindering factors behind their poor intervention into the academic matters of the students. It is noticeable that many of the tribal students except the students from the advanced communities such as Malayarayar, Kurichyar, Kani, Kurumar, etc. are either first- or second-generation learners. Hence, this might be restricting the capabilities of the parents in making active involvement in the academic activities of the schools. Maintaining a good parent teacher relationship is an inevitable factor in ensuring quality education to the children. But parents face difficulties to reach the school. Thus, the school management has to start innovative practices to make relationship with parents such as Corner PTAs at students' catchment areas, passing the information through the online groups of parents, etc. The WhatsApp group of parents and school management in MRS Paravanadukkam is a successful movement

and may be a replicable model in this regard.

Peer Group Interactions

By taking part in peer group interactions, children are able to develop and balance skills that are essential for the maintenance of effective group functioning. Group participation allows children to acquire skills to engage in cooperative activity aimed at mutual rather than individual benefits (Rubin, Bukowsky & Bowker, 2015). The peer group plays a significant role in the social, emotional and behavioural functioning and adjustment of individuals within larger social settings. For example, the profile of peer networks significantly predicts changes in the academic motivation of individual members (Kindermann & Gest, 2009). In comparison with other schools, students of MRS have greater scope and opportunities to develop peer group interactions. This is due to their living and learning in the same environment throughout the entire school period. However, in comparison with other general school students, students of MRSs get fewer opportunities to mingle with other school students. They only get opportunity to interact with the students of other class and schools by participating in sahasava camp (10th standard), Students Police Cadets, Our Responsibility to Children, National Service Scheme, Kalikkalam, Sargolsavam, exhibition, and external co-curricular competitions, etc.

In our personal interviews with Head Mistresses and Principals, Head Mistress of MRS Vadasserikara commented that "They get the opportunity to mingle with other students through sports and sahasava camp". All the MRS students spend their entire adolescent period within the school environment. It causes lack of opportunity to express their adolescent urges. This would lead to behavioural changes among students and it also affects their psychological

development and academic performance. In MRSs most of the MCRT, Ayah, Counsellor, and other Staff do not have the scientific knowledge to handle adolescent issues related to gender identity and sexual orientation. Thus, authorities handle these issues in their own perspective and in turn this would affect the overall development and wellbeing of the students. For better understanding, peer group interactions among MRS students are classified under different sub-heads.

In schools, students are supervised by the teachers and most of the time they engage in academic activities. According to teachers, the peer interaction within the classroom seems to be normal. Only one-third of the MRS schools is co-educational, the rest of the schools are of the same gender, either boys or girls. Irrespective of the school environment, MRS hostels are single gender categories. Some peer group issues were observed during the field study in schools and hostels. Most of these issues are directly related to the gender, sexuality, and age group of the students. It is also noted that the teaching and non-teaching staff of MRS largely face challenges in addressing these issues professionally.

Male to Male Interactions

The general trends on peer-group interactions among male students are found to be normal, while there are some matters that require special attention. The sexual and emotional affections of the students are handled according to the moral presumptions of teachers and other staff. The conflicts between senior and junior students are common among male groups. This is particularly visible in hostels and turns into violence in certain cases. There were two cases reported from MRS Pookkod and Munnar last year. Along with that, a

sexual harassment case was also reported from Munnar, where a group of senior students sexually abused a junior student and he was forced to run away from school and was reluctant to come back.

In our personal interview with the Principal of MRS Njaraneeli, she commented, "Night interaction in hostels is restricted. The senior students often assault junior students and destroy their personal belongings. But in the school, there are no restrictions in student's interaction". A higher secondary student from MRS Kulathupuzha said "We are the initial 11th class batch here. We are not allowed to interact with students from other classes. The authorities have restricted the juniors from interacting with us". Thus, it is evident that the above-mentioned incidents lay stress on teachers and staff to suspiciously observe the students. These keen surveillances and interventions based on personal moral presumptions and lack of proper professional competence leads often to dissatisfaction among students. And it negatively affects the wellbeing of students.

Female to Female Interactions

About one third of the MRS schools is girls' schools. The peer group interactions with the girls in hostels and schools seem to be normal and healthy. At the same time, it is noted that the suspicious observation and unnecessary interventions limit the free interaction of girl students altogether at least in some schools. One of the students from MRS Mukkali commented "They misunderstand, if I talk with my friend. We are not allowed to talk or play with friends for a long time; even I am not allowed to talk to my best friend. If, I talk with her, they suddenly interfere and instruct us to stop our talk. We should be able to talk with our friends". A class 11 student from MRS Chalakkudi responded, "Teachers' behaviour is rude, they scold unnecessarily.

They interfere in personal matters. They are doubtful even if two people sit together". The aforesaid evidences testify that even a normal female to female close interaction is suspiciously observed in the hostels. These often create hurts in the mind of students and affect their good peer group interactions.

Cross-Gender Interactions

There are nine mixed Tribal Model Residential Schools in the State. Students of these schools are expected to get opportunities for free cross-gender peer group interactions. Even in mixed MRS, hostels are gender segregated and opportunity to interact with opposite gender occurs only when they are in the classroom. However, these interactions are always suspiciously observed by the teachers and staff of MRS. A student from MRS Pookode said, "There is no playground for girls". A class 11 student from MRS Njaraneeli commented "When we enter the hostel after the school time, the main grill closes. We are not allowed to go out after that. Here, we don't have any indoor playground facility. We play inside our rooms. In fact, boys have access to playground". From the above mentioned comments, it is clear that, the measures taken by the school authorities to regulate cross-gender interactions affect the mobility of girl students. These restrictions are discriminating in nature and not justifiable.

From the detailed analysis, peer interactions of MRS need corrections. The teachers and other staff need to be professionally trained to handle the issues related to the adolescent groups. The field observation underscores that students of MRS are under suspicious observation and surveillance. These continuous monitoring and interventions also affect students'

privacy and healthy peer group interactions, and it would also lead to some kind of dissatisfaction among students.

Along with the instrumental values, education is expected to provide certain intrinsic values to the students. UNESCO describes these values as part of life skills. Students have to acquire the skills of collaboration, co-operation, empathy, tolerance and democratic leadership to effectively interact with the teams and adapt to the society. Since, students are from a patriarchal system, the school must be able to provide gender-neutral value through education system. However, such orientation and professional training are not embedded in the present MRS system. Hence, extensive professional training oriented to develop collaborative cultures among students is necessary.

Mode of Expression of Dissatisfaction

One of the most common experiences in teaching and learning process is the phenomenon of students' dissatisfaction. They express dissatisfaction through various ways in classrooms and hostels. Since they stay away from their family, they do not get the opportunity to express their emotions. It is also noted that the students get very little time to interact with family over the phone. Most of the students in MRSs get an average of 5 to 10 minutes to talk with their family in a week. The students of MRS go through a tight schedule and they do not get sufficient time for recreation. All these factors influence the level of dissatisfaction among MRS students. Most of the students express their dissatisfaction by destroying things in the hostel and at school. Some of them use abusive language as well. The Superintendent of MRS Kulathupuzha commented "Mostly, children shredded sheets or damage tube lights, switches and

fans as their reaction or to express their dissent. They do not know how to respond or react in a mature manner. Because of this they go beyond the limits". From our field study, we found that there is no proper mechanism to address the dissatisfaction or disappointment of students. Most of the schools do not have a complaint redressal mechanism for students. Since the power of running schools is vested with the authorities, a complaint redressal mechanism which keeps the anonymity and source of complaints needs to be introduced in the schools.

Mode of Reward and Punishment

An effective reward and penalty system promotes positive behaviour and act as motivation towards learning, which is the foundation of creative learning and teaching environment. Effective reward and penalty system include a wide range of rewards and penalties. When rewards outnumber the penalties, they are effective in motivating students. Since, the students spend their entire schooling period within the institutional environment; MRS has a key role in moulding the characters of students. Natural aberrations of behaviours would be manifested in different forms during their campus life. In such a context, how the institutions and staff treat such deviations and promote the positive behaviours is pertinent in moulding their personality. Some of the rude punishments may be sufficient enough to create a gulf in the mind of students, which in turn might affect their development process. Hence, the introduction of scientific and professional punishment and reward system which do not break the thumb rules of child rights are relevant in the running of the MRS.

"The harmful physical and psychological effects of corporal punishment and other forms of violence in childhood and later

life add further arguments and compel us to condemn the practice" (**Joan E. Durrant, Anne B. Smith.2011**). Much greater attention needs to be paid as to, how broad education policies are implemented, received and experienced by different stakeholders; children, families, and teachers (Subramaniyan, 2003).

The majority of the teachers and staff support corporal punishment and they believe that these are acceptable to the parents. It is also worth mentioning that even though the laws that restrict the corporal punishments sustain, majority of the MRS school authorities believe their decisions in favour of such punishment are rational [The Right of Children to Free and Compulsory Education Act, 2009, The National Policy on Education 1986, (Amendment 1992)]. The rewards and punishment depend upon the authorities' discrete power and it may reflect their personal emotions and believe. This also underscores the restructuring of consumptions of authorities regarding punishments and rewards which could be done only through legal actions and intensive training. The Superintendent of Kulathupuzha commented "Students really need punishment. They know punishment is given for their wellbeing. Even, parents never complained against any punishment". It is noted that there is no uniform reward system in MRS Manual and mode of punishment and reward varies from MRS to MRS. The Superintendent of MRS Mukkali indicated that, "There is no system of reward and punishment in MRS schools. Usually, superintendent and other authorities handle the issues and take rational decisions. But sometimes those choices create problems. So, there is a need for uniform reward and punishment system in MRS Schools". It is also noted that, in many cases the decisions are made based on discussions with higher officials or superintendent of other schools.

These unscientific punishments and reward systems would adversely affect students' emotional wellbeing as well as their psychological development. A positive punishment and reward system would result in positive reinforcement of students' behaviour. The findings of the study indicate that the need for a code of conduct or protocol for punishment and reward must emanate through a scientific process.

Counselling

Guidance and counselling are important for children and schools have an indispensable role in motivating children to achieve overall development. They are given advice on how to manage and deal with emotional conflict and personal problems. Counselling helps students to learn new coping skills, set goals, solve problems, make decisions, and manage stress. It also provides a safe and structured environment for exploring various aspects of their emerging adult lives. Most of the MRSs provide counselling facilities to the students. It is also noted that some of the counsellors have additional charge of nearby post/pre-metric hostels. They are available in MRS only for 3-4 days in a week. A part-time service is not sufficient for MRSs, where on an average 250 or more students reside. The counsellor from MRS Chalakkudy stated, "Due to the responsibility of other hostels, I am only able to spend a limited time and effort for MRS". Problems related to adjustment among students are common in MRS students largely because they stay away from home. A resident full-time counsellor is inevitable in every MRS to address the aforementioned issues. It is also pertinent to mention that the counsellors appointed in tribal hostels need to be trained about the living environment and emotional issues of tribal students.

Co-curricular Activities

The modern education system recognizes that schools should be able to facilitate holistic harmonious development of children. Educational experiences include curriculum centered activities and co-curricular activities to develop the social, spiritual and mental development of the child (Kochhar, 1993). The modern educational psychology identifies the concept of multiple intelligence and explains that curricular and co-curricular activities have equal importance in the development of a child. Hence, even the co-curricular activities are presently considered as part of academic development. This helps facilitate all-round development of the students outside the subjects for examination (Jha *et. al*, 2004).

All the students of MRS get opportunities to participate in co-curricular activities. The students who belong to the 10th and higher secondary classes only get opportunities to attend Sarggothsavam and Kalikkalam and other external competitions. Except a few schools, other MRS have a physical education teacher and either a music or a drawing teacher. Most of the schools provide co-curricular activities for students. They also arrange external trainers for additional coaching based on students' aptitude. At the same time, six schools lack playground facilities for physical education. A student from MRS Vadasserikkara commented "We are given training for items like tug of war, swimming and archery".

MRS Nalloornadu has produced many National level hockey players. MRS Chalakkudy has been providing special coaching for Atya-patya (sports event) and they are the overall champions of Kalikkalam for the last few years, though they even do not have a ground for their daily practice. The students of MRS Chalakkudy use the playground of the nearby Government school for daily practice. Many physical

education teachers in MRS commented that the performance of their students is better than the students from general schools. And, if they are provided with good facilities, they would be able to bring better results. Overall the observations of the study indicate that the performance of the tribal students in sports and arts is excellent. Their geographical specifications provide them with advantages to perform better in physical education activities. It is pertinent to mention that, instead of following a routine academic programme that gives emphasis on traditional subjects, a co-curricular oriented curriculum can make them more productive in life. This will help them explore the livelihood potentials in sports and various performing arts.

Role of ORC, NSS, ASAP and other Clubs

Student clubs and forums like NSS, SPC and ORC are organisations that work in a school to develop civic culture and certain values among the students. It is also intended to inculcate democratic values among students. All the MRSs have been conducting various activities under the supervision of different student clubs such as day observations and exposure visits. A few schools have NSS units. All the students of eighth and ninth classes are members of SPC. We could realise that these activities under social organisation enhances the capacity of the students in various aspects. It is highly visible as it increases their level of confidence, ability to express themselves, co-operation and collaborative functioning.

A student from MRS Munnar stated, "I could overcome stage fear. I can express my opinions and suggestions in front of others without any fear". Through SPC, ORC and NSS activities, students of MRS get more opportunities to interact with the students in other schools which in turn contribute to their socialisation. It is evident from the

study that social organisation such as SPC, NSS and ORC could make considerable changes in the socialisation of its members. Hence, we would propose to establish NSS units in all the MRS. Units of NCC can also be established in all the schools. NCC certificate may help the students get preferences in the security forces of the nation and this would also help them to get preference in admissions to higher education. SPC system is presently limited to 8th and 9th standards. It would be advisable to establish Scouts and Guides units in all the MRS to include the students from 5th standard.

Health Care

Each MRS manifests the nature of a community because of the presence of a large number of students and teaching and non-teaching staff who spend most of their time in the campus. Hence, a system must be established in the schools to provide routine administration of health check-up, first-aid, health monitoring and medication and also to handle medical emergencies. Since a community living occurs, systems to detect contagious conditions would also be necessary. The health services might include monitoring vital signs and ensuring proper nutrient status. The health service systems are required to address the issues of students who need special care and attention because of diseases such as communicable diseases, chronic diseases, congenital diseases, dermatitis and nutritional anaemia. Services such as screenings and immunizations are also widely provided in the schools. Health care facilities play a vital role in the wellbeing of students of Model Residential Schools. Following are the key components of the health care system of MRS.

Health Monitoring

Nutrition and health monitoring are

significant in health care. It includes keeping an individual health card for every student, and maintaining periodical examinations such as height, weight, nutritional status, etc. Most MRSs do not have a proper system to monitor the health status of their students. Only few of them have a resident nurse; boys' schools do not have any. The majority of MRSs' nurse posts are lying vacant as the pay is not reasonable. The nurse from MRS Nilambur remarked "No proper medical record is kept. Neither do there exist a proper method to know about the illness or sick cases nor is any routine blood check-up done". The only two schools that maintain individual health record and have periodical health examinations for every student is MRS Njaraneeli, and MRS Chalakudy. The health monitoring system of MRS needs to be more systematic. A full-time nurse needs to be appointed in all MRSs with sufficient remuneration. Individual health cards and regular monitoring of health and nutritional status needs to be carried out in every MRS at least once a month.

In many cases, students may require costly treatments in multi-speciality hospitals. Schools have limitations in supporting such cases. At the same time, tribal department has provision to support such students through their local department system at the residential districts of the students. Lack of knowledge and education of parents act as a hurdle in fulfilling the procedures required for such a move. In such situations, the schools can liaise with the local department system and the parents and help them to complete the procedures. In another way, the schools can take up the responsibility for the well-being of the student and thus ensure that they will grow up as healthy citizens.

Monthly check-up

The health department provides periodical check-ups, vaccination, and other basic

health care services to MRS through PHC and CHC. It is noted that the Tribal Development Department conducts regular monthly health check-up in all MRSs. This is done through the mobile clinic and it is named as monthly medical camps. The students who need medical attention can voluntarily come and seek health check-up. In most of the MRSs, staff such as ayah, residential tutor, counsellor or nurse refer students to the medical team. Usually, students who come to these camps are treated by the medical team in the clinic, and are referred to advanced level medication if needed.

Vehicle support

Own vehicle has a significant role in providing proper medical care in emergency situations. Lack of proper vehicle support may lead to delay in getting medical care. Most of the MRSs are located in geographically isolated areas, hence owning a vehicle is vital to ensure proper medication to the inmates. A student from MRS Pookkode commented "Transportation facilities are minimal to take the sick to the hospital". Through our infrastructure survey, we found that only half of the MRSs have their own vehicle.

Food Production and Supply

Quality of food menu

The items in the menu must be compatible with student preferences to promote better consumption. There must be initiatives to ensure that the food menu is acceptable to the students. Among the key factors that relate to menu planning are variety in flavours, textures and food choices; repeated exposure to less familiar foods; food combinations that go well together; foods that are easy to eat in the available time and eating space, and consideration of regional, and cultural food preferences.

All these factors need to be considered and participation of students should be ensured in menu planning. It is noted that the menu is not updated properly by considering the contemporary needs of the students. For instance, the present menu was prepared in 2006 and it took eight years to get it revised. It was last updated in 2014.

The majority of the students of MRSs are not satisfied with the food menu even if it is nutritious. Most of the students hesitated to eat dosa and idli. A student from MRS Pookkode responded to our FGD, "From the monday menu, idly and sambhar and evening snack vada must be substituted". Another student from MRS Nilambur stated "I like the food served here, but I don't like dosa, chapatti and idly". The food menu followed in MRS does not consider the normal food habits of the tribal community. A student from MRS Kulathuppuzha noticed "The food items we eat in our village are not included in the food menu of the MRS. Items such as ragi, leaves and dhal are not included in it. Indigenous curries are also not included in the menu". The breakfast system followed in MRS is not compatible with their normal food culture. As per the government circular D4-7591/15, the senior superintendent has the right to alter the menu without compromising its nutritional value and it should be approved by both the programme officer and a government-approved nutritional expert /dietician/health practitioner. However, school authorities do not consider students' complaints and suggestions related to menu. All the MRSs follow uniform menu without considering the cultural context and demands of students.

Serving of Food

In a residential schooling system, both teaching and non-teaching staff have an equal role in the nurturing of students. In such a context, the role of cook and mess

workers who prepare and serve food is important. If they are not able to treat the students in a dignified way, it will affect their self-confidence and they will feel humiliated.

Accommodation and Space in Hostel

From our field survey and observations, we could see that a few of the MRSs have sufficient space and facilities for accommodation, eg., MRS Njaraneeli, MRS Kalpetta and MRS Paravanadukkam. All the other MRSs do not have sufficient infrastructure facilities in hostels. Students of MRS Thirunelli, MRS Pookkode, MRS Mukkali and MRS Katela face problems related to lack of space for accommodation. The hostels in these schools do not have adequate number of lavatories and bathrooms. Lack of 'study room' that is the area for carrying out students' academic tasks other than their routine classes is one of the main problems that students of MRSs face. Only MRS Njaraneeli, MRS Kalpetta and MRS Paravanadukkam have study area or study room in the hostels, and in all other MRSs students do their academic tasks (other than routine classes) in the classroom itself. That is, they spend their entire day in the classroom. About 60% of their day is being spent in the classroom with the result that they do not get time for recreation and leisure. Thus it would negatively affect their psychological development and emotional wellbeing.

Recreation Facilities

Any physical activity one performs, must be geared towards developing individual physical, mental and social well-being (WHO, 2001). Recreation enhances moments of enjoyment, fun, excitement, pleasure, engrossment, and refreshment through active and passive activities (Udoh, 2000). Regular participation in leisure time activity promotes relaxation from the tension of

work and help to forget problems, thereby contributing to mental and emotional health (Echeruo and Yakassai 2006). The regimented timetable is the major barrier for the recreation of MRS students. They undergo very rigid and predetermined schedule. All MRSs follow a uniform schedule and it does not consider the need of students in various age groups. Girls get fewer opportunities for recreation activities compared to boys. And intermingling of boys and girls is always discouraged. A student from MRS remarked that “we do not have freedom to play in the playground every day, because elder boys play there.”

All the students do not get equal opportunity to use recreation facilities and playground. Senior students in same-gender schools and boys in mixed schools tend to be dominant in using recreation facilities and playground.

A girl student from MRS Njaraneeli remarked that, “As soon as we enter the hostel after the school time, they lock the main gate and then we cannot go out. We do not have any exclusive place or ground to play. Therefore we play in our hostel rooms, but boys have playground”. There should be a proper management mechanism to ensure equal opportunity for all students to use recreational facilities. Most of the MRSs do not provide indoor recreation facilities in hostels. Some of them have rooms for recreation, but they are nominal. A student of MRS Paravanadukkam opined that, “They allow us to watch television, but never give the remote control to us. T.V and other entertainment facilities are also available, but the preference of the children is not considered.

Uniform, Dress and Other Supplies

All MRSs provide uniform, night dress and other consumables, and its quantity and quality are determined by Scheduled Tribe

Development Department, Government of Kerala (STDD). Textbooks, bags and other academic materials are also provided by the department. Some products such as footwear, undergarments, and daily consumables are purchased by the school itself. But uniforms, bed sheets and nightdresses are purchased by the state administrators and distributed to schools on the basis of requirement.

A student from MRS Mukkali commented, “We have not yet received a uniform. We need one.” As part of the field study we conducted our FGD at Mukkali MRS on 7th march 2019 and above commented student’s class was started in July 2018. This indicates the delay of uniform distribution. In addition to that, Head Mistress of Nilambur remarked that “due to the centralised purchase which has started this year, students did not receive uniforms on time”.

It is evident that there is an unjustified delay in the timely distribution of uniform, night dress and umbrella. Most of the MRS students wear their previous year uniform and nightdress. Students struggle to manage during the rainy season with limited clothes due to this. During the previous years, the schools had the right to purchase uniform, nightdress, etc. Recently, the government took away the provision and introduced the state-wide purchase system. This has caused clerical delay, government should take measures to ensure timely availability of uniform and other basic amenities.

Sanitation, Water and Hygiene

Hygiene of the area we live in is crucial for ensuring health. The World Health Organization (1948) defines health as “a state of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity” and any condition

that impairs physical, mental, or social health reduces both individual well-being and the well-being of communities. There are studies that have highlighted the connections between hygiene and physical health and between hygiene and social health (Pengpid, K. Peltzer 2011).

Poor sanitation, water scarcity, poor water quality and inappropriate hygiene behaviour are also detrimental to the health of school-going children, who spend long hours at schools. As per KER 1959 (Kerala Education Rules) all hostels must have one lavatory and one bathroom for every six students. As per our field level survey, we found that only one school satisfies this regulation and that is MRS Chalakudy. A student from MRS Mukkali remarked in our FGD, "As we don't have enough toilet facilities, we have to wake up early to stand in the queue to use the toilet and take bath before going to school". Most of the MRSs keep their environment clean. Seasonal water scarcity affect the cleanliness of a few schools, particularly MRS Kulathupuzha. They lack constant and assured water supply. All the hostels are equipped with cleaning staff. Girls hostels are clean and hygienic compared to boys' hostels. A student from MRS Vadasserikkara commented, "We store our belongings in our bedrooms. We keep it in our bags as we don't have enough amenities or space to keep it. Everyone's used clothes and washed clothes are kept together in one place, lack of space is a big problem". Most of the schools face issues regarding space in their hostel rooms. Due to the lack of shelves and other special space to keep their personal belongings, proper cleaning is too difficult. Health issues such as scabies are not uncommon in such environment.

Disability Inclusive Model Residential School

The Model Residential Schools are not supposed to provide admissions to the differently abled students. Hence, most of the schools are not concerned with the accessibility of students with disabilities. The MRS Painavu is an exception to this. A student of MRS Painavu met with an accident and lost his legs during a vacation. The incident took place when the student was in ninth grade. He hails from the interior of Idukki district and needed support for doing all activities after the accident. Considering this, the Senior Superintendent intervened to bring back hope in the life of the student. The school provided accomodation facility for the student and his family. The mother accompanied the student to complete his high school education. The school also made facilities such as ramp and other infrastructure initiatives to ensure an inclusive system.

Better health care system for quality education; an inspiring case from MRS Mukkali

The MRS Mukkali is situated at the end of a notch, which is the entrance to Attappady. The nearest accessible hospital to the school is Tribal Speciality Hospital, Kottathara, which is 25 km away. If the hospital fails to meet any medical emergency, they have to reach either Perinthalmanna or Palakkad which are 50 kms and 55 kms away respectively. Since MRS Mukkali is a girl's school, frequent health support is necessary. However, such a facility is not available because of the distance from the school to the hospitals.

Even with the limitations of geographical isolation and dearth of facilities MRS Mukkali succeeded in providing better health care to the students through various

interventions. The MRS Mukkali has taken initiatives to ensure that individual health records are kept for each student. This has facilitated the provisioning of better health care to each student whenever the health check-ups and referred treatments are occurring. This also helped the school in providing scientific treatments by analysing the medical history of each student.

MRS Mukkali could appoint full time health nurse with the qualification of BSc in Nursing. This helped them in ensuring individual health care at regular intervals. All this has helped to ensure regular monitoring of the health status of the students and take necessary steps to address the issues. The school could ensure a vehicle on contract basis which has a significant role in availing timely medical assistance to students. It is also not worthy that the efficient leadership in the school has a key role in availing better health care facilities to the students.

Findings and Summary

Following are the major findings that emanated from the study.

1. The overall observations of the study indicate that the peer group interactions among students are not healthy. It seems that the cross-gender interaction and inter-gender interactions are often suspiciously looked up on by the teachers and authorities. This act as an impediment for healthy peer group interaction. There are 11 gender-segregated schools (6 girls only and 5 boys only) out of 20 MRS in Kerala. This actually creates hurdles in nurturing healthy cross-gender interactions among students.
2. Conflict between senior and junior is also common in the schools,

particularly among boys. It is noted that the teachers and non-teaching staff are not scientifically trained to handle the adolescent issues. They often handle these issues based on their personal moral values which lead to the suppression of emotion and results in dissatisfaction.

3. Absence of training among students regarding the evolution of healthy gender interactions often creates conflicts in schools. And sometimes this extends to the level of sexual abuse. Absence of training for teachers on healthy gender relations and sexual orientation leads to teacher's unscientific intervention on these issues. And this leads to the implementation of the suspicious surveillance system over students. In a nutshell, it leads to the emotional imbalance of students and act as a hurdle in evolving good peer group interactions.
4. The experiences of MRS highlights that students get limited opportunities to interact with students of general schools and community except during the arts and sports events, SPC and NSS camps. Even though the MRSs have contributed to elevating the academic performance to some extent, it could not contribute to an expected level in the emotional and social development of students. The experiences show that MRSs could not escape from the trap of ghettoization of tribal students and could not nurture citizenship values among them. Special considerations are not given to the intrinsic values of education, such as cooperation, collaboration, tolerance, democracy and social leadership (UNESCO 2000).

This underscores the relevance of a student handling strategy in MRSs by considering the emotional context of students.

5. The findings related to the teacher-student relation points out that students are more attached to the co-curricular activity teachers than regular subject teachers. There might be different reasons for this. Even though, the teachers in residential schools are expected to be residential, field realities point out that the majority of them, particularly permanent teachers are not staying in the campus. The teachers have largely failed in creating good rapport with the students because of their absence from the campus after the day schooling time. Ayahs or MCRT are caring them during their hostel time. They are considered as local caretakers of students. However, such a system does not work in tribal MRS. This creates the situation where MRSs largely fail in providing continuous individual care and support system through a single channel.
6. Lack of training to the teachers and non-teaching staff regarding the tribal context and emotional status of the students were reflected during the study. Contract teachers and non-teaching staff also do not get any kind of training. These factors also affect good student-teacher-staff relationship. The lacuna of the proportionate number of tribal teachers and non-teaching staff in schools was also noted during the study. Ensuring their presence would have been a way out to improve teacher-student-staff relationship.
7. In the absence of permanent residential teachers, a proportionate number of non-teaching staff such as ayah and counsellors are inevitable in schools. However, it was noted that the majority of schools lack a proportionate number of ayahs. One ayah is forced to look after hundred or more students. School counsellors working with many MRSs, hold additional responsibilities in pre-matric or post-matric hostels. This altogether leads to a situation where students do not get individual care and support from non-teaching staff as well. It is also interesting to note that only a few of the ayahs are permanent.
8. The field inferences highlight that students face issues pertaining to adjustment during the entry classes. Special mechanisms for mentoring and bridging the students from home environment to schools are also missing. It is also worth mentioning that six out of twenty schools admit students from first standard onwards. This is actually denying the human rights of students to stay with parents. And this is also in contradiction to the provisions of RTE Act (Right to Free and Compulsory Education Act 2009). Along with this, the lack of proportionate number of ayahs at the primary level makes the situation more complex.
9. The study revealed that the opportunities for student- parent interactions are limited. Most often the parental visits to the schools are limited to the PTA meeting. It is often managed with the vacation when they come to the school to pick their children. The travel allowance provided to the parents is limited to picking up

and dropping them back to school. The opportunities for telephonic conversation are strictly restricted to 5-10 minutes a week, which force the students to vent out their grievances in other ways.

10. There is no uniform mechanism for grievance redressal and addressing the dissatisfaction of the students. Corporal punishment system is still practiced in schools irrespective of the fact that this is legally prohibited (Section 17 of the RTE Act, 2009). The punishment mechanisms are often decided by the individualistic moral values of authorities. Absence of uniform punishment and reward system and the institutionalisation of this lead to dissatisfaction among students. And this dissatisfaction manifests into violence of various kinds and levels.
11. It was found that NSS and SPC provide better opportunities for the students for healthy peer group interaction and also interactions with other schools. At the same time, these opportunities are limited to students from high school and higher secondary students. Forums like NCC and Scout and Guide are non functional in any of the MRS.
12. The study indicates that there are no systematic mechanisms for maintaining individual health record and monitoring the health status of students. The presence of health staff is not available in boys' schools. Health nurse posts are vacant in many of the schools because of the poor salary (13000/ month) paid on contract basis. Two schools, viz., MRS Njaraneeli and MRS Mukkali succeeded in maintaining health

records.

13. The responses regarding the food menu points out that majority of the students are dissatisfied with the food menu. It was interesting to note that even though contextual flexibilities are allowed in food menu this was not really practiced in schools. Regional food is excluded from the food menu which makes it less unattractive for students.

The overall inferences related to the wellbeing of the students indicate that, even though the MRSs succeeded to an extent in improving the academic performance of students, they could not make any exemplary result in ensuring the wellbeing of students. Absence of residential teachers in school, unproportioned number of non-teaching staff and lack of regular training to the teaching and non-teaching staff pertaining to tribal contexts are major factors that were found to be hurdles in providing individual emotional care and support to the students. Segregated gender divisions in schools also created obstacles in the matured development process of students. The lacuna in including context specificities of tribal population in food menu and school curriculum also created impediments in providing a dignified school environment for the children.

Recommendations

- It would be advisable to avoid the system of gender segregated schools for healthy cross-gender and inter-gender interactions.
- The units of NCC, Scouts and Guide system would be helpful for the overall individual development of students. The introduction of scouts and guides

will also help provide a forum for the students from 5th to 8th classes.

- Regular trainings are needed for permanent, contract teachers and non-teaching staff regarding the cultural and living context of tribal students. This would help them develop a better student-teacher-staff interaction. Systematic trainings are needed for teachers and non-teaching staff regarding the cross-gender relations and sexual orientations of the adolescents. Training must be given to the students as well.
- A statutory decision is required to stop the system of residential school till class 5.
- Contextual flexibilities in the food menu need to be statutorily implemented.
- Uniform punishment, reward system and its institutionalization are pertinent in all MRSs.
- Scientific system for individual health records and health monitoring is needed in all schools.

V. Governance and Administration of Model Residential Schools

Introduction

“Governance has been defined to refer to structures and processes that are designed to ensure accountability, transparency, responsiveness, rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation” - International Bureau of Education, UNESCO

The above definition indicates that governance represents norms, values, and rules. It is necessary that governance has to be transparent, participatory, inclusive and responsive. In a broader sense, governance can be viewed as a cultural mechanism for interaction between authorities and citizens. The Global Monitoring Report (2009), state governance as a power relationship, formal and informal practices of formulating policies and allocating resources. In a nutshell, it can be assumed that the governing system is responsible to set up norms for operating management administration systems of institutions. The policies set up by the system of governance will be instrumental in running the administrative mechanism.

Administration is a set of components that include structure, process and the methods envisaged for mobilizing and transforming available resources; that include human, economic, and physical resources. When it comes to educational administration, it

is the process that brings the humans and materials together for effective academic outcomes through the school for the wellbeing of the students. The administrative system consists of structures that guide the entire mechanism geared by the governing policy.

The Model Residential Schools were established under Scheduled Castes and Scheduled Tribes Residential Educational Society. This body consists of tribal department officers, MRS Representatives, District Collectors, Education department officials and other invitees. The system also works with a district level Executive Committee chaired by the district collector for district level governance. In addition to this, school level bodies are formulated to ensure smooth functioning of each of the schools. School Advisory bodies, under the chairpersonship of the Member of Legislative Assembly (MLA) of the constituency where the school is located,

Parents and Teachers Associations (PTA) and Mother Parents and Teachers Association (MPTA) are also associated with the functioning of the schools. At the same time, the educational policies are framed with the decisions of the governing body¹.

This chapter focuses on the governance and administrative system in Model Residential Schools. The chapter also tries to discuss the components that come under the broad domain of Governance and Administration. The existing governing bodies, administrative system and its role, distribution pattern of staff among schools, provisions for financial management and purchase of goods are discussed in this chapter. The chapter is based on the interviews conducted with the heads of the schools and school Superintendents. Along with this, FGDs with students, personal interviews with teaching and non-teaching staff were also conducted.

Governing system of Model Residential Schools

The Model Residential School (MRS) is governed by a state level governing society. This society was established through GO (MS) No. 24/95/SCSTDD dated 11.08.1998. The Scheduled Caste and Scheduled Tribes Residential Educational Society is registered in accordance with the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act of 1955 (ACT XII of 1955, registration No.663/95) on 11.09.1995. All the MRSs in the state have been functioning under this registered society.

The apex body of the society is the governing body. The president of the body is the Principal Secretary to the Scheduled Caste and Scheduled Tribe development

Society. Currently, the state level governing body consists of 19 members, including department representatives, educational experts and special invitees. They include- Additional Secretary/ Joint Secretary of Scheduled Castes/ Scheduled Tribes Development Department, the Director of Public Education, the Director of Higher Secondary Education, the Chief Engineer of Building and Local Works, the Director of Scheduled Tribes Development Department, the District Collectors where the MRSs are located (Vice Presidents), Principal and HM of Ashram/MRS as members, Govt. Special secretary, Scheduled Castes/Scheduled Tribe Development Department and Director of Scheduled Tribe Development Department (As Ex Officio Members).

In addition to the above mentioned office bearers, three educational experts and five special invitees (Scheduled Caste and Scheduled Tribe Development Department Project Officer or Tribal Development Officer, District officers of Scheduled Castes Development Department, Chief Engineers of Kerala Water Authority and Kerala Electricity Board, Secretary Attappadi Co-operative farming society limited and Director of Vocational Higher Secondary Department) are included in the governing body.

The Governing body is entrusted with several duties and functions as follows:

1. It shall be responsible for the overall functioning of the society; to determine and implement its policies subject to general supervision and approval by the Governing Body
2. To approve the expenditure statement of the previous year
3. To pass the budget for the current year
4. To elect the Executive Committee
5. To make by-laws to carry out the

¹The Governing policies are being discussed in the chapter no.2, Evolution of Tribal Education

objectives of the society as laid down in the MoA

6. It has the powers to appoint /retract or otherwise deal with the employees of the society, including exercising all disciplinary powers over the employees of the society
7. It shall have the authority to raise resources for the society by collecting fees, donation, grants etc. from the government, public/ private bodies, individuals, etc. The society can open joint account in the name of President and Treasurer.
8. It shall have the authority to delegate its specific functions to any of the office bearer or Executive Committee or Subcommittee constituted by it.
9. It shall have the authority to include outsiders to serve the society

The key functions of the apex body includes resolving the issues related to the governance of the MRS, framing and reframing the policies, suggesting recommendations related to the financial matters of Kerala Government regarding MRS. As per the rule, it is necessary to convene the meetings of the body once a year. In contradiction to the provisions in the by-law, during the field work, it was noted that meeting of the governing body was not properly conducted. The authorities from different MRS have indicated that state level governing body meeting has never occurred within the last five years. The field evidences underscores that even though the functioning of school level committees happen, the absence of regular meetings of the state level governing body have created many issues, particularly in the aspects of coordination between different departments.

² Inter Departmental conflicts raised among the MRSs are discussed later in this chapter

Currently there are twenty Model Residential Schools in Kerala. In addition to the state level governing body, a district level Executive Committee is formed in the districts where the MRSs are located. Representatives of all MRSs are included in the district level Executive Committee. The District Collector is the Chairman and Integrated Tribal Development Project Officer is the Convenor of the district level executive committee. The Principal/HM/ Senior Superintendent of the MRS is the treasurer of the executive committee. Other members of the executive committee are Joint Director of the Scheduled Tribes Development Department, Deputy Director of Education, District Education Officer, District Medical Officer, District Development Officer, Scheduled Caste Development Director, District Planning Officer and a Teacher. As discussed in the case of governing body, the district executive committees are also vested with specific functions. The functions of the district level committees are listed below:

1. It shall act for promotion of the objectives of the society in all possible ways.
2. The District Executive Committee shall look after the day-today functions of the society, institutions under the society and shall provide guidance to the joint secretary/treasurer of the Executive Committee in discharging his/her duties.
3. The Executive Committee shall ensure proper and efficient functioning of the institution subject to the decision and directions given by the governing body.
4. The Executive Committee will exercise immediate disciplinary powers over the employees of the society and institutions under the society.

6. All accounts vouchers, transactions of the executive committee and the institutions under the Executive Committee would be approved and scrutinised by the Executive Committee.

Both the Governing Body and the Executive Committee of the society have been drafting the policies. Even though the Tribal Development Department officials have participated in the above process, representatives of the tribal communities were not included in these committees. Advisory Committees were formulated by the department through the order GO.112/2008/SCSTDD, dated 1.12.2008 to address the gap of community participation in school management. The order explains that the establishment of Advisory Committees is intended to receive adequate suggestions for the improvement of MRSs.

The chairperson of the Advisory Committee is the Member of the Legislative Assembly and the convenor is the Senior Superintendent of the school. The remaining members of the committee are Mayor/Municipal Chairperson/District Panchayat president, District/Block Panchayat Member, Welfare standing committee chairperson, Ward Counsellor/Member, State Scheduled Caste Advisory Committee member, Tribal Development Officer/Integrated Tribal Development Project Officer, MCRT/Warden, HM/Principal, Teacher Representative, Student Representative, Parent representative, District Education Officer, DIET principal and Tribal Extension Officer.

The district level Executive Committees of Model Residential Schools are entitled to look upon the suggestions given by the advisory committees. It is also necessary to integrate suggestions of the committee in the development of the schools. The committee is formulated to fill the lacuna

between the society and the school.

Functioning of School Advisory Committees

The Advisory Committee is entitled with several responsibilities for developing the academic and creative skills of the students. The responsibilities include development of a plan of actions, evaluation of the academic and non-academic activities of the institution, assessment of wellbeing of the students and the reviewing of the prevailing system. The Advisory Committees are also advised to give suggestions to executive committee on each of the criterion mentioned above. However, Executive Committee is not mandatory to take follow up on matters proposed by the school level advisory committee. There are some aspects which require action from the district advisory committee for better functioning of the schools which are proposed by school advisory committees. But the advisory role of school advisory committee limits the possibilities for implementing their proposals to the actions on district level. This might be an impediment in addressing the issues of schools. This would also have other implications. All the schools in Kerala work under education department and they have School level Management Committees (SMC) and School Development Management Committees (SDMC). This gives the freedom for the school level committees to provide better support system to the school administration. However, the advisory committees of MRS still have only advisory roles and not statutory powers. This underscores the relevance of reforming the roles and responsibilities of School Advisory Committees for better autonomy and to ensure possibilities for responsive action. Renaming of the school advisory committees to School Development Management Committees may enable them to bring about

better interventions in the schools.

All the MRSs have constituted Advisory Committees as per the orders issued. Contrary to the existing orders, most of the schools do not convene meetings regularly. "Advisory committee was formed, but its functioning is not satisfactory. Nevertheless, schemes like rain harvesting and computer lab are functioning with the support of funds by the Member of the Parliament (Superintendent, MRS Mukkali). The comments from these schools indicate the irregularity of their functioning. From the field observations, it is noted that, many elected representatives such as the Member of Parliament (MP) and Member of Legislative Assembly (MLA) take their own personal initiatives to improve the conditions of the schools.

The field experience testify that MLAs representing the constituencies of Kalpetta, Nilambur and Chalakkudi take personal initiatives to visit the schools regularly and to engage with their activities. "MLA of this constituency visits the school on a regular basis and finds time to interact with the students." (HM, MRS Nilambur). However, such initiatives are missing in other schools. It can also be noted that school advisory committees have the role of mobilizing funds from different sources including that from MPs and MLAs. MRS Malampuzha and MRS Mukkali have constructed smart classrooms and rainwater harvesting system in the school premises. MRS Paravanadukkam and MRS Thirunelli are provided with vehicle facility with the support of the respective MPs. The lacuna in the proper functioning of School Advisory Committees creates restrictions in their potential sources of action. This again underscores the relevance of restructuring the role of school advisory committee to school development management committees.

Garnering more representation from Local Self Governments

Kerala has a long tradition of decentralisation. Compared to most other States, Local Self-Governments in Kerala make significant contribution in the development of the State. Among them, education is one of the major areas. In this regard, the role of LSGIs is inevitable. Considering the situation, the local body representation should have been included in the Advisory Committee. The present constitution of School Advisory Committee does not provide any space to the local authorities such as Grama Panchayat President and Block Panchayat President to engage with the activities of the MRS. The Panchayat Raj Act defines that the management of secondary and higher secondary schools are the responsibility of the District Panchayat. The present structure suggests to include standing committee chairperson, welfare standing committee chair person and Mayor/ Municipal Chairperson in the school advisory committee while, the presence of district panchayat president is missing. Since, the district panchayat has an education standing committee in the current scenario (amendment in Panchayat Raj Act) the chairperson of this could also be included in the advisory committee. More representation of the district panchayat would enable them to provide more support to the schools in terms of financial and other resources. Along with this, the representation of Local LSGIs such as block and Gram Panchayat would also help the schools gain more community support and engagement in all their activities.

Constitution of School Development Management Committee

The existing Advisory Committees can be renamed as School Development Management Committees. The committee shall have all the powers vested in the existing Advisory Committee and there shall be the following recommendations:

- The committee shall consist of the MLA, the MP, District, Block and Panchayat Presidents/Municipal Chairperson/Mayor of the corporation, Educational, Welfare standing committee chairpersons of the local bodies, Parents and Teachers Association and Mother Parents and Teachers Association Presidents, HM/Principal, Superintendent, representation of temporary and permanent teachers and non-teaching staff.
- The committee shall have statutory powers.
- Compulsory provision for meetings of School Management Committee should be there.
- The overview of the school activities has to be done by the School Management Committee

Functioning of Parents and Teachers Associations

The Parents and Teachers Association (PTA) exist in every school. Observations from the study indicate that compared to non-residential schools, PTA and MPTA performance is not appreciable. It was noted that the frequency of PTA meetings is less compared to other non-residential schools. "PTA meeting only happened when the parents came to school to take their children" (MRS Munnar 09/05/2019 12:30- 2:30 PM). The PTA meetings are

convened either before the vacations or after the vacations. Isolated settlement patterns of tribal population, admission of students from distant districts, and the poor financial condition of parents act as hurdles in organising frequent PTA meetings in Tribal Schools. It was also found that participation of parents in the meetings is quiet low. It was also noticed that rather than the geographical barriers, some cultural contexts of the communities also create hurdles in ensuring better participation in PTAs. The low participation of parents in the PTA of MRS Nilambur is a good instance of this. "There were only 35 parents for the last PTA. Due to several reasons, this time it has been reported that hamlet based PTA meeting was not effective". Since they are PVTG schools at Cholanaika and Kattunaika colonies, and since the school at Nilambur is geographically inaccessible to them, their participation is poor in parent's meetings. This also indicates the need of some community concentrated interventions to ensure better parent participation in PTA meetings.

The following strategies are proposed to make the PTA meeting more effective and meaningful. Corner PTAs at different student catchments of each school or at district level would be helpful to make PTAs more effective. Geography based joint meetings with the participation of different school authorities with the initiative of tribal department and local bodies would also be helpful in improving parental involvement in students learning process. During the field study, the research team could conduct four alumni FGDs in the locations of Attappadi, Wayanad and Marayur. These also indicated the potential of frequent parents' meetings jointly organised by different school authorities in different tribal locations. Representation of LSG leaders from the school catchment areas in the School

Management Committees, particularly PVTGs will help to improve the community participation.

Poor financial background of parents and the poor emoluments given by the department for the school visit of parents also creates difficulties for the frequent visit of the parents to participate in meetings and other purposes. A meagre travel allowance is only provided for the parents to escort the students and that is also restricted to vacation periods. Currently the travelling allowances are provided based on the distance from their location. Also the unforeseen expenses are not considered. Hence PTA meetings are compounded with school vacations. Since most of the parents reach schools from distant places they may not be able to meet the expenses on their own. "Parents do not come to the meeting as the schools are far away and because of the financial constraints. Moreover, they go to work every day / they are daily wage labourers. Most of the parents are illiterate. They are scared of interacting with outsiders. So, they don't travel long distances", a student from MRS Chalakudi commented. Along with the cost incurred for travel, it is also found that most of the schools do not have the systems to arrange accommodation facilities for parents during their visits. This also underscores the relevance of providing local accommodation facilities for the parents during their visits. Distance acts as a hindrance for parents to visit the school and attend the PTA.

The following strategies are suggested to overcome the situation. The travel expenses allotted to the parents must be revised every year based on the real market prices. Calculating the exorbitant expenses due to geographical isolation should also be considered. The schools should be able to provide accommodation to the parents during the time of the visit. Such flexibility should be given to the school authorities. Financial allotments should be made as per these requirements. It could be made mandatory that at least three PTA meetings will be conducted in a year.

Administration of Model Residential Schools

As discussed earlier, the Model Residential Schools were established under the Scheduled Caste and Scheduled Tribes Residential Educational Society. The administrative structures of the school include the education department and the tribal department. The Senior Superintendent of the school acts as the administrative head. The Head Master/Mistress heads the academic activities of the high school and the Principal acts as head of the higher secondary section. A smooth running of schools can only take place with the cooperation of the above departments (tribal department, education department). The detailed staffing pattern of administration is mentioned in the figure below.

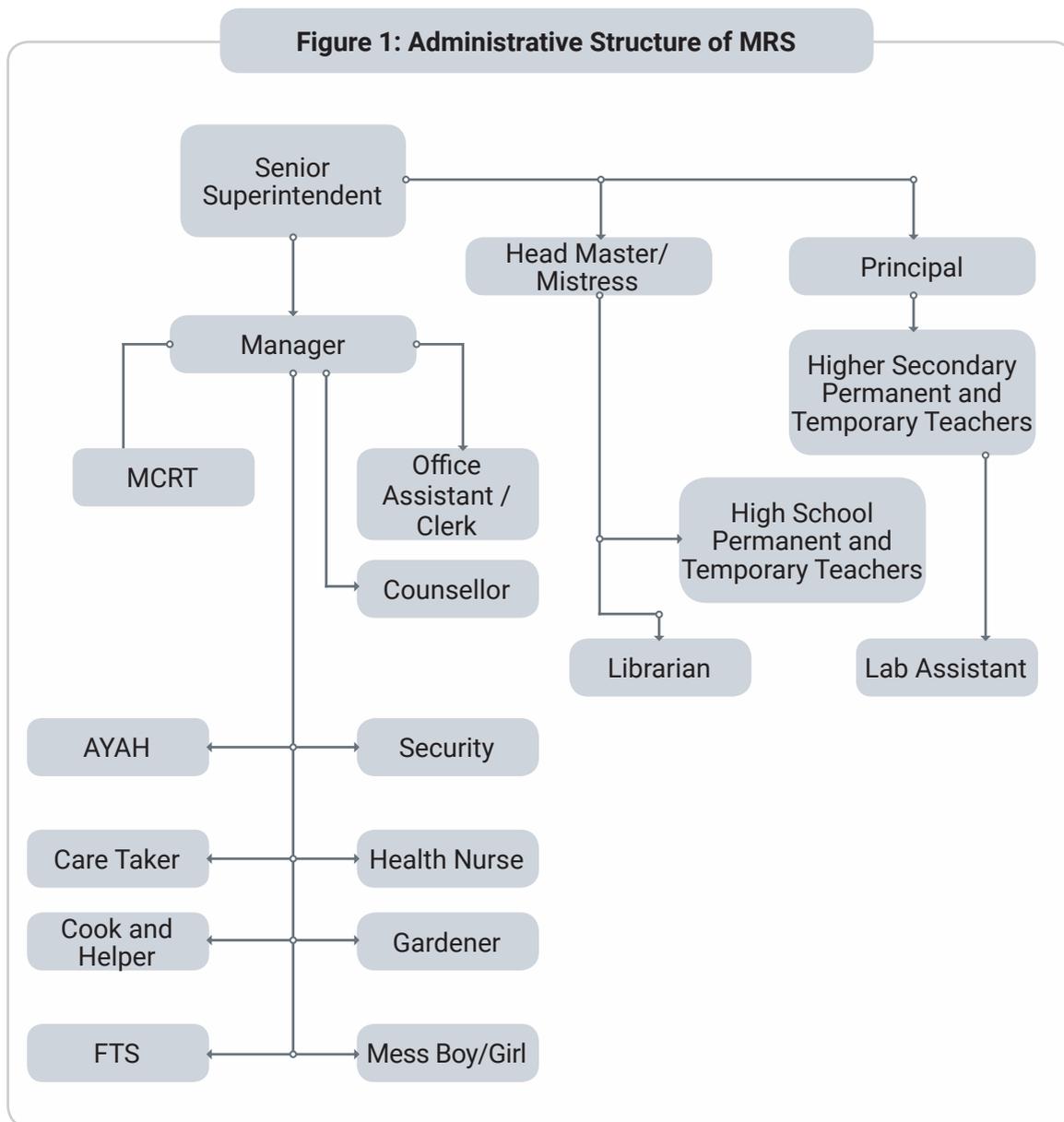


Figure 01: Administrative Structure of MRS

Inter departmental roles in MRS administration

The major positions of Model Residential Schools were served by Senior Superintendent, Head Mistress/Master and Principal. The Superintendent of Model Residential Schools (for Njaraneeli CBSE Model Residential School Manager / Nilambur Indira Gandhi Model Residential

School) the Assistant Directors are the key decision makers of the Model Residential Schools. Their role distribution based on the circular is mentioned below. The guidelines were formulated as per the minutes of the meeting held at the Kerala Institute for Research Training and Development Studies of Scheduled Castes and Scheduled Tribes (KIRTADS), Kozhikode on 26.05.15.

Role of Academic and Administrative Heads in Running of Schools

The Senior Superintendent acts as the administrative head of the MRS. The function of the Superintendent is to head the non-academic activities of the institution. Several inferences can be drawn from the guidelines of the meeting (D4-7591/15) held at KIRTADS. Even though the Superintendent is not associated with the academic decision making; the person is authorized to take decisions regarding the infrastructure factors that could leverage the academic and overall wellbeing of the students. The appointment or dismissal of contract staff (including counsellors, nurse and academic staff) and the monitoring of contract staff is kept under the control of Senior Superintendent. The MRS is meant to develop the academic efficiency of the students from tribal community which could only be possible with their participation. The admission pattern to the MRS is also formulated likewise. Other than Ekalavya and Ashram schools, Govt. Model Residential Schools have provisions for admitting non-tribal students. In a situation where there are vacancies in general seats, head of administration can give priority to tribal students than students from other community for the vacant seats. It is also the right of Senior Superintendent to admit the students to the vacant seats with proper lateral entry test/screening as per the availability of vacancies. Even though academic activities are not monitored by the Senior Superintendent the power to take disciplinary action (except physical actions) against the students is vested with the person. Nutritious food is essential for the physical and mental development of children. A well balanced diet has been provided in all Model Residential Schools. Nevertheless, the food menu that has been followed in the MRS does not

address the cultural food habits of tribal community. If a demand arises from the students, Superintendent has the right to alter the menu without compromising the nutritional value of authorized food menu after getting sanction from Project Officer/ Tribal Development Officer. The altered menu needs to be approved by the dietician/ health practitioner/nutritional expert from the Government sector. The administrative head is also responsible to keep a food safety register to ensure the wellbeing of students. As an authority of administration, preventing tress-passers to ensure security for the inmates of residential school is also the responsibility of the Superintendent.

It has already been discussed that the academic head of the MRS is the headmaster/mistress/principal. Among them, Headmaster/mistress takes care of the high school section. Out of 20 MRS, 14% have Higher Secondary classes. As per the current status, academic activity of the higher secondary section is geared by principal. The admission of students from the published list is the duty of the HM/ Principal and they are also responsible to ensure the health, hygiene and discipline of the students both in the school and at hostels. It is pertinent to note that the HM/ Principal is appointed and supervised by the education department. Apart from the distributed roles, the joint venture of department staff is required for the effective functioning of MRS. The above mentioned administrative chart can be considered as the overview of the MRS management. The following section is an analysis of the staffing and its pattern.

All other state schools (except MRS) in Kerala are controlled by the education department. In MRS, a conflict of dual management arises because of the dual role of tribal and education departments. The

Superintendent/Manager of the schools is controlled by the tribal department whereas the Principal and HM are controlled by the education department. This creates hurdles in ensuring unity of command in management and administration of schools.

- “Education department does not have much role other than conducting visits, exams and distribution of textbooks.”

(Principal) MRS Paravanadukkom
06/05/2019 11:00 AM – 12:30 PM

- “Suggestions, appointment of contract staff, hostel staff and availability of amenities are taken care of by tribal department”- (HM) MRS Vadasserikara
22/05/2019 11:45 AM 2:00 PM.

The field study indicates that there is a requirement of a mechanism for ensuring unity of commands in schools. Since the HM/Principal is the qualified head of the institution, responsibility to ensure academic quality should also be vested with them. At the same time, there can be some mechanisms to assess the performance of teachers and the HM/ Principal. It could be linked with the performance of the students. The accountability of the HM/Principal can be ensured through a system whereby the district executive committee has the right to evaluate their performance every year based on certain indicators. There can be some special mechanisms for selecting the HM/Principal in Tribal Residential Schools. Qualified teachers from tribal communities can be given weightage. Along with this a special list of HM/Principal can be prepared from the general promotion list by inviting special applications. The period of appointment could be for a minimum of three years and not more than five years. The HM/Principal, who has worked in the tribal schools, could be given special incentives

in their remaining service and post service. Along with the other conditions, it could be statutorily ensured that the HM could be a resident in the school.

The existing power of the Superintendent including the appointment of contract/ academic staff can be handed over to the HM/Principal. In order to avoid interdepartmental conflicts, the district head of the tribal departments can be given a statutory sanction to attend district monthly meetings of HM/Principal. And the deputy director of education and concerned DEO can be given a provision to attend monthly meeting of the tribal department at the district level particularly in the matters related to education.

The role of the Superintendent can be redefined based on the field evidences. All contract appointments, including teachers and non-teaching staff can be vested with a joint committee of HM and Superintendent. The sole authority of the Superintendent in making contractual appointment can be shared through a collective decision. An academic and development master plan of all the schools can be jointly prepared by the Principal/HM and the Superintendent and submitted to the tribal and educational department. This could be for five years and an annual plan can be developed out of this each year. This can be monitored by the school management development committee and the executive committee. The financial allocation from tribal and education department should be based on this master plan and annual plan. It can also be proposed that all the documents submitted to the tribal department can be prepared by the Superintendent and countersigned by the HM/Principal. The powers to take disciplinary actions against the academic and non-academic staff can be vested with the executive committee with the reference

of the School Development Management Committee. The proposals for disciplinary action against any staff can be mooted by the HM/Principal to School Development Management Committee.

Staffing of the MRS

The Model Residential School staff can be classified into academic and non-academic. The academic and non-academic staff are further divided into temporary and permanent staff. Among the academic staff, the permanent teachers are being appointed by the Department of Education and the remaining teachers are appointed by the tribal department (A1/77133/2015/D.P.I Dated 09.11.2014).

Teaching Staff

The teaching staff can be broadly classified into temporary and permanent. Permanent teachers have been appointed by the department of education and temporary staff by the tribal department. The Kerala Education Rule (KER) is the apex system for designing the proportion of teachers to the students.

The permanent teacher's appointment is based on the panel created by the board which is chaired by the Director of Public Education Department and convened by the Director of Scheduled Tribe Development Department. Prevailing order for the appointment of the permanent teachers in MRS is order No. A1/77133/2015/DPI, Dated 09.11.2014, issued by the Directorate

of Public Education which is the significant document on behalf of it. Only the permanent teachers who have been teaching in public schools under the government of Kerala are eligible to apply for the posts reported in Model Residential Schools. The selected teachers have to undergo conditions put forward in the mentioned order. It is compulsory for all the teachers to reside in MRS quarters and the minimum period of appointment would be for three years. Empanelled teachers are responsible to take over the responsibility within the stipulated time frame. As per the current norms, any teacher violating/ showing any kind of hesitation to follow the above mentioned criterion, may have to face disciplinary action by the department.

Permanent teachers have great influence over the overall development of the students. This can only be possible with continuous intervention in their activities and ensuring a safe and secure environment of life. The permanent teachers get training from both the education and tribal development department. These teachers appointed on a permanent basis, would be interacting with students for more than three years. Hence they would be able to visualise and develop comprehensive strategies for the academic and social development of a student. Permanent teachers are thus the backbone of MRS and hence their appointment is primary requisite for the proper development of the school.

Figure 02: Status of Permanent teachers in Model Residential Schools

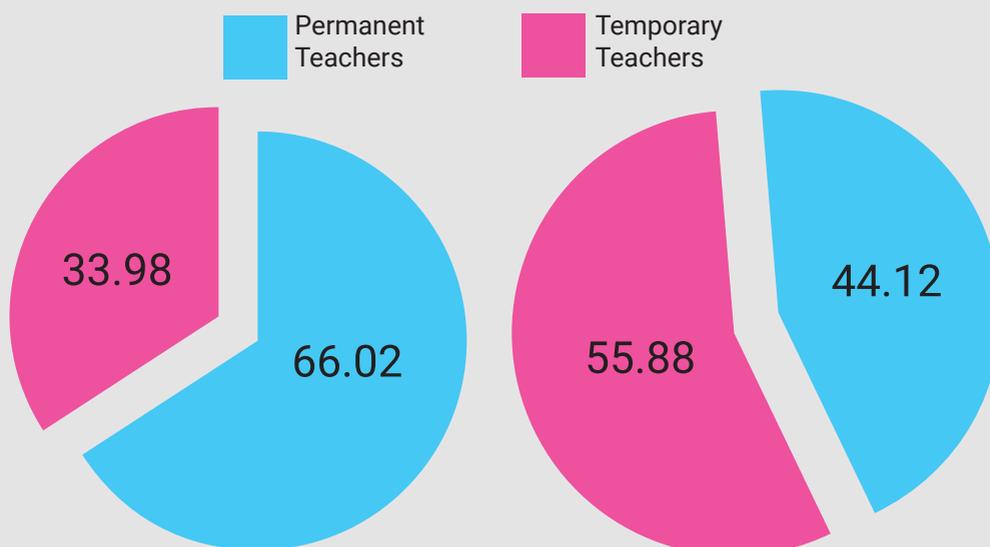


Figure 0.2 Total percentage distribution of permanent and temporary High School teaching staff

Figure 0.3 Total percentage distribution of permanent and temporary Higher Secondary teaching staff

The above diagrams are the representation of the total percentage distribution of teachers in Model Residential Schools. There are 392 teaching staff who have been working in all the MRSs. Among them, 65% serve at the High School level or classes below. (Varying number of total number of teachers is a reason for the depiction in percentage rather than in numbers) When it comes to high school staff, out of total 256 teachers from all MRS, 169 are permanent total higher secondary teachers are 136, the majority (55.88%) of whom are temporary.

The difference between High School and Higher Secondary permanent teachers is a notable observation. A comment from the Superintendent of MRS Kalpetta underscores the void in the appointment of permanent teaching staff at the higher secondary level. "There are no permanent staff for standard 12 in the school. Students are taught by temporary teachers" - Superintendent, MRS Kalpetta, 07.05.19, 12.30 PM. The remark can also be seen reflected in the following table.

Table 5.1 Year of Starting Higher Secondary in Schools

Name of School	HSE Starting Year
MRS Paravanadukkam	2005
MRS Pattuvam	2008
MRS Nallurnadu	1997
MRS Noolpuzha	2007
MRS Kalpetta	2014
MRS Nilambur	2014
MRS Mukkali	2018
MRS Malampuzha	2014
MRS Chalakkudy	2008
MRS Munnar	2008
MRS Vadasserikkara	1998
MRS Kulathuppuzha	2018
MRS Njaraneeli	NA
MRS Kattela	1997

Source: Saketham Data Bank

Three schools have established Higher Secondary system since 20 years. Five schools were added with higher secondary in the period between 2005 and 2008. Among the remaining five schools, three were established in the year 2014 and two were established recently (2018). The data shows that out of 14 higher secondary schools, eleven schools were started at least since four years. While comparing with the high school, it may be noted that there exists a gap in the total number of higher secondary permanent teachers. The detailed school wise data is provided below (Table No. 5.2)

Most of the teachers in high schools are permanent. The trend differs in the case of specialist teachers. This is because specialist teachers are mostly appointed on contract basis.

From diagram no.5.2 it is clear that the majority of the schools have permanent teachers at the high school level and the lesser percentage of permanent teachers is at the higher secondary level. The table no. 5.2 provides school wise data of high school and higher secondary permanent teachers. MRS Kuttichal and MRS Koragai are in their initial stage of development. As the school follows the CBSE syllabus, MRS Njaraneeli is not under General Education Department or under Higher Secondary Education. So, the departments do not have the provision to appoint permanent teachers in MRS Njaraneeli. Hence, MRS Njaraneeli, MRS Kuttichal and MRS Koraga may be given exception in the appointment of permanent teachers. The total percentage of permanent teachers at the high school level on an average is 66 percentage. There are schools

Table 5.2 School wise list of Permanent Teachers

Name of the School	HS Permanent	HSS Permanent
MRS KoragaKasaragod	33.33	NA
MRS Paravanadukkam	69.23	63.64
MRS Pattuvam	57.14	66.67
MRS Thirunelli	42.86	NA
MRS Nallurnadu	70	54.55
MRS Pookkode	83.33	NA
MRS Noolppuzha	60	45.45
MRS Kalpetta	92.31	0
MRS Nilambur	76.47	0
MRS Mukkali	38.46	0
MRS Malampuzha	50	40
MRS Chalakkudi	64.29	87.5
MRS Munnar	84.62	50
MRS Painavu	83.33	NA
MRS Ettumanoor	69.23	NA
MRS Vadasserikkara	69.23	71.43
MRS Kulathuppuzha	83.33	0
MRS Njaraneeli	0	0
MRS Kattela	91.67	91.67
MRS Kuttichal	20	NA
Total Percentage of Teachers	65.16	48

Source: Model Residential Schools

with 50% permanent teachers also (MRS Mukkali, MRS Malampuzha and MRS Thirunelli). The high schools that have permanent teachers above 80% are MRS Kattela, MRS Kulathupuzha, MRS Painavu, MRS Kalpetta and MRS Pookkode. The percentage of permanent teachers in the remaining schools is between 50 and 79. They are MRS Paravanadukkam, MRS Pattuvam, MRS Nallurnadu, MRS Noolpuzha, MRS Nilambur, MRS Chalakkudi, MRS Ettumanur and MRS Vadasserikkara. While it comes to the case of Higher Secondary section, only two schools (MRS Chalakkudi and MRS Kattela) have more than 80% permanent teachers MRS Vadasserikkara, MRS Munnar, MRS Nallurnadu, MRS Pattuvam and MRS Paravanadukkam are schools with

permanent teachers between 50 and 79%. Whereas a significant number of schools have equal/less than 50% permanent teaching population. It is noteworthy that MRS Kalpetta, MRS Mukkali and MRS Kulathupuzha do not have a single Higher Secondary faculty except the Principal.

MRS Nilambur did not have a Principal for the last five years and all the activities have been headed by the Headmistress. The HM of MRS Nilambur commented thus: "I have been taking the responsibility since 2014. So far the required posts have not been sanctioned." (14.05.2019, 1.30-3.30 PM) Among the schools, only MRS Kattela, MRS Chalakkudi, MRS Vadasserikkara, MRS Pattuvam, MRS Paravanadukkam, MRS Nallurnadu and MRS Munnar have at least 50 percent or above teaching population at the Higher Secondary level. Among these schools, MRS Kattela is the school with the highest permanent teachers both at the High School and at the Higher Secondary level.

The field observations indicate that there are different factors that influence the presence of permanent teachers in the schools. The location of a school is one of the important factors. For instance, MRS Kattela which is situated in the heart of Trivandrum has a higher number of permanent teachers (91.67%) at both high school and higher secondary level. At the same time, schools in other distant locations have a poor percentage of higher secondary teachers.

The provision regarding permanent teachers is as per the norms mentioned in order no. A1/77133/2015/DPI, Dated 09/11/2014. The norms dictate a minimum period of 3 years before a teacher can leave the school unless expelled for misconduct. Surveys confirm that the rule was often being violated. The Superintendent of MRS Mukkali stated, "We can not control the teachers under dept. of education. Teachers try and get transfer

after 3 months of joining here. They are not interested in staying in the campus and teaching". The violation of order is clear from the first observation. His opinion has also been supported by other Superintendents that they do not have control over the action of teachers. Many comments indicated that most of the teachers opt to get an appointment in MRS to stay in their native district. The Superintendent of Munnar has opined, "Though the teachers agree to follow the rules of residential school, they see this just as an excuse to teach in schools near their houses". The field evidences indicated that majority of the teachers are not willing to stay at the MRS campus. This creates hurdles in providing proper academic care to students. Sometimes insufficient accommodation facilities in the campus also prevent the teachers from continuing the MRS. While analysing the infrastructure of the schools, it was found that seven schools do not have facility of quarters³. Several schools are situated in remote areas, so they may not find appropriate educational facilities for their children. This also might be a reason for non-attraction/lack of continuity of permanent teachers at the MRSs.

There are exceptions where the number of permanent teachers were high eventhough they were not provided with quarters. MRS Vadasserikkara and MRS Pookkode are good examples. This really challenges the concept of residential school itself. Hence, it could be emphasized that all the MRS should have quarters for teachers.

The survey also revealed that the quarters were not properly maintained to attract permanent teachers to study in the campus after school time. We have already discussed that most of the teachers violate the basic norms of MRS, i.e., to stay in the campus with their children. This reaffirm the relevance of some modalities

to ensure better teacher recruitment to MRS. The condition in the guidelines for the residential stay of teachers should be strictly followed. The children of the teachers could also be given admission in the MRS for their convenient stay in the campus. All the schools should ensure that sufficient teachers' quarters are built for their stay. It can also be ensured that the teachers who have opted MRS would get some kind of incentive whenever they go back to the department.

Model Residential Schools appoint temporary staff due to the lack of permanent teachers. When it comes to the case of Ashram schools, the schools are exclusively meant for Particularly Vulnerable Tribal Groups (PVTG). So, any student from the said groups can join in any of the classes without any limitation. By citing the existing student population and student teacher ratio, the HM of MRS Nilambur stated that: "Students can only be divided into two more divisions above this. We need one more building for classrooms. The hostels can accommodate a maximum of 382 students, but due to lack of alternatives 525 students stay in the hostels. Moreover, we have had to run the school without teachers to teach till Onam." (14.05.2019 1:30-3:00 PM) The experience of Nilambur MRS reflects the inadequate infrastructure and improper appointment of teachers that has affected the academic standards and wellbeing of the students. The sanctioned posts in Ashram Schools are not sufficient enough to cater to the needs of all students; more teachers are needed to personal attention to students. The Department of Education could not make any movement to ensure proportionate availability of teachers to the school. Hence,

³Details are mentioned in the chapter Infrastructure of Model Residential Schools

the schools took their own initiatives to appoint temporary staff. From the opinion of the HM, it was clear that sometimes the contractual appointment gets unduly delayed.

It was also noted that in most of the schools, there is lack of permanent specialist teachers. This is especially true in the case of Physical Education. Most of the principals and HMs indicated that specialist teachers are appointed on contract basis. Irregular appointments of specialist teachers also create hurdles in the performance of the students in co-curricular activities. "The delay in appointing contract teachers is affecting students' performance", a teacher from MRS Munnar commented. The field observations underscore that a good number of teachers, particularly specialist teachers work on contractual basis.

Trend of Temporary Teaching Staff

The appointment of temporary teaching staff in schools is purely contractual (that includes contract and daily wages) and it is compulsory for them to reside in hostels at the MRS. In the guidelines it is insisted that the tribal candidate should be given preference during the contractual appointment (Circular No.D4-7591/15). However, it is noted that this condition is not practically followed in the case of appointment of contractual teachers. Most of the contractual teachers do not hail from the tribal community. It is a pity that even a prestigious school like Njaraneeli highlighted by the department, does not have a single permanent teaching staff in the school. The proportion of teachers from tribal community is also less in this school.

Staffing of Non-Teaching Staff

Temporary staff includes academic (Subject Specialist teachers and MCRT) and non-

academic staff (Ayah, Security, Counsellor, Cook, Full time sweeper, Gardner and Driver) at every MRS. They are appointed through interview conducted on behalf of the Tribal Development Office of each district. For posts like JPHN (only in girls MRS and mixed schools), interviews are jointly organised for districts or at Tribal Directorate.

The non-teaching staff are also divided into the category of permanent and temporary. All the non-teachings staffs are appointed by the Scheduled Tribe Development Department. The category of non-teaching staff is spread over from Superintendent to security/Ayah. The detailed staff pattern is attached in the appendix.

The role distribution for each position varies. Considering the role distribution, the Superintendent is the administrative head and the manager supports his/her daily activities including financial matters. All the posts such as Superintendent and Manager are permanent at every school.

The nurses, counsellors and ayah are appointed to ensure the wellbeing of the students. The post of Nurse (Junior Public Health Nurse - JPHN) is sanctioned only at girls and mixed schools. Schools with only male students are excluded from direct service of nurses at schools. As per the job description, nurses have to ensure the primary health care of students on a full time basis (24 hour service). They are also supposed to keep the health registers of the students. The basic qualification required for this post is diploma in general nursing and higher.

The salaries payments of permanent staff are reasonable, but higher and that of the temporary staff are very low. The case of JPHN is a good example. JPHN is supposed to be there for the entire week and they also have to offer their service whenever it

is necessary. The allocated allowance for them is only INR 13000 per month, which is comparatively low. A large number of nurses suffer due to low emoluments. Other than this, none of the additional benefits are provided to them. A nurse from MRS Mukkali commented, "The salary is very low. I'm teaching here because of my interest. I too studied in MRS and I wish to do at least something for the community".

"I am also from the same community. We joined here to do whatever we could possibly do with our education", said a nurse from MRS Nilambur.

Psychologists and Social Workers are appointed as counsellors in MRS. Compared to JPHN, they have a slightly better honorarium (18000 - 20000). It is sad to mention that in many places, the counsellors do not hail from the tribal community. They do not have any orientation about the context and culture of the tribal community. It was found that this gap affects their performance and commitment to the children. An alumni of MRS Chalakkudi commented, "When I was studying in MRS, Chalakkudi I enquired about the part in Chemistry which I couldn't understand. But the teacher replied by saying that Ambily (Student from other than ST communities) could understand, then why couldn't you?" (Alumni FGD, conducted at Marayoor, on 09-06-19). Along with this, the temporary appointments of caring staff, such as Ayah and Counsellor create several issues related to their performance in the schools.

They are appointed on a contractual basis. Many of them discontinued after the contractual period. This affects their personal relationship with students and that in turn affects the care given by them to the students. This emphasizes the need for permanent staff, or contractual staff at least for a reasonable period of 3 - 5 years. The

counsellor of MRS Chalakkudi commented, "We are hardly getting a year. The appointments are delayed. Moreover, by the time we get to know the students, the year ends". Short term job contract and overload of works are the major issues raised by the counsellors during their interviews. It is noticed that counsellors in some MRS were also allotted the additional charge of pre metric and post metric hostels. This limits their service time in Model Residential Schools. The counsellor of MRS Chalakkudi further commented, "MRS requires a separate counsellor for hostels; additional responsibility of pre and post metric hostels should not be given to the MRS Counsellor".

The case of ayahs is not different. Most of the ayahs are contract staff and the number of students allotted to them is high. "Working is difficult because the scheduled work load is from 6.00 am to 11.00 pm" said ayah of MRS Njaraneeli. The responses from different schools indicated that they were not able to give individual care to the students because of the higher proportion of students allotted to them. Hence, the staffing patterns of ayahs need to be restructured in a way that they can give personal attention to the students. 40-50 students per one ayah may be reasonable in this regard. This number may have to be reduced again in the case of schools starting from first standard. The overall picture of the staffing of non-teaching staff of MRS indicates that key positions such as ayahs and counsellors are temporary in nature. Since, students stay away from home, their personal care in hostels is extremely important. Hence the role of ayahs and counsellors are pertinent in this regard. However the present contractual system acts as a hindrance in providing continuous care to the students.

Modifications in Admission Systems

Presently, EMRS, MRS schools is for PVTG communities, MRS schools is for special communities and Njaraneeli CBSE School follow different systems for admissions. Malampuzha, Koraga, Nilambur and Nulppuzha schools function for PVTG communities. Nilambur School restricts its admissions to Cholanaikkar and Kattunaikkar communities. The MRS Thirunelli restricts admission to Adiya and Paniya communities, whereas Koraga School was started for the Koraga community. Usually, the schools started for the PVTG community restricts their admission to these communities. However, Koraga School admits students from other tribal communities apart from the Koragas because they do not get sufficient students from the community. Other schools for PVTG communities, such as MRS Nulppuzha and MRS Malampuzha provide open admission for PVTG communities all over Kerala. Kattunaikkar, Cholanaikkar, Kurumbar, Kadar and Koragas are the PVTG communities listed in Kerala. The MRSs for PVTG communities give direct admissions to the PVTG communities by receiving applications. MRS Njaraneeli admits students taking admission from first standard. They conduct district wise interviews and prepare a state wide rank list. In all other MRSs they follow a state wise admission system through a common entrance test conducted at the state level. Ashram schools such as Malampuzha, Nilambur, Nulppuzha, Thirunelli, Kuttichal and Njaraneeli admit students from first standard onwards. The provision in the Right to Education Act proposes that students should get the opportunity to stay with their parents till fifth standard. The present admission system in Ashram schools is against the provision mentioned in this Act. It would be ideal to propose neighbourhood

education system to the tribal students at least till they reach the age of ten. Hence, it would be advisable to cancel the provisions in Ashram Schools to admit students from first standard. The study indicates that students in the same gender school face several developmental and interactive issues during their schooling period. The mixed school system is advised for cross gender interactions and scientific development of the students, particularly in their teenage (Meyer, 2010). Hence it would be advisable to convert single gender schools to gender fluid schools. Presently in several areas, students had to take admissions in schools at distant locations because of the unavailability of mixed schools in their locality. For instance, boys at Attappadi are forced to move either to MRS Munnar or MRS Vadasserikkara because MRS Mukkali is a girls' only school. This issue will be solved by putting an end to single gender schools.

The present system of admission in the state owned MRSs is centralized. Students often do not get the opportunity to enter into a school close to their region in the present system. The distance between school and habitation creates difficulty for parents to frequently visit to the schools. This also affects the parents' participation in PTA meetings and other activities. Hence, an admission system which can provide more opportunity for better parent- student

interaction is advisable for MRSs. The present Centralised Entrance system can be continued. At the same time a cluster wide approach can be followed while preparing the rank list. The cluster can be formed including nearby districts. This would provide more opportunities for students and parents to interact. The teacher- parent interaction would also be improved through this.

Finance for Model Residential Schools

The Tribal Sub Plan (TSP) (now called Scheduled Tribe Component) Strategy was adopted in the 5th Five Year Plan (1974-75) for accelerated development of tribal population. It envisages channelizing the flow of outlays and benefits from all sectors of development to ST population. TSP dedicates fund for tribal development. Scheduled Tribe Component (STC) is a multipronged strategy which includes support for education, health, sanitation, water supply, livelihood, etc. Education is a major area of expenditure under the Tribal Sub Plan both at the State and the National Level.

As per the Budget 2018-19, there are 37 Central Ministries and Departments that have STC funds catering to specific tribal development in various sectors through 299 different schemes, as reflected in the Statement 10B of the Expenditure Profile of the Budget. The allocation for the welfare of

Table 5.3 Break-up of Tribal Sub-plan funds (in crore rupees) during the last five years

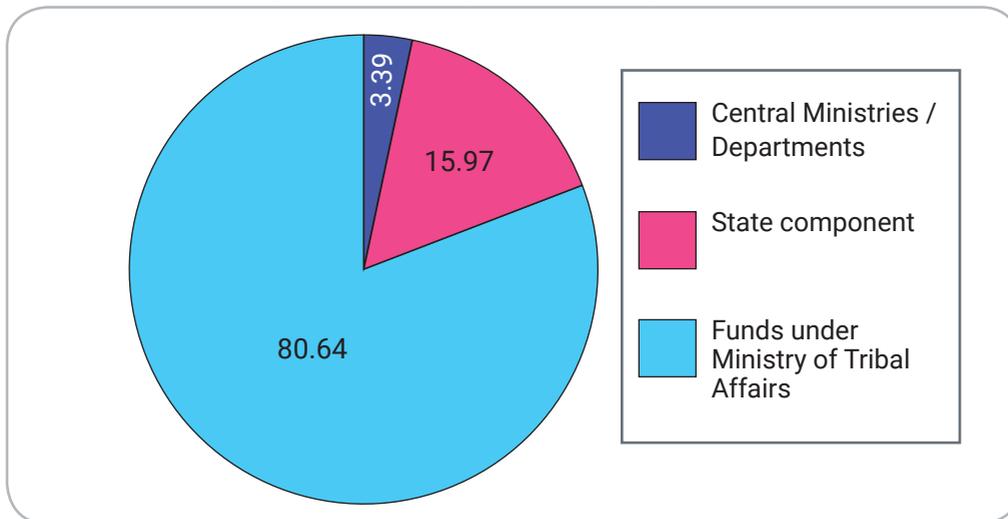
ST Component	2014-15	2015-16	2016-17	2017- 18	2018-19
Central Ministries / Departments	16,111	15,628	19,873v	25,999	37,803
State Component	83,167	96,369	1,11,435	1,39,290	1,52,494
Funds Under Ministry of Tribal affairs	3,850	4,550	4,799	5,293	6,000
Total	1,03,128	1,16,547	1,36,107	1,70,582	1,96,297

Source: Annual Report, Ministry of Tribal Affairs

Scheduled Tribes across all Ministries has witnessed an increase from INR 24,005.00 crores in the financial year 2016-17 to INR

31,920.00 crores in the financial year 2017-18 and to INR 37803.26 crores in 2018-19 (Tribal Development Report 2018).

Figure 03: Breakup of tribal sub-plan funds



State TSP

The erstwhile Planning Commission had revised the guidelines for implementation of TSP by States/UTs on 18th June 2014. The Guidelines, inter-alia, reiterate the resolve of the Government for allocation of funds under TSP out of total Plan Outlays not less than the population proportion of STs in the State as per 2011 Census. The guidelines further stipulates for non-diversion of funds meant for tribal areas and comprehensive monitoring framework with well-defined indicators, covering provisioning, service delivery standards as well as outcomes.

Table 5.4 Allocation and expenditure of TSP funds for the last five years (in lakhs rupees)

Year	Total State Plan Scheme by Outlay	TSP Allocation	Percentage of TSP Allocation	TSP Expenditure	Percentage of Expenditure w.r.t Total State Plan Outlay	Percentage of Expenditure w.r.t TSP Allocation
2014-15	804040	83167.17	10.34	63305.95	7.87	76.12
2015-16	9206960	96369.02	10.46	74050.15	8.04	76.84
2016-17	1040788	111434.7	10.7	89145.25	8.57	80
2017-18	1568918	1412979	9.05	116833.1	7.44	82.32
2018-19	181353.2	152493.7	8.41	5542.35	0.003	0.036

Source: Annual Report, Ministry of Tribal Affairs

Table 5.5 Management cost for the Running of Model Residential/Ashram Schools

Year	Running Cost(in Lakhs)
2017-18	5500
2018-19	6000
2019-20	6000

Source: Tribal Department Government of Kerala

The amount provided is for meeting running cost/management cost of 17 Model Residential/Ashram Schools, two Ekalavya Model Residential Schools and one Special CBSE Model Residential School. All the expenses relating to the cost of running MRSs are included in this. The cost of establishment (salaries and allowances) repair and maintenance, minor construction, additional amount for fuel, cooking gas and provisions, waste management, energy projects, project for modernization and projects for implementation of e-governance initiatives are included in this. Funds are also earmarked in this area for extra coaching, skill development including additional skill acquisition programme and entrepreneurship development. Funds under this head are also allocated for group activities like Student Police Cadet, National Cadet Corps and National Service Schemes. Purchase of equipment's/furniture/computers and accessories, programmes for soft skill development and for extra/remedial coaching, cost for conduct of seminar and workshop, cost for meeting travel and other allowance to students and staff for participating in or for conducting various programmes/functions/camps/site visits/workshops/competitions in India and abroad, cost for meeting study tour of students, development of health including provision for counselling and special programmes or projects aimed at the overall development of children and cost for Sahavasa camp for Secondary and Higher Secondary students and honorarium for counsellors An amount

of INR 6000.00 lakh is allotted for the running cost/management cost of the school during 2019-20. (Budget circular and Tribal Sub Plan Programme 2019-20)

The fund allocation of each school is according to the category of the school. Among all the twenty schools, Ekalavya Model Residential schools are functioning under complete central assistance. Half of the establishment costs and the running cost of Ashram Schools are borne by the State government and the remaining by the central assistance. CBSE Ashram School, MRS Njaraneeli is functioning under the special grant aid by Central Government. The remaining Model Residential Schools run with the complete assistance of State Government.

Ekalavya Model Residential School (EMRS)

Ekalavya Model Residential Schools (EMRSs), with the capacity of 480 students in each school, are set up in the States / UTs under the Special Area Programme of Grants under Article 275 (1) of the Constitution of India. The objective of EMRS is to provide quality middle and high level education to Scheduled Tribe (ST) students in remote areas, not only to enable them to avail reservation in higher and professional educational courses and get jobs in government and public and private sectors, but also to have access to the best opportunities in education at par with the non ST population.

Costs and Budget of Ekalavya Model Residential Schools

- A. Capital Cost (non-recurring) - The capital cost for the school complex, including hostels and staff quarters will now be INR 12 crore with a provision to go up to INR 16 crores in hilly areas, deserts and islands. Any escalation will have to be met by State Government/UT.
- B. Recurring Cost during the first year for schools would be INR 42000/- per child. This may be raised by 10% every second year to compensate for inflation.
- C. For procurement of essential, non-recurring items like furniture/ equipment including the kitchen, dining hall, hostel, recreation, garden, etc. is at INR 10 lakh per school - will be allowed once in every five years
- D. The annual budget for recurring expenditure shall be formulated and placed before the Management Committee for approval at the end of each financial year for the next year. The rates for calculation of recurring costs may be based on the prevailing rates sanctioned for the Jawahar Navodaya Vidyalaya from time to time.
- E. The amount under recurring cost, due to each functioning EMRS, would be released by the State/UT Government to the bank account of the EMRS. The bank account of each EMRS for this purpose may be opened jointly in the name of the Principal of the EMRS and any Member of the Management Committee who is also a Government Official.

Table 5.6 Ekalavya Model Residential Schools: Recurring Cost for Last Two Years in Kerala

Year	Recurring Cost (INR lakh)
2018-19	369 (600 students INR 61.500/- per student)
2019-20	633.29 (581 students INR 1.09 per students)

Source: Tribal Department Government of Kerala

The table above shows the running cost of Ekalavya Model Residential Schools (EMRs) sanctioned by the Government of India. The Government sanction funds based on the project proposals submitted by the State government.

Maintenance and Purchase in Model Residential Schools

Presently there is a purchase mechanism to cater to the needs of MRS.

The Model Residential Schools have both centralised and decentralised purchasing systems. Several items are listed under each domain of purchase. Currently, the

items such as uniforms, night dresses, undergarments, bed sheets and pillow covers are under the centralised purchasing system. Daily consumables shall be purchased from the local market. The detailed quantity of purchase is mentioned in the appendix. Among the daily consumables, grocery items are purchased from government stores such as Maveli/Thriveni/Supplyco. MRSs purchase vegetables, fish and meat from local markets. With the intention of promoting the livelihood sustainability of the tribal community, the government has given administrative provision to purchase goods and cultivated products that have been

produced by the community. MRS Mukkali is the only MRS that purchases from the tribal community institutions (from Attappadi Tribal Co-operative Society). The centralized system can also incorporate with the tribal products in their purchase pool. For instance, the tribal department has purchased 'Karthumbi', a brand of umbrellas produced by a tribal youth collective in Attappadi.

The centralised system exists even during emergency situations. The products can be purchased by the Superintendent after the sanction from the Project Officer.

The running cost for the schools is sanctioned from the head 2225-02-277-49/48- MRS- OC. The cost is being used for the daily functioning of the schools. The Superintendent is the appellate authority of financial management (Accounts, financial statement and other financial documents) at schools. So the person can spend prescribed money for the purchase and maintenance of the system. The person could spend an amount of INR 15000 without the tendering process. If the needed amount is above INR 15000, the Superintendent has to get the permission from the Project Officer.

Field observations indicate that there are some issues that exist in the centralised purchasing system. Timely availability of materials and quality of the materials are two important concerns raised during the study.

"Stitching and materials of the uniform are not up to the promised quality", a student from MRS Chalakkudi commented. "Students did not get uniform on time because of the centralised purchase of uniform", stated HM, MRS Nilambur.

The field inferences underscore the need of some changes in the existing purchase system. The State Tribal Department can empanel a list of government and semi

government institutions from where these schools can make purchases. This will enable them to make purchases in the prompted place. For instance, the state supported systems like Hantex, Khadi and Village Industries Board can be listed for the school level purchase. In the case of materials which are not available from direct government institutions, MRS could purchase through the government institutions like Maveli, Supplyco and Thriveni. This will enable the school authorities for timely delivery of materials to the students. The quality of the goods can also be ensured through such a mechanism. It is also worth mentioning that the financial limit instructed under the power of Superintendent can be increased from INR 15000 to a reasonable amount.

MRS Paravanadukkam - An overall performer among tribal MRSs

Among the 20 tribal residential schools in Kerala, MRS Paravanadukkam has shown outstanding performance in different aspects like, academic excellence, performance in sports and arts activities, better administration and involving parents in the activities of the school.

The records on academic performance indicate that performance of students below SSLC in English is comparatively better in Paravanadukkam, which is equal to an English medium school like MRS Njaraneeli. The performance of students in SSLC, in terms of attainment of marks and grades in all subjects is also far ahead in MRS Paravanadukkam than other schools. Nine students in MRS Paravanadukkam could score A Plus in all subjects during the academic year 2018-19. It is also worth mentioning that the higher secondary result of the school is 95 per cent in the same year.

The school is also a best performer in sports activities. The students from this school have won in state and national level sports meet. They have won fourth place in the national level Subroto Cup football tournament.

Different factors were observed as contributing elements for the better performance of this school. The involvement of parents is quite high in the matters related to the school. The parents are maintaining an active social media group for detailed discussions. It is also interesting that most of the students are hailing from the same district and same community, which has a prominent role in the better involvement of parents in schooling activities.

MRS Paravanadukkam holds better infrastructure with good residential facilities to teachers and non-teaching staff. It is also pertinent to mention that better interdepartmental coordination between tribal department, school education department and higher secondary department were visible in this school. Along with the better coordination, good leadership of the school would also have contributed to the overall performance.

Findings and Summary

The following are the findings extracted out of the chapter:

1. The State level governing body of MRSs is a registered society. We could realise during the study that this governing body does not meet regularly. The last meeting was conducted in 2014. It is also noted that participation of all stakeholders, whose role is important in running schools are missing in the governing body. The representatives of health and local self-government department are not present in the existing structure.
2. Local Self-Government participation is minimal at the district level executive committee and the school level Advisory Committee. District panchayat president and grama panchayat presidents are missed from the Executive Committee and the respective school advisory committees. Since schools commence from 5th standard, absence of block panchayat representatives are also worth mentioning in the school advisory committees
3. The presence of PTA representatives and student representatives is also note there in the school advisory committee.
4. The inferences of the study indicate that the present PTA system is dysfunctional or nominally functioning in most of the schools except in the school at Njaraneeli. The distance of schools, domicile places of students and restricted assistance given by the department for attending the meetings are the major reasons highlighted for the poor presence of parents in the PTA meetings. This underscores the relevance of some innovative strategies to ensure parental participation in schooling process.
5. It is interesting to note that the school advisory committees have only advisory roles. And no statutory powers are provided to them. This negates the possibility of a democratic decision making at school level. This has larger implications

while the PTA system is poorly functioning.

6. It is noticed during the study that the dual management system creates several conflicts in the administration of schools. Administrative authority is vested with the superintendent and academic authority is vested with the principal or HM. This conflict leads to lack of unity of command in school administration.
7. The conflict between education department and tribal department is also highlighted during the study. The authority to appoint permanent teaching staff are vested with the education department while the temporary staff appointment is vested with the tribal department. This conflict also badly influence the efficient coordination of the school system
8. It is interesting to note that even though the Principal or HM is the school head, the authority to recommend disciplinary action against contract staff to Executive Committee is still vested with the Superintendent. In short, absence of a single head in the school creates a hurdle in efficient management.
9. It is noted that the norms for continuous three year stay at school and the residential living of permanent teachers are violated. This really challenges the meaning of residential schooling system
10. The data from the study indicates that the proportion of permanent teachers at the higher secondary schools is low while compared to the high school. It is noticeable that there is a regional imbalance in the availability of permanent teachers particularly at the higher secondary schools. High proportion of higher secondary teachers in MRS Kattela and the low proportion of other remote schools are good examples.
11. It is also pertinent that the one and the only CBSE school functioning in the State is being run totally by contract staff.
12. Over population of students and low student teacher ratio is also an issue noted particularly in PVTG schools, such as MRS Nilambur.
13. The proportion of non-teaching staff, particularly ayahs is lower than the statutory norms in almost all the schools. And in most of the places, ayahs are contract staff. This makes hurdles in providing personalised care to the students.
14. Along with this, lack of permanent health nurses and the dual responsibility of many of counsellors affect their performance. Poor remuneration of health nurses was highlighted as a major point during the study.
15. Even though the permanent MCRT posts are allotted in schools, most of them are working on contract. It is noted that teachers from education department are not willing to take up this responsibility. This highlights the need for special recruitment mechanism for the MCRT.
16. Contract teachers are appointed for a short term. The lack of continuity of contract teachers is a factor affecting the student teacher relationship.
17. The participation of tribal youth is eventually reduced to the posts of

contract teachers and non-teaching staff. The circular issued by the department in this regard is not really followed in practice.

18. Different categories of MRS follow various modes of admission. The state level admission system and segregated general school system often negates the opportunity of students to study in the schools closer to them. At the same time, some schools for PVTG communities like MRS Nilambur is over populated because of uncontrollable admissions. It is also noted that the Ashram schools still follow an admission system which is contradictory to the RTE provision, i.e., to avoid residential school system till the class of fifth.
19. It is found that the financial autonomy of the administrative head is too limited and majority of the powers are vested with the Executive Committee.
20. The gender segregation in schools negates the opportunity of many students to get admitted in nearby schools. The present admission system negates the possibility of providing admission to the differentially abled students. The explanation given was that of difficulty in taking care of them in residential schooling system. This is really human rights violation and humiliation of the differentially abled group.
21. Long term master plans and special considerations to the backwardness of infrastructure are missing from the funds allotted to the schools.
22. The tribal directorate follows both centralized and decentralized system

in schools. The field study highlights that centralized purchasing system delays the timely availability of materials to the students.

Recommendations

- Better strategies for parent-teacher-student interaction need to be developed. The measures to improve parent connectivity with students such as providing financial assistance for more number of visits to school, restructuring the admission system and organising regional or district level PTA meetings can be the initiatives in this regard.
- Some statutory provisions are required to ensure that state level general body meetings would be conducted at least twice a year. The participation of different stakeholders related to school such as representatives from LSGD, Health departments, and forums such as SPCs and NSSs needs to be ensured in the state level governing body.
- The presence of the District Panchayat President and respective Block Panchayat President in the school area must be included in the district level Executive Committee.
- The representation of Panchayat president needs to be ensured in school level advisory committees.
- The school advisory committee can be converted into School Development Management Committees. It may be given statutory powers instead of advisory roles. Representatives of PTA and students can also be included in the school Development Management Committees.

- The HM/ Principal can be fixed as institutional heads in all schools. Both the administrative and academic responsibilities can be vested with them. It can be statutorily ensured that they will reside in the campus till their services will be available to the school at least for three years.
- The powers for recommending disciplinary action against staff and students can be vested with Principal/ HM and the same can be implemented with the approval of a School Development Management Committee which can be presented by the Principal/ HM and the Superintendent.
- In order to avoid the conflicts between the departments, provisions can be made to ensure the presence of HM/ Principal in the district level meetings of the tribal department where the matters related to schools are discussed. The presence of tribal department district officers can also be ensured in the district level meetings of educational department. Interdepartmental issues can also be sorted out in the executive committee meetings where the school Principal/ HM, Deputy Director of Education and tribal department officials are present.
- Some measures are required to ensure effective functioning of PTA. District level PTA meetings in the catchment areas of MRS and corner meetings in the student meeting locations would be some initiatives in this direction. Along with this, the frequency of parent visit to school can be improved by providing better financial assistance.
- The present admission system needs to be restructured in a way that the distance between the student's hamlet and school locations would be reduced. The eleven gender segregated schools can be converted into mixed schools. This would solve many issues related to admission. Along with these, a region based cluster admission system can be followed by sustaining the state level entrance admission system. This can be done through preparing a regional wise rank list for admission.
- Some innovative strategies to select interested teachers from the education department can be followed. A special recruitment drive by the PSC for MRSs can be done by sustaining their control within the education department itself. An MRS cadre can be formed within the education department which ensures that they will serve a minimum period in the tribal schools. The other possibility is to statutorily ensure that the teachers who opt for Tribal MRS from the education department will have to stay in the campus itself. Some special allowances and study facilities for their children in the MRS can be ensured through a statutory provision. A promotional mechanism can be introduced by ensuring that those who have worked for a minimum of three years in MRS would get incentives when they go back to the mainstream school system.
- The appointment period of contract teachers and non-teaching staff can be ensured to the minimum period of three years.
- The student ayah ratio can be reduced to 1:50. Full -time counsellors need to be appointed. PSC can make a special recruitment drive for the post of MCRT and their control can be brought into the tribal department.

- Special efforts are needed for preparing a long term infrastructure and academic master plan for all the schools. The financial allotment for the infrastructure development of all schools can be done by following the criteria of infrastructure index instead of universal distribution to schools.
- The allotment for meeting the running expenses of schools can be made with the present criteria itself, based on the head count of students.
- The financial autonomy of the school's head can be expanded from the existing standards to a reasonable level.
- The purchase system of the schools can be decentralised. The government institutions from where the purchases are made can be listed out and the financial allotment can be given to the respective school heads. In the case of objects which are not available directly as a product of government system, the purchase can be done through government agencies such as Supplyco, Maveli and Thriveni. Here also, the schools can be given powers to purchase from local branches of these institutions. In addition to this, preference can be given to purchase of products from tribal cooperative societies.

VI. Academic Performance of Students in Model Residential Schools

In comparison to the pre-independence period, the oppressed and deprived communities like Scheduled Caste and Scheduled Tribes have been enjoying freedom and equality during the post-independence period. This transition is highly reflected in education sector that has led to the social transformation of the society. However, various government reports and studies exhibit that there have been notable differences in the academic performances of the tribal students and students from other social groups. This is manifested in terms of higher drop-outs and poor pass percentage and lower number of students aspiring for higher education (Kerala Development Report 2008). There are some reasons highlighted as contributing factors for the poor academic performance of tribal students. The educational backwardness of parents, medium of instruction, issues related to curriculum and syllabus not catering to the living environment of tribal students' etc., were the major reasons highlighted for the poor academic performance of the tribal students.

Model Tribal Residential schools were established to overcome the problems faced by the tribal students with regard to lack of schools. The residential system is expected

to provide individual care and attention to the students in their living environment (Sujatha, K. 2002). The role of ayahs, residential tutors and residential teachers in improving the educational performance is worth mentioning. Hence it was expected that MRS could make radical changes in the educational attainment of students. It was assumed that good school infrastructure and learning environment will improve the performance of students. In such a context, an objective assessment of the academic performance of students in MRSs is pertinent. This chapter is an attempt to understand the academic performance of students using various indicators.

Performance of MRS students in Higher Secondary Public Examination (2018-19)

In 2005, Govt. of Kerala started Higher Secondary Course in two Model Residential Schools which were MRS Kattela in Thiruvananthapuram and MRS Nalloor nad in Wayanad. Later, the higher secondary courses were included in many MRSs all over the State. Nearly 2000 students are studying in 14 Model Residential Schools opting various streams like Science, Humanities and Commerce. Among these 14 schools, Mukkali and Kulathupuzha have recently

started standard 12 and Njaraneeli follows CBSE and the data could not be collected from MRS Malampuzha because of technical issues. The data collected for analysis comprises of 10 schools.

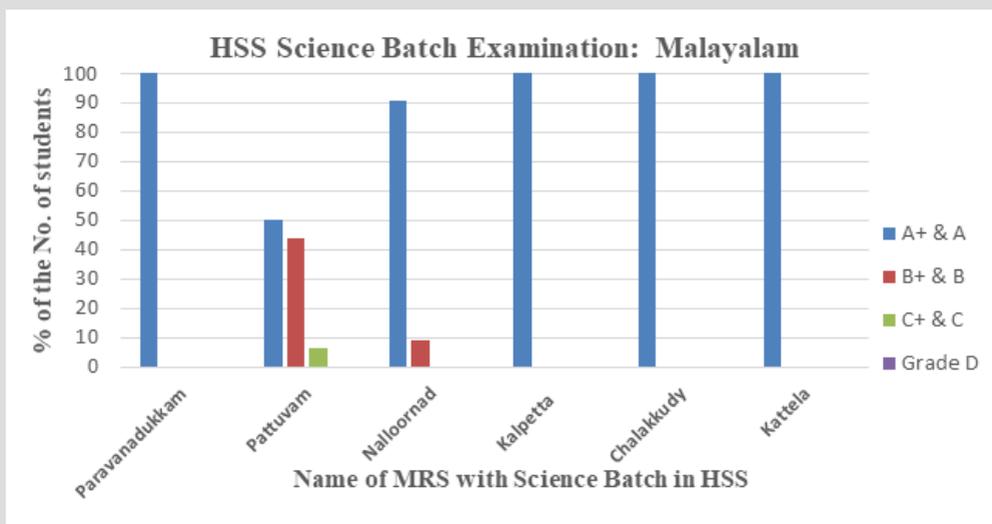
Among the selected ten MRS, six schools (MRS Pattuvam, Nallooroad, Kalpetta, Paravanadukkam, Chalakkudy and Kattela) have Higher Secondary students studying science stream. The humanities stream is offered at MRS Vadasserikkara, Noolppuzha and Pattuvam. Commerce is offered in seven

MRS, such as MRS Pattuvam, Nallooroad, Noolpuzha, Paravanadukkam, Nilambur, Munnar and Kattela. For the evaluation of the performance of the students, the marks of the higher secondary examination is categorized into four i.e. A+ and A (above 80%), B+ and B (60% - 79%), C+ and C (40 % -59 %) and D (below 30%), which shows students who have failed. In addition, the students from the rank list who were absent in the examinations have been excluded from the analysis.

Performance of Higher Secondary Students in languages

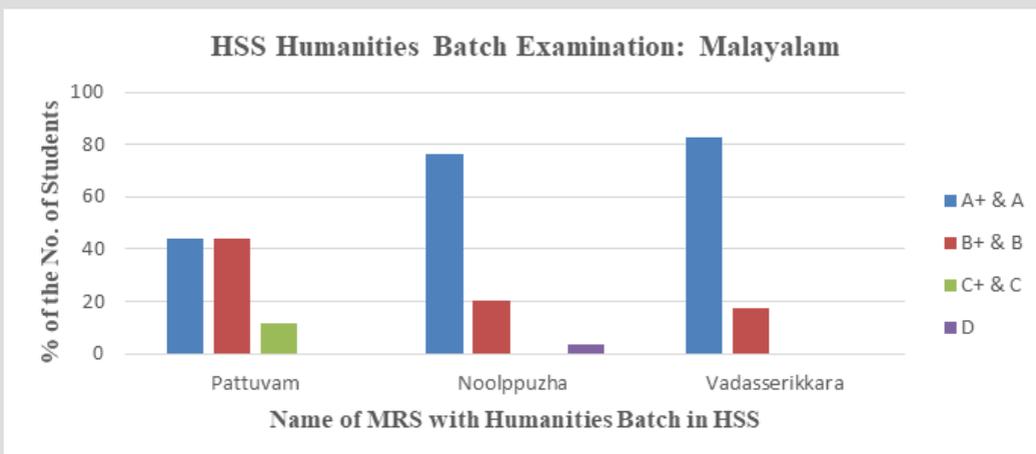
The three graphs (6.1, 6.2, 6.3) below indicate the performance of Higher Secondary School students in Malayalam examination. The overall trend of the graph indicates that the students in Science and Commerce stream have shown better performance in Malayalam examination.

Figure 6.1 Performance of the students in the HSS Science Batch- Malayalam



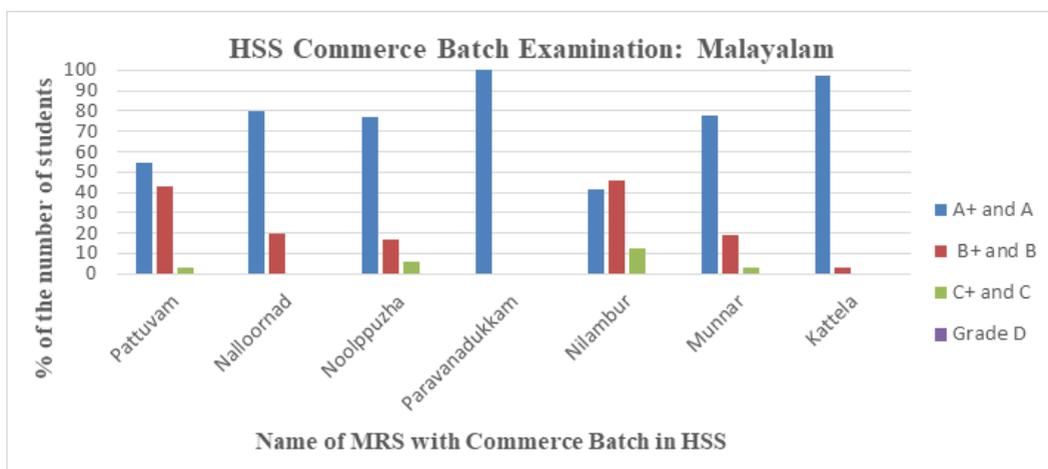
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.2 Performance of the students in the HSS Humanities Batch- Malayalam



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.3: Performance of the students in the HSS Commerce Batch- Malayalam

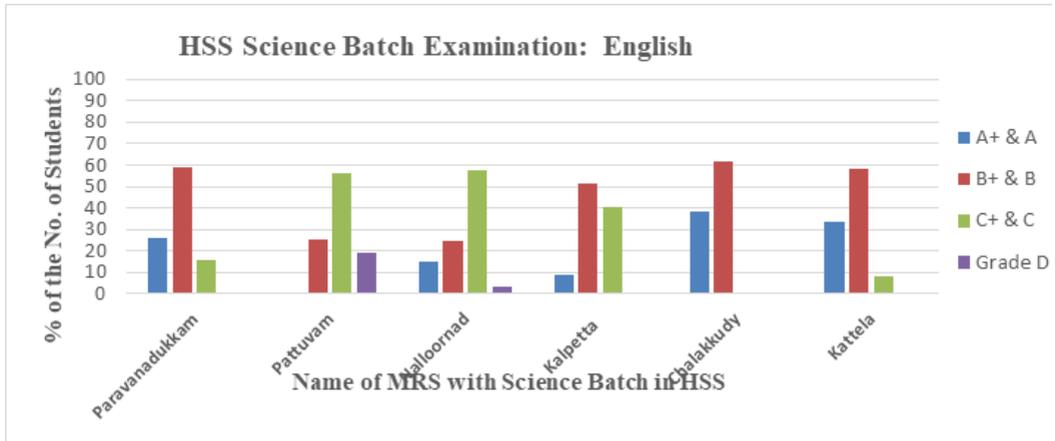


Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

The performance of students in Humanities seems average. For instance the Science and commerce streams could gain 100 per cent result in all the schools, while no school among Humanities stream could gain 100 per cent result. It is noticed that most of the students in Science and Commerce streams could attain the grade point A+ or A. The majority of the students in the Humanities stream could gain the grade point of pleasantly B+ or B. It is found that

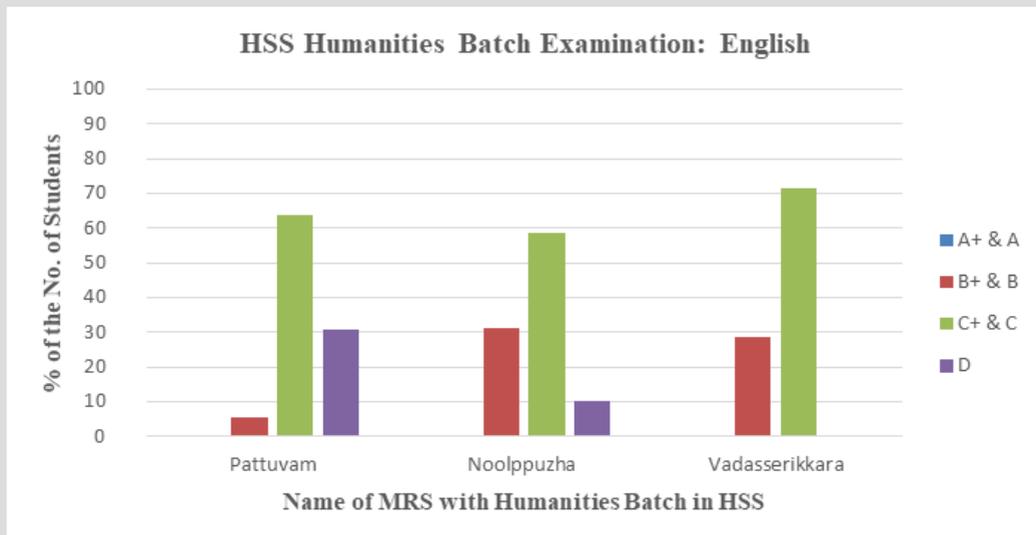
the MRS Paravanadukkam has shown better performance in Malayalam Examination among students of Science and Commerce stream while Vadasserikkara shows better performance in Humanities. At the same time Pattuvam, Nilambur and Noolpuzha has shown poor performance in the Malayalam examination under Science, Commerce and Humanities streams.

Figure 6.4 Performances of the Students in the HSS Science Examination- English



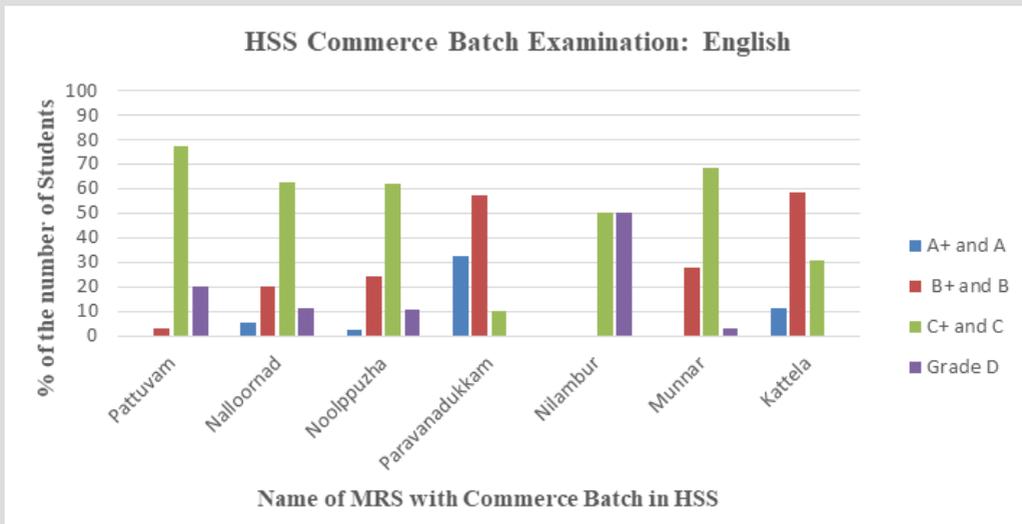
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.5 Performances of the Students in the HSS Humanities Examination- English



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.6 Performance of the Students in the HSS Commerce Examination- English



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

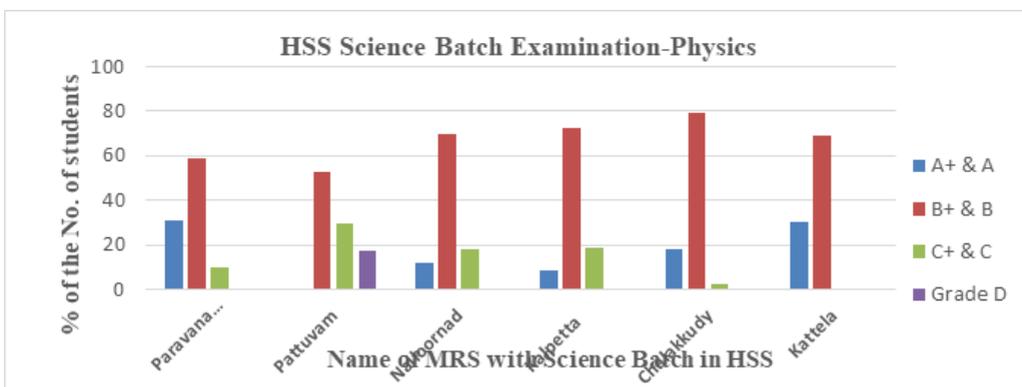
The above three graphs (6.4, 6.5, 6.6) show the overall trend of Higher Secondary School Students in English examinations. The trend shows that the majority of the students in HSS stream have shown only average or below average performance. The overall trend indicates the backwardness of students in English language. It is noted that the majority of the students could only attain the grades of B+, B, and C+, C in English. Compared with the Humanities and Commerce streams, students in Science stream have performed slightly better. Paravanadukkam, Chalakkudy, Kattela and

Vadasserikkara Schools have shown better performance in English, while Pattuvam, Nallooroad and Nilambur have shown poor performance.

Performance of HSS Students in Science Subjects

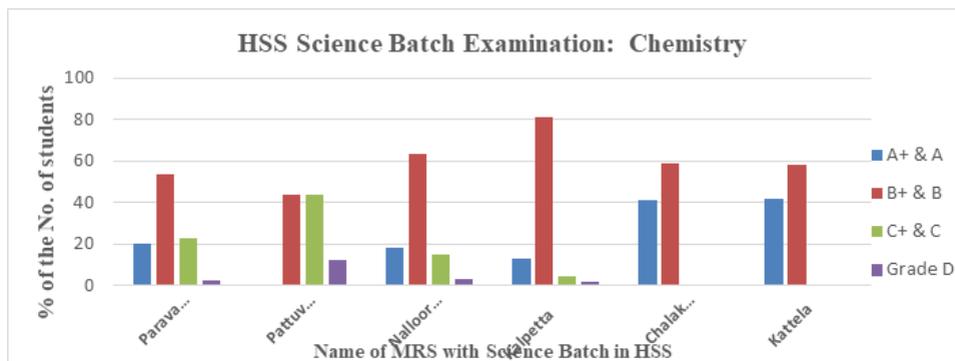
Since the science stream is a combination of subjects such as Physics, Chemistry and Biology, the analysis of the performance of students is important. The following graph shows the performance of HSS students in science subjects such as Physics, Chemistry and Biology.

Figure 6.7 Performance of the Students in the HSS Science Examination- Physics



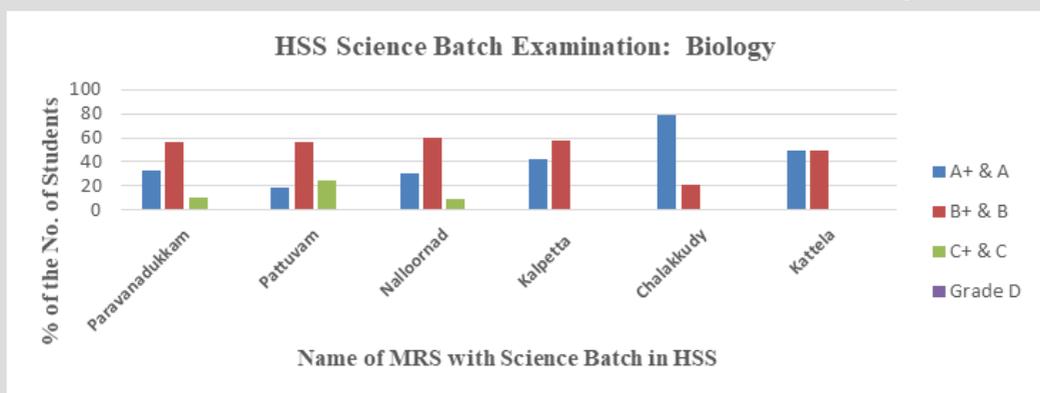
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.8 Performance of the Students in the HSS Science Examination- Chemistry



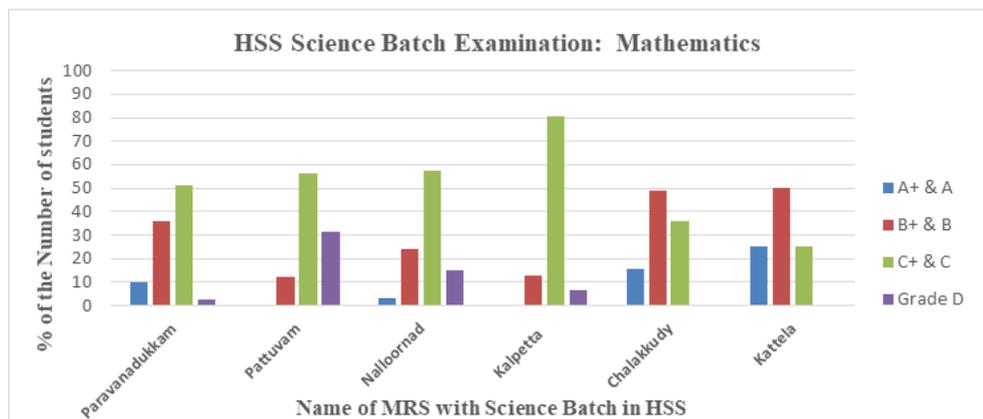
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.9 Performance of the Students in the HSS Science Examination- Biology



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.10 Performance of the Students in the HSS Science Examination- Mathematics



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

The overall trend in the above graphs indicates that students in all MRS could make comparatively better performance in Biology and Physics, while performance is poor in Mathematics and Chemistry. Figure 6.9 shows that all schools could make 100 per cent results in biology. One school failed to attain 100 per cent results in Physics. However, only two out of six schools could make 100 per cent results in Chemistry and Mathematics.

It is worth mentioning that students in tribal schools in general could not perform excellently in all Science subjects except Biology. The data indicate that the majority of the students could attain grades B+, B and C+, C in almost all Science subjects. It is noticed that the students have shown extremely poor performance in Mathematics. Chalakkudy, Kattela and Paravanadukkam are the schools where students have shown comparatively better performance in Science subjects, whereas, Pattuvam school has shown poor performance in all Science subjects. The close interaction of tribal students with the natural environment and the eco-system may be a factor in their

better performance in biology examination. The syllabus and curriculum of the Science subjects in the Higher Secondary School is tough compared to the High school. It largely follows a National framework followed by SCERT. Hence, they might find it difficult in following comparatively tough syllabus in all subjects. This underscores the relevance of some special strategy to transact Science subjects more effectively among tribal students (Shweta Bagai, Neera Nundy, 2009). Even though the students are allowed to write the examinations in Malayalam in the current HSS system, they might be confronting difficulties in imbibing the technical terminologies and complex concepts used in the Science texts. Some programmes which could link the scientific concept into their living environment through the live experiences and activities is necessary. The inference of the study highlights that there is no direct relation found in the quality of infrastructure and academic performance of schools. For instance, Nalloorad and Pattuvam have well equipped Science labs, but that is not reflected in their results.

Performance in Humanities Subjects

Figure 6.11 Performance of the students in the HSS Humanities Examination- History

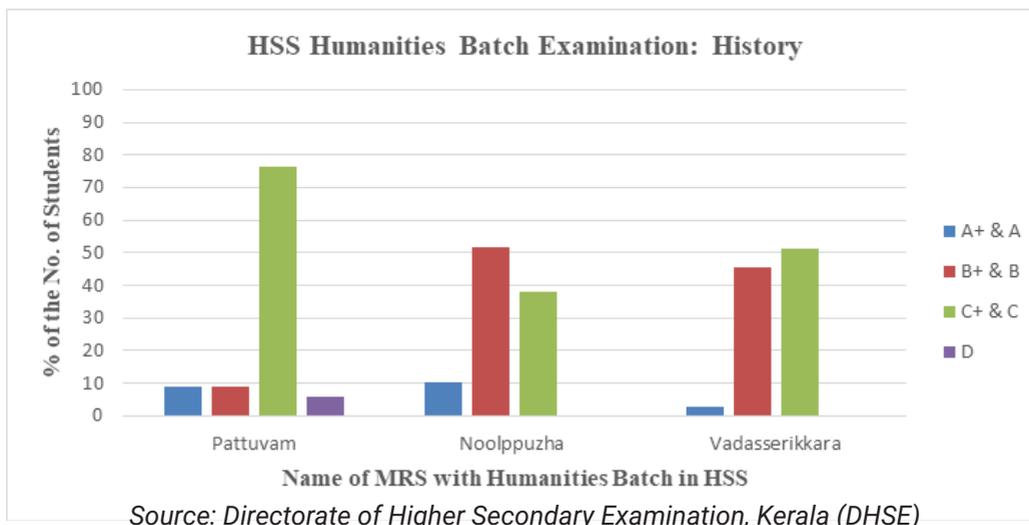
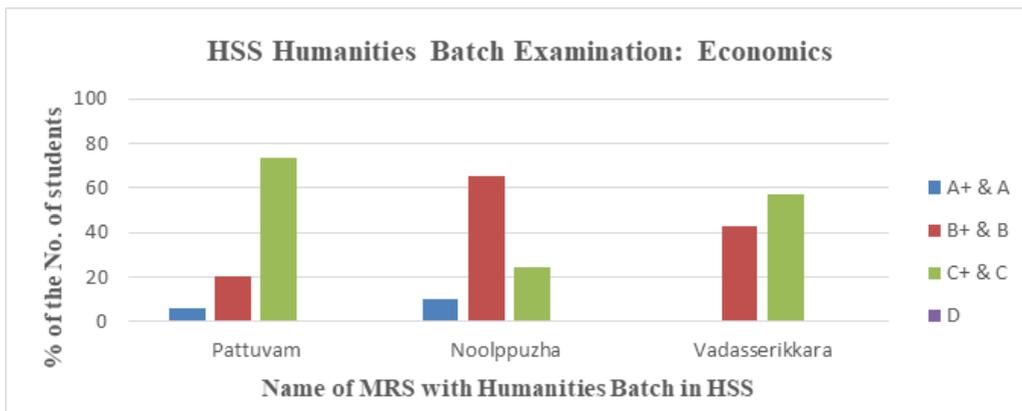
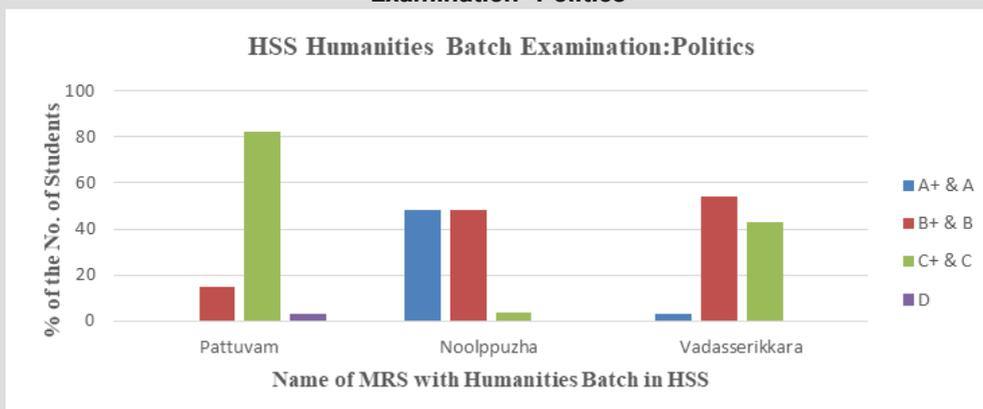


Figure 6.12 Performance of the students in the HSS Humanities Examination- Economics



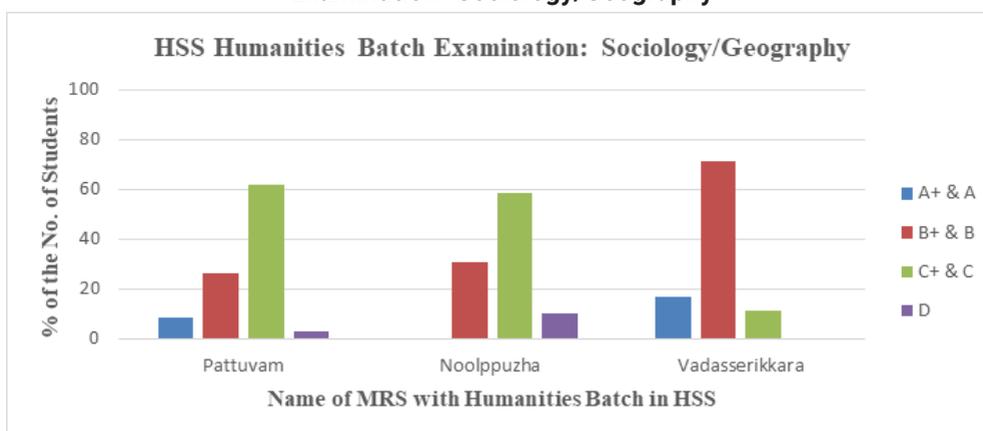
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.13 Performance of the students in the HSS Humanities Examination- Politics



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.14 Performance of the students in the HSS Examination- Sociology/Geography



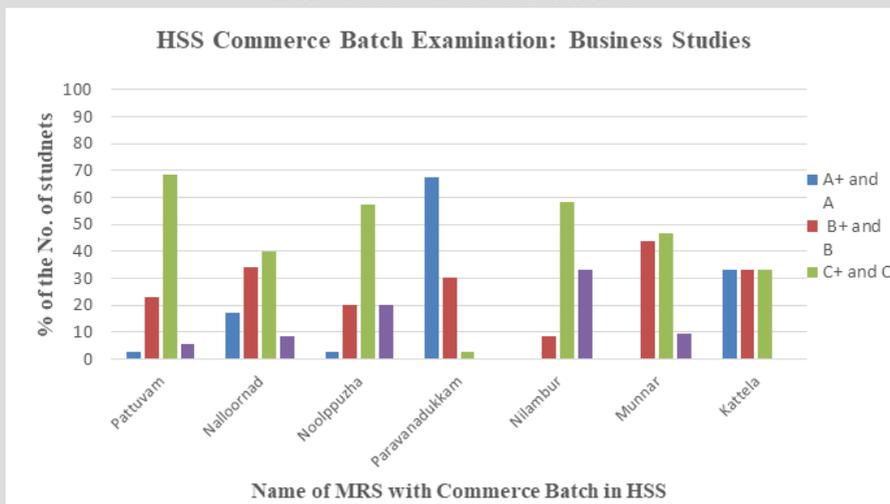
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

The figures show the general trend of students' performance in Humanities subjects. This indicates that three schools which offer Humanities could attain 100 per cent result in Economics. The majority of the students in Economics could attain grades ranging between B+, B and C+, C. On the contrary the result is not 100 per cent in Political Science, History, Sociology/ Geography. Political science is the second subject in which students performed better. Most of the students attained grade B+, B

and C+, C in History. At the same time, it is noted that the failure rate of students is higher in Geography, an optional subject of Humanities. They have performed reasonably well in Sociology, another optional subject. The technical content and the nature of the subjects in terms of its closeness to Science subject may be the reason for lack of better performance in Geography. This emphasizes the need for special training for the Humanities stream students who opt Geography.

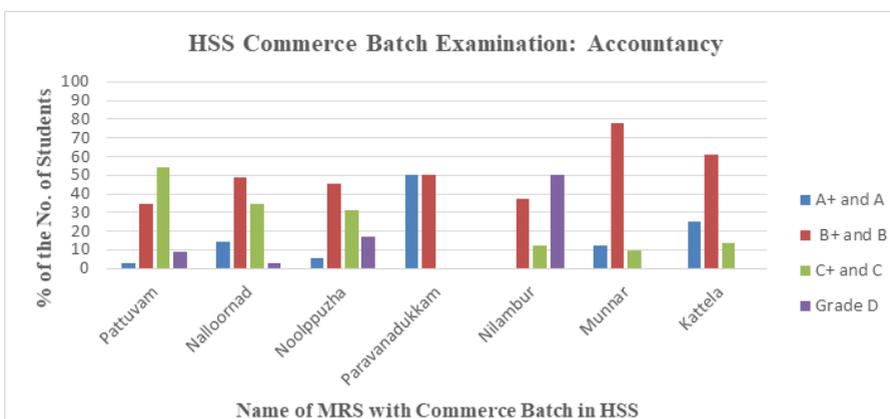
Performance of the students in the HSS Commerce Examination

Figure 6.15 Performance of the students in the HSS Commerce Examination- Business Studies



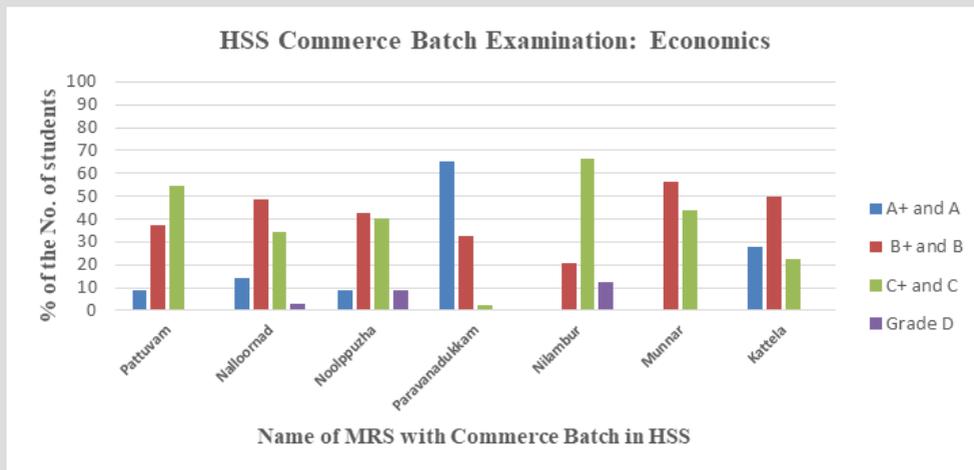
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.16 Performance of the students in the HSS Commerce Examination- Accountancy



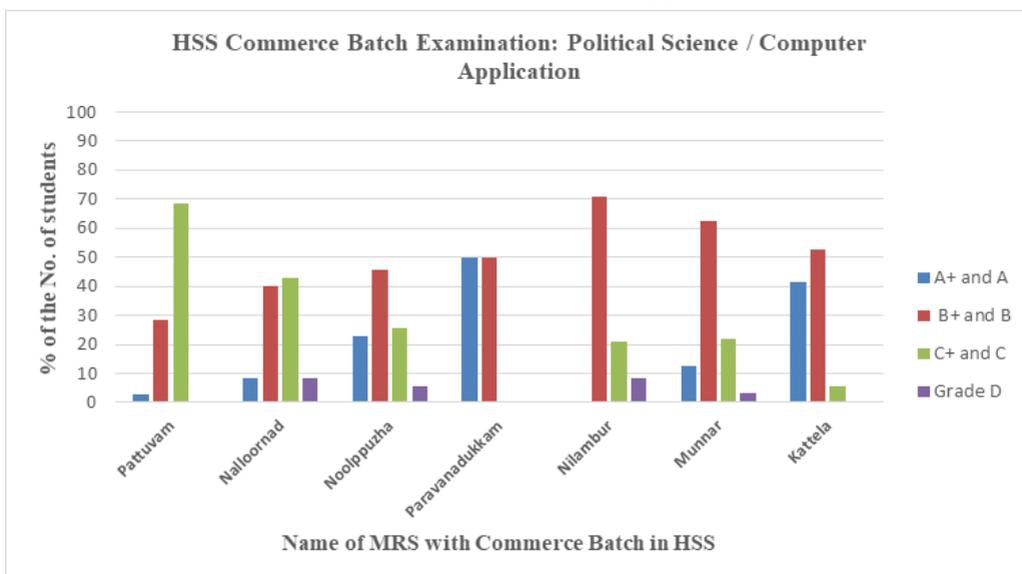
Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.17 Performance of the students in the HSS Commerce Examination- Economics



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

Figure 6.18 Performance of the students in the HSS Commerce Examination- Political Science / Computer Application



Source: Directorate of Higher Secondary Examination, Kerala (DHSE)

The above graphs (6.15, 6.16, 6.17, and 6.18) show the overall performance of Higher Secondary School students in commerce subjects. Only two out of seven schools could gain 100 percent results in Commerce stream. The general trend shows that majority of the students have gained the grades of B+, B and C+, C in the Commerce

stream, such as Business Studies, Economics, Accountancy and optional subjects, Political Science and Computer Application. The failure of students is very high in Accountancy, and Business Studies. It is also interesting to note that even though MRS Munnar is backward in other Commerce and the subjects under it, their

accountancy results is fairly good and the performance of the teachers is reflected through this. The poor performance of Accountancy may be because of its similarity with Mathematics. This highlighted that there needs some special training to the students on Accountancy. The result of commerce batches also exhibit that Paravandukkam and Kattela are schools that have shown good performance in Commerce stream. Nilambur and Noolpuzha schools exhibited poor performance. It is noted that the failure rate is higher among the students who have opted Computer Application as their optional subject.

The overall analysis of the academic performance of standard 12 students reveals that their lack of competence in English affects their academic performance in subjects that are filled with technical terminologies and concepts. This is reflected in the results of Mathematics, Accountancy, Computer Science, Chemistry and Geography. It is also essential to note that their performance is poor in the above mentioned subjects that are technical. Their fluency in the language (both English and Malayalam) might be an impediment in expressing the ideas during the time of examination. This may be one reason for their average performance even in humanities related subjects. A higher secondary teacher from MRS Vadasserikkara states that, "The ability of students to write and read is not up to the mark. There are many students who do not know to write even if they are in class 12. They cannot express the ideas in writing"⁶. The teachers' inability to handle tribal language also affects the classroom transactions.

A student from MRS Chalkkudy commented that, "Teachers who teach subjects such as

⁶ Interview dated 26-03-2019

⁷ Interview dated 8-5-2019)

Social Science, Chemistry and Malayalam should know both the tribal language and Malayalam and that will enable them to teach well."

As mentioned, the science related subjects need attention through some special programmes to equip the students to perform better, especially in subjects such as Mathematics, Geography, Accountancy and Computer Application. Special initiatives can be undertaken to instill the language among the students through interesting sessions conducted in hostels as well. Some special training to the teachers regarding the techniques and activities to improve the language efficiency of students would also be beneficial in this context. Along with laboratory infrastructure, apt use of the lab may also help generate interest among the students in Science. It is also pertinent to note that the present Higher Secondary School system in MRS does not provide any space for the interest of students in opting subjects. In this regard, a student from MRS Kulathupuzha commented that, "We could not opt a subject of our choice in standard 12, mostly because the authorities select the subjects for us and the lack of knowledge of parents also affects the course selection". A teacher from MRS Pookkode commented that, "Most of the parents are uneducated and they do not know what options are there in higher classes"⁷.

The subject allotment to the students in MRS is done based on the availability of seats. There is no balancing in the allotment of courses in different MRSs. For instance Humanities batches are limited to five schools and single gender schools are also included in this. It would have been more scientific to re-orient the subjects allotted to the MRS based on three or four regions by clustering MRSs in each region. In each region, it can be ensured that Science,

Commerce and Humanities streams are allotted to school. It is also important that students should get opportunities to take decisions on their Higher Secondary subject options during High School itself. Hence, continuous orientation programmes on different subject options and its availability needs to be done in all schools from eighth standard onwards. This would provide opportunities for the students to opt subject combinations in HSS in accordance with their interest and aptitude. The comments of students from various schools highlight the need for career orientation programmes to provide ideas about better higher education opportunities to the students. Orientation for addressing the anxiety of students was also felt necessary during the study. A higher secondary teacher from Vadasserikkra commented that “there is nobody to promote the children after class 12. Students do not get opportunities to proceed forward with higher education, particularly with free accommodation and food. Staying outside the institution is another crisis in their higher studies often due to the high fee structure. Hence a systematic career orientation programme is inevitable in all MRSs at least from the high school level.

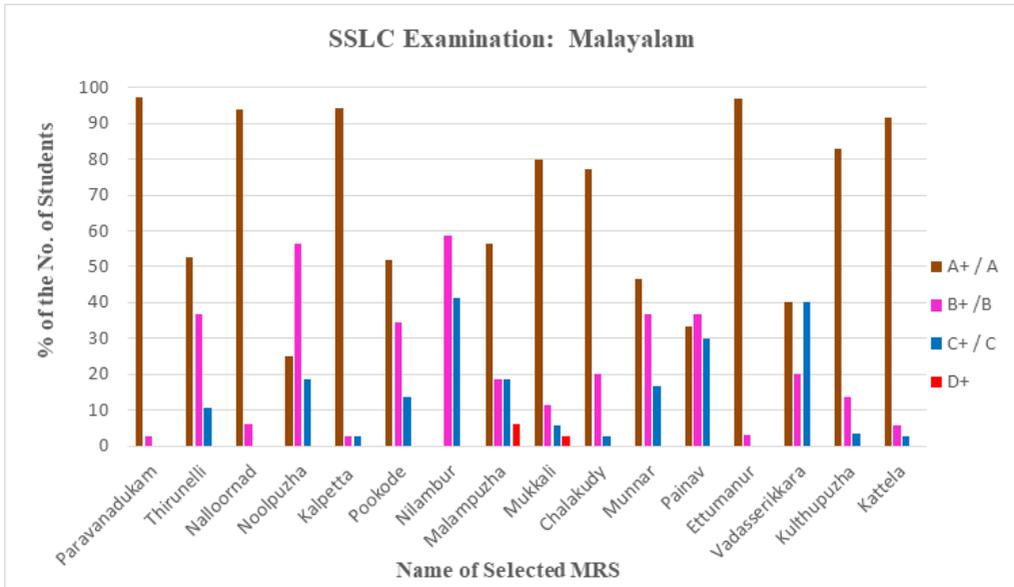
Performance of students in S.S.L.C examination (2018-19)

The Secondary and Higher Secondary final examinations play a crucial role in the life of a student, especially in the selection of courses in higher education. So, it is necessary to identify that in which subjects the tribal students have shown better performance in the State level examinations like SSLC. For this purpose, the result of the SSLC examination (2018-19) was selected in 16 MRS and a comparative analysis on the performance of the students in various subjects was done. Out of 20 MRS, 2 schools are Primary level ones and all others have sections upto High School. Due to technical issues among the 18 schools chosen for analysis, MRS Njaraneeli was exempted because it is CBSE School and Pattuvam MRS was exempted due to the unavailability of data.

The subjects of Secondary School examinations were clustered into four, namely, Languages (Malayalam, Hindi and English), Science (Physics, Chemistry and Biology), Social Science and Mathematics. Each subject was categorized based on marks into four - A+ and A (above 80%), B+ and B (60% - 79%) C+ and C (40 % - 59 %) and D+ and D (below 39%), which shows the least performance or failure in the examinations.

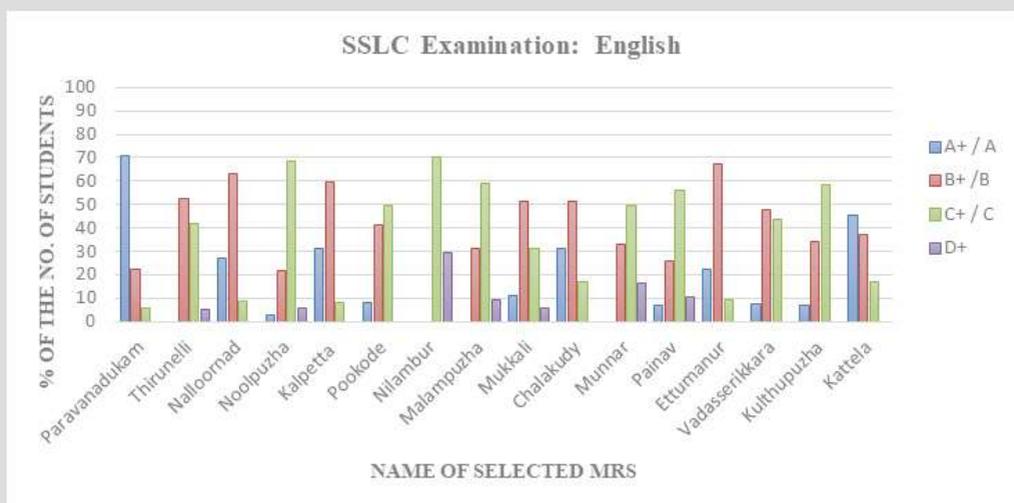
Performance in Languages

Figure 6.19 Performance of the students in the SSLC Examination- Malayalam



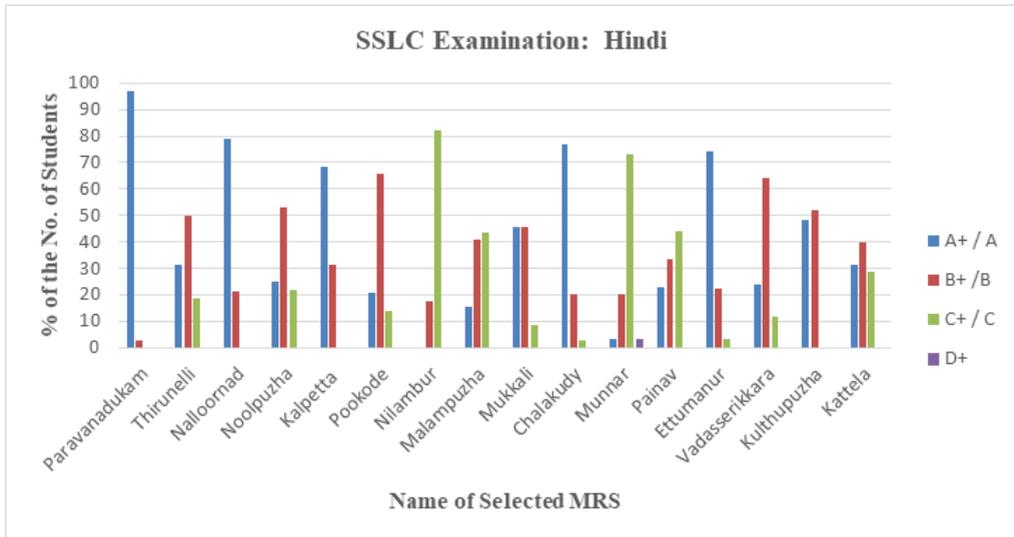
Source: Board of Public Examinations, Kerala

Figure 6.20 Performance of the students in the SSLC Examination- English



Source: Board of Public Examinations, Kerala

Figure 6.21 Performance of the students in the SSLC Examination- Hindi



Source: Board of Public Examinations, Kerala

The above three figures show the performance of 10th standard students in the SSLC language examinations. The overall trend indicates that all the schools could attain 100 percent result in three languages; Malayalam, Hindi and English. It is also noticed that the performance of students in three languages varies. Students in all the MRS could perform better in Malayalam, in their SSLC examination. The data indicate that the majority of them scored A+ and A grades. Paravanadukkam, Ettumanur, Nalloornadu, Kattela and Kalpetta are the schools that have performed well in Malayalam while Noolpuzha, Nilambur, Munnar, Painav and Vadasserikkara schools performed poorly.

The data on students' performance in the SSLC English examination have shown that they are average and below average in English as compared to Malayalam. It is worth mentioning that the majority of them scored grades B+, B and C+, C. Paravanadukkam and Kattela have shown better performance in English, whereas Munnar, Nilambur and Malampuzha schools have shown relatively poor performance.

The performance of students in Hindi lies between the performance of Malayalam and English. The majority of the students could attain grades A+, A and B+, B in the Hindi examination. Paravanadukkam, Ettumanur, Kalpetta and Chalakkudy MRS have shown better performance in Hindi while Nilambur and Munnar schools have performed badly in Hindi.

The results indicate that some schools (MRS Nilambur and Munnar) exhibit poor performance in all three languages. Six MRS in Kattela, Paravanadukkam, Nalloornad, Kalpetta, Chalakkudy and Ettumanur have shown good performance in all three languages. Even though all the MRS has secured 100 percent results in other subjects, their performance in English is relatively poor. This is serious concern and remedial measures in the form of special training and orientation is required to make sure they improve their skills in English.

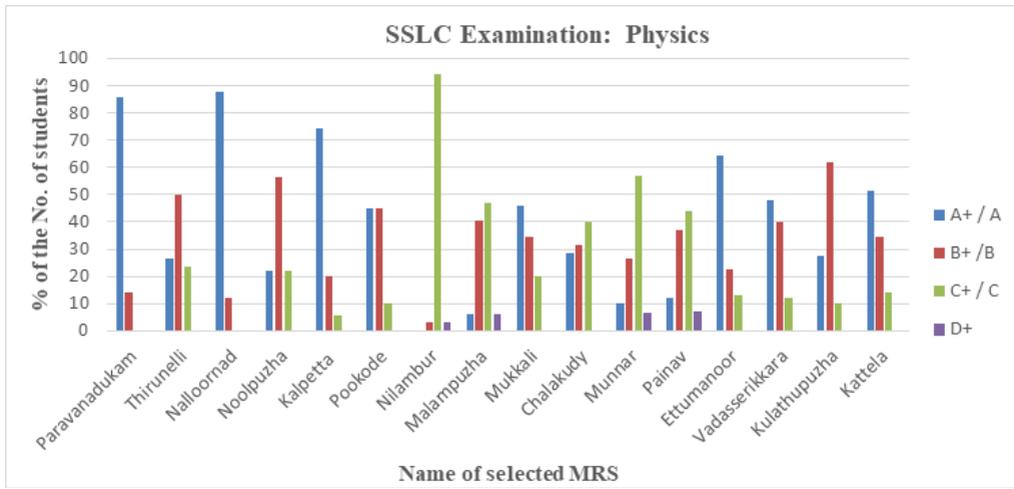
A comparative analysis of the performance of students in languages at the S.S.L.C and higher secondary examinations shows that their level of performance is better in S.S.L.C examination. The failure rate in

the higher secondary students (English examination) was high even though the schools could attain 100 percent results in SSLC examination. This also indicates

that students confront greater difficulties in dealing with English while they move to higher classes.

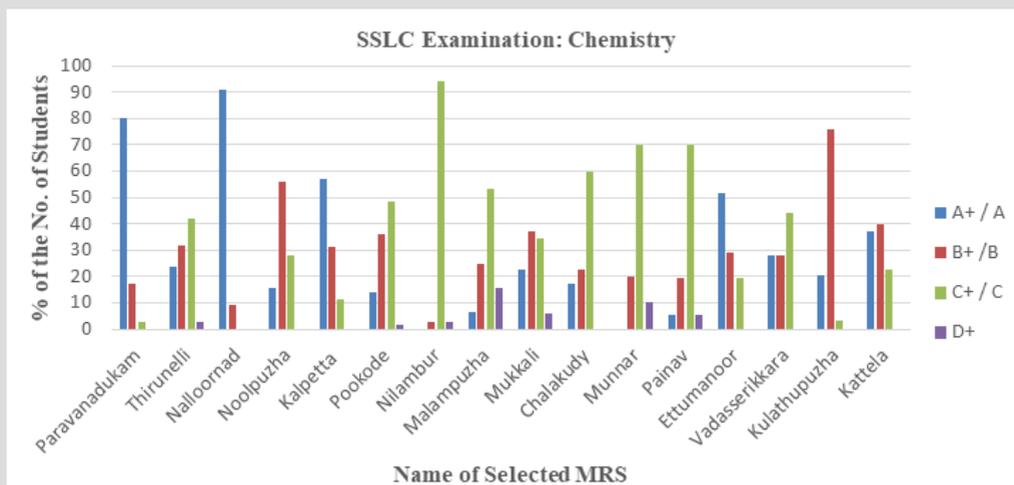
Performance in Science Subjects

Figure 6.22 Performance of the students in the SSLC Examination- Physics



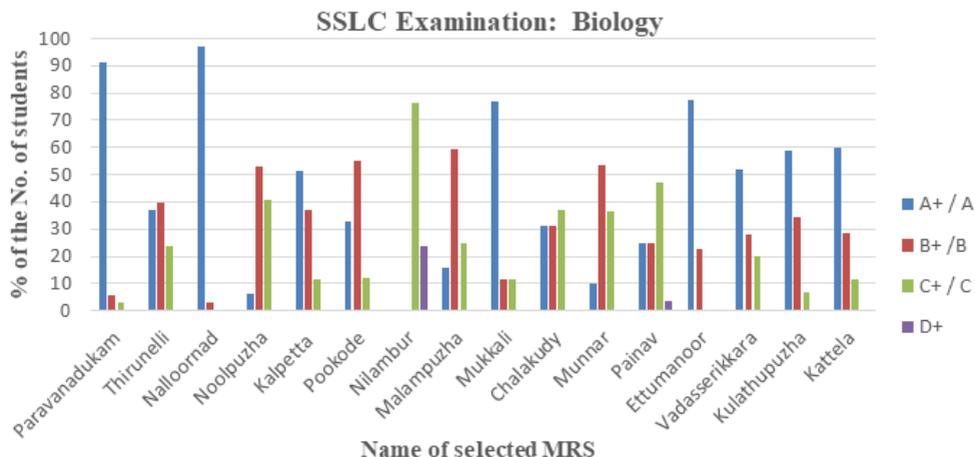
Source: Board of Public Examinations, Kerala

Figure 6.23 Performance of the students in the SSLC Examination- Chemistry



Source: Board of Public Examinations, Kerala

Figure 6.24 Performance of the students in the SSLC Examination- Biology



Source: Board of Public Examinations, Kerala

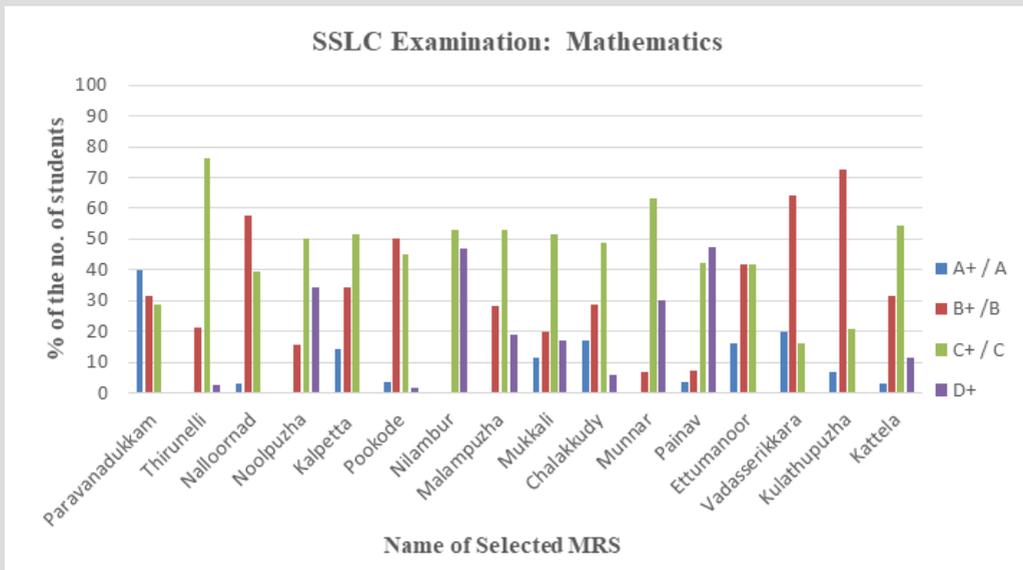
The above figures (6.22, 6.23 and 6.24) show the performance of SSLC students in science subjects such as Physics, Chemistry and Biology. It can be noted that Biology is one subject in which the students need to improve and Chemistry requires greater attention. Majority of the students could perform better in physics too. The students have secured A+, A grades in Biology, B+, B and C+, C in Chemistry and A+, A and B+, B in Physics. It is interesting to note that 80 percent of students from two schools such as Paravanadukkam and Nallooroad have attained A+ and A in Physics.

Some schools have shown exemplary performance in Science subjects in general (Paravanadukkam, Nallooroad, Ettumanoor, Kattela and Kalpetta). At the same time, the schools in Nilambur, Munnar and Painav have shown poor performance in Science subjects. While we observe the performance

of students in Science subjects, it can be noted that the students have performed poorly in Chemistry. We have seen this trend in higher secondary result too. The best performance of tribal students is in Biology at the higher secondary level. The poor results in Chemistry in SSLC also highlight the need of special programmes to boost the performance of the students. The field inferences indicate that high school labs are not widely used in any the schools. A teacher from MRS Vadasserikkara commented that, "Sastraposhini lab is here, but there are no special lab staff and teachers to do all the activities." There is no water in the lab, water is brought from outside in buckets". Dearth of basic facilities in the schools is also reflected in the study. Hence, there is greater need to provide a better and active lab infrastructure to ensure students improve their performance.

Performance in Mathematics

Figure 6.25 Performance of the students in the SSLC Examination- Mathematics



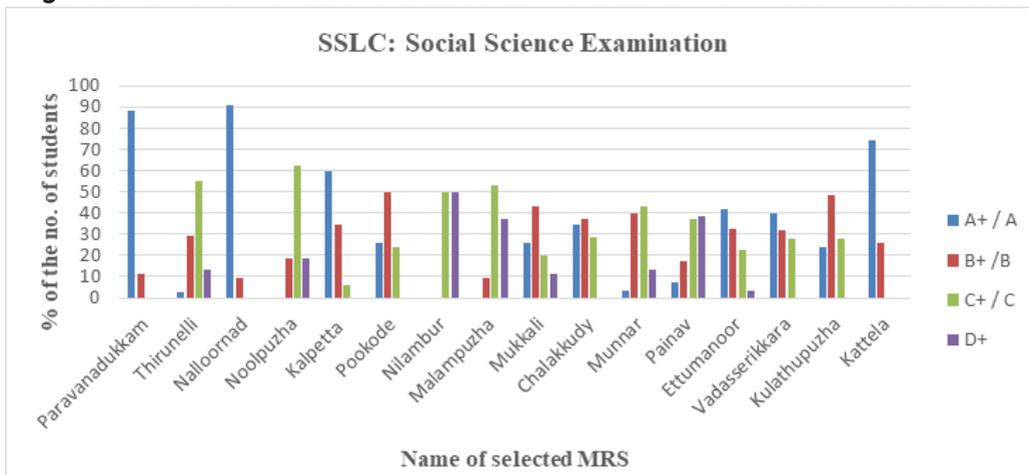
Source: Board of Public Examinations, Kerala

Figure 6.25 displays the academic performance of the 10th standard students in the SSLC Mathematics examination. Majority of the students in all the schools have shown average or below average performance in Mathematics. MRS Paravanadukkam and Vadasserikkara are the best performers in the Mathematics

examination when compared to other schools. MRS Nilambur scored below average. It is noted that some schools show average or below average performance in Mathematics, especially students who are from Primitive Tribal Groups and linguistic minorities.

Performance in Social Science

Figure 6.26 Performance of the students in the SSLC Examination- Mathematics



Source: Board of Public Examinations, Kerala

The academic performance of 10th standard students in the SSLC examination is exhibited in the Figure 6.26. Some schools in the SSLC examination while others have scored average or below average marks. More than 90 per cent of the students in MRS Nalloorad have attained grade points A+ or A, followed by MRS Paravanadukkam and MRS Kettela. Compared to other schools, the students of MRS Nilambur had only average or below average marks.

The result of SSLC examination (2018-19) of students in the selected Model Residential Schools shows that 100 percent results have been secured in the final examination. MRS Paravanadukkam, Nalloorad, Kalpetta, Chalakkudy, Ettumanur and Kattela were the best performers in SSLC examination. In these schools, majority of the students scored more than 60 percent marks in all subjects. MRS Pookode, Mukkali, Vadasserikkara, Kulathupuzha and Noolpuzha have shown average level performance and majority of the students have scored 50 – 60 percent of marks. The students from MRS Nilambur, Munnar, Painav, Thirunelli and Malampuzha were the least performers in the SSLC examination. Most of the students in these schools scored below 50 percent marks and scored grades D+ or C.

The performance of the SSLC examination of MRSs reveals that the academic infrastructure plays an influential role in the better academic result of the students: the best performed schools owe it to their good academic infrastructure (see table 3.2). Moreover, during the period of field visits, the spirit of team work among the stakeholders viz., administration and academic wing, teachers and students, Principal/ HM and teachers, etc., was noticed. In addition to this, almost all schools have provided intensive coaching to the 10th standard

students, like remedial teaching facilities, special coaching classes by subject experts, etc. These factors might have helped the students to score good marks in the SSLC Examination. However, few schools have shown poor academic performance in the examination and they can improve their performance if the team works well and the school provided with a better infrastructure.

The result of languages in the SSLC examination states that English is the most difficult language for students in the Model Residential Schools. They scored average or below average marks in English when compared to the results of Malayalam and Hindi examinations. Most of the schools conduct additional English learning programmes for students of various classes with the support of the external trainers or experts. However, the students have performed poorly in English. It is noted from the field survey that, the students have not been given special coaching to improve their English, other than classroom level coaching.

In the case of subject wise performance, Mathematics and Chemistry were difficult subjects in the SSLC examination. Majority of the students scored average or below average marks in these subjects. At the time of Focus Group Discussion with the students in various classes, they mentioned that Mathematics and Chemistry were very difficult subjects. But, they like Biology and a majority of them scored good marks in last year's SSLC examination. It is noted that the nature of the subject like Biology, is more connected with the tribal lives or the environment of the tribal communities. The poor performance of students in subjects like Chemistry and Mathematics leads to issues related to curriculum. Linking the subjects with the life context of the students and developing them based on that will make a difference in their overall learning

process. This is applicable in the case of Science, Social science and Mathematics. The experience of 'Padanodynam', a project supported by UNICEF is implemented in Idukki is an example in this respect. This is an attempt to introduce scientific concepts to the students through activities linked to their living environment.

Some schools are very good in the performance of Social Science examination while others show average or below average performance. However, 100 percent success rate of students in the Model Residential Schools last year in the SSLC examination is a remarkable achievement in the promotion of tribal education in the State.

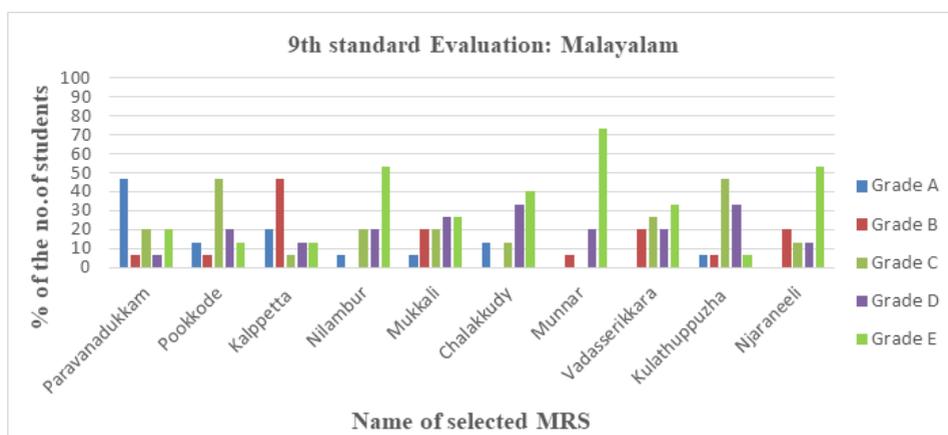
Academic Performance of 7th & 9th Standard Students in MRS

As part of an evaluative study about the role of MRS in tribal education in Kerala, we have conducted an academic assessment test for the 8th and 10th standard students in 10 selected schools, This assessment was done based on 7th and 9th standard syllabus. Three hundred students participated, 150

each from 8th and 10th standards. From each school 30 students participated; 15 each from both the standards. The test was conducted during the period between June and July 2019, in Malayalam, English and Mathematics. The languages were selected with the intention of knowing the capacities of the students in writing, reading, analytical and comprehensive skills. The test in Mathematics was conducted for assessing the basic arithmetic (Addition, Subtraction, Multiplication and Division) and analytical skills. The test was conducted to identify the basic issues faced by the students in the learning process. The weightage of marks on the assessment test was prepared based on the criteria of the State Council of Educational Research and Training (SCERT). The maximum mark of the performance analysis test of each subject was 20 and then it was converted to percentage according to the grading criteria of SCERT. The range of marks was categorised as above 75 (A grade), above 60 (B grade), above 45 (C grade), above 33 (D grade) and below 33 (E grade) (Appendix Tables :).

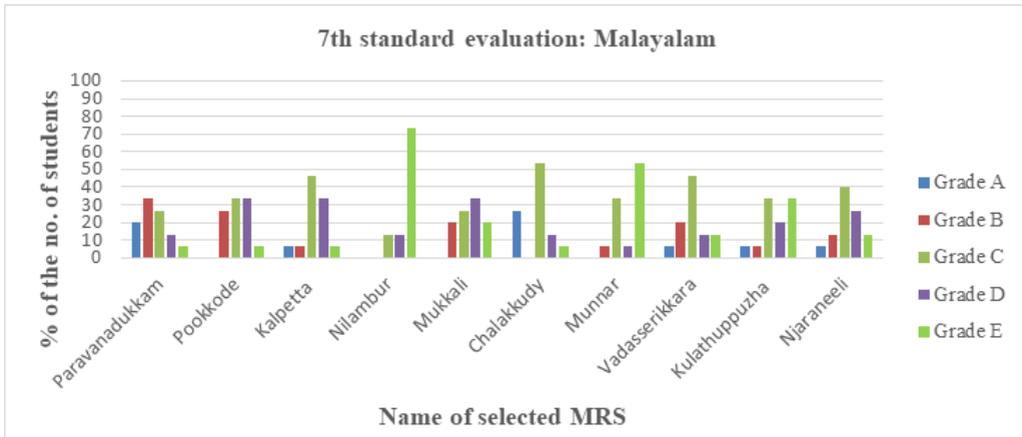
Performance of students in the Malayalam academic assessment test

Figure 6.27 Performance of 9th standard students in Malayalam



Source: Academic Evaluation Conducted by the Research team

Figure 6.28 Performance of 7th standard students in Malayalam



Source: Academic Evaluation Conducted by the Research team

Figure - 6.27 shows the academic performance of the 9th standard students in Malayalam. It explains that the performance of the students from all MRS is average in the evaluation test. However, some MRS scored more than 75 percent marks in Malayalam, especially MRS Paravanadukkam and Kalpetta. But, the majority of students in MRS Munnar, Nilambur, Chalakkudy, Njaraneeli and Vadasserikkara had shown poor academic performance where some failed or scored below 45 percent in the evaluation test. The MRSs in North and Middle zone performed better in Malayalam than the South region.

Figure- 6.28 illustrates the performance of the 7th standard students in the assessment test of Malayalam; majority of the students scored more than 60 percent mark in the test. Some of the students could score more than 80 per cent mark in the evaluation test, particularly those of MRS Chalakkudy and MRS Paravanadukkam. However, majority of the students failed in MRS Nilambur and Munnar who could only score Grade-E in the assessment test. MRS Njaraneeli is a CBSE school and majority of the students secured more than 60 percent marks in the evaluation test.

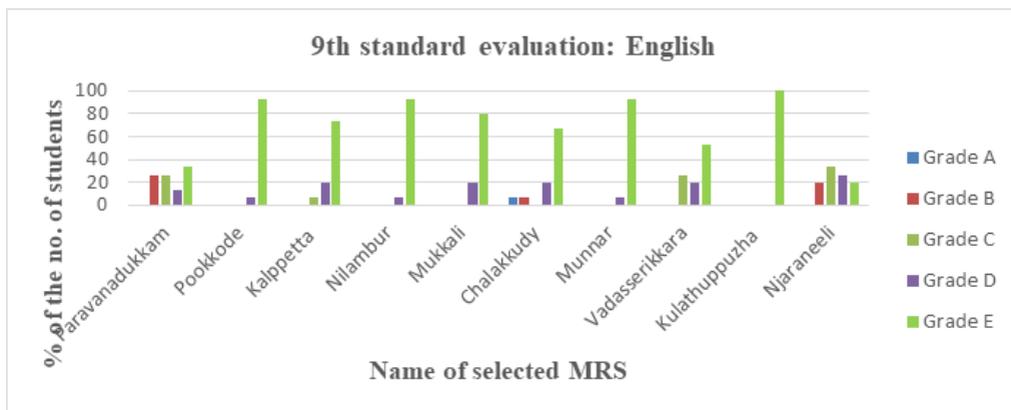
It is noticed in the Focus Group Discussion that the students in some schools had shown difficulties in using languages (MRS Nilambur and MRS Munnar). MRS Nilambur has been sanctioned for the students of Kattunaikkar and Cholanaikkar tribes, who hail from the interior parts of the forest. Also, they have been using tribal dialects for communication (Seetha, 2012). In the case of MRS Munnar, the students generally speak Tamil and they have settled in the geographically isolated areas such as Marayoor, Munnar (Idamalakkudi), etc. It is noted that the 9th class students in Chalakkudy have shown better performance in Malayalam while 7th standard students in the same school have shown poor performance. It is also interesting to note that the students from PVTG groups and from the linguistic minority areas face difficulties in acquiring Malayalam. Intensive bridging programme for such students in the entry classes in all MRSs can go along way in improving the situation. Some schools have taken initiatives in this direction, and such efforts needs to be universalised.

The data regarding performance of tribal students in Malayalam during SSLC and class 12 examination indicated that they could perform comparatively better in these

examinations. However, their performance in the assessment test conducted by the research team in 7th and 9th standards showed that their performances in these classes were average or below average. The intensive coaching for SSLC examination may be one reason for this. Several teachers during the study indicated that many of the students who joined the MRS in 5th standard are not able to read or write Malayalam without mistake. This also points to the fact

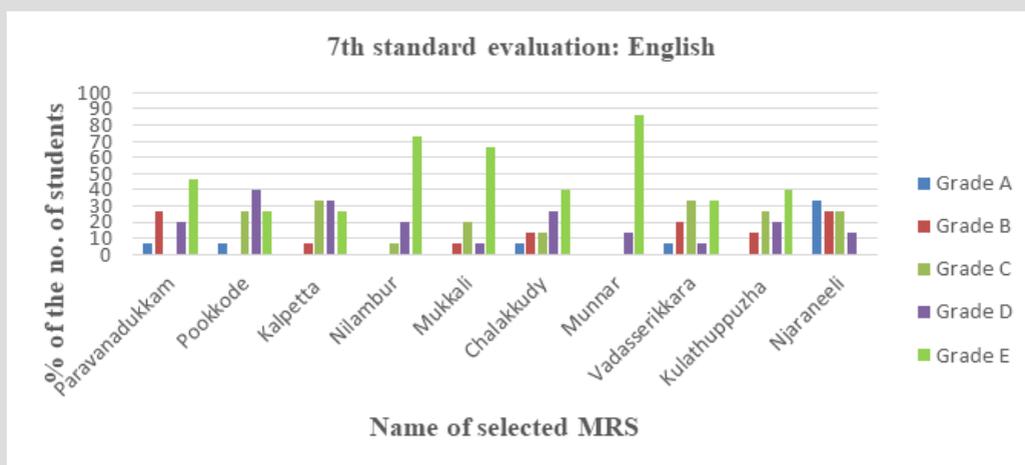
that many of them do not get the basics of language from the primary school. This indicates the need for building exercises at the 5th and the 6th standard level at the MRS to address the gap in learning Malayalam. Providing a basic understanding to the teachers on tribal languages or providing mentor teachers for the 5th or 6th standards may be helpful to reduce this gap in acquiring language proficiency.

Figure 6.29 Performance of 9th standard students in English



Source: Academic Evaluation Conducted by the Research team

Figure 6.30 Performance of 7th standard students in English



Source: Academic Evaluation Conducted by the Research team

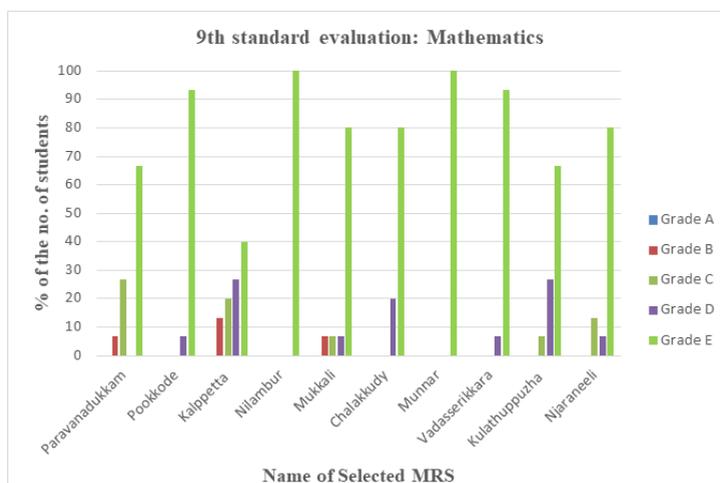
Figure - 6.29 exhibits the result of the academic performance analysis of the 9th standard students in English. Among 10 schools, majority of the students have failed or scored below 45 percent marks. MRS Chalakkudy is the only school that has attained the grade point A in English. It can also be stated that all schools are very poor in English except MRS Njaraneeli and Paravanadukkam. These schools have shown comparatively better performance in the analysis test. All the students in MRS Kulathuppuzha have failed in the test.

Figure - 6.30 exhibits the result of the 7th standard students in the assessment test of English. It reveals that the majority of the students have failed in English test, especially students from MRS Munnar, Nilambur and Mukkali. Most of the qualified students scored Grade B, C or D. Only a few students in MRS Paravanadukkam, Pookkode, Chalakkudy and Vadasserikkara scored grade point A; several students failed in these schools. During the time of the interaction with students, we could realise that many of them are not interested to learn English as a new subject even when the school authorities provide external coaching for English learning. They revealed that it

is a hard task for them to understand the meaning of words and learn grammar and new words. Except a very few students, a majority of them try to learn English only for their examination purpose.

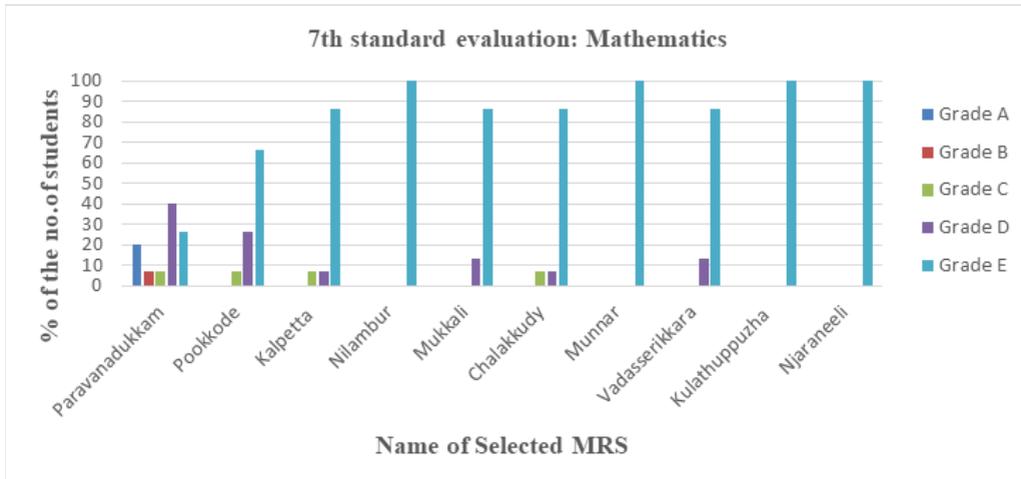
The majority of the students from the 10 MRS who participated in the Focus Group Discussion quoted that they have been facing a lot of challenges in learning English. In their opinion, English is a new language and it is too difficult to understand. Some schools provide special coaching classes for English with the support of external experts. But the result shows that it has not been helpful for students to achieve the expected result in English learning. Some special training to the teachers and non-teaching staff to improve the English learning skills of students may enable the schools to overcome the lack of skill in the ability to perform well in English. Some daily routine activities as part of hostel life and classroom transactions might be helpful in this context. Exercises like reading and explaining newspapers and hearing and reviewing English books, presentations of English stories and small book reviews and special talks in English would be some ways in the help them hone their English skills.

Figure 6.31 Performance of 9th standard students in Mathematics



Source: Academic Evaluation Conducted by the Research team

Figure 6.32 Performance of 7th standard students in Mathematics



Source: Academic Evaluation Conducted by the Research team

The result of the academic performance of 9th standard students in Mathematics is exhibited in the Figure - 6.31. Majority of the students in all MRS schools failed in the Mathematics test and they scored Grade-E. MRS Kalpetta had shown slightly better performance in the test when compared to other schools. MRS Munnar and MRS Nilambur failed completely in the performance analysis test (Mathematics) and no one scored more than 80 marks. This indicates that the teachers should use child friendly methods to teach Mathematics.

Figure - 6.32 describes the performance of the 7th standard students in Mathematics. Among 150 students, majority failed in the academic assessment test in Mathematics; only few of them scored Grade D or above. Among 10 MRSs, students of MRS Paravanadukkam alone could show slightly better performance in the test, and they achieved grade point A. It was noted that all the students failed in Mathematics in MRS Nilambur, MRS Munnar, MRS Kulathuppuzha and MRS Njaraneeli. It was reported by the students at the time of field visits that Mathematics is too difficult to study and they have failed to follow the conventional teaching methods in Mathematics.

Innovative methods adopted in Kerala for learning Mathematics such as “Manchadi and Padanodhyanam” could be useful to scale up the standard of MRSs. The Mathematics teachers in MRSs could also be trained in innovative teaching methods. Local texts in Mathematics addressing the living environment of tribal students would also be helpful in improving their learning.

Post schooling experience

The field observation indicated that the career orientation programmes were limited to students of class 12 in most MRSs. Students were not oriented from High School classes to enable them in taking right decisions by recognising their aptitude and capabilities. An alumni from Nalloor nad School commented, “We continue our study till class 12 but we do not have any idea what to do next”. The comments of alumni of various schools indicated the lacuna of orientation from MRSs in taking decisions about the future. It was also noted that the majority of them face a void once they step out of the MRS. They suffer isolation from communities and often carry the inhibitions by interacting with the community. At the same time they also do not get any post school support in their future career

and studies. An alumni of MRS Mukkali commented, "There is nobody to promote us after class 12 and we face a crisis to manage food and accommodation during the study period at the college. We face problems once we leave the MRS". This comment indicates that a system for providing future education possibilities for MRS students is missing even though institutional and accommodation facilities are freely allotted. These students face survival challenges in higher educational institutions, even including their inability to finance their food requirements. The overall responses of alumni indicate the need for a follow-up mechanism for students after class twelve through processes like the MRS. Feedback from the field enable inferences that the MRS could kindle career aspirations of some students. A student from Nallurnad who has gone on to become a government servant commented, "I have reached this position only because of the opportunity to study at MRS". At the same time the majority of them did not get such an orientation.

MRS Nallurnadu- Best performer in sports

MRS Nallurnadu has provided enormous opportunities to many students to build a career through sports. The students from the school have shown exemplary performance in sports which helped them get jobs in various departments of State and Central Government. Some of the students have joined the police department and the armed forces through their performance in hockey.

Although the students have shown exemplary performance in hockey, authorities have failed in providing better infrastructure for the sport. The school lack good ground and other necessary equipments for rigorous training. It was noted that, this acted as an impediment for the students in securing selection to national team.

MRS Chalakkudi- Champions without grounds

For the last three years, MRS Chalakkudi were the champions of Kalikkalam, the sports meet conducted for the students of Model Residential Schools in Kerala. MRS Chalakkudy also turned out to be the national level champions in Aatya paatya sports competition, another noteworthy achievement of theirs. The students from the school performed well in football, cricket and kabbadi.

But the most contradictory fact is that MRS Chalakkudy lacks playground to practice and nurture the skills of sports persons among students. The students were not given any proper ground facility to improve their skills in playing cricket, kabbadi and football. Often students have to rely on private grounds for their practice.

It is worth mentioning that hard work of physical education teacher and a group of students is the triggering factor behind these achievements. And this was repeatedly mentioned by all the teachers and staff. The experience of MRS Chalakkudi underscores the fact that continuous handholding support and better infrastructure facilities will create better results.

MRS Njaraneeli- Narratives from a CBSE school

Among the twenty MRSs, MRS Njaraneeli is a CBSE English medium school. The school fully follows CBSE syllabus and students from different parts of the State are studying there. It was observed that the school had better classroom and hostel infrastructure facilities. Also, the students from MRS Njaraneeli have shown comparatively better performance in English when the data regarding the academic performance is analysed. It was also noted that the involvement of parents in the

academic matters of their children was better compared to other Model Residential Schools.

Findings and Summary

Following are the key findings we can extract from this chapter.

1. The performance of higher secondary students in languages shows that majority of them exhibited poor performance in English. Commerce and science students have shown comparatively better performance in Malayalam, while the performances of Humanities students are poor.
2. It is interesting to note that the performance of students in the science batch is better in the subjects of Biology and Physics, while that of the same in Mathematics and Chemistry appears poor. The complexity of the curriculum, the absence of activity-oriented learning, and the poor use of laboratories may be responsible for the poor performance. Closeness of the subject to the living environment of tribal students may be one reason for their better performance in biology.
3. The performance of students in economics is exemplary in the case of humanities and commerce. At the same time, their performance in other humanities subjects such as Political Science, History, Sociology, and Geography seems to be poor. The failure rate of students in Geography is comparatively high.
4. Economics is the high performing subject in Commerce as well. However, Business Studies and Accountancy show poor results. The performance of students in optional subjects, i.e., Computer Application is also poor.
5. The general trend of Higher Secondary section indicates that students are showing poor performance in the subjects that require technical skills such as Chemistry, Mathematics, Accountancy, Computer Application and Geography.
6. The overall trend of the Higher Secondary results shows that only one-third of the schools in Science, Commerce and Humanities subjects could attain 100 per cent result.
7. The other noticeable factor is that majority of the students could score the grade points B+, B and C+, C only in three subject options.
8. Only a few students in Science, Humanities and Commerce stream could attain A+, A in almost all the subjects.
9. The pass rate in class twelve is below 75 per cent in most of the model residential schools while that of main stream schools is above 84 per cent.
10. The general trend indicates that the backwardness of students in languages, particularly English, act as an impediment in their overall learning process. They encounter difficulties in comprehending and reproducing the technical concepts and terminologies used in these subjects. This indicates the need of some programmes to link these subjects with their living environment. Additional support programmes would also be helpful in this context.
11. The field insights highlight that higher secondary options are not allotted considering the interest and aptitude of students. The students are compelled to choose options from limited baskets. The high presence of gender

segregated schools and the poor course options are also responsible for this situation. This underscores the relevance of mixed schools, and redesigning the course allotments of higher secondary schools in MRS

12. Along with the issues in allotment of courses, the poor career orientation of the students also contributes to the high rate of failure in their higher secondary examinations. Students are not given proper training to recognize their aptitude and to build career dreams in the areas that interest them. Nevertheless, the school authorities offer some career orientation programmes for class 12 students. Such an orientation is not available for the high school students.
13. The absence of follow-up mechanism for students after MRS and lack of continuous support to them post their departure from school are issues raised by the alumni. On the other hand, MRSs could generate better career aspirations in some students and they have attained good positions in life. But the majority of the students do not get such training.
14. The SSLC result indicates that students have shown comparatively better performance in Malayalam and Hindi, while they lag behind in English. However, it is interesting to note that all the MRS could attain 100% result in all the subjects.
15. The performance of students in Science subjects in SSLC indicates that they have shown poor performance in Physics, Chemistry and Mathematics. At the same time they could exhibit better performance in Physics and Biology. As indicated above, since majority of the students face difficulty with Chemistry at the high school and higher secondary level, some special efforts are needed to address this concern. Poor use of labs at the high school level was indicated as one of the reasons for the backwardness.
16. Contrary to the better performance of students in Malayalam examinations during SSLC, the performance of students in 7th and 9th standards in the same subject is average or below average.
17. It is also interesting to note that some special communities such as PVTG groups in Nilambur, and linguistic minority students from Munnar also face difficulty in performing well in Malayalam. This highlights the need for language bridging exercise in the entry level classes at the MRSs (5th and 6th standards).
18. The academic assessment of the research team also indicates that the performance of students in English in 7th and 9th classes is comparatively poor except for MRS Paravanadukkam and Njaraneeli. The poor result of English demonstrated from 7th class to 12th class indicates the need for some creative strategies for improving their performance.
19. The academic assessment also highlights that the performance of students in Mathematics is poor. The same scenario continues to be seen in the case of SSLC and class 12. Innovative attempts to transact Mathematics by linking that with the living environment of students would be one way to resolve this issue. The innovative attempts such as 'Manchadi' supported by K-DISC

and 'Padanodhyanam' supported by UNICEF are worth mentioning in this context.

20. The overall analysis of the academic performance indicates that the tribal students often face an alienated feeling from the mainstream curriculum and syllabus, since they are altogether different from their living environment. This emphasizes the need to bring local context of the tribal communities into the syllabus and curriculum. This can be done by developing additional contextual text, and by engaging in activity oriented teaching learning processes.

21. The dearth of training in the context of tribal lives to the teachers and non-teaching staff might be a relevant factor which restricts the better academic performance of tribal students.

22. The residential teaching facility is highlighted as the uniqueness of residential schools. Notwithstanding the general trend of residential schools, majority of the teachers in MRSs do not reside in the campuses. This situation becomes worse when schools are also not able to provide proportionate number of ayahs and counsellors. Since the students are separated from parents, MRSs are expected to provide individual emotional care and support through the teaching and non-teaching staff in the school. In a nutshell, the present MRS system is a failure in providing individual emotional care and support to the students which has a higher implication in their overall nurturing process. Hence there is a need to seriously think about whether the MRS system should be continued or not

since they are not capable enough to provide expected input to the students.

23. The educational backwardness of parents creates some natural impediments in the learning process of students. Also the present MRS admission system stipulates many restrictions that hinder better parent, student and parent teacher interactions. This all altogether makes the parents alienated from the learning process of the students. Along with these, the poor performance of PTA also leads to lesser parental pressure over the teachers. Many studies indicate that parental involvement and better functioning of parent-teacher bodies are inevitable in good academic performance of the students. This emphasizes the need of innovative forums for student, parent and teacher engagement and thereafter the restructuring of the admission system.

24. Library and ICT facilities are poorly used in most of the schools. Poor use of laboratory is also a fact to be highlighted. ICT has a pertinent role in making the classrooms more interactive. Hence the poor use of this may affect the student output. Even though books are available in the library, the system to allot books and activities to promote reading habit of students is found to be minimal. It is also noted that many of the libraries do not subscribe basic reading materials such as magazines and journals. This, all together leads to the observation that innovative teaching, learning are not practiced in MRSs. The potentials for creating learning opportunities in the hostels is least explored.

The overall findings of the chapter indicate that the student performance is average

till SSLC and is further lower at the Higher Secondary level. It is worth mentioning that language acts as an impediment in comprehending the subject content and reproducing the same in the examination.

The lacuna of teachers training regarding the tribal context was highlighted throughout the study. Poor career orientation and lack of follow up after schooling creates challenges in the post schooling life of students.

Recommendations

- Language bridging and mentoring mechanism in entry level classes are needed to overcome the backwardness in using both Malayalam and English language. This would help them to have better articulation and comprehension during their learning process.
- Along with the mainstream text, the local text that links the syllabus and curriculum with the living environment of tribal students are necessary to overcome the backwardness in their academic performance.
- Developing activities out of the text by linking their living environment would also be a way out to improve their academic performance.
- Regular and scientific training for teachers and non-teaching staff to understand the tribal context is necessary to develop better teacher-parent relationships and to ensure good academic outcome.
- Some special orientations in the HSS classes may be required in the subjects where they face challenges.
- Parent educating programmes that concentrate on their locations would improve their involvement in the learning process and career orientation of their children.
- It is better to ensure that contract teachers and non-teaching staff continue at least for a period of three years for ensuring better relationship with the students.
- It is essential that some system is needed to ensure better participation of tribal youth to take up teaching and non-teaching staff roles during the process of recruitment.
- Ensuring the availability of specialist permanent teachers in the school would bring about better changes to the overall school environment.
- Career orientation programmes in the MRS need to start from 8th standard and it should be provided continuously.
- A follow up mechanism of students who have stepped out from the MRS is necessary to ensure their better career. Setting up of a career orientation cell is advisable for all the MRS.

VII. Findings and Recommendations

Introduction

Model Residential Schools is a system envisaged to promote tribal education all over the country. It is intended to provide quality education to the students by providing individual care and emotional support system. It was envisaged that students, teachers and non-teaching staff would stay together in the campus and that would turn into a community life. In such a context, the study was an attempt to understand to what extent the objectives of the residential school system have been successful. The study has followed a mixed methodology to explore the realities from the institutional habitus of the schools. The major domains covered in the study are school infrastructure, wellbeing of students, academic performance, governance and administration of the schools.

The overall analysis of the performance of infrastructure of school exhibits a satisfactory picture. However, two schools still function in rented land and building. The absence of friendly initiatives to girls and disabled students need to be taken into account very seriously.

The initiatives to prepare a long term master plan for infrastructure with special planning continue to be missing. This unplanned

development creates special difficulties in the campus. Class 12 courses are allotted to the schools not based on long term planning but by a casual approach. School infrastructure is not developed at par with the allotment of new courses. This creates hurdles in ensuring quality learning environment to the existing students. This is highly reflected in the lack of hostel facilities. It is noted that a uniform guideline for developing infrastructure is missing in all MRSs. For instance, EMRS has their own guidelines and other schools follow KER guidelines and many of the KER rules do not focus on school infrastructure.

The findings of the study highlights that the majority of the schools do not have sufficient study spaces in the hostels. This forces the students to spend most of the time in school even after the school time. This affects the quality of the learning process of students. It is interesting to note that toilets in most of the schools are cleaned by students even if sufficient numbers of cleaning staff are available. This indicates the need for a cleaning protocol and regular monitoring of this. The lack of cleanliness of toilets in schools would lead to many health issues among students.

The experience of the study indicates that tribal students perform well in sports and arts activities. Many schools attempted to provide special coaching and infrastructure to the students. Studies indicate that the nurturing of sports and arts talents of students can even contribute to their higher level of employability in these sectors. However, such a concerted approach to provide special facilities in each school by realising the contributions of the students is missing. Notwithstanding the fact that MRSs are envisaged as residential schools, four out of twenty of them still do not have residential facilities for teachers, and one school faces critical limitation in residential infrastructure for teachers. A residential school is really residential only when the teachers also stay with the students. However, the absence of residential facilities for the teachers makes the residential initiative meaningless one.

The overall evaluation of the infrastructure indicates that MRS Njaraneeli, MRS Paravanadukkam, MRS Kattela, MRS Kalpetta and MRS Painav are the best performing schools, and MRS Kuttichal, MRS Thirunelli, MRS Munnar and MRS Kulathupuzha are the worst performers.

The observations of the study indicate that peer group interactions among students are not healthy. Cross-gender interactions and inter-gender interactions are often suspiciously looked upon by the teachers and authorities which act as an impediment in healthy peer group interaction. There are 11 gender-segregated schools (6 girls only and 5 boys only) out of 20 MRSs in Kerala. This actually creates hurdles in nurturing healthy cross-gender interactions among students. The experiences of MRSs highlights that students get limited opportunities to interact with students of general schools and other community, except during the arts and sports events

and SPC and NSS camps. Even though the MRSs have contributed to elevating the academic performance to some extent, it could not contribute to the expected level in the emotional and social development of the students. The experiences show that MRSs could not escape from the trap of ghettoization of tribal students and could not nurture citizenship values among them. Special considerations are not given to the intrinsic values of education, such as cooperation, collaboration, tolerance, democracy and social leadership.

The findings related to the teacher-student relationship points out that students are more attached to the co-curricular or specialist teachers than regular subject teachers. There might be different reasons for this. Even though the teachers in residential schools are expected to be residential, they largely fail in creating a good rapport with the students because of their absence from campus after the schooling time. Lack of training to the teachers and non-teaching staff regarding the tribal context and emotional status of the students were reflected during the study. If regular trainings are impractical, atleast one comprehensive training in this aspect should be imparted at institutions such as Institute of Management by Government (IMG). Contract teachers and non-teaching staff also do not get any kind of training. These factors also affect good student-teacher and staff relationship. The poor representation of tribal teachers and non-teaching staff in schools is also noted during the study. In the absence of permanent residential teachers, a proportionate number of non-teaching staff such as ayah and counsellors are inevitable in schools. However, it is noted that the majority of the schools lack a proportionate number of ayahs. School counsellors work with many MRS and hold additional responsibilities in pre-matric or post-matric

hostels. This altogether leads to a situation that students do not get individual care and support from non-teaching staff as well.

The field inferences highlight that students face difficulty with language at entry classes. Also, special mechanisms for mentoring and bridging the students from home environment to the schools are missing. It is also worth mentioning that six out of twenty schools admit students from first standard onwards. This is actually denying the human rights of students to stay with parents in their early life. This is also contradicts the provisions of RTE act 2009.

The study highlights that opportunities for student- parent interaction are limited. Most often, the parental visits to the schools are limited to the PTA meeting that is also linked with the vacation when they come to the school to pick their wards back home. It is also worth mentioning that the travel allowance provided to the parents are only limited to picking and dropping the students from and to the school. The opportunity for telephonic conversation is strictly restricted to 5-10 minutes a week, which forces the students to pent up their frustration in other ways.

Corporal punishment system is still practised in schools irrespective of the fact that this is legally prohibited. The absence of uniform punishment and reward system and the institutionalisation of this lead to dissatisfaction among students.

The study indicates that there is no systematic mechanism to maintain individual health record and monitoring the health status of students. Absence of health staff in boys' schools and the inconsistency in their availability in other schools because of poor remuneration also acts as hurdles in ensuring quality health services. The responses regarding the food menu points to the fact that the majority of the students are not

satisfied with the food menu. It is interesting to note that even though contextual flexibilities are allowed in food menu, this is not really practised in schools.

The irregularity of state level governing body meetings and the absence of sufficient participation of all stakeholders in various committees were noted during the study. Local self-governments do not have participation in the state level and school level committees. PTAs and students are underrepresented in school level committees. The school level committees do not have statutory power and their powers are limited to an advisory role. This has a larger implication and most of the PTA committees are dysfunctional. Different reasons are highlighted for the ineffective functioning of PTAs. The distance between students' domiciles and schools and insufficient financial assistance for the parental visits to schools are the major reasons found. This underscores the need for innovative strategies for the effective functioning of PTA.

Dual control and the conflicts between tribal and education departments create hurdles in the smooth functioning of schools; unity of command becomes impossible. Even though there are guidelines to ensure the stay of permanent teachers within the school premises for three years, these provisions are violated in most of the schools. The majority of teachers take the provision of MRS as a chance to get transferred to their home districts. Hence, they do not avail residential services in schools. This scenario makes the purpose of MRS meaningless. There are several staffing issues glaring at the MRSs. The low proportion of ayah, vacant positions of permanent MCRTs, the dual job role of counsellors, and poor remuneration to health nurse are pertinent among them. Along with these

the short term contract also destabilizes the system. The centralized purchase system delays the timely availability of materials to the students and schools. It is noted that the school heads have limited financial autonomy, which restricts their administrative capacity. Financial power of school heads needs to be increased.

The overall academic performance of students from 8th class to 12th class shows that they lag behind in English. They face the same problem in Malayalam till they finish secondary level schooling. Students from PVTG communities and linguistic minorities face greater hurdles in learning the languages. It is noted that the poor proficiency in language affects their overall academic performance, particularly when they reach the higher secondary classes. This highlights the need of a language bridging exercise the entry level classes. It is relevant to mention that all the schools could attain 100 per cent result in SSLC. The data indicate that tribal students face difficulty in learning Mathematics from high school level to Higher Secondary level. Their performance in Chemistry is also poor in both the levels. At the same time only a third of the school could attain 100 per cent results in Class 12 irrespective of the nature of streams such as Science, Commerce and Humanities. The overall pass per cent of HSS examination is lower than 75 per cent in MRSs, while that of general student in other schools is 84 per cent in the year 2018-19. This highlights that even though the students are making satisfactory progress in their performance at the SSLC level, they could not maintain the same at the Higher Secondary level. Moreover, the syllabus, the technicality in terms of content, failure of the teaching process in linking the syllabus with the local context and linguistic backwardness, which affects their comprehension capacities

might be the factors leading to their poor performance in Higher Secondary section. The general trend of Higher Secondary School indicates that students perform poorly in the subjects with technical nature such as Chemistry, Mathematics, Accountancy, Computer Application and Geography. The field insights highlight that the higher secondary options are not allotted by considering the interest and aptitude of students. The students are compelled to choose options from the limited baskets. The high presence of gender segregated schools and the poor course options create this situation. This underscores the relevance of mixed schools, and the need to redesign the course allotments of higher secondary section in the Model Residential Sschools.

The overall analysis of the academic performance indicates that the tribal students often face an alienated feeling from the mainstream curriculum and syllabus, since they are altogether different from their living environment. This emphasizes the need of bringing the local context of the tribal communities into the syllabus and curriculum. This can be done by developing additional contextual text, and through bringing activity oriented teaching learning processes. The dearth of training in the tribal context for the teachers and non-teaching staff might be a relevant factor which restricts the better academic performance of tribal students. The residential teaching facility is highlighted as the uniqueness of residential schools. Notwithstanding the general trend of residential schools, the majority of teachers in MRSs do not reside in the campus. The situation worsens when the schools are also not capable of providing a proportionate number of ayahs and counsellors. Since the students are separated from their parents, MRSs are

expected to provide individual emotional care and support through the teaching and non-teaching staff in the school. In a nutshell, the present MRS system is a failure in providing individual emotional care and support to the students, which have a higher implication in their overall development. Hence we should seriously think of whether the MRS system should be continued or not since they are not being capable enough to provide the expected input to the students. The experience of some countries that have implemented residential schools for the indigenous groups, indicates that they have taken the radical decision to withdraw the system itself with the realization that this lead to another kind of ghettoization. The non-willingness of teachers to stay in the campus and the failure of the authorities to ensure their presence raises some fundamental questions such as who the real stakeholders of institution such as schools are. If students are the prime stakeholders, how can the services of the other stakeholders ensured to the students? The failure of authorities in following the statutory mandates regarding teachers stay in the campus has to be seriously noted in this context.

Along with the issues in the allotment of courses, the poor career orientation to the students also might be contributing to the high rate of failure in the higher secondary examinations. Students are not given proper training to recognize their aptitude and to build carrier dreams in their interest areas. Nevertheless the school authorities offer some career orientation programmes to Class 12 students. Such an orientation is not available for the high school students. The educational backwardness of parents is a critical factor in their poor involvement in the educational process of their wards. This also affects their participation in parental forums. This highlights the need for parental

educational programme and innovative systems for linking parents and teachers.

Key Recommendations

- The present tribal school system succeeded in ensuring universal education opportunity to tribal students to a certain extent. However, it could not ensure quality of education through continuous care support of residential teachers. The present residential school system has largely failed in providing individual care and attention to the students. The lack of full-time residential teachers is acting as a hurdle in ensuring individual care to the students.
- An administrative provision is required to ensure that all the teachers would be staying in the campus. There can be a special recruitment board from the education department to recruit teachers to the Model Residential Schools. Also, a signed agreement can be followed in order to provide additional incentives to work at MRS. In case the conditions are violated, the agreements can be cancelled and the person could be sent back to the parent department.
- If sufficient teachers are not available from the education department, a special recruitment drive for MRS teachers can be conducted through the PSC. The staffing pattern particularly the ratio of caretaking staff such as ayahs, Manager Cum Residential Tutor needs to be revised by considering the number of students in each school. The permanent staff are to be appointed in all schools, or the contract period of temporary staffs should be extended to a minimum of three years.

- It is advisable to arrange accommodation facility for the teachers in the blocks where the students are staying. This will provide more opportunity for closer teacher-student interactions. If the system fails to ensure the stay of teachers in the campus, the whole idea of setting up of the residential schools become futile.
- The contextualisation of the curriculum and continuous training of teachers are the two major demands that have arisen throughout the study. The overall finding of the study highlights that the medium of instruction currently has a negative impact upon the academic performance of the students. This highlights the need for a language bridge system in the entry classes. The mentor teacher system would be one way to solve this issue. The appointment of mentor teachers with adequate knowledge of tribal culture, language and various other aspects in order to facilitate an easy living and learning environment for a student, especially in the entry classes needs to be considered.
- Individual care plans (ICP) for each student need to be developed and teachers have to be trained in the learning and implementation of ICP. A systematic monitoring and evaluation to assess the performance of teachers needs to be implemented. In all MRS, yearly examination of teachers and peer review system can be followed in this context.
- Each school has different context and intake of students. It is important to have a long term vision and master plan to achieve the vision of each school. The study underscores the relevance of the long term academic and infrastructure master plan for each school. The observations from the study indicate that the tribal students have talents in the areas of sports and arts. Hence, a special provision is required in the MRS Master Plans for providing quality infrastructure for exploring their talents. The availability of full-time physical education and co-curriculum teachers are extremely important in tribal schools. The system is required to identify the versatile talents of students and career orientation needs to be provided based on this assessment. In the discussion with alumni, lack of proper career orientation was found as a significant issue. The orientation should be provided from eighth grade itself.
- The study points out that a poor parent- teacher interaction and a negligible follow up made by the parents in the academics of their students has a serious impact on their performance. This highlighted the need for developing a promotional system that can improve parent-teacher student interaction.
- The present admission system needs to be restructured in such a way that the distance between the hamlet of students and the school can be reduced. The admission can be done by region cluster approach. The conversion of single-gender segregated schools to a mixed school would also help to tackle this issue.
- The study indicates that the single-gender schools create hurdles in the socialisation of the students. Hence it is advisable to convert all the single-gender schools to co-educational institutions as soon as possible. Also,

the present ecosystem of the MRS fails to provide an environment for the students to interact with other students. It is advisable to convert MRS as tribal hostels and admit the students in the nearest schools.

- The conflict between the principal, headmaster and senior superintendent are visible in many schools which in terms created several issues in the school management. There should be a single person to hold the charges of both administrative and academic powers, be it principal or headmaster for the swift functioning of the system. At the same time legal mechanism can be instituted to ensure that they are liable and answerable to the tribal department as well. The minimum period of their service can be fixed for three years. The study recommends a joint monitoring system of tribal department and the education department through district advisory committee.
- The school advisory committees can be converted into school development and management committee with statutory powers. The participation of local body, political representatives and PTA members need to be ensured in it. The frequency of meeting of the state-level committee can be increased. It is to be ensured that meetings are held at least twice a year.
- Purchase system of the schools can be totally decentralised. Selection of accredited agencies can be done at the state level through a systematic process and schools can be allowed to make purchase through these agencies. Preference can be given to government agencies and tribal cooperative institutions.

Conclusion

The overall picture of school infrastructure looks satisfactory. However, there are lacuna in the hostel infrastructure and space for students in the hostel. Even though half the schools get promoted to the higher secondary level, their infrastructure is not expanded in accordance with the higher intake of students. The schools still lack infrastructure for co-curricular activities, particularly sports and games, that can offer better career options to the tribal students.

Even though the schools succeeded to some extent in improving the academic performance of students, they could not make such an achievement in ensuring individual care and attention to the students. This has affected the overall wellbeing and emotional development of the students. Absence of residential teachers, low student-non teaching staff ratio and absence of regular training to the teachers on tribal living environment are the major reasons which have acted as an impediment in ensuring quality schooling experience to the students. The approach of gender segregated schools and unscientific handling of cross gender and inter gender interactions have acted as obstacles in ensuring the wellbeing of the students

The overall findings of the study indicate that the gender segregated schools needs to be converted to mixed school as early as possible. The study also points out that the ratio of care taking staff should be enhanced in accordance with the number of students. If the authorities are not able to ensure stay of teachers inside the campus, then there is no meaning of continuing the present MRS schooling system. The academic studies also indicate that mixed schooling with non-tribal students would give better results than the tribal segregated school system.

Hence, it would be advisable to strengthen

the local schooling closer to the tribal habitation rather than promoting Model Residential Schools. In such a context, the present MRS can be converted into tribal hostels and the students can be admitted to the nearest school in their locality.

The overall academic performance of students exhibits a gradual decline in the trend when it moves from the high school to the higher secondary level. The overall pass percentage of students at the higher secondary level is less than 80% in most of the schools, which is too low compared to the general schools. It is also interesting to note that the performance of the students remains poor irrespective of Science, Commerce and Humanities streams. At the same time it is worth mentioning that all the schools could attain 100% results in SSLC. The poor performance of students in language, particularly in English, is manifested from the high school level to the higher secondary level. It is also noted that the students from PVTG communities and linguistic minority regions confronted difficulties in comprehending even Malayalam. It can be assumed that the overall backwardness of the students in languages might have created hurdles in comprehending the different subjects and reproducing the same in the examinations. Absence of contextualisation of curriculum and syllabus by considering the living environment of tribal students are highlighted as major reasons for their poor academic performance.

The study emphasise the need to providing special support to the students in entry classes to enable them acquire linguistic skills. This can be done through bridge courses or mentoring teacher system. Restructuring options for plus two courses also need to be done to make the learning process comprehensible to the students. The course options which consider the

aptitude and taste of tribal students needs to be introduced in tribal schools. The experience of the Vidya Vanam School in Anaikatti (Attapady) is worth mentioning in this context. Arts and sports should be introduced in the course subject that will create a positive impact on their career in accordance with their aptitude and skills.

The post schooling experience of the students highlight that they face several challenges in finding out career options after schooling. The lacuna in providing systematic career orientation training from high school onwards was reflected during the study. Even though a minority of the alumni could get better prospects, the majority of them dropped their attempts to gain proper employment after higher secondary. The lack of initiatives from the tribal department to provide post school support and monitoring has become evident through this study.

Career orientation has to be started from eighth standard and extended up to the end of plus two course. A systematic process for recognising the aptitude of students require to be introduced in schools during these periods. Information about higher education courses, options and institutions also require to be provided as part of the career orientation programme. Follow up of students after MRS is also pivotal in this context. This can be done by establishing a career orientation cell in each MRS.

The State level body of MRS is either dysfunctional or irregular as regards its meetings. The participation of all stakeholders is also not included in the committees from school level to the State level. The committees functioning at the school level can only have an advisory role since not provided with statutory powers. This limits their capacity to a great extent and restricts its effective functioning. The conflicts in the jurisdiction of powers

between tribal and educational departments create hurdles in the smooth governance of the schools. The dual authority of schools ultimately leads to the absence in the unity of commands which create unnecessary tensions within the school system. The presence of gender segregated schools and state level admission system create a situation where the students can not get an opportunity to study closer to their locality. There are several issues related to the staffing and recruitment of teaching and non-teaching staff. Teachers who come through the education department do not show interest in residing within the campus and are not willing to stay continuously for a stipulated time period. The period of appointment of contract staff is also too short which limits their performance. The disproportionate number of non-teaching staff also affects the quality of services provided to the students. A better co-ordination of tribal and educational departments should be ensured for the

efficient functioning of schools. Legal provisions are needed to ensure that the service of teachers and non-teaching staff are available adequately in schools.

The MRSs are actually envisaged to provide quality education and better care to the students. But they are not able to provide adequate support, especially with regard to the emotional care and holistic development of students. The studies from many countries that have followed residential schooling system for students from indigenous communities indicate that they decided to discontinue the system because they could not produce the expected outcome. The MRSs for tribes could make achievements in terms of universalizing the educational opportunities to the tribal students, whereas they could not make such advancement in ensuring quality education. Hence the total restructuring of the system and strengthening of the schools in local environment would be advisable in the contemporary context.

Reference

Deshpande R.S, T. S. (2001). Caste System and Economic Inequality: Economic Theory And Evidence. In G. Sha (Ed.), *Dalit Identity and Politics: Cultural Subordination and the Dalit Challenge* (Vol. 2, pp. 44–73). Sage Publications.

Government of Kerala.(2018). *Economic Review*. Kerala State Planning Board

Joseph A, T. (2001). Dynamics of Educational Development: A Case Study of Selected Backward' Villages in Kerala. In *Elementary Education in Rural India: A Grassroots View. Strategies for Human Development in India* (Vol. 2). Sage Publications.

Kerala Institute of Local Administration. (2013). *Tribal Report 2013*.

M Shivani Jaswal. (2016). Efficient Education Sector in Kerala: Lesson to be learnt by other Indian States. *IOSR Journal of Humanities and Social Sciences (IOSR-JHSS)*, 21(10), 57–64.

Padma Velaskar. (1990). Unequal Schooling as a Factor in the Reproduction of Social Inequality in India. *Sage Publications*, 39(1/2), 131–145.

Padma Velaskar. (2000). The Politics of Untouchability and Social Change: A Study of the Scheduled Castes of Maharashtra. *Journal of Indian School of Political Economy*, XII(3,4), 473–501.

Thorat S. (2002). Oppression and Denial: Dalit Discrimination in the 1990s. *Economics and Political Weekly*, XXXVII (No.6), 572–577.

Government of India.(2008). *Kerala Development Report*. Planning Commission.

Uchharangrai Navalshankar Dhebar.(1961). *A report of the Scheduled Areas and Scheduled Tribe Commission (Dhebar Commission Report)*. Government of India.

Gana, S.G., & Kollamir, M. (2005). Marginality: Concepts and their Limitations, IP6, *Working Paper No. 4*, Development Study Group, Department of Geography, University of Zurich.

Government of India, Ministry of Tribal Affairs. (2010). *Revised Guidelines for Eklavya Model Residential Schools*.

Government of India, Planning Commission (NITI Aayog). (1951-56) to (2012-17). *Five-Year Plan Reports*.

Government of India, Ministry of Tribal Affairs. (2017-18). *Annual Report*.

Government of India, Ministry of Tribal Affairs. (2008). *Guidelines for Ashram Schools*.

Government of India, Ministry of Tribal Affairs. (2008). *Guidelines for Eklavya Model Residential Schools*.

Government of India, National Commission for Scheduled Tribes. (2007). *Handbook for Scheduled Tribes*.

Govt. of India, National Commission for Scheduled Tribes. (May 2014). *Report of the high-level committee on socio-economic, health and educational status of tribal communities of India*.

- Government of Kerala, Scheduled Tribes Development Department. (1995). *Government Order 24/95/SCSTDD*.
- Government of Kerala, Directorate of Scheduled Tribes. (2008). *Government Order 107/2008*.
- Government of Kerala, Directorate of Scheduled Tribes. (2009). *Government Order 23/2009/STDD*.
- Government of Kerala, Directorate of Scheduled Tribes. (2008). *Government Order 112/2008*.
- Government of Kerala. (2006). *Evaluation study of MRS in Kerala*. Kerala State Planning Board.
- Kagan, C., Burns, D., Burton, M., Crespo, I., Evans, R., Knowles, K., Lalueza, J.L., & Sixsmith, J. (2005). Working with People who are marginalized by the social system: challenges for community psychological work, Department Psychology and Speech Pathology, Manchester Metropolitan University, UK.
- Kothari, D.S. (1966). Vol-I: *General Problems, Education and Development; Indian Education Commission (Kothari Commission Report)*, Ministry of Education, Govt. of India.
- Lokur, B. N. (1965). *Report of the advisory committee on the revision of the list of Scheduled Caste and Scheduled Tribes (Lokur Committee Report)*, Department of the Social Security, Govt. of India.
- Gautam, V. (2003). Education of Tribal Children in India and the Issue of Medium of Instruction a Janshala Experience. *UN/Government Janshala Programme Delhi, India*.
- K, S. (2002). Education among Scheduled Tribes. *India Education Report: A Profile of Basic Education*.
- Kakkoth, S. (2012). UNHEARD VOICES: *A study on the preception of Tribal school drop-outs in Kerala*.
- Kalpana Kannabiran, S. K. (2017). *Socio-Economic Status and Educational Attainment and Challenges of Denotified Nomadic and Semi-Nomadic Tribes*. Indian Council of Social Science Research.
- Kijima, Y. (2006). Caste and Tribe Inequality: Evidence from India. *Economic Development and Cultural Change*, 369-404.
- Mondal, A. (2014). Education of Indian Tribal - A Post Independence Narration .
- Rupavath, R. (2016). Tribal Education a Perspective from Below. *South Asia Research*, 206-228.
- Shweta Bagai, N. N. (2009). Tribal Education a Fine Balance. *Dasra catalyst for social change*.

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Integrated Rural Technology Centre (IRTC) is an autonomous research and development institution found by the Kerala Sastra Sahithya Parishad (a pioneering people's science movement) and a grant-in-aid institution of Kerala Council for Science, Technology and Environment. IRTC envisions the upliftment of the underprivileged sections of the society through knowledge, technology and skill transfer. The institution intervenes to meet the new age challenges and find sustainable solutions in the sector of solid waste management, watershed development, energy management, local planning and livelihood. IRTC has played a pivotal role in handholding the local self-government institutions across the state through their project implementation and consultancy support for preparing Detailed Project Report. IRTC has extensively involved in research, innovation and extension activities to empower the indigenous communities such as fisher folk, tribals and potters. It has also marked its footprints in the areas of women and child development with the collaboration of national and international agencies such as WHO, UNICEF and UNDP.



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