GOVERNMENT OF KARNATAKA

EVALUATION OF THE SCHEME FREE SUPPLY OF BICYCLES TO 8th STD. STUDENTS STUDYING IN GOVERNMENT AND AIDED SCHOOLS AND STUDENTS IN HOSTELS OF SOCIAL WELFARE DEPARTMENT IN KARNATAKA FOR THE PERIOD 2006-07 to 2017-18

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Karnataka Evalution Authority

KARNATAKA EVALUATION AUTHORITY

DEPARTMENT OF PLANNING, PROGRAMME MONITORING AND STATISTICS

GOVERNMENT OF KARNATAKA

DECEMBER 2020

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2006-07 to 2017-18

NAME OF PRINCIPAL INVESTIGATOR – Dr RAJIV RANJAN PRASAD

NAME OF ECO:

GRASSROOTS RESEARCH AND ADVOCACY MOVEMENT

DEPARTMENT NAME:

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By:

Grassroots Research and Advocacy Movement
CA-II, KIADB Industrial Housing Area
Hebbal Ring Road
Mysore, Karnataka, India – 570 016
Land line: 0821 – 2415412
Mail Id: graam@graam.org.in

Printer and Typeset Details:

SPC Enterprises,
36, NS Ayyangar road,
Seshadripuram, Bangalore 20

FOREWORD

Secondary education is a crucial stage in the educational hierarchy as it prepares the students for higher levels of education and also for the job market. But, in India secondary education suffers from lack of access, low participation and equity and quality issues. In Karnataka, the dropout rate at secondary education is 26 percent. The scheme of distribution of free bicycles to students studying in 8th standard in Government and aided schools was introduced in the year 2006-07 as an incentive to the students-especially girl students, to reduce drop-out rate and improve the attendance to enhance the learning outcomes. The Department of Primary and Secondary Education initiated the evaluation of the scheme to assess its impact on the students in terms of access to education, attendance, self-confidence and learning abilities and Karnataka Evaluation Authority entrusted the study to Grass roots Research and Advocacy Movement (GRAAM).

This mixed methods study has applied quantitative and qualitative methods to collect the data from various stakeholders. A primary survey of 5098 beneficiary students and 90 nonbeneficiary students from urban schools was conducted along with eight Focus group discussions and 33 interviews with the officers covering eight districts from the four administrative divisions. A sample of 507 bicycles was tested for quality assessment.

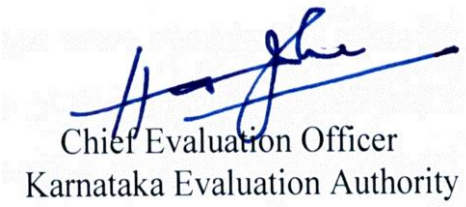
The major findings åre: The usage of bicycles is about 50 percent, 72% of beneficiaries from hilly areas find it difficult to use bicycles because of difficult terrain and poor roads. Family members also use the bicycles (45%), students' punctuality in reaching school on time has marginally improved from 58.3% to 65.5%. Only 13% receive bicycles in the first or second month of academic year. The quality check brought out that more than 40% students encountered missing parts in newly received bicycles and 24% among one-year old bicycles were damaged. Rs 300-600/- is spent for refitting of new bicycles, and Rs. 100 per month for maintenance. Bicycles have been able to enhance school retention, as 79.4% of the principals see bicycle as the main reason for improving school retention but the parents had mixed response. There is no significant impact on Learning outcomes as only 3 percent increase in the score in examinations.

The major recommendations are: establish time bound procedures for procurement of bicycles and redressal of complaints and replacement of bicycles, train members of the Division and District level quality check committees through Master trainers and third-party assessment of

assembled bicycles supervised by a technical consultant/representative of technical institute, conduct free service workshops, alternative transportation for students in hilly areas, Consider alternative measures such as cash transfers to get better quality cycles by parents. In view of the high costs and marginal benefits, the scheme to be reviewed for better alternatives such as enhancing scholarship amount or additional incentives.

I expect that the findings and recommendations of the study will be useful to the Government and the Department of primary and Secondary education, to redesign the scheme and bring in the necessary modifications or to introduce other alternatives, to achieve the objectives of access, retention and learning outcomes.

The study received support and guidance of the Additional Chief Secretary, Planning, Programme Monitoring and Statistics Department, Government of Karnataka. The report was approved in 49th Technical Committee meeting. The review of the draft report by KEA,the Technical Committee and an Independent Assessor, has' provided useful insights and suggestions to enhance the quality of the report. I duly acknowledge the assistance rendered by all in successful completion of the study.



Chief Evaluation Officer
Karnataka Evaluation Authority

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Foremost, we express our gratitude to **Dr. Shalini Rajneesh, IAS, Additional Chief Secretary** to the Government, Planning, Programme Monitoring & Statistics Department, Government of Karnataka. We also thank Karnataka Evaluation Authority (KEA), Department of Planning for the opportunity to conduct this study. We thank the current Chief Evaluation Officer KEA **Shri Harikumar Jha** and the former CEO of KEA, **Mr. Sudarshan G.A.,** for their leadership and guidance in finalizing the study report. We would also like to thank **Dr.Chaya K Degaonkar,** Additional Chief Evaluation Officer of KEA, for her technical support and guidance throughout the study. We Thank **Ms. Jyothi S. Jenni, Associate Director** for all the administrative support during the study.

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We specially thank the Department of Primary and Secondary Education towards smooth conduct of the study. The timely information and data support by the line department was indeed a great help in completing this study. We thank the entire team from the state level to the grassroots level of the departments who took part in the study and shared crucial information.

Our special thanks to data enumerators and GRAAM's Field NGO Partners who helped us complete the data collection despite difficulties because of flood and other field challenges. They have also given us a greater insight on the implementation and challenges related to the supply of bicycles in the field. We also thank all the participants of the study for their time and sharing their responses in the survey.

We would like to thank the community consultation team and project management team at GRAAM for effective management of data collection and constant communication with KEA, respectively.

We thank the entire study team for conducting the study with the fullest commitment.

Sd/-
(Dr. Basavaraju. R.)
Executive Director

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LIST OF ABBREVIATIONS

Abbreviation	Full form
USE	Universalization of Secondary Education
SSA	Sarva Shiksha Abhiyan
CCT	Conditional Cash Transfer
BRC	Block Resource Centre
CRC	Cluster Resource Centre
DPI	Department of Public Instruction
SDMC	School Development and Monitoring Committee
BEO	Block Education Officer
UNESCO	United Nations Educational, Scientific and Cultural Organization
BPL	Below Poverty Line
APL	Above Poverty Line
SC	Scheduled Caste
ST	Scheduled Tribe
OBC	Other Backward Caste
DBT	Direct Benefit Transfer
SHG	Self-Help Groups
FGD	Focused Group Discussion
DDPI	Deputy Director of Public Instruction
IDI	In-depth Interview
UDISE	Unified District Information System for Education
GoK	Government of Karnataka
GoI	Government of India

Executive Summary

Background

The nation's greatest resource for solving critical national issues is its talented and educated children. Unless children are able to complete basic education during their development in elementary and secondary school years, their potential to assist the nation's future hangs in the balance. Loss of talent through educational neglect is a tragic waste for both the individual and society. When they are educated, children have much to contribute to society; however, children from economically disadvantaged families and rural areas are often not accorded access to education. The great distances that many students must travel to school each day often discourages regular attendance and lowers academic performance.

To mitigate the effects of this daily reality, the Government of India and several state governments have introduced numerous schemes to enhance the enrolment of children and their retention in secondary school. These schemes include provision of mid-day meals, free bicycles, free text books, free uniforms and subsidised bus pass facility, residential hostel support and so on. Such schemes are intended to reduce the expenses towards educating children especially for less privileged families, and also to incentivise them to enrol and retain their wards in secondary school.

Government of Karnataka started the bicycle distribution scheme for secondary school students in 2006-07. As per the scheme, the bicycles are given to class VIII students to encourage their transition from class VII to class VIII by improving access to schools (thereby ensuring increased enrolment, arresting dropout and helping students complete their secondary education).

The present evaluation study - commissioned by Karnataka Evaluation Authority and conducted by GRAAM - has examined the overall impact of the scheme through various parameters such as the process of delivering bicycles to students, process of procurement, quality of the bicycles, access to secondary education, impact of the scheme on girl child education and usage of bicycles. The study has generated insights on the extent to which the scheme has been successful in achieving its professed objectives and also the visible and critical gaps in implementing the scheme.

Methodology and Sample Size

- The evaluation study collected both quantitative and qualitative data from various stakeholders.
- The study was conducted in all the four revenue divisions of the state covering eight districts (Bangalore South, Mysore, Kodagu, Chitradurga Belagavi, Uttar Kannada, Kalburgi and Yadgir) and 16 talukas (two in each selected district).
- As part of the quantitative analysis, a primary survey was carried out of 9^{th} and 10^{th} Std students, who have received bicycles under the scheme in Government and aided schools of Karnataka. A total of 5098 beneficiary students were covered (4863 school students and 235 social welfare hostel students).
- Quantitative data was also collected through the survey of school principals (sample size of 243) and the direct observation-based inspection of a sample of 507 used bicycles.
- Qualitative data came from eight focused group discussions (FGDs) of parents and 33 In-depth interviews (IDIs) of quality check officials from division level committees (DDPIs), district level committees (BEOs) and school level committees (SDMC Presidents).
- Secondary data for the study pertaining to secondary school enrolment was taken from the UDISE database.

Findings

This study has generated insights on the process side (implementation processes related to bicycle distribution which shape the quality and timeliness of bicycles received) and the outcome side (effects on enrolment, retention, transition, attendance, learning outcomes and non-cognitive outcomes). The findings are presented below:

Implementation Process

Procurement, obtaining of parts and assembly, quality test and quality check, and distribution of bicycles at school level are the major processes embodied in the distribution of bicycles. This study observed the following from its review of these processes:

<u>Processes contributing to the delay in distribution of bicycles</u>

- The delay in distribution of the bicycles is found in the study. Only 13% children reported to receive the bicycles in the first two months of the academic year (June or

July). 27% received bicycle in August, which is two months after the start of academic year, and the rest received bicycles even later.

- The current dates for procurement, bid evaluation and selection of supplier are not early enough to ensure timely supply of cycles to students, as it takes 90-120 days for the supplier to provide cycles. Furthermore, other processes like quality check at various levels and assembly also need to be completed after bicycles parts are provided by the supplier.
- Delayed indenting of bicycles by principals is one of the contributing factors. A little more than half the principals indent in the first month of the academic year, and the rest in the months to follow. Principals delay since they decide the required number of bicycles on the basis of enrolment or attendance in the current academic year.

Processes related to quality assurance and quality check

- The quality check is being done based on visual check with no physical quality testing facility located within the state.
- The quality check functionaries at school level perceive the lack of effective mechanisms for raising complaints pertaining to bicycle defects.

Quality and maintenance of bicycles

- Triangulated findings from direct observation-based quality check of cycles, beneficiary surveys and FGDs with parents point to quality shortcomings, especially in used bicycles.
- Close to 44% students had to add parts in the newly received bicycles such as bell and seat cover.
- Bicycle quality is observed to deteriorate year to year after receipt. While 8% bicycles were damaged at receipt (as evident from beneficiary survey responses), 24% one-year old cycles and 33% two-year old cycles checked through direct observation were damaged.
- More than 40% of the bicycles used had defects on stable parameters such as rusted frame, worn gear teeth and rusted fork. Rusted brakes and locks are common quality defects of used cycles.
- According to parents, the bicycles become unusable by the time students reach class X.
- Beneficiaries and their parents need to invest considerable resources from their side for refitting of newly received (but poorly assembled) bicycles, and on maintenance of

cycles after receipt. Rs 300-600/- is needed for refitting of new bicycles. On average, beneficiaries spend Rs 100/- per month on bicycle maintenance, which may be burdensome since majority of beneficiaries are from the BPL section.

Findings pertaining to the attainment of scheme's objectives

Effects on secondary school access and enrolment

- Bicycles have changed how children reach school and have also made the school commute relatively easier. Only 32% students walk to school after receiving bicycles, compared to the 80% students in hilly areas and 67% in plains who were walking to school before receiving cycles. After receiving bicycles, almost half the students (49%) use bicycles to travel to school.
- In spite of overall greater relative ease of travelling to school, students from hilly areas still face difficulties in the school commute. 72% beneficiaries from hilly areas find it difficult to use bicycles because of difficult terrain and poor roads, and 27% beneficiaries from such areas never bring the bicycle to school.
- Bicycles would notably improve school access only if they were used regularly. However, less than half (46.2%) the beneficiaries, overall, bring the bicycles to schools regularly. Regular bicycle usage is even less among girls. Road condition, house being very near, frequent damage of cycles and house being too far are reasons for non-usage. Statistical tests show that road condition has a significant effect on the regular usage of bicycles.
- The study shows that the proportion of social welfare hostel students using bicycles regularly for school travel (34.04%) is lower than the corresponding share of school day scholars using bicycles for the same purpose (46.8%). While 40.63% of girl day scholars use bicycle regularly for the school commute, only 27.27% of girl social welfare hostellers use bicycle regularly for the school commute.
- Family members also use the bicycle for 45% of the beneficiaries; however less than 1% beneficiaries mention family members' use of bicycles as a reason for not bringing bicycle to school.
- Parents expressed that while they would have anyway bought bicycles for boys; **the scheme has however ensured that girls are also getting the bicycles.**
- UDISE data shows that secondary school enrolment in Karnataka has been growing over the last six years, which indicates some association of bicycle provision with

school enrolment. School principals also feel that bicycles have been able to contribute to enhancing secondary school enrolment. However, a persisting gender gap in enrolment in class VIII (25%) at the state level remains, implying that bicycle provision has not been able to bring male and female secondary school enrolment on par.

Effects on attendance

- Bicycle provision has improved the beneficiaries' attendance, but only marginally. Before receiving the bicycles, beneficiaries were missing two classes a month, which has come down to one or less than one class a month after receiving bicycle.
- Students' punctuality in reaching school has improved only slightly (around 7%) through the bicycles. Before receiving bicycles, 58.3% students were reaching school on time. After receiving bicycles, 65.5% students were reaching school on time.

Effects on Retention of Children in Schools

- Almost all surveyed principals perceive that bicycle are contributing to the retention of students in secondary schools to a greater or lesser degree. Parents however mostly expressed that they would have mostly continued their wards' school education irrespective of the status of bicycle provision.
- Almost all beneficiaries intend to complete their secondary school education, and 93% also intend to complete their higher secondary education.

Improvement in learning outcomes

- Class VIII students had slightly higher average exam scores (71%) than class VII students (68%). The only 3% increase in exam scores shows a marginal association of learning outcomes with bicycle provision.

Improvement in confidence and other non-cognitive outcomes

- Parents and principals of students who use bicycles felt that the students have become more confident, owing to reasons such as reaching school on time, freedom of travelling with friends, and active participation in extracurricular activities.
- As revealed by discussion with parents, cycling in groups and being able to cycle on the highway have also enhanced the confidence of the students.

Recommendations:

- The date of procurement should be advanced and bid evaluation should be expedited.
- As part of the bidding process, the state government should require the bidder to submit a sample boys' bicycle and girls' bicycle conforming to the stipulated specifications. Such a provision is incorporated in the tender document of West Bengal.
- Indent for schools should be based on previous years' enrolment or average of last three years' enrolment.
- The Mechanical engineering laboratories in the Government or reputed Engineering Institutes at the regional or district level can be designated to conduct quality testing of bicycles.
- Organizing a third-party assessment of assembled bicycle under the supervision of technical consultant/representative of technical institute at district level will add value in ensuring quality.
- Conducting a free service workshop at the school level (by the supplier) at the end of the first month after bicycle distribution would ensure initial minor repairs as well as servicing for preventive maintenance. The same workshop can be used to orient children on the regular care and maintenance of the bicycles.
- Replacing bicycles reported to be damaged at receipt with new bicycles may be initiated.
- Students should be involved in a more active way in bicycle maintenance through activities such as bicycle club. The bicycle maintenance and minor repair training should be imparted to bicycle club members so that they become self-reliant in maintaining bicycles. This would also align with Basic Vocational Training for children in school, in the spirit of the New Education Policy.
- A coordinator (Teacher) should be designated at the school to receive and record complaints by the students on a day-to-day basis (especially in the first 3 months after the receipt of bicycles)
- There should be mandatory tests of the bicycle riding skills of all students at the outset and training of students who lack bicycle riding competency.
- Community representatives such as parents, SHG members and local leaders should be involved more extensively in bicycle monitoring and maintenance to relieve the burden of the 3-member school committee.
- Members of the Division and District level quality check committees should be trained in quality check through Master trainers.

- The three-member school level committees should be empowered to take corrective action on faulty bicycles, and to register complaints that have to be mandatorily redressed by the DDPI or another designated officer.
- Time bound procedures for the redressal of complaints and replacement of bicycles should be established. An added online application can be incorporated in the existing school management system
- Effective and functional bicycle warranties should be ensured and students should be made more aware of them.
- Servicing camps should be organized every six months at each school level or at least at the cluster level (after the first camp held at the end of the first month after distribution).
- The department can also think of providing alternative transportation for students in hilly areas such as hired jeeps or minibuses as an alternative to the bicycles
- In view of the high costs and marginal gains in punctuality and learning outcomes, the scheme should be reviewed for better alternatives such as enhancing scholarship amount or additional incentives.

Chapter 1

INTRODUCTION

1.1 History

Education in India has a rich and interesting history. In ancient days, the knowledge was imparted orally by the sages and scholars to their disciples. Later palm leaves and barks of trees were used for writing. The temples and community centres formed the role of knowledge disseminators. The Gurukul system came into existence as traditional Hindu residential schools of learning –with free education alongside learning for life. At Gurukul, the Guru imparted wide-ranging knowledge in topics such as Sanskrit, mathematics to astrophysics, statecraft to warfare, medicine and so on (Ponmeli, 2020). Till date, this system is referred as the oldest and most effective system of education around the world. India has witnessed extensively flourishing higher education at Nalanda, Takshashila, Ujjain and Vikramshila Universities.

The prevalent education system in India is a legacy of British education (in 20th Century) recommended under Macaulay – western style and content. Post- Independent (1947 onwards) India inherited an education system with great education disparities between female and male, upper and lower classes, and urban and rural population. The first milestone in the development of education was the enactment of the Indian Constitution in 1950 which laid down broad educational policies for the country. Innumerable efforts were undertaken by the then government to promote hassle-free teaching learning environment and reconstruct the education system. Meanwhile, Kothari Commission was formulated to enhance the accessibility, equality and quality of education. To achieve such aims, the main pillar of Indian education policy was free and compulsory education for all children up to 14 years of age. In 1986, Prime Minister Rajiv Gandhi (late) announced New Education Policy (NPE) insisting on providing good schooling environment, innovative teaching and also instructional materials. Various government schemes were targeted at disadvantaged children including girl children and children in isolated habitations in rural areas or slum regions (Schropp, 2011). The Indian Government has endeavoured to achieve the universalization of secondary education (USE) with the main objective to provide high quality secondary education to all Indian adolescents up to the age of 16 years by 2015 and senior secondary education up to the age of 18 years by 2020. To address the foremost issues of enrolment and dropouts (both in elementary and

secondary education) especially in Government schools, innovative initiatives such as mid-day meal scheme, Sarva Shiksha Abhiyan (SSA), free books, bags and uniforms, free bicycle, free bus pass and hostel facility, and scholarships have been implemented with huge amounts of budget allocation.

Although the Indian education system has improved considerably, it is still facing manifold problems – gender disparity, accessibility and equality. Reducing gender gaps in school enrolment has been one of the important goals for international education policy, and is enshrined as one of the United Nation's Millennium Development Goals (Muralidaran & Prakash, 2013). In developing countries, improving female education is of utmost priority for policy makers. The most prominent category of demand-side interventions have been conditional cash transfers (CCT) to households for keeping girls enrolled in school. Scholarships have been implemented as another means to reduce dropouts.

1.2 Status of Girls' Education

Girls are often treated as inferior and are socialized to put themselves last, thus undermining their self-esteem. Discrimination and neglect in childhood can initiate a lifelong downward spiral of deprivation and exclusion from the social mainstream. Gender-biased educational processes, including curricula, educational materials and practices, teachers' attitudes and classroom interaction – all these reinforce existing gender inequalities. Ensuring universal and equal access to and completion of primary education by all children and eliminating the existing gap between girls and boys, is stipulated in article 28 of the UN Convention on the Rights of the Child[1].

All barriers must therefore be eliminated to enable all girls to develop their full potential and skills through equal access to education and training, nutrition, physical and mental health care and related information (www.un.org.). Initiatives should be taken to prepare girls to participate actively, effectively and equally with boys at all levels of social, economic, political and cultural leadership. In addressing issues concerning children and youth, Governments should promote an active and visible policy of mainstreaming a gender perspective into all policies and programmes.

[1] https://www.un.org/development/desa/youth/girls-and-young-women-wpay.htmi

In this context, the present evaluation will address the issues and challenges faced in free bicycle distribution scheme and also provide insights on whether the scheme has really enhanced school enrolment and reduced dropouts in Karnataka.

1.3 Free Bicycle Scheme in India

The main objective of distribution of free bicycles in government owned schools was to empower the students, especially girl students and reduce drop outs among school children. Still thousands of children especially rural India have to travel miles together to reach and learn in schools opting to reach through public transport or by walking! Several state governments have extended their hands in providing free bicycles to secondary school children not only to reduce travelling time but also to increase leisure time for children for involving in extra curricular activities.

To know one of the best practices in free bicycle distribution, we can take a brief note of Sabooj Sathi (Cycle Distribution) scheme in West Bengal. The government took initiative of distributing free bicycles from September 2015, and has distributed around 43 lakhs free bicycles for students from class 9^{th} and 10^{th} studying in Government owned and aided schools and Madrasas. The procurement of bicycles was done through e-tender as per norms of the State government. To ensure quality deliverables, the supplier of bicycle has to meet the standard IS specification – IS 10613-2004 - including standard accessories viz., front basket, carrier, stand, full-half chain cover, bell and rider's safety measures. The school has to record student information through sub inspectors and additional district / district inspectors of school. Block development officers perform the task of creating delivery points and tagging schools to finalize delivery point-wise requirement for students (both boys and girls). Government owned and aided schools generate the distribution record from individual log-in facility, and finally the schools upload data like date of distribution, brand of bicycle, bicycle frame number, details of students etc., and entire details are made available in the public domain on real time basis.

Similarly, other state governments such Chhattisgarh (Saraswati Bicycle Scheme), Chandigarh (Mai Bhago Vidya Scheme), Tamil Nadu (Amma Free Bicycle) , Andhra Pradesh (Badiki Vastha Scheme), Karnataka (Free Bicycle Scheme) etc., have distributed free bicycles to students of the 8^{th} and 9^{th} standards with standard norms pertinent to the individual states.

1.4 Free Bicycle Scheme in Karnataka

Government of Karnataka introduced a scheme for providing free bicycles with an intention of improving school attendance, and subsequently learning standards, at the secondary school level in 2006-07. The main aim of the scheme was to improve school access for secondary school students of rural and hilly areas. An expected secondary benefit was the increased confidence of the girl students.

Initially, only girl students enrolled in 8th standard in Government owned and Government aided schools in rural and hilly regions were included[2]. In 2007-08, the scheme was extended to girls and boys falling below the poverty line, and was extended to all 8th std. students belonging to all categories in 2008-09. Over a period of time, the scheme has been steadily modified and as per the latest modification (2016-17), the beneficiary categories are as follows:

1. All 8th std. students studying in Govt and Govt aided schools including those staying in Social Welfare hostels
2. The students studying in schools in city corporation limits, bus pass holders, and students staying in hostels have been excluded

However, students staying in hilly regions who walk from house to bus stop (though possessing bus pass) are included.

1.5 Quality Test and Penalty

Before bicycle distribution at schools, bicycles are inspected thrice to ensure quality. At the first step, they are tested at the time of manufacturing by picking one sample out of 100 bicycles. Secondly, one out of 2,500 cycles is subjected to crash test and the lastly test is done after the delivery by randomly drawing 40 samples from all divisions.

From the academic year 2019-20, the Karnataka government has entrusted that all the materials used for bicycle viz., handle bars, rods, tubes and spokes must be BIS- certified with a five-year warranty period.

Earlier the quality check for free bicycle was done by the Research and Development Centre for Bicycle and Sewing Machines which is located in Ludhiana, Punjab. The Department of Primary and Secondary Education in Karnataka has stepped forward to conduct quality test in

[2]Students having bus pass, those living in hostel facility and those within city corporation limits were excluded.

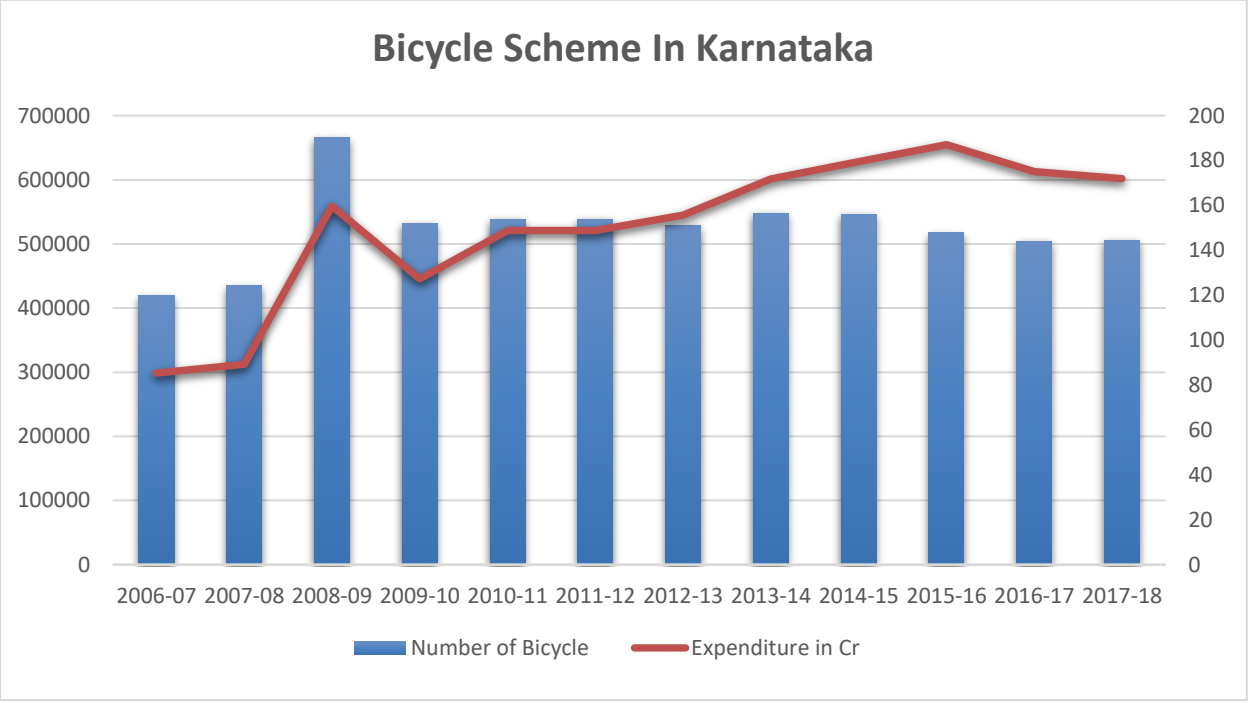
few more labs run by the Union government and private companies. Further, a committee has been constituted at the state level comprising senior professors of engineering colleges heading the mechanical engineering department to check the quality of bicycles distributed.

In Karnataka, suppliers also have to provide one tool kit per school for any minor repairs which can be managed at the school level.

1.6 Performance Review of the Scheme in the State

As per the ToR of the study, by 2016-17 the scheme covered 195 selected blocks (excluding corporation limits) of 34 educational districts of Karnataka. From the same document it can also be observed that from the start of 2006-07 till 2017-18, the scheme has distributed over 62 lakh bicycles at a cost of nearly ₹1800 Cr. The scheme gradually increased from about 4.2 lakh bicycles at a total cost of nearly ₹85Cr in 2006-07 to nearly 5.5 lakh bicycles in 2014-15 at a cost of nearly ₹180 Cr. It has since dipped a bit to 5.05 lakh bicycles costing ₹172Cr in 2017-18[3].

Figure 1.1 Bicycle Scheme in Numbers



[3]Data from the ToR for the project

1.7 Problem Statement

- Studies on the implementation of the bicycle scheme in different contexts show evidence related to enrolment and retention but there is no clear evidence on the impact of the scheme on learning outcomes.
- The existing literature has not delved in detail into the administrative aspects of the implementation of the scheme including the detailed analysis of quality of bicycles and the efficacy of the quality check processes.
- There is thus a need for a comprehensive evaluation study that touches on the effect of bicycle scheme on enrolment, retention, attendance, and learning outcomes, and also on attitudes, motivation and confidence of students with respect to school education. The study should also touch on the administrative dimensions including the quality check processes and their efficacy. Finally, sustainability also needs to be examined, in terms of the longevity and maintenance of the provided bicycles. The study should also look into the debate of whether cash transfers are a better option than in-kind supply of bicycles, given the administrative burden of bicycle supply and the common complaints of poor quality of supplied bicycles.

1.8 Conclusion

Like some other Indian states, Karnataka has also introduced the scheme of bicycle distribution for secondary school students. The bicycle distribution scheme can be seen as not only a means of enhancing school access but also of serving as an incentive (in a slew of other incentives such as Mid Day Meal, free textbooks and free uniforms) to encourage students to enrol in and continue secondary school. In Karnataka, the scheme has been implemented on a large scale (both in physical and financial terms).

This evaluation study is expected to add to the body of literature already available on the performance of bicycle distribution schemes in India and beyond, and also go beyond available evaluations by focusing comprehensively on process and outcome aspects.

Chapter 2

LITERATURE REVIEW

Education is the basic structure on which any nation's progress and development are based. A school not only imparts education to children but also plays a significant role in nurturing their basic ideology, habits and attitudes, transforming them into good citizens for a nation. Education requires greater focus in terms of Accessibility, Equity and Quality. With appropriate education for children, employment opportunities are broadened, increasing their income levels (Gouda & Sekher, 2014) and standard of living.

School children dropout rate have been prevalent at alarming rates in India since long. As per the UNESCO statistical data report for India, the average value of secondary school enrolment as a percentage of all eligible children is 75.09 per cent for the year 2017 as compared to 23.84 per cent during the year 1971. However, the average annual dropout rate across secondary schools in India was approximately 17.06 per cent during 2014-15. Secondary school drop-out is on higher side especially among girl children. Poverty, accessibility and availability are the major reasons of school dropouts in India. Further, continuing children's education basically depends on their family and socio-economic background, school environment and community participation at large. High school drop-out rates are high when girls reached the ninth grade. This was primarily because of fewer high schools and girls having to travel longer distances (Khazan, 2013) every day to school. Reducing dropouts is a crucial factor in order to reduce poverty (Halawar, 2019) and achieve socio-economic equality.

Although major strides are being made worldwide to reduce the gender gap especially in education, there continue to be significant barriers to girls' education and empowerment-particularly for adolescent girls (Modi, 2017). Despite many efforts made by the Indian Government and non-profit organizations, there is a high drop-out rate of girls at around 62.1 million (MHRD Report, 2018), particularly in rural areas (Khazan, 2013), pushing (around 47 per cent) them to early marriage.

The Central Government has undertaken several initiatives to improve quality of education, school infrastructure, and deployment of additional teachers under Sarva Shiksha Abhiyan. The Government of Karnataka has implemented several schemes in collaboration with several institutions and local bodies to ensure development in the education sector. Some of the schemes worth mentioning are mid-day meals, free bicycle distribution, free bus pass facility,

residential hostel buildings, regular training for teachers, and free text books and uniforms to children. These are being implemented with a view to enhance enrolment and retention of children in schools.

Increasing access to school is one of the more important and often used supply-side policy interventions. There are multiple ways of enhancing school access - most obvious one being providing schools closer to the students. The flip side of this intervention is proliferation of small schools with one or two teachers providing suboptimal teaching. One way out would be providing children transportation services allowing them access to slightly further but better equipped schools. Providing bicycles to students fall under the same category, as it reduces travel time to school i.e., distance cost (Khazan, 2013) and thereby increases access. The initiative of free bicycle supply for government school children has been well received across different states such as Karnataka, West Bengal, Odisha, Madhya Pradesh, Punjab, Andhra Pradesh, Assam, Rajasthan, Tamil Nadu and Bihar.

This literature review examines the available studies on the performance of the bicycle distribution scheme for school students. The studies are largely on Indian contexts, however, one study showing effects from bicycle distribution in the African country of Zambia has also been included. The review is organized according to the objectives of the bicycle distribution scheme in Karnataka such as enhancement of enrolment, attendance, retention and learning outcomes, which all comprise the expected outcomes of bicycle provision. Additional, studies illustrating the performance of bicycle distribution on the process side have also been included.

2.1 Performance of Bicycle Schemes as per the Objectives of the Bicycle Distribution Scheme: A review of evidence on the outcomes of bicycle provision

2.1.1 Improvement of Secondary School Enrolment of Children

Muralidharan and Prakash (2013) study the impact of a scheme in Bihar that aimed to increase girls' enrolment in secondary education through providing funds to girls for buying bicycles for continuing secondary education. This study found that exposure of a cohort to the bicycle program increased girls' age-appropriate enrolment in secondary school by 30% and reduced the gender gap in age-appropriate secondary school enrolment by 40%. Increases in enrolment mostly took place in villages where the nearest secondary school was further away (Muralidharan & Prakash, 2013)**.** This implied that the program made impact through reduction in time and enhancing of safety of school children (Muralidharan & Prakash, 2013).

2.1.2 Improvement of Attendance of Children, Arresting of Dropouts and Helping Students complete High-school

The State Government of Chhattisgarh has provided bicycles to secondary school students under Saraswati Bicycle Scheme for all girl students who belong to SC, ST and BPL sections. The initial enrolment of girl students in class IX was translated into regular attendance and retention. On the other side, bicycle provision did not address some persisting, strong causes of dropouts such as child marriage, household work, and economic occupation (SCERT, 2017). As family members also utilize and take decisions on usage of the bicycle (Sumangala, 2010) there was a reduction seen in the days that the child came to school by bicycle (though attendance continued) because of family members using the bicycle that day.

In West Bengal, the Sabooj Sathi scheme has distributed bicycles to all students of Standard 9 to 12 irrespective of caste, religion, affiliation and gender (Pratichi, Wheeling Education: An assessment of the Sabooj Sathi (Bi-cycle Distribution) Scheme for School Students of West Bengal, 2017). While the scheme made a positive difference to school continuation prospects, the scheme could not obviously address all factors (including systematic factors) that hinder secondary school participation such as teacher inadequacy, non-availability of science streams in rural high schools etc. (Pratichi, 2018).

A randomized controlled trial (RCT) was conducted in 2017-18 in the sub–Saharan African country of Zambia to assess the impact of bicycle distribution program known as known as BEEP or Bicycles for Educational Empowerment Program of World Bicycle relief, on attendance, transition and learning outcomes. Under this RCT design based evaluation study, more than 2400 girls studying in class 5^{th}, 6^{th} and 7th in 100 schools in three districts of Zambia were randomly assigned to 3 groups – a) girls who did receive the bicycles b) girls who received the bicycle but were not asked to pay a financial contribution for getting a maintenance kit and for preventive maintenance of bicycles c) girls who received the bicycle, benefitted from a trained field mechanic provided for each school for doing repairs and maintenance checks for a fee, and from a start-up spares kit provided for each school (each girl had to pay an amount equivalent to USD 5 for financing the start-up spares kit and preventive maintenance). The study found reduction in commute time to school by a third (35 minutes each way. While girls in the control group were late to school a little over two days each week (2.19 days), girls with access to bicycles were late less than one day a week (.76 days), which represents a 66 percent increase in punctuality. Absenteeism was found to reduce by 28%. The study however did not find statistically significant outcomes on dropout and grade transition.

2.1.3 Other Effects of the Scheme: Increase in Learning Outcomes

Studies have rarely found notable impacts of bicycle provision on learning outcomes or exam scores. A small-scale research study by Sumangala (2010) found that in Karnataka, as a result of bicycle provision, students were able save 15-30 minutes of time which they utilize for studies (however no significant improvement in their marks was seen after bicycle provision). They also felt that their confidence and interest in studies have improved. On the other hand, parents felt the scheme gives time and space for other activities and improves academic performance (Sumangala, 2010). However, there is a dearth of evidence showing the direct impact of bicycle scheme on quality of learning and learning outcomes.

2.1.4 Other Effects of the Scheme: Increase in Confidence and Other Non-cognitive Outcomes

The literature indicates that the confidence generated among beneficiaries when they get access to bicycles may extend beyond their attitude to school. In the West Bengal case, it was found that apart from making a positive difference to the everyday school life and school continuation prospects for girls, the bicycles also have a wider liberating effect on the girls, since it is also used for travel to market, fair, hospital and just 'biking' for leisure. The universal distribution scheme of bicycles also creates a sense of equality among students (Pratichi, 2018)

Muralidharan and Prakash's (2013) study of Bihar also found that the bicycle program has positive externalities such as increased safety from cycling in groups and changes in social norms that prevented girls' mobility outside the village.

The evaluation of the BEEP bicycle provision program in Zambia found the following with respect to the confidence and empowerment of girls: (IPA, n.d.)

- Girls at schools who received the bicycles felt more in control of the decisions affecting their lives than girls in the control group
- The girls who received the bicycles displayed more pro-social tendencies (i.e., they said that they would help or collaborate with a friend in need).
- An improvement in self-image was also seen for girls who had received the bicycle

The study did not find any statistically significant effect on their freedom of movement (the probability of being allowed to visit friends or family or go to the market by themselves).

2.2 Process Evaluation

2.2.1 Process Shortcomings and Strengths in Distribution of Bicycles

The major process issues addressed by the literature are the quality of cycles and delay in distribution of bicycles. In the Saraswati scheme in Chhattisgarh (SCERT, 2017), there was found to be a delay in distribution of bicycles and bicycles reached school only towards the end of the academic year. Issues of governance under this scheme, in terms of poor monitoring by stakeholders and suboptimal level of selection of vendors are pertinent in most of the states. There is need to emphasise the importance of using previous academic year's enrolment data as basis for distribution of cycles for reducing delays.

The Sabooj Sathi bicycle distribution scheme in West Bengal, characterized by universal distribution to all 9th standard students was found to create significant visibility and community interest in the programme and a consequent built-in mechanism of community audit. However, there are also some operational shortcomings in the scheme in terms breakage, repairs and maintenance adding on the cost to beneficiaries (Pratichi, 2018)

Under the BEEP programme in Zambia, bicycles are provided both to teachers and students. Students getting the cycle have to sign a study-to-own contract, agreeing to attend class regularly. BEEP programme has taken up innovative community-based measures to monitor the scheme and address maintenance of bicycles. Each community forms a Bicycle Supervisory Committee (BSC) consisting of teachers, PTA members, students and local leaders. For maintenance, one trained field mechanic is selected by the BSC and provided to each school (IPA, n.d.). Such community-based measures and attention to maintenance should be studied by Indian states for enhancing their bicycle programs.

2.2.2 The debate on In-kind transfer vs. Cash Transfer or Direct Benefit Transfer for provision of Bicycles

While states such as Karnataka, West Bengal and Chhattisgarh provide bicycles in kind, other states such as Bihar and Maharashtra have provided cash transfers to beneficiaries for procuring bicycles instead of supply bicycles in kind. The numerous press reports on the poor quality of bicycles in states such as Karnataka lead researchers and policy makers to reflect over cash transfer for buying bicycle as an option to the in-kind distribution of bicycles.

Significant analysis and evidence is available from the Bihar case which is presented below to highlight the pros and cons of cash transfers, and beneficiary preferences with respect to the same.

In theory, cash transfer or Direct Benefit Transfer (DBT) promises the following merits: It is expected to reduce leakages, increase beneficiary choice, and eliminate intermediaries between the beneficiary and the state (Centre for Civil Society, 2017). It also helps to address the flaws associated with in-kind supply such as sub-standard quality of goods, and poor accountability and capacity of local administrative actors (Ghatak, Kumar & Mitra, 2016). On the flip side, cash transfers have disadvantages such as likelihood of misuse of money, price fluctuations of the concerned goods in the underdeveloped rural markets that may make it difficult to procure the concerned goods using the cash transfers and absence of banking facilities that create inconveniences for beneficiaries (Khera, 2011; Khera, 2014; Shah, 2008). In such a perspective, reforming the existing in-kind programme is preferred to replacing it completely with a cash transfer programme. Also transfer of money to children's Aadhaar linked bank accounts creates the possibility of a large number of children being left out (Sakal Times, 2018).

Mukhyamantri Cycle Yojana in Bihar provides money to purchase a bicycle to every student who is enrolled in Standard 9 of a government-run/aided school. The scheme has the following features (as of 2016): transfer of Rs 2500/- per beneficiary, distribution of cash through camps held at school level, and requirement for beneficiaries to produce a receipt as evidence for having procured a bicycle (Ghatak, Kumar & Mitra, 2016)

According to a paper by Ghatak, Kumar & Mitra (2016), the programme has performed well in terms of coverage and reducing corruption. Surprisingly, however, a survey of the beneficiaries showed that a majority of them (55%) would still prefer in-kind provision of bicycles compared to the cash transfers. Such preference, according to the authors, is shaped by certain supply side and demand side or household level factors.

On the supply side, beneficiaries are inconvenienced by the way the scheme is implemented (which deviates from the rules); beneficiaries are burdened by having to often produce a receipt as proof of purchase of cycle in order to obtain the cash transfer (30% beneficiaries had to show such receipt before getting the cash transfer amount) . Regression results show that the beneficiaries who had to submit a receipt before receiving the money were 20 percentage points

less likely to prefer cash compared to those who submitted the receipt after receiving the money. (Ghatak, Kumar & Mitra, 2016)

The survey results show that the amount given to purchase bicycle was not sufficient; 98% beneficiaries had to add money from their side to buy the cycles, and the average amount to be added was Rs 979/-. Relatively better-off households may be better placed to add such money and may thus better appreciate the freedom or element of choice that such cash transfers bring. The survey data shows that while 72% of the beneficiaries used their own savings to top-up the cash transfers to buy the cycles, 25% of them had to borrow money to do the same. The regression results show that an increase in monthly household income by Rs 1,000 increases the probability of preferring cash transfers by six percentage points. Also, access to bicycle shop or distance from bicycle shop is significant in shaping preference with respect to in-kind transfers. The further beneficiaries lived from bicycle shops, the less likely they were to prefer in-kind transfers. An increase in this distance by one km reduces the likelihood of preferring cash by 1.2 percentage points (Ghatak, Kumar & Mitra, 2016).

Cash transfers may also not be able to ensure bicycle procurement for girl beneficiaries. The study findings show that the households are willing to provide Rs 130 less for girls than for the boys, controlling for a wide range of variables. Households may be willing to invest less for girls for boys given the prevalent gender biases in society, but it is also possible that the unavailability of more expensive models of girls' cycles in the rural bicycle market contributes to such a phenomenon (Ghatak, Kumar & Mitra, 2016).

In summary, therefore, poorer beneficiaries with poor market access may be less likely to prefer cash transfers compared to in-kind transfer, in spite of the merits of cash transfers in terms of accountability and transparency. While cash transfers may reduce the administrative and logistical burden associated with in-kind bicycle supply, governments should keep in mind that the poorest beneficiaries may be disadvantaged by a switch to cash transfers.

2.3 Major Findings from Literature Review

- There is evidence that bicycles have notable impact on secondary school enrolment of girls and reduction of enrolment gap between boys and girls. This is the most well- known evidence related to the effect of bicycles on secondary education.
- Bicycles have also been found to enhance school attendance and reaching of school on time.
- There is no strong evidence of bicycles enhancing retention/reducing dropout.

- There is no clear evidence in the literature about the effect of bicycles on learning outcomes or exam scores.
- Bicycles may also have non-cognitive outcomes such as greater confidence/feeling in control of one's life for girls and better self-image. On the effect of bicycles on the general freedom of movement, however, the evidence is conflicted.
- The literature from India points to quality issues and maintenance costs experienced with respect to bicycles. A study from sub-Saharan Africa points to good practices on the process side, such as community level monitoring committees, designating a field technician for each school and taking a small fee from beneficiaries which can be used to finance maintenance and servicing initiatives.

While DBT may be a possible solution to avoid quality, issues associated with in-kind provision of bicycles, the equity concerns that may arise from non-uniform bicycle provision should be kept in mind. It may also be financially burdensome for poor beneficiaries to add money to buy bicycles or first buy a cycle and produce a bill to obtain the cash transfer.

2.4 Conclusion

The above literature review shows that while bicycle provision has a positive and clear effect on enrolment, the effects on retention, transition and learning outcomes are less clear. Apart from two studies come across (Muralidharan and Prakash, 2013; IPA, n.d.), the studies do not take up a structured scientific evaluation methodology. There is therefore scope for more rigorous studies to evaluate the impacts of bicycles on secondary education in a variety of contexts.

The review in this chapter has also shown that quality issues with bicycles are common, and some states like Bihar have opted for cash transfers in place of in-kind provision of bicycles. However, such cash transfers (while having merits like increased choice for beneficiaries) may also be more burdensome for poorer households and inequitable in some ways.

The existing studies (especially from India) have not delved in-depth into the process aspects and administration of the scheme (in its in-kind distribution form), shedding light on processes that affect the timeliness and quality of bicycle provision. Quality check processes have not been touched on in the literature. These are aspects that this evaluation will incorporate and address.

Chapter 3

EVALUATION METHODOLOGY

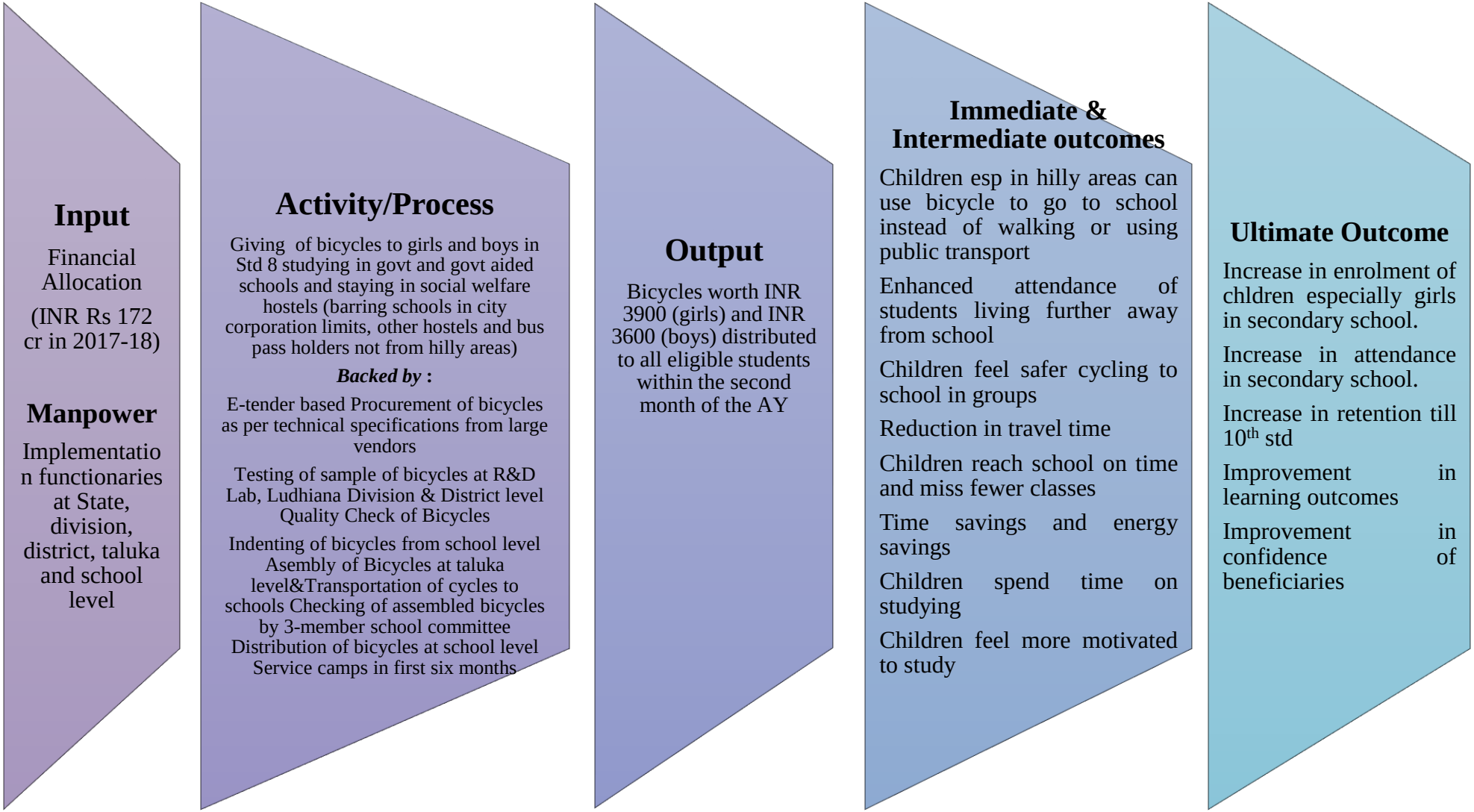
3.1 Theory of Change

The theory of change for the bicycle scheme is given on the next page. The inputs, activities, outputs and immediate and intermediate outcomes that would lead to the ultimate outcomes such as enhancement of enrolment, attendance, retention and learning outcomes have been specified. Bicycle distribution would have such outcomes only if the following assumptions are satisfied:

Assumptions:

- Bicycles sustain at least for three years, till the completion of 10th standard
- Bicycle maintenance requirements and costs are minimal, and maintenance services are easily accessible.
- Children know how to ride bicycle and are trained in road safety
- Children know how to take care of bicycle and are motivated to oil and take other regular care of bicycles
- Students – and not family members – use the bicycle at the required time of school travel
- Availability of roads to connect the residential areas to school and terrain that is suited to cycling.
- Availability of secondary schools within distances amenable to being covered by cycling (not more than 5-7 kms)
- Time and energy saved by cycle commute is used for studies and not for other activities
- Enhanced academic efforts of children are supported by quality of teaching and sincere effort of teachers

Figure 2.1Theory of Change (Log frame)



3.2 Objectives for the Study

The purpose of the evaluation study is to measure the achievements of the scheme vis-a-vis the objectives, review the implementation process and get the feedback and suggest measures for effective implementation of the scheme. With these designated purposes, the following objectives have been defined for the study:

1. To evaluate the impact of the scheme on access to secondary education for the students across the categories and regions.
2. To examine the impact of the scheme on girls- with regard to their access to education, convenience, and on development of self confidence among them.
3. To evaluate the impact of the scheme with respect to enrolment, attendance, and retention rate of the children in 8th Std and subsequent grades.
4. To assess the impact of the scheme on transition rate and continuation of education till 10th Std.
5. To assess the impact of the scheme on learning achievements of the students - boys and girls across the social groups.
6. To evaluate the extent that the scheme has helped the students in hilly areas/remote areas to access the school and attend the classes regularly.
7. To examine the process of implementation of the scheme and assess the performance across the districts and divisions.
8. To examine the issues related to maintenance of bicycles, their retention till 10^{th} std. and utilization of the facility by regularly bringing the bicycles to the school.
9. To evaluate the utility of the scheme with regard to % of bicycles brought to school; reasons for not bringing; being misused by other family members etc.
10. To get feedback from different stakeholders in the field and offer suggestions for improvement.

The following **additional** objectives have been identified for this study, which encompass some of the evaluation questions laid down in the ToR document:

11. Understand the meaning, benefit and usefulness of the cycles from beneficiaries and beneficiaries' parent's perspective.
12. Understand the access and safety issues that remain misaddressed in spite of bicycle provision.
13. Understand if bicycles are used by children for travel other than travel to school.

Triangulation is adopted for validation of insights by collecting inputs from multiple stakeholders using quantitative as well as qualitative methods. The research frame consists of 9th and 10th std. students who had received bicycles under the scheme in Government and aided schools of Karnataka. Other than this, school principals and officials involved in quality check were interviewed. FGD of parents were conducted in different districts.

3.3 Secondary Data Collection and Literature

The school wise list of beneficiaries of the last 3 years was collected from the Department of Public Instruction, Karnataka. Other than that, the tenders released for procurement of the bicycles and circulars related to the administration of the scheme had also been collected from the department. Also, details related to enrolment, retention and number of students who attempted Class X and XII over the years has been collected from the DISE website.

Various other states, like Chhattisgarh, Madhya Pradesh, Odisha, Bihar, and West Bengal has also rolled out the scheme in their states to facilitate education of girl children in remote areas. Few of the schemes are evaluated by independent researchers or government departments. Those studies have been reviewed to understand various impact of the program. Also, the literature review had been helpful to gauge the impact of scheme on enrolment, retention, and attendance of the students over the years.

3.4 Stakeholders for the Study

Based on the objectives of the study, the officials of the Department of Public Instruction at state, district and block levels has been interviewed. As committees are formed at various levels to check the quality of bicycles distributed to the students of 8th Standard under the scheme, therefore committee members at the division level, district level and school level have been interviewed. Other than this, through focus group discussions (FGDs), data was collected from the parents, some of whom are SHG members and SDMC members.

The study has covered 5098 beneficiaries, slightly more than the pre-determined sample of 5000 beneficiaries. Alongside 243 headmasters/headmistress were also surveyed for the study.[4] The table below shows the list of stakeholders contacted to collect information/data for the study.

[4] The study also collected data from 90 non beneficiary students which has not been included in the final analysis of this report.

Table 2.1 Stakeholders for the Study

Levels	Stakeholder	Number of Stakeholders	Method of Data Collection
State	Officials of Department of Public Instruction, GoK	1	IDI
District	District/Division level committee member (DDPI)	8	IDI
Block	Block Education Officer/BEO	16	IDI
GP	Parents/SDMC members/SHG members	8	FGD
School	SDMC Presidents	8	IDI
	Total	**8 FGDs + 33 IDIs**	
Quantitative Survey Method			
School	Beneficiary Students	4863	Survey
Social Welfare Hostel	Students from hostel	235	Survey
School	Headmaster of selected schools	243	Survey
School	Non-beneficiary students	90	Survey
	Total	**5431**	Surveys

3.5 Developing Tools for Data Collection

A detailed survey questionnaire was prepared to collect information from the beneficiary students from schools as well as welfare hostels. Headmaster/headmistress of the school plays an important role in the scheme; therefore, all the headmasters/headmistress of the selected schools were also surveyed for the study. In the absence of headmaster/headmistress, the acting headmasters/headmistress has been interviewed. The questionnaires captured the issues in distribution of bicycle, impact of the scheme on enrolment, retention, and attendance of the students, change in attitude and behaviour of students due to availability of own transport facility, and issues related to safety etc. The qualitative questionnaires were framed such that they captured the process of distribution along with the issues faced in implementation.

The table below has provided the questions to be answered across major objectives and the indicators to assess them.

Table 2.2 Evaluation Questions

S. No.	Objectives	Major Questions	Indicators	Tools for Data Collection
1.	To evaluate the impact of the scheme on access to secondary education for the students across the categories and regions.	Examine the impact of the similar schemes in other states Examine the impact of scheme across the state	Increase in enrolment, retention and attendance of the students across the country	Literature review, Survey
2	Examine the impact of the scheme on girls- with regard to their access to education, mobility, and on self-confidence.	Examine, trends in enrolment of girls in high schools and helped in improving their attendance in the schools	Increase in enrolment of girls in high school. Regularity of girl students in schools	Secondary data on enrolment and attendance of the girls from various websites School registers Survey of students
3	Evaluate the impact of the scheme with respect to enrolment, attendance and retention rate of the children in 8th standard.	What are the trends on student retention and transition?	Increase in number of students enrolling in 10th across the region over the years	Secondary data School registers
4	To assess the impact of the scheme on transition rate and continuation of education till 10th Std	What are the impact of the scheme on the transition rate and continuation of education till 10th standard across regions, social groups and gender?	Increase/decrease in number of students enrolled for 10th std.	Secondary data School registers
5	To assess the impact of the scheme on learning achievements of the students - boys and girls across the social groups	Has the scheme helped to improve the learning achievements of the students? If yes, then how?	Increase/decrease in learning achievements of the students	Discussion with principals Survey of students
6	To what extent the scheme has helped the students in hilly areas/remote areas to access the school and attend the classes regularly.	What is the impact of the scheme on student enrolment in hilly areas of the remote and dispersed villages in different divisions of the state?	Increase/decrease of enrolment of students in hilly region	School registers Secondary data from the Department of Public Instruction Students Survey
7	To examine the process of implementation of the scheme and assess the performance across	- Whether bicycles are provided in the beginning of the academic year? Are there any difficulties faced in	Proportion of principals who submit bicycle requirements on time	Survey of Principals and Students Interviews of SDMC presidents, BEOs and DDPIs.

	the districts and divisions.	timely supply of bicycles to the students? - Understanding on the process of procurement, and distribution - Adherence to quality check mechanisms at different levels	Proportion of students who received bicycles on time	
8	To examine the issues related to maintenance of bicycles, their retention till X Std and utilization of the facility by regularly bringing the bicycles to the school.	Expenditure on maintenance of the bicycles? What is the nature of complaints of cycles after use by students? Loose fittings, low quality parts, frequent punctures, lack of local mechanics and other complaints	Maintenance cost of the bicycle Major complaints in bicycles with respect to quality	FGD with the parents Survey of students Discussion with headmasters/headmistress Direct observation based quality check of used bicycles
9	To evaluate the utility of the scheme with regard to % of bicycles brought to school; reasons for not bringing; being misused by other family members etc.	Breakup of students bringing the bicycle to school, including gender wise. What are the reasons of not bringing the bicycles to school? Other than students, who else in the house is using the bicycle?	Number of students bringing the bicycle Reasons of not bringing the bicycle Utilization of bicycle	FGD with parents Discussion with headmasters/headmistress Survey of students
10	Understand the meaning, benefit and usefulness of the cycles from beneficiaries and beneficiaries' parents' perspective	How the bicycle has improved the learning abilities, self-confidence, attendance of the students	Improved the learning ability Improved self-confidence of the girl students Decreased travel time	FGD of parents Survey questionnaire of the beneficiary students
11	Understand the access and safety issues that remain misaddressed in spite of bicycle provision	Has the provision of bicycle addressed the safety issues of the adolescent girls? What are the strategies adopted by students (girl students) to address the safety issues?	Improved self-confidence has helped girls to address the safety issues Cycling in group or in presence of an elderly persons.	Students survey FGD with parents Discussion with headmaster/headmistress

			Improved road safety in the way to school	
12	Understand if bicycles are used by children for travel other than travel to school	Are the girls using the bicycle for other purposes (other than travelling to school)?	Bicycle has not only helped in decreasing the travel time to school but also accessibility to other areas, like market, tuition classes, visit to friends/relatives house	Survey questionnaire of students, headmistress FGD with parents

3.6 Sample Selection

Multistage stratified random sampling design is adopted for the study. As the scheme is effective across the state, thus it is ensured that the sampling - coverage and number – are representative of the state. Given below is the adopted process for sampling.

Stage I: Selection of Division: The state is divided in four administrative divisions, i.e., Bangalore, Belgaum, Gulbarga and Mysore. Sample is selected from all the four divisions of the state (pre-determined by KEA).

Stage II: Selection of Districts: As per the KEA's guidelines, two districts with highest and lowest distribution of bicycles from each division are selected for the study. At 95 per cent confidence level with 4 per cent margin of error, KEA has also pre-determined the sample size from the sampled districts. Accordingly, around 4800 beneficiary students and 200 students from welfare hostels should be selected across the state for the study. However, with small variation, the number of beneficiaries selected from school is 4863 (63 more than suggested) and from hostel is 235 (35 more than suggested). The following tables provide the list of districts selected from each division along with their sample size.

Table 2.3 Sample Districts Selected under the Study

Division	Districts	Total Number of Bicycles Distributed in last 5 years	No of Sample			
			Beneficiary from Schools	Beneficiary from Welfare Hostels	Non-Beneficiary students	Headmasters /Headmistress
Kalaburgi	Yadgir**	69572	601	28	11	30
	Kalburgi*	131759	622	29	15	30
Belgaum	Uttar Kannada**	36344	628	30	11	30
	Belgaum*	174128	600	28	11	30
Mysuru	Kodagu**	23328	604	30	10	31
	Mysore*	103548	607	31	11	30
Bangalore	Bangalore**	32655	603	30	11	30
	Chitradurga*	92466	598	29	10	32
Total			4863	235	90	243

** Districts with lowest enrolment within the division*

*** Districts with highest enrolment within the division*

Stage III: Selection of Education Block for the Study

Department of Public Instruction (DPI) had shared information about number of beneficiaries under each 'education block' for each district. Based on this, two blocks from each sampled district were selected - 'block which had distributed maximum number of bicycles', and 'block which had distributed least number of bicycles' in the FY of 2018-19 under the scheme. In total, 16 'education blocks' are selected for the study. Bangalore South-3 educational block has very few rural schools (DISE data is showing 'none' under rural areas), so we selected the next in list, i.e. Bangalore South-4 for the study. In case of shortage of schools (minimum 20 in selected educational blocks) from the selected educational blocks, other schools from neighbouring educational blocks were selected for the study.

Table 2.4 Educational Blocks Selected for the Study

S.No	District	Name of the Education Block	Total Number of Bicycles Distributed (2018-19)		
			Girls	Boys	Total
1	Bangalore South	Anekal	1364	1356	2720
2	Bangalore South	South-4	287	310	597
3	Chitradurga	Chitradurga	2070	2124	4194
4	Chitradurga	Holalkere	963	1077	2040
5	Kodagu	Madikeri	600	623	1223
6	Kodagu	Somavarapet	724	688	1412
7	Mysore	K.R.Nagar	970	1018	1988
8	Mysore	Nanjanagud	1637	1754	3391
9	Belagavi	Belgaum Rural	2443	2508	4951
10	Belagavi	Kittur	799	790	1589
11	Uttar Kannada	Ankola	490	553	1043
12	Uttar Kannada	Kumta	793	799	1592
13	Kalburgi	Chhitapur	2223	2448	4671
14	Kalburgi	Kalburgi N	877	872	1749
15	Yadgir	Shahpur	2178	2499	4677
16	Yadgir	Yadgir	2312	2845	5157

Source: Department of Public Instruction, Bangalore

Stage IV: Selection of Schools and Hostels from Sampled Taluks

15 schools and two welfare hostels were selected from each sampled taluk. In total 243 schools and 16 welfare hostels were selected for the study. KEA had provided the random sample of schools and hostels from the selected taluks.

Stage V: Selection of Sample from the Selected Schools and Hostels

As per the ToR of KEA, the study should have surveyed 20 students from class 8th, 9th and 10th standards in proportion of 60:25:15 from the selected schools. However, during our pilot survey, we found that the 8th standard students had not received the bicycles in this academic year (2019-20), thus after a discussion with KEA, we dropped 8th standard and restricted our sample from 9th and 10th standard in a ratio of 60:40. The table below provides the number of students to be selected from each school, representing standard and gender.

Table 2.5 Sample Selection from Selected Schools

	9th Standard		10th Standard		Total	
Number of Sample Students	12		8		20	
Sample representing Gender	**M**	**F**	**M**	**F**	**M**	**F**
	6	6	4	4	10	10

3.7 Limitations of the Study

- The conclusions of the study regarding effect of bicycle provision on enrolment, attendance, retention, transition and learning outcomes are to a large extent based on beneficiary and principal survey data in which perceptions and experiences have been reported.
- Since the study does not adopt an experimental design, the inferred relationships between bicycle provision and various academic outcomes should be interpreted as being associations rather than causal relationships.
- Learning outcomes/exam scores analysed are based on recall-based responses reported by students in the survey.
- The study is unable to report secondary data on school enrolment and retention seen before the bicycle scheme started. This limits the before-after comparison.

3.8 Conclusion

The theory of change presented in this chapter has shown that the bicycle distribution can potentially have ultimate academic outcomes such as enhancement of enrolment, attendance, punctuality, retention and even learning outcomes. However, the achievement of such outcomes is conditional on many other assumptions which are stated in this chapter. This study investigates the relationship between bicycle provision and these outcomes; however, since an experimental design is not adopted, the inferences should only be interpreted as associations and not causation.

This study is notable for the significant geographical spread of the sample (representing all divisions of the state and more than 25% of all districts). Apart from this, the strengths of this study lie in obtaining extensive quantitative or survey-based inputs from the direct beneficiaries (students) and also from other key stakeholders such as principals.

The study has also obtained qualitative data from multiple stakeholders such as officials and parents which has enhanced the analysis of the implementation process and has also fleshed out and aided the interpretation of the quantitative findings.

Chapter 4

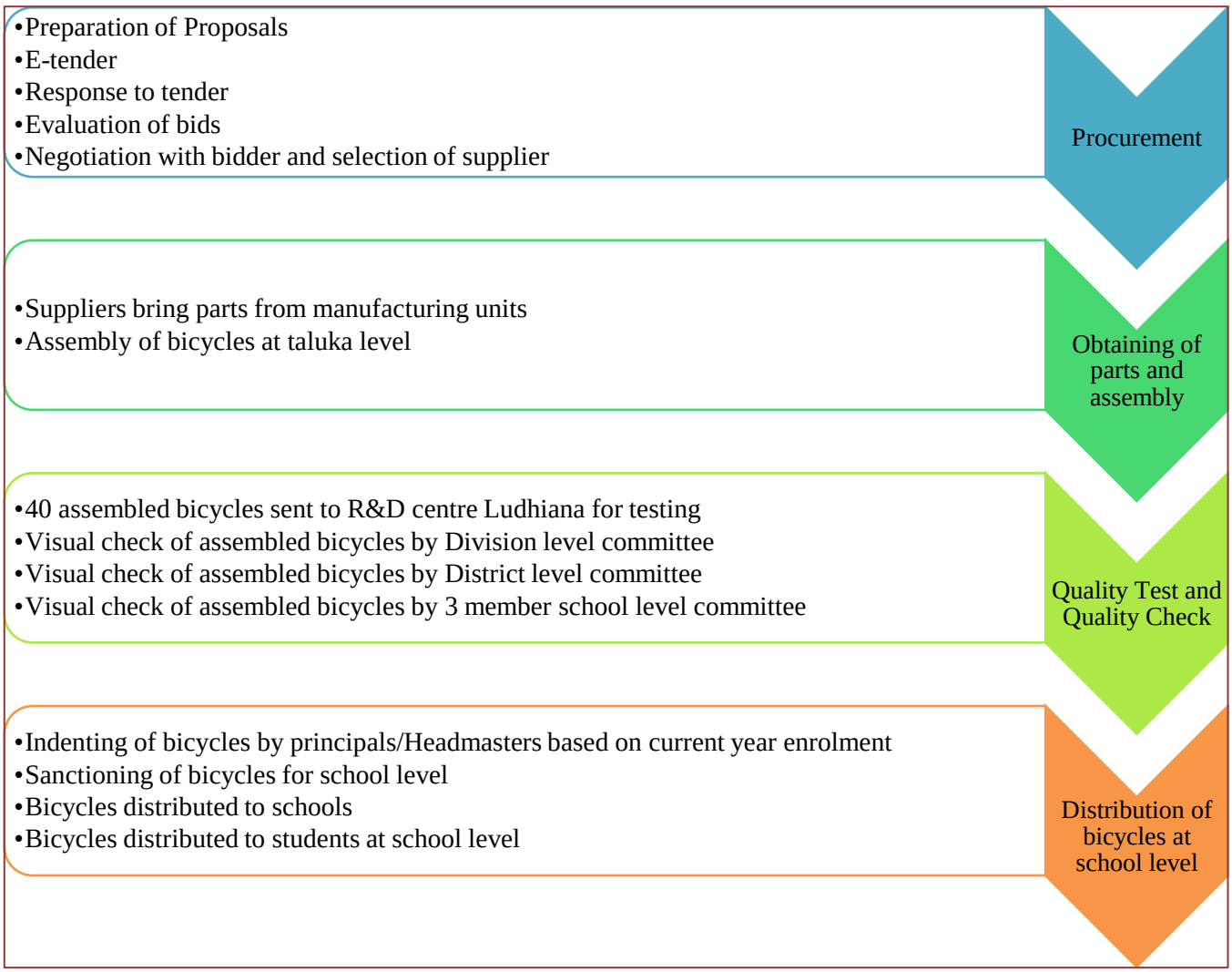
PROCESS EVALUATION

This chapter has 3 parts: the first part which examines the processes pertaining to the distribution and quality check of bicycles, the second part which pertains to the quality and the third part which looks at the maintenance of bicycles.

4.1 Process Pertaining to Quality Check and Distribution

The distribution of bicycles to secondary school students is preceded by a number of back-end processes which shape the quality of bicycles provided and the timeliness of distribution. The bicycle distribution process can be summed up in the following process diagram:

Figure 4.1 Bicycle Distribution Process



The 4 major process categories – procurement, obtaining of parts and assembly, quality test and quality check and distribution of bicycles at school level are not strictly chronological. There components may overlap or run in parallel to each other. The four major processes categories are elaborated in this chapter, with a special focus on implications for timing of bicycle distribution and quality of cycles.

4.1.1 Procurement of Bicycles

4.1.1.1 Quality and Other Specifications in Tender Document

Karnataka State has a highly detailed bicycle procurement tender document that lays down technical specifications with respect to the overall standard of cycles as well as the specific parts in accordance with the Bureau of Indian Standards specifications. Appendix 9 details the technical standards for bicycles in Karnataka. There are minimal differences between Karnataka and states such as West Bengal, Rajasthan and Chhattisgarh with respect to the technical requirements for bicycles specified in the tender documents.

States such as Karnataka and West Bengal prefer to procure from large companies that produce bicycles. In Karnataka, bidders should have average annual turnover of at least Rs 75 crores from manufacture and sale of bicycles in last 3 years. In West Bengal, the company size requirements are even more stringent- companies are required to have annual turnover of Rs 200 crores in each of the three financial years. It is noteworthy that West Bengal's bicycle tender process also requires the bidder to submit one sample boys' bicycle and one sample girls' bicycle conforming to the stipulated standards and specifications, allowing a first level examination of physical quality at tender stage itself.

4.1.1.2 Timing of Procurement

The timeliness of procurement has implications for the timeliness of the distribution of bicycles. A comparison of the date of issue of the tender for bicycles with the dates of the tenders for the issue of textbooks and school uniforms in Karnataka (for supply in the year 2017-18) reveals that the tender dates are the latest for the bicycle procurement; nevertheless, the bicycle bid is closed four months in advance of the new academic year in June.

Table 4.1 Bicycle Tender Dates for 2017-18 compared to Uniform and Textbook tender dates

Item	Date of issue of tender	Last date for submission of tender
Uniform dress material	28th December 2016	28th Jan 2017
Printing and supply of school	3rd October 2016	1st Jan 2017
Bicycles	6th Jan 2017	6th Feb 2017

Source: Tender documents for year 2017-18

The technical bid evaluation meeting (for procurement for the year 2017-18) was held on 23rd Feb 2017. In the previous year, such meeting was held as late as 21st May 2016, which has implications for the timeliness of distribution.

In the year 2014-15, there were reports of the procurement process being delayed because of a legal dispute (a rejected supplier went to court and the High Court stayed the bicycle distribution). The state government established a committee on the court's directive, which visited and studied the manufacturing companies in various states. The High Court dismissed the petition from the supplier after receiving the committee's report and the bicycle distribution process could only continue after that, which led to loss of time. The years 2013-14 and 2014-15 saw considerable delays in the distribution of bicycles; in 2014-15 the bicycles were distributed only in February (delay of 8 months) while in 2013-14 the cycles were reportedly distributed at the end of the AY (gaadi.com, 2015).

A press report has also pointed to the issue of delayed/inadequate response to tenders from bicycle suppliers because of the massive numbers of cycles required. In view of this problem, the state is also welcoming bids from other states (Scoonews, 2016).

It is also reported that bicycle companies take 90-120 days to supply the bicycles (gaadi.com, 2015); on this estimate, the parts from the suppliers would arrive no earlier than the months of June to July. *This creates the case for conducting the procurement process as early as possible, since a number of processes such as assembly and quality check need to be completed after the bicycle parts supply is received.*

The last dates for opening bids have been advanced in recent years compared to earlier years (with the exception of 2016-17). The earlier years such as 2015-16 and 2014-15 had earlier dates of tender issue but later dates of closing of bids. The reduction in time given to bidders to respond (from 2 months to one month) is a reaction to the experienced delays.

Table 4.2 Changing dates in bicycle procurement over years

	Tender Issue Date	Last date for submitting
2017-18	6th Jan 2017	6th Feb 2017
2016-17	8th Jan 2016	10th March 2016, extended to 24th March 2016
2015-16	16th December 2014	16th February 2015
2014-15	23rd December 2013	20th February 2014

Source: Tender documents for 2017-18, 2016-17, 2015-16 and 2014-15

In the academic year 2018-19, bicycle distribution was said to have been delayed because of the assembly election model code of conduct in place. As of July 2018, bicycles were yet to be distributed, and the tender allocation was awaiting the approval of government at the highest level (New Indian Express, 2018). As per a news report of September 2018, bicycle distribution had still not happened (Kulkarni, 2018).

4.1.2 Obtaining of Parts and Assembly

Bicycle companies take 90-120 days to supply the bicycles (gaadi.com, 2015); considering the bidding and tender evaluation dates, the parts from the suppliers would arrive no earlier than the months of June to July. Assembly of bicycles and quality check need to be completed after the bicycle parts supply is received. *The significant time taken for arrival of parts thus has implications for the timeliness of bicycle distribution in schools.*

The assembly of bicycles is required to be done at the taluka level, as per the circular of education department. The respective BEO is responsible for choosing any such school within the education block which has sufficient space, and extra care is required to be taken so that the assembling activities don’t affect the children's regular classes.

4.1.3 Quality Test and Quality Check

An important characteristic of the bicycle supply scheme in Karnataka is that quality check mechanisms for quality assurance have been laid down right from the State level to school level, and from production level to post assembly distribution level. However, the mere

presence of such mechanisms does not mean that these are implemented to their full extent in actual practice.

4.1.3.1 State Level Quality Check and Quality Assurance

The very detailed tender document for procurement of bicycles for Karnataka state mentions a number of special quality check mechanisms that hold the supplier accountable for ensuring good quality of bicycles and also provision of maintenance services:

- Technical and Purchase Committee may levy penalty up to 10% of cost of bicycle supplied. Penalty will be levied at 1% for each failure of crash test of selected bicycle
- The supplier should organize a free servicing camp for refitting / overhaul the bicycles supplied at cluster level in the first 6th month of the warranty period. Supplier can organize the further servicing camp every year for which he may charge minimum nominal charges for the service conducted. The supplier shall provide list of service centres of his company at district/taluk level in Karnataka State. [In West Bengal, the Supplier will have to ensure that free of cost after sales service is provided for the bicycles supplied for a period of one year from the date of supply, but servicing camps are not mentioned].
- Supplier is responsible for all unpacking, assembly, and fixing hardware at user sites (school).
- Supplier is required to test all bicycles and carry out all adjustments necessary for the smooth functioning of bicycles at all delivery sites.

Two levels of quality check are proposed: production level and post assembly or pre-distribution stage. The guidelines (contained in the circular issued by the education department) state that bicycles should be checked at the production level; 1% bicycles are sent for visual inspection and one out of 2500 bicycles (0.04% or 202 bicycles) are sent for testing and certification of quality. The very small share of bicycles to be sent for testing is noteworthy, and nor is randomness mandated in the selection of such small samples for testing.

4.1.3.2 Division Level District Level Quality Check Mechanism

After assembly and prior to distribution, one bicycle out of 12500 (i.e. 40 bicycles or 5 girls bicycles + 5 boys bicycles for each division) are required to be sent to the Research and Development Centre for Bicycles and Sewing Machines, Ludhiana, Punjab for testing to confirm that the bicycles are in good condition and fit for distribution.

As per the circular issued by the Education department, one division level committee and one district level committee, comprising of Government and other officials, are constituted for carrying out quality inspection and to confirm the quality of the parts and also whether bicycles have been assembled correctly. The members of these committees are required to be trained by the Research and Development Centre for Bicycles and Sewing Machines, Ludhiana. The members of these committees are supposed to be as follows:

- Division Level Committee: Divisional Assistant Director, Respective DDPIs, Principal of DIETs
- District Level Committee: DDPI, Block Education Officer (BEO), DyPC (Deputy Planning Coordinator), Representative of District or Taluka level Government Engineering College/Government Polytechnic/Government ITI/Senior Faculty of Mechanical Engineering Department.

After assembly of bicycles but before distribution at taluka level, the District Committee members are required to visually inspect the cycles and conduct a meeting to discuss the findings of the quality inspection, the minutes of which are required to be sent to the DDPI. The discovered damages are required to be intimated to the suppliers.

The five DDPIs interviewed for this study (covering Chitradurga, Kodagu, Uttara Kannada, Mysore and Belagavi districts) mentioned that they were part of district level committees for quality check. All of them stated that they had not been trained at the Research and Development Centre for Bicycles and Sewing Machines, Ludhiana (though such training is required as per the guidelines). All of them mentioned having been involved in quality checks, but one of them mentioned having been involved only in visual check and thus dissatisfied with the quality check process. They all mentioned having submitted reports to either the DPI or Commissionerate at Bangalore. The interviewed DDPIs mentioned the following suggestions for improving the quality check process: providing demonstrative training to committee members and having access to facility doing detailed inspection on tube quality, frame material etc. One of the DDPIs mentioned a suggestion for transferring the bicycle cost to students for them to procure their own cycles.

The BEOs, who are members of the district level committee were interviewed for this study (covering blocks in Chitradurga, Kodagu, Uttarakannada, Mysore and Belagavi districts). *All the 10 BEOs interviewed stated that they had not attended any training at the Research and*

Development Centre for Bicycles and Sewing Machines, Ludhiana *(though the guidelines require such training to be conducted).* Nine out of these ten stated that they had been involved in quality checking of bicycles, and eight of them stated that all the district level committee members were present on the day of the inspection. Eight of them also stated that inspection reports were submitted by the committee, out of which five mentioned that the reports were submitted to the DDPI. Seven of the ten interviewed BEOs mentioned that they were satisfied with the quality check process, one expressed average/partial satisfaction and one expressed dissatisfaction since only visual check was done.

Recent news reports have revealed that in view of the numerous complaints regarding the quality of bicycles in November 2018, the CM of Karnataka had directed the supply to be halted, payments to be stopped to the suppliers and a departmental inquiry to be held. According to a news report from November 2018, the inadequacy of quality checks by the district level functionaries such as DDPIs was brought up as a reason for poor quality bicycles being eventually distributed to the children at a meeting of deputy commissioners, CEOs of Zilla Panchayats and the secretaries of all departments with the CM (Moudgal, 2018). *This strengthens the case for sound training on quality check to be given to district level quality check functionaries.*

4.1.3.3 School Level Quality Check

The guidelines mandate the setting up of a three-member committee at the school level for conducting visual inspection of bicycles and confirming their quality before the assembled bicycles are given to the school and distributed among students. School principal, SDMC president and local government official are supposed to be the 3 members of the school level committee. This inspection committee is required to submit a report.

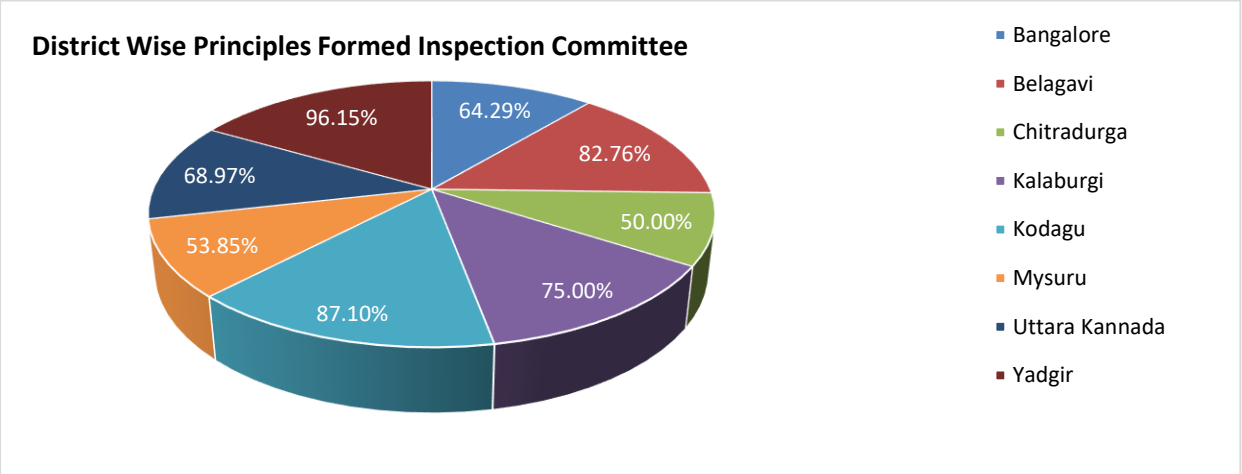
Approximately 72 percent of the surveyed Principals said that they have formed a school level inspection/quality check committee. Members of both school and district level inspection/quality check committees were quoted as saying that they have not undergone mandated technical training for doing quality checks.

4.1.3.3.1 Formation of three-member Committee

However, as per the survey data, 72 per cent of the principals showed a positive response in forming committee, whereas the remaining 28 per cent principals showed negligence in forming inspection committee. Further, at the district level the figure comes down to as low as only 50 per cent (Chitradurga) in forming inspection committees.

IDIs of SDMC presidents reveal more details on the formation of the 3-member committees for quality check and the involvement of SDMC presidents in the same. SDMC Presidents in Belagavi, Uttara Kannada and Kodagu districts revealed that they were involved in quality checks at the school level. In Belagavi district, however, the SDMC President interviewed mentioned the absence of the three-member committee at the school level, but he was involved in taking the bicycles to the shop to check intactness of bicycles and presence of parts, and parents were also spending money from own pocket to correct defects prior to distribution. In Gulbarga and Yadgir districts, the SDMC Presidents stated that they were not involved in such quality checks and were not aware of the school level three-member committee.

Figure 4.2 District Wise Portion of Principles Forming Inspection Committee



4.1.3.3.2 Selection of 3rd Member of Three-member Committee

The members of the 3-member committee are either selected by the SDMC president himself/herself or in certain places they are selected based on lottery method, however, in all the cases a criterion is specified that the members should be well-educated and should have a child studying in the school. As per guidelines, the local government official is required to be the 3rd member in the committee.

Principal survey responses indicate that majority of the respondent principals were not clear about the specific criterion they follow in selecting government officials. Few principals mentioned that they include GP members as well in forming the committee. Few of the principals mentioned that they either select the PDO or officials of the co-operative society whereas majority of the respondents said that the government officials are usually selected by BEO or BRC and CRC. SDMC president IDI responses however reveal that the actual third member is senior teacher rather than local government official. *This indicates that the provision of having local government official as 3rd member is not uniformly implemented.*

4.1.3.3.3 Role of the three-member school level committee

When it comes to the role of inspection committee, majority of the respondent principals (86%) said it is only inspecting the quality of the cycle. Whereas, about 66.2 per cent of them said in addition to quality check the committee is also responsible for verifying the exact numbers and around 54 per cent of them said the committee should also monitor the assembling quality.

Table 4.3 District Wise Role of the 3-member committee

Districts	Inspect Quality	Verify Numbers	Assembling Quality	Other
Bangalore	25(89.29)	16(57.14)	9(32.14)	0(0.00)
Belagavi	25(86.21)	21(72.41)	20(68.97)	3(10.34)
Chitradurga	21(70.00)	17(56.67)	10(33.33)	7(23.33)
Kalaburgi	13(65.00)	14(70.00)	11(55.00)	4(20.00)
Kodagu	25(80.65)	17(54.84)	17(54.84)	4(12.90)
Mysuru	26(100.00)	24(92.31)	17(65.38)	0(0.00)
Uttara Kannada	29(100.00)	20(68.97)	18(62.07)	0(0.00)
Yadgir	25(96.15)	16(61.54)	17(65.38)	1(3.85)
Grand Total	**189(86.30)**	**145(66.21)**	**119(54.34)**	**19(8.68)**

*Values in the parenthesis are percentages Source: Field Survey

The IDI responses of SDMC president provide more details on the role of these committees. The interviewed SDMC Presidents part of the three-member committee said that they were involved in carrying out the quality check as per the checklist. Half of them mentioned selection of random/sample bicycles for quality check. They stated that they visually check parts like

fork, handle, reflector, brake, colour and quality of frame and also whether the cycle is safe to use.

4.1.3.3.4 Challenges faced by the three-member committee

Lack of capacity and guidance: The SDMC President interviewed in Belagavi district mentioned that he was involved in the visual check of chassis, handle and brakes, pedal and seat etc., though no checklist was made available to him for the same nor was any training on conducting visual checks provided. SDMC Presidents interviewed in Uttara Kannada and Kodagu districts stated that they had received the checklist from their respective BEO offices but they had not received any training for applying the checklist in the visual check of bicycles; an SDMC President interviewed in Uttara Kannada district stated that the checklist was not detailed enough. An SDMC President from Kodagu stated that he also feels constrained by the lack of training for doing the visual checks and the lack of knowledge of the complaint procedure. Schools are required to intimate block level officials if manufacturing faults are seen. This creates a case for the capacity building of the members of the school level committee.

Issue of bearing travel expenses: Since the committee is at the school level which is directly monitored and formed by the Principal himself/herself, the travel expenses should also be borne by the school itself. According to the data, around 32 per cent of the principal said the members themselves bear the travel cost whereas about 40 per cent principals said the travel cost is borne by the school itself. On the other hand, around 9 per cent of the respondent principal said since there is no provision of reimbursing the travel cost of the inspection committee the principals themselves bear the travel cost.

Lack of powers in addressing quality issues: Further, even if the inspection committee submits any report according to the principals, not all the issues are addressed, as per the principal survey responses only 65 per cent of total reported issues have been addressed. However, these issues are addressed at the cost of delayed delivery of the bicycle. In the IDIs also, the SDMC Presidents expressed concern about the lack of effectiveness of the committee in addressing quality issues. While committee members do send quality reports to the BEO, they feel constrained by the lack of power to take any action in this matter. An SDMC President from Uttara Kannada stated that the higher-ups also do not take any action on the basis of the issues raised by the committee. Another problem expressed by one of the SDMC Presidents is that the Headmaster or Senior Teacher in the committee are reluctant to raise complaints for fear of offending the higher authorities and jeopardizing future promotion prospects. One viewpoint

expressed in the SDMC president IDIs was that either the committees should have rights and responsibility to send the cycle back if not received in perfect quality or after the complaints are registered by the Committee, the cycles should be replaced.

4.1.3.4 Overall Observations on Quality Check and Quality Assurance Processes

The BIS standards/tender specification set by the Karnataka state are competitive enough compared to other states. A number of detailed quality check mechanisms have been laid down in the State, though there is scope to strengthen the quality check mechanisms and also the implementation of the quality check mechanisms. Except for the quality check made by the Research and Development Centre for Bicycles and Sewing Machines, Ludhiana, nowhere else is a technical quality assessment is being done. There is a lot of reliance on mere visual check. There is also a need to build the capacity of the quality check officials at the division, district and school districts to equip them to conduct the quality check more effectively.

4.1.3.5 Recent Quality Improvement Measures taken by the Government

In light of the quality complaints received, the state government has envisaged certain recent measures to address the issues (Kulkarni, 2019):

- Suppliers have been instructed to conduct service camps in the first 3 months after supply to students (earlier they were required to conduct the camp 6 months after supply to students). The supply camp is required to be conducted at the hobli level.
- Students must be given a warranty card with basic instructions for proper usage and maintenance printed on the card.

The distribution of cycles would be monitored online through the Student Achievement Tracking system.

4.1.4 Distribution of Bicycles to Students

4.1.4.1 Indenting of Bicycles by Principals

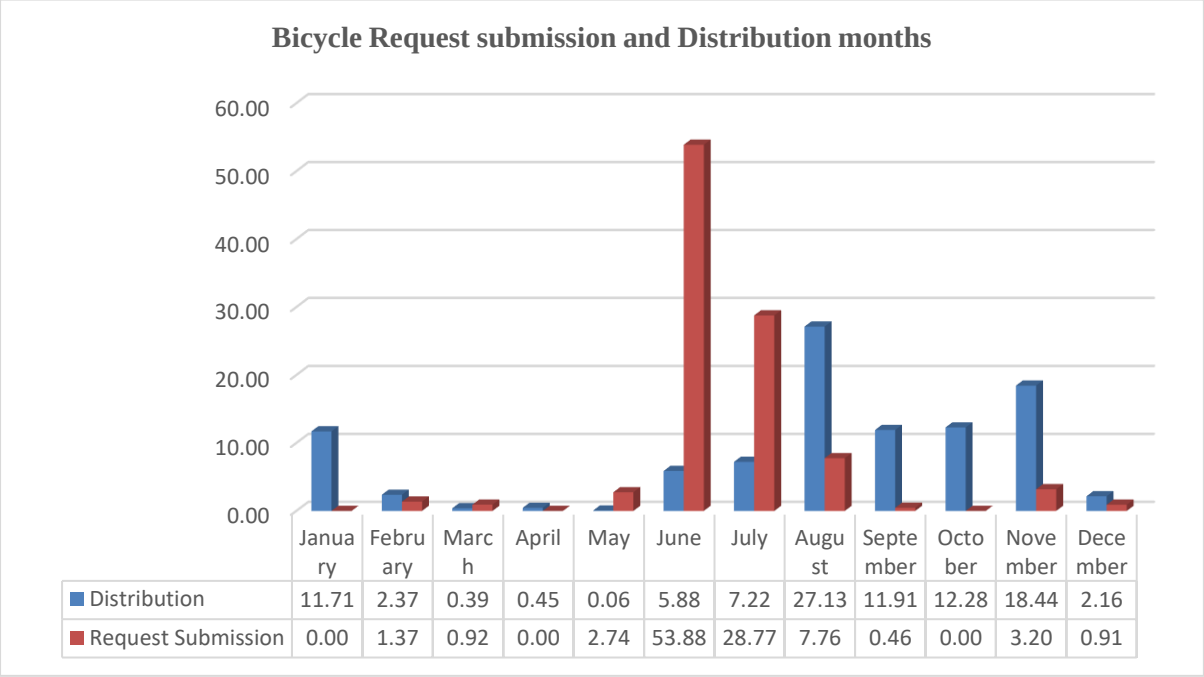
The headmaster/principal of each upper primary/secondary school should submit a proposal mentioning the required number of cycles along with required documents at the beginning of each academic year either to the BEO office or to the respective CRC or BRC. The documents include but not limited to;

1) Gender wise student list based on last academic year.
2) List of students staying in the hostel.

3) Letter from the SDMC.
4) Some other documents such as students' attendance details, list of students having bus pass etc.

The school principals are expected to submit the requirements along with the pre-requisite documents at the beginning of each academic year i.e., in the month of June.

Figure 4.3 Month in which HM Submitted Requests for Bicycle and Months In which it Get Distributed



	January	February	March	April	May	June	July	August	September	October	November	December
Distribution	11.71	2.37	0.39	0.45	0.06	5.88	7.22	27.13	11.91	12.28	18.44	2.16
Request Submission	0.00	1.37	0.92	0.00	2.74	53.88	28.77	7.76	0.46	0.00	3.20	0.91

However, amongst the surveyed schools, only 53.8 per cent principals said they submit the requirements in the month of June itself whereas, around 5 per cent of the total surveyed principals said they submit the proposal before starting of the academic year (1.3%, 0.9% and 2.7% in the month of February, March and May respectively). On the other hand, around 28.7 per cent school submit their requirements by the end of July. In the similar fashion, the proposal submission activities continue till December as the principals of each of these schools must wait to finish new admission activities in-order to get the exact number of students admitted in the school (to class 8 for that academic year).

On an average, students from 4 to 5 surrounding villages come to an individual school, as the higher primary/secondary schools are not available in every village. It is difficult to estimate number of bicycles required based on the previous years' numbers, since many new students from surrounding villages may join in class VIII. Principals therefore usually wait for

enrolment numbers to be frozen (or make an estimate based on attendance) in the new AY instead of asking for cycles based on the previous year enrolment. On the other hand, majority of the students receive bicycle only in the month of August (27.13%) followed by November, October and September.

Table 4.4 District wise Method of Calculating Required Cycle Number

Districts	Attendance	Registration	Total
Bangalore	6(21.43)	22(78.57)	28
Belagavi	2(6.90)	27(93.10)	29
Chitradurga	9(30.00)	21(70.00)	30
Kalaburgi	8(40.00)	12(60.00)	20
Kodagu	11(35.48)	20(64.52)	31
Mysuru	9(34.62)	17(65.38)	26
Uttara Kannada	13(44.83)	16(55.17)	29
Yadgir	2(7.69)	24(92.31)	26
Grand Total	**60(27.40)**	**159(72.60)**	**219**

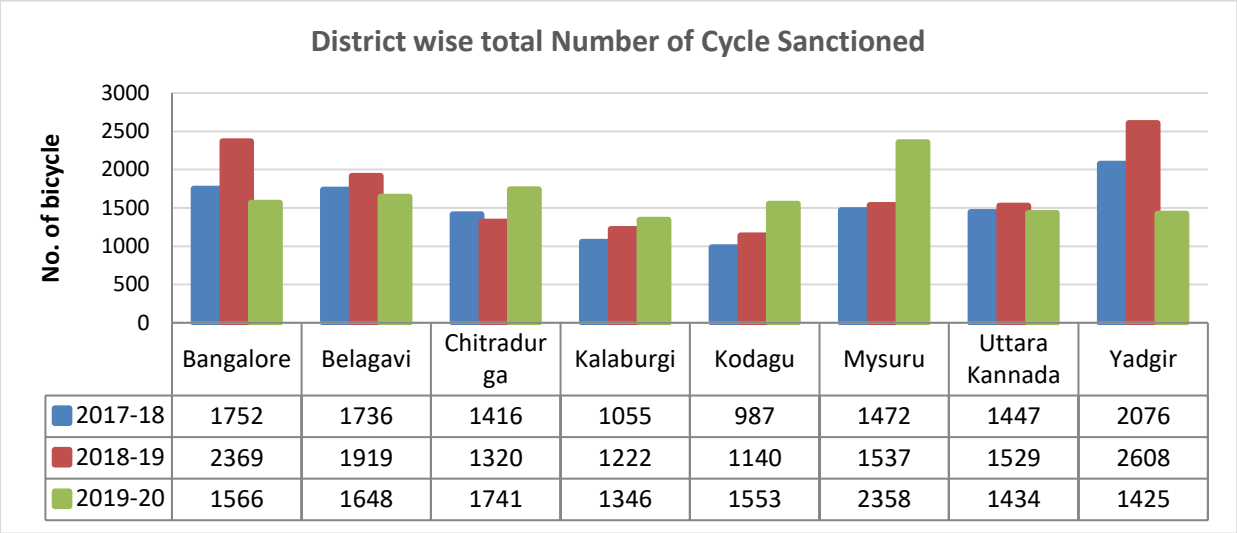
*Values in the parenthesis are percentages Source: Field Survey

The school principal should decide and submit the requirements either based on the registration details or based on the regularity (attendance of the students). Amongst the surveyed schools around 72.6 per cent principals calculate the required number based on registration whereas around 27.4 per cent principals decide the required number depending upon the attendance of the beneficiary. Looking at the district-wise figures, around 93 per cent respondent principals of Belagavi and 92 per cent of Yadgir decide the required number based on registration. Whereas the highest number of principals who decide the cycle requirement depending upon the attendance is seen in Uttara Kannada (44.8%) followed by principals from Kalaburgi (40% of total surveyed principals in that districts).

4.1.4.2 Sanctioning of Bicycles

The indents from the principals would need to be followed by sanctioning of bicycles for schools. The total number of student enrolees has increased over the year and as a result number of cycles sanctioned had also increased over the year irrespective of districts, as seen in the figure below:

Figure 4.4 District wise No. of Cycle Sanctioned in Surveyed Districts



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir
2017-18	1752	1736	1416	1055	987	1472	1447	2076
2018-19	2369	1919	1320	1222	1140	1537	1529	2608
2019-20	1566	1648	1741	1346	1553	2358	1434	1425

Source: TOR

4.1.4.3 Distribution of Bicycles to Schools

The sanctioning of bicycles is followed by the supply processes such as obtaining of parts and assembly of bicycles at taluka level. The BEO oversees the supply of assembled bicycles to the schools. Assembled bicycles have to be transported to schools, which creates the possibility of damage. In fact, an SDMC president in Belgaum had pointed to such damage in transportation, "While transporting the bicycle they put one cycle over another and transport it in heap. This leads to more damage; handles of the 2 cycles were broken when they arrived."

4.1.4.4 School-level distribution of Bicycles

In general, the required number of cycles are distributed in a single day in all the surveyed schools across the districts. However, one school each at Bangalore, Belagavi, Kodagu and Uttara Kannada had reported that the cycles had not been distributed in a single day. However, at Kodagu and Uttara Kannada the cycles were distributed in the very next day, whereas, for the school at Bangalore it took nearly 30 days and in Kodagu, it took around 21 days for the next distribution.

4.1.4.5 Dates of School-level distribution to Schools

Beneficiary survey responses indicate that there is considerable delay in bicycles being given to the students. The table below shows that students largely receive the bicycle two months after the start of the AY or even later.

Table 4.5 District wise month in which Beneficiary received Cycle

Districts	January	February	March	April	May	June	July	August	September	October	November	December	Total
Bangalore	95 (15.01)	10 (1.58)	0 (0.00)	0 (0.00)	0 (0.00)	4 (0.63)	27 (4.27)	261 (41.23)	47 (7.42)	68 (10.74)	70 (11.06)	51 (8.06)	633
Belagavi	16 (2.55)	0 (0.00)	0 (0.00)	2 (0.32)	0 (0.00)	105 (16.72)	102 (16.24)	113 (17.99)	20 (3.18)	205 (32.64)	65 (10.35)	0 (0.00)	628
Chitradurga	8 (1.28)	2 (0.32)	2 (0.32)	1 (0.16)	0 (0.00)	0 (0.00)	6 (0.96)	281 (44.82)	14 9 (23.76)	92 (14.67)	76 (12.12)	10 (1.59)	627
Kalaburgi	3 (0.46)	0 (0.00)	1 (0.15)	1 (0.15)	0 (0.00)	93 (14.29)	129 (19.82)	196 (30.11)	74 (11.37)	70 (10.75)	82 (12.60)	2 (0.31)	651
Kodagu	127 (20.03)	105 (16.56)	17 (2.68)	1 (0.16)	0 (0.00)	75 (11.83)	66 (10.41)	64 (10.09)	19 (3.00)	33 (5.21)	101 (15.93)	26 (4.10)	634
Mysuru	206 (32.29)	2 (0.31)	0(0.00)	0 (0.00)	0 (0.00)	6 (0.94)	3 (0.47)	105 (16.46)	69 (10.82)	75 (11.76)	163 (25.55)	9 (1.41)	638
Uttara Kannada	141 (21.43)	1(0.15)	0(0.00)	18 (2.74)	1 (0.15)	16 (2.43)	17 (2.58)	169 (25.68)	70 (10.64)	36 (5.47)	188 (28.57)	1 (0.15)	658
Yadgir	1 (0.16)	1(0.16)	0(0.00)	0 (0.00)	2 (0.32)	1 (0.16)	18 (2.86)	194 (30.84)	159 (25.28)	47 (7.47)	195 (31.00)	11 (1.75)	629
Grand Total	**597 (11.71)**	**121 (2.37)**	**20 (0.39)**	**23 (0.45)**	**3 (0.06)**	**300 (5.88)**	**368 (7.22)**	**1383 (27.13)**	**607 (11.91)**	**626 (12.28)**	**940 (18.44)**	**110 (2.16)**	**5098**

*Values in the parenthesis are Percentages

Source: Field Survey

According to the survey data ***only about 5.8 per cent beneficiaries received bicycle in the month of June and around 7.2 per cent beneficiaries received in the month of July. Further, around 27.1 percent of total surveyed beneficiaries said they received bicycle in the month of August.*** Which is followed by 18.4 per cent beneficiaries saying they received bicycle in the month of November. Similarly, around 11.7 per cent students responded saying they received bicycle only in the month of January, which indicates around 7 moths delay after school re-opening. Since the bicycles are usually distributed during the rainy season, sometimes it becomes very difficult to assemble and to distribute the cycle, which further causes the delay.

Inputs were also taken from the parents' FGDs regarding the month in which bicycles were received. In Ankola taluk of Uttar Kannada, parents said that the bicycle was given to students in the first two months of the academic year (i.e. June and July). In Belgaum taluka of Belgaum district and Madikeri taluka of Kodagu district, parents mentioned distribution in August. In Kumta taluka of Uttar Kannada, parents said that distribution was in September, while in Shahapur taluka of Yadgir and Yadgir taluka of the eponymous district, distribution was said to happen in September or October (i.e. 3-4 months after the opening of school). In two taluka of Gulbarga district (Chittapur and Gulbarga) distribution was said to happen at least four months after the reopening of school (i.e. in October or even in November).

Two important observations should be noted from the timing of bicycle distribution:

- *The desirable scenario would be for bicycles to be distributed to students in the first month of the academic year (June), or at least the second month (July). However, only a small share of bicycles (total of 13%) are distributed by July, as per the beneficiary survey findings.*
- *A number of factors lead to a accumulation of delay in bicycle distributions including delay in closure of bids and finalization of supplier, time taken to deliver bicycles, quality defects and consequent complaints, and the delay in indenting by the school principals. Waiting for the freezing of enrolment numbers or numbers based on attendance for the current year is one of the factors which leads to the delay in indenting by Principals*

4.1.4.6 Supervision of Distribution of Bicycles at School-level

On the day of distribution, SDMC president, SDMC members, BEO, and other government officials of the education department and other departments are required to oversee the bicycle

distribution. The table below shows the understanding of principals regarding which officials are required to be present.

Table 4.6 District wise Persons Need to be Present While Distributing Cycle

Divisions	SDMC President	SDMC Member	BEO	Official from DPI	Officials other than DPI	Other
Bangalore	21(75.00)	19(67.86)	10(35.71)	6(21.43)	8(28.57)	5(17.86)
Belagavi	17(58.62)	15(51.72)	10(34.48)	10(34.48)	13(44.83)	17(58.62)
Chitradurga	16(53.33)	16(53.33)	20(66.67)	16(53.33)	3(10.00)	15(50.00)
Kalaburgi	14(70.00)	11(55.00)	10(50.00)	4(20.00)	8(40.00)	3(15.00)
Kodagu	29(93.55)	27(87.10)	3(9.68)	4(12.90)	4(12.90)	3(9.68)
Mysuru	21(80.77)	19(73.08)	5(19.23)	2(7.69)	3(11.54)	10(38.46)
Uttara	28(96.55)	22(75.86)	18(62.07)	9(31.03)	14(48.28)	8(27.59)
Yadgir	24(92.31)	11(42.31)	2(7.69)	0(0.00)	1(3.85)	2(7.69)
Grand Total	**170(77.63)**	**140(63.93)**	**78(35.62)**	**51(23.29)**	**54(24.66)**	**63(28.77)**

*Values in the parenthesis are percentage Source: Field Survey

As per data from the principal survey, the highest share (around 77.6 per cent) respondents said presence of SDMC president is must on the day of cycle distribution whereas, 63.9 per cent said along with SDMC president SDMC members are also needed. Similarly, around 35.6 per cent of the respondent principals said BEO presence is required on the day of delivery. 23.3 per cent of the surveyed principals said that officials from DPI need to be present, whereas 24.6 per cent of the surveyed principals said that govt. officials from departments other than education department should also be present on the distribution day. 28.7 per cent principals said that in addition to the Govt officials, people representatives such as MLAs, GP/TP and ZP members, GP Presidents and village leaders' presence is expected on the day of cycle distribution.

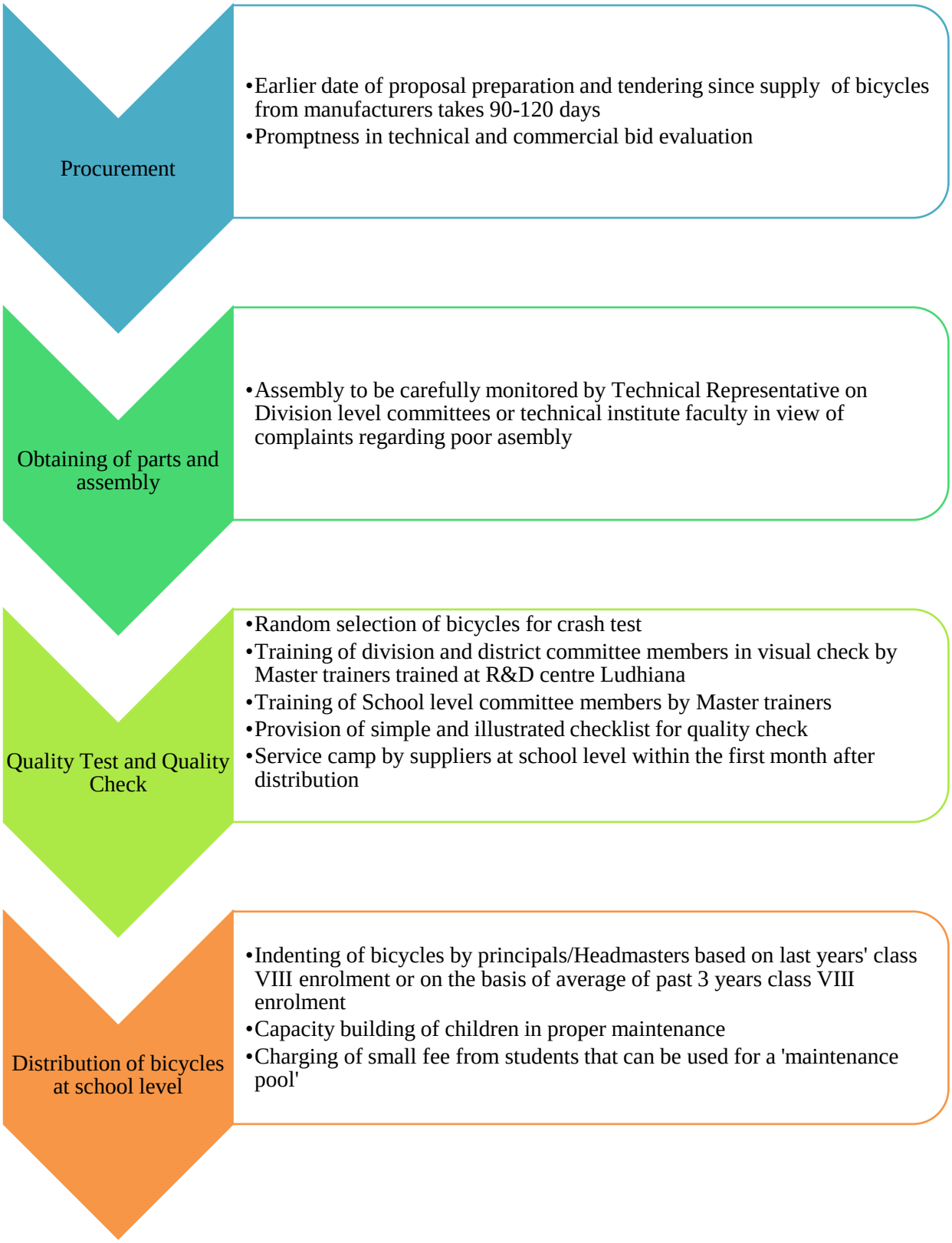
As a process of verification, the school should maintain a separate register mentioning the number of cycles requested, number of cycles sanctioned and distributed. The school also follow procedures like taking parents and students' signature and writing down the chassis number of individual cycles against the respective students to whom the cycle has been given as a measure of verification.

The Government Guidelines state that in every school, remaining bicycles (that were not distributed in previous years) should be distributed before bringing in new bicycles. If older bicycles from previous years supplies' are distributed, then servicing of these bicycles should be done before distribution. Each bicycle carries two types of warranty: a five years warranty for manufacturing faults on major parts such as handle, frame and fork and a two years warranty on manufacturing faults on other parts.

4.1.5 Process Improvements in Bicycle Distributions

Based on the analysis in this chapter, certain improvements are needed at various states to address delays and quality issues. These are summarized in the figure below, and elaborated in the recommendations section:

Figure 4.5 Suggested Process Improvements in Bicycle Distribution Process



4.2 Quality of Bicycles Distributed

4.2.1 Independent Analysis of Quality of Samples of Bicycles as per stable parameters and less stable parameters

A team of data collectors was trained to carry out quality test of 507 bicycles under the direction of the mechanical engineering expert in the study team. The analysis has been done with respect to stable parameters that are less likely to change in status with age of bicycles, and also with respect to less stable parameters that are more likely to change with increasing age of bicycles.

The direct observation-based quality test of the bicycles shows that overall, more than 40% of the bicycles had the following quality defects: rusted frame, rusted fork, worn gear teeth and worn tyre. More than one-fourth (but less than 40%) of the bicycles that had been quality-checked had the following quality defects: bent frame, cut frame, bended rim, bended fork, rusted gear teeth and tyre new but weak. Overall, the highest extent of defect is seen with respect to tyres (67.94% bicycles had worn tyres) followed by gear teeth (53.36% bicycles had worn gear teeth). Results can be seen in detail Appendix 10 and are summarized below:

The following quality defects show the largest percentage point difference between two-year old and one-year old bicycles on the parameters listed in the above table: rusted frame, rusted rim, broken spokes, rusted fork, worn gear teeth and worn tyre.

Overall, for all the less stable parameters, more than 25% of the bicycles checked possess quality defects. More than 40% of the bicycles possess the following quality defects: tight brake, loose brake, rusted brake and rusted lock. Notably, a majority of bicycles have rusted brakes (58.53%) and rusted locks (53.26%).

The following quality defects show the largest percentage point difference between two-year old and one-year old bicycles on the parameters listed in the above table: rusted lock, followed by faded paint, broken brakes, broken locks and rusted mudguard respectively. These are the parameters that are most susceptible to increasing age.

4.2.2 Experienced Quality Issues related to Bicycles

Parents (including SDMC member) covered in the FGDs described the quality challenges faced with respect to the bicycles. It can be seen that parents FGD participants across the board have drawn attention to quality problems in the bicycles. However, the findings from the parents

FGD also need to be looked at in perspective, considering that parents may be comparing their wards' cycles to the quality of the more expensive bicycles that can be procured in the market.

1. *Poor assembly and missing parts at the outset:* Parents participating in the FGD in Chittapur Taluka, Gulbarga district said that the when the bicycles were received, each and every part was loose and also few parts were missing and damaged; as a result, parents had to pay around 700 rupees at the outset to refit the cycles to make them ride able. Parents in Belagavi Taluka of Belagavi district, Madikeri Taluka of Kodagu and Shahapur and Yadgir Talukas of Yadgir revealed that they spend Rs 300-400 and in Ankola and Kumta Talukas of Uttara Kannada stated that they spend Rs 500-600 for refitting the cycle at the outset. SDMC Presidents interviewed in Uttara Kannada and Kodagu districts also pointed to the highly unsatisfactory quality of the assembly of bicycles. An SDMC President interviewed in Belagavi district revealed that the "The assembling of bicycle parts is not proper when it is given to the children. They have to spend on reassembling the parts of cycle to use it conveniently. If they do not re assemble it, the bicycle will not be fit for use after a week." He also revealed that in transporting, bicycles are heaped one over the other which results in their damage.
2. *Size of the bicycle*: In most of the FGDs, parents did not perceive problems with the size and design of the cycles. In Ankola Taluka of Uttara Kannada, however, parents felt that cycles should be provided according to height, weight and age of students.
3. *Particular parts that are of especially poor condition*: SDMC Presidents, who are involved in quality check at the school level, highlighted more specific technical faults in the bicycles. An SDMC president in Belagavi Taluka stated, "In all cycles, there is a lack of any bearings and wheel balls even if present are less in number. The wheel rim is not intact and there is a bend in it. The seat is intact in the beginning but does not last long. Chassis gauge should be 22 mm but we get 18 mm. The rim if subjected to rough use does not sustain and becomes bent." An SDMC President in Ankola Taluka of Uttara Kannada district revealed that the mudguard, handle, chain, tyre and other parts are of very poor quality.
4. *Preference to receive money in their accounts to buy cycles vs. receiving bicycles*: In some of the FGDs done, parents felt that they should continue to receive bicycles instead of money transfer to buy bicycles of their choice. In Shahapur Taluka of Yadgir, parents stated that transferring money may lead to misuse for other purposes. However, without exception, all the parents expressed a strong need for improvement of quality

of bicycles. In Belagavi Taluka, however one section of parents mentioned, "If money is given we can invest some more to supplement the given money and buy a better cycle." Another section of parents (SDMC members) mentioned, "The amount should be transferred to school account… 10 years back schools would get shoes and uniforms, and now we (SDMC) get money and purchase the shoes and uniforms for the school." In Yadgir Taluka, parents stated that the money should be transferred to the school account, and the school teachers should purchase the cycles in coordination with SDMC members. In the FGD at Ankola Taluka of Uttara Kannada, the suggestion was that the Government should transfer the maintenance costs to the SDMC account, so that the maintenance of the cycles can be regularized and the lifecycle of the bicycles can be increased.

5. *Unawareness or ineffectiveness of complaint mechanisms*: Parents covered in FGDs in Chittapur (Gulbarga) expressed unawareness about whom they could complain to, and also lack of time to complain because of their work in the field. In Belagavi Taluka, parents shared that they complain to the headmaster. In one taluka, parents revealed that when they complained to the headmaster of the school about the quality of the bicycle, the headmaster refused to take direct action stating that the department buys the cycle and hence the complaints should be escalated to that level.

4.3 Maintenance of the Bicycle

4.3.1 Condition of Bicycle and status of parts at the time of receipt of Bicycles as per student and principal perception

The condition of bicycles at the time of receipt is examined on the basis of opinions of two relevant stakeholders i.e. principals and students (beneficiaries).

Table 4.7 District Wise Cycle Condition on Receiving (according to Principals)

Districts	Few broken	All new	Few were Used	Other	Total
Bangalore	3(10.71)	22(78.57)	3(10.71)	0 (0.00)	**28**
Belagavi	1(3.45)	28(96.55)	0 (0.00)	0 (0.00)	**29**
Uttara Kannada	4(13.79)	23(79.31)	1(3.45)	1(3.45)	**29**
Chitradurga	2(6.67)	28(93.33)	0 (0.00)	0 (0.00)	**30**
Kalaburgi	0 (0.00)	20(100.00)	0 (0.00)	0 (0.00)	**20**
Kodagu	11(35.48)	20(64.52)	0 (0.00)	0 (0.00)	**31**
Mysuru	0 (0.00)	24(92.31)	2(7.69)	0 (0.00)	**26**
Yadgir	1(3.85)	25(96.15)	0 (0.00)	0 (0.00)	**26**
Grand Total	**22(10.05)**	**190(86.76)**	**6(2.74)**	**1(0.46)**	**219**

*Values in the Parenthesis are Percentages Source: Field Survey

A dominant share (overall 86.76%) of the principals interviewed stated that they had received all new bicycles. The highest percentage of principals stating that they had received all new bicycles were in Gulbarga district followed by Belagavi district. The lowest share of principals (64.52%) stating the same were in Kodagu district. Overall, only about 10% principals mentioned receiving broken bicycles. The highest share of principals who said that they had received some broken bicycles were in Kodagu district (35.48%) and the lowest shares (0%) were in Mysore and Gulbarga district. Therefore, from the principals' responses it appears that broken bicycles are rarely received at the outset (but this does not rule out the issue of poorly assembled bicycles that fall apart subsequently).

Table 4.8 District Wise Condition of Bicycle when received (according to beneficiaries)

District	Looking Old	New but Damaged	New but Missing Parts	New without Damage	Other	Total
Bangalore	3(0.47)	9(1.42)	37(5.85)	584(92.26)	0(0.00)	633
Belagavi	2(0.32)	74(11.78)	36(5.73)	512(81.53)	4(0.64)	628
Chitradurga	4(0.64)	21(3.35)	12(1.91)	589(93.94)	1(0.16)	627
Kalaburgi	0(0.00)	9(1.38)	41(6.30)	596(91.55)	5(0.77)	651
Kodagu	14(2.21)	177(27.92)	34(5.36)	407(64.20)	2(0.32)	634
Mysuru	1(0.16)	58(9.09)	16(2.51)	563(88.24)	0(0.00)	638
Uttara Kannada	19(2.89)	59(8.97)	26(3.95)	520(79.03)	34(5.17)	658
Yadgir	0(0.00)	0(0.00)	24(3.82)	605(96.18)	0(0.00)	629
Grand Total	43(0.84)	407(7.98)	226(4.43)	4376(85.84)	46(0.90)	5098

*Values in the Parenthesis are Percentages Source: Field Survey

85.84% beneficiaries (students) said that they had received bicycles that were new and without damage (this is comparable to the 86.76% principals who stated they had received all new bicycles). Yadgir district had the most students (96.18%) who said that they received new and undamaged bicycles while Kodagu district had the least (64.20%). It may be recalled that Kodagu district also had the lowest share of principals who had mentioned receiving all new bicycles. Close to 8% beneficiaries stated that they had received bicycles that were new but damaged. Missing parts in new bicycles were mentioned by about 4% beneficiaries.

Table 4.9 District wise Persons Responsible for Cleaning Bicycle

Districts	Beneficiary	Siblings	Father	Friends	Hostel staff	None	Other family Members	Don't know	Other	Total
Bangalore	567 (89.57)	45 (7.11)	10 (1.58)	1 (0.16)	1 (0.16)	4 (0.63)	5 (0.79)	-	-	**633**
Belagavi	545 (86.78)	65 (10.35)	9 (1.43)	-	-	-	5 (0.80)	-	4 (0.64)	**628**
Chitradurga	587 (93.62)	26 (4.15)	13 (2.07)	-	-	-	1 (0.16)	-	-	**627**
Kalaburgi	522 (80.18)	97 (14.90)	2 (0.31)	-	-	20 (3.07)	6 (0.92)	-	4 (0.61)	**651**
Kodagu	595 (93.85)	28 (4.42)	2 (0.32)	1 (0.16)	-	3 (0.47)	5 (0.79)	-	-	**634**
Mysuru	563 (88.24)	29 (4.55)	28 (4.39)	-	-	-	17 (2.66)	-	1 (0.16)	**638**
Uttara Kannada	632 (96.05)	11 (1.67)	5 (0.76)	-	1 (0.15)	3 (0.46)	3 (0.46)	1 (0.15)	2 (0.30)	**658**
Yadgir	557 (88.55)	57 (9.06)	8 (1.27)	2 (0.32)	1 (0.16)	-	4 (0.64)	-	-	**629**
Grand Total	**4568 (89.60)**	**358 (7.02)**	**77 (1.51)**	**4 (0.08)**	**3 (0.06)**	**30 (0.59)**	**46 (0.90)**	**1 (0.02)**	**11 (0.22)**	**5098**

*Values in the Parenthesis are Percentages Source: Field Survey

Maintenance of bicycle begins with regular cleaning, though as per the survey data, 89.6 per cent beneficiary themselves clean their respective cycles. There are around 358 respondents (around 7% of total surveyed respondents) whose cycles are cleaned by beneficiaries' siblings. Similarly,

there are about 123 respondents whose cycles are being cleaned by either respondents' fathers or by any other family members. On the other hand, there are around 30 respondents who said that they don't clean their cycle at all. The maintenance issue is also examined in terms of the completeness of the bicycles received i.e. did the beneficiaries have to add any parts to the cycles? This is detailed in the table below:

Table 4.10 Whether Beneficiary added any Parts and which parts were added (district wise)

District	Whether added parts?			Which Parts were Added?						
	Did not add parts	**Added parts**	**Total**	**Bell**	**Seat Cover**	**Back Carrier**	**Front Carrier**	**Chain Cover**	**Handle Cover**	**Others**
Bangalore	154 (24.33)	479 (75.67)	633	410 (64.77)	310 (48.97)	232 (36.65)	207 (32.70)	248 (39.18)	169 (26.70)	2 (0.32)
Belagavi	435 (69.27)	193 (30.73)	628	75 (11.94)	116 (18.47)	16 (2.55)	10 (1.59)	62 (9.87)	84 (13.38)	22 (3.50)
Chitradurga	497 (79.27)	130 (20.73)	627	87 (13.88)	84 (13.40)	13 (2.07)	8 (1.28)	55 (8.77)	46 (7.34)	12 (1.91)
Kalaburgi	299 (45.93)	352 (54.07)	651	239 (36.71)	229 (35.18)	145 (22.27)	75 (11.52)	199 (30.57)	155 (23.81)	49 (7.53)
Kodagu	484 (76.34)	150 (23.66)	634	61 (9.62)	61 (9.62)	7 (1.10)	5 (0.79)	23 (3.63)	50 (7.89)	22 (3.47)
Mysuru	436 (68.34)	202 (31.66)	638	84 (13.17)	126 (19.75)	30 (4.70)	10 (1.57)	90 (14.11)	118 (18.50)	3 (0.47)
Uttara Kannada	274 (41.64)	384 (58.36)	658	118 (17.93)	116 (17.63)	61 (9.27)	52 (7.90)	63 (9.57)	81 (12.31)	217 (32.98)
Yadgir	282 (44.83)	347 (55.17)	629	246 (39.11)	187 (29.73)	125 (19.87)	99 (15.74)	121 (19.24)	90 (14.31)	17 (2.70)
Grand Total	2861 (56.12)	2237 (43.88)	5098	1320 (25.89)	1229 (24.11)	629 (12.34)	466 (9.14)	861 (16.89)	793 (15.56)	344 (6.75)

*Values in the Parenthesis are Percentages Source: Field Survey

It can be seen that a majority of beneficiaries (56.12% beneficiaries) stated that they did not have to add parts. The most common part that had to be added was the bell followed closely by seat cover. Bangalore Urban district has the highest proportion of beneficiaries (75.67%) who stated that they had to add parts.

4.3.2 Stakeholder views on the condition of Bicycles at the time of receipt and the present condition of Bicycles

An analysis of the maintenance of bicycles should also involve a comparison of the condition of present condition of bicycles with the condition of bicycles at the time of receipt. It is also important to compare older and newer used bicycles. Such analysis is attempted in this section on the basis of stakeholder perceptions.

As already seen in a previous section, 85.84% beneficiaries (students) said that they had received bicycles that were new and without damage (86.76% principals had also stated that they had received all new bicycles). Close to 8% beneficiaries stated that they had received bicycles that were new but damaged. Missing parts in new bicycles were mentioned by about 4% beneficiaries. The table below, based on student perception shows an analysis of present condition of bicycles, and the difference in present bicycle quality/condition between bicycles received one year back and bicycles received two years back. A difference in present quality is observable between one year and two year old bicycles; the overall proportion of damaged bicycles among two year old cycles is eight percentage points higher compared to one year old cycles (32.58% vs. 24.48%). Among two year old cycles, Gulbarga (Kalaburgi) district has the highest proportion of damaged bicycles (60.19%) followed by Belgaum (Belagavi) district at 56.83%. Amongst one year old bicycles also, Gulbarga district has the highest proportion of damaged bicycles (50.90%), followed by Kodagu district (42.44%). It is also important to compare the present condition of bicycles to the condition at the time of receipt of bicycles. While close to 8% bicycles were damaged at the time of receipt, significantly larger shares of two year old bicycles (32.58%) and one year old bicycles (24.48%) were damaged. Such findings point to the deteriorating condition of bicycles over time which may be attributable to a variety of possible reasons (quality and/or assembly gaps at the outset, rough/improper usage and lack of regular oiling and servicing).

Table 4.11 Present Condition of Bicycles as per Age of Bicycle (District Wise)

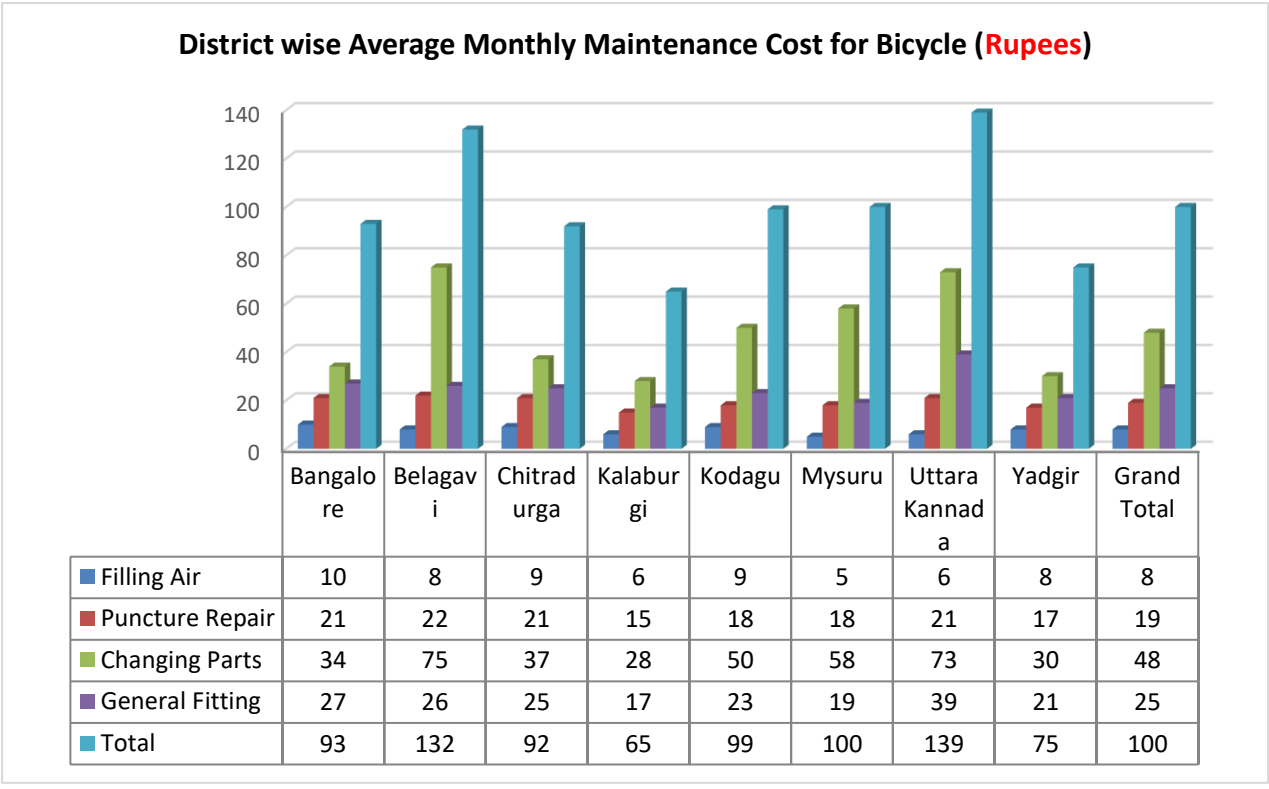
Districts	One-year Old Cycle				Two-Year Old Cycle			
	Damaged	**Don't Know Where it is**	**Good**	**Other**	**Damaged**	**Don't Know Where it is**	**Good**	**other**
Bangalore	44 (11.73)	1 (0.27)	330 (88.00)	(0.00)	47 (18.22)	2 (0.78)	208 (80.62)	1 (0.39)
Belagavi	141 (40.29)	1 (0.29)	204 (58.29)	4 (1.14)	158 (56.83)	1 (0.36)	117 (42.09)	2 (0.72)
Chitradurga	68 (18.63)	2 (0.55)	295 (80.82)	(0.00)	72 (27.48)	(0.00)	189 (72.14)	1 (0.38)
Kalaburgi	169 (50.90)	3 (0.90)	156 (46.99)	4 (1.20)	192 (60.19)	(0.00)	122 (38.24)	5 (1.57)
Kodagu	160 (42.44)	7 (1.86)	209 (55.44)	1 (0.27)	121 (47.08)	15 (5.84)	120 (46.69)	1 (0.39)
Mysuru	44 (11.55)	(0.00)	335 (87.93)	2 (0.52)	40 (15.56)	1 (0.39)	215 (83.66)	1 (0.39)
Uttara Kannada	36 (8.80)	(0.00)	368 (89.98)	5 (1.22)	27 (10.84)	(0.00)	216 (86.75)	6 (2.41)
Yadgir	63(16.89)	(0.00)	310(83.11)	(0.00)	39(15.23)	(0.00)	217(84.77)	(0.00)
Grand Total	**725(24.48)**	**14(0.47)**	**2207(74.51)**	**16(0.54)**	**696(32.58)**	**19(0.89)**	**1404(65.73)**	**17(0.80)**

*Values in the Parenthesis are Percentages Source: Field Survey

Further looking at the other maintenance activities, it can be observed that in a given period of 1 month, on an average, individual respondent had filled air in the Tyre for about 3 times whereas around 2 times they have repaired the puncture. Similarly, the beneficiary had to do an overall fitting for at least once in a month and the individual respondents also had to change any crucial part in order to keep the cycle in running condition.

With increased maintenance, the cost also increases; on an average, an individual beneficiary needs to spend around 100 rupees per month to keep the cycle running. While the average cost seems to be less, if we consider individual cost across the districts, the total maintenance cost has gone up to 1500 rupees in a month. Hence sometimes it becomes difficult to get cycles repaired, as majority of the beneficiaries are from BPL families and the major income sources of the family are often farm related works which don't guarantee them with an assured income. In addition to this, around 43 per cent respondents said that there are no repair shops nearby their house. Average distance between the beneficiary house and cycle repair shops is around 2.7 KM (ranging between 0.1 KM to 14 KM) and on an average, the repair shops take around 2 days to make the cycle fit again which in turn could also be a barrier for the students to not commute in the bicycle.

Figure 4.6 District Wise Average Monthly Maintenance Cost



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir	Grand Total
Filling Air	10	8	9	6	9	5	6	8	8
Puncture Repair	21	22	21	15	18	18	21	17	19
Changing Parts	34	75	37	28	50	58	73	30	48
General Fitting	27	26	25	17	23	19	39	21	25
Total	93	132	92	65	99	100	139	75	100

4.3.3 Concerns related to Maintenance, Durability, and Present condition of Bicycles

The parents (including SDMC members) covered in FGDs described the difficulties and challenges that they are facing with respect to the maintenance and present condition of bicycles. The major concerns highlighted were the need for frequent repair, high cost of repair and the bicycles becoming less usable over a period of time. However, the parents may be comparing the bicycles obtained under this scheme with costlier, better quality cycles available in the market. Also, it must be kept in mind that bicycles are mechanical devices subject to wear and tear over time, especially if regular maintenance (especially oiling) is not done.

1. *Need for frequent repair and high cost of repair*: As expressed by parents in Chittapur Taluka in Gulbarga, the bicycles are relatively in better condition for those children whose parents get the bicycles repaired frequently; for other students the bicycles are not in working condition. Major repairs are needed every month and minor repairs like fixing punctures need to be done once every fortnight; the expenses amount to around 800 rupees every month. Inputs from Belagavi Taluka, and Yadgir and Shahpur Talukas show that the repair costs lie in the range of Rs 300 to Rs 600, which is burdensome for BPL families. In Gulbarga Taluka of Gulbarga district, parents mentioned that repairs were needed on a weekly basis. Parents mentioned that such need for repair coming up so frequently led them to stop spending on repair and asking their children to walk to school or to spend out of their own pocket money on repair. In Shahapur Taluka of Yadgir, Madikeri Taluka of Kodagu and Ankola Taluka of Uttara Kannada too, similar views came up. In Gulbarga Taluka of the eponymous district, parents mentioned that the chains of the bicycles keep coming off. In fact, bicycle breakdowns that happen on the way to school create a major problem since the child has to first drop the cycle to a repair shop or acquaintance's house and then go to school. A parent from Belagavi Taluka expressed the following strong words which sum up the universal quality issues experienced by beneficiaries:

"Most of the times when children are late to reach home, we hear complaints with regards to problems of bicycle either with chain, pedal or any other part. The cycles they have given this time are of poor quality, among that my daughter has received the worst one which will have some issue or other once a week or fortnight. The chain is not proper, the air filled in the tyres does not stay for one week also."

In Belagavi Taluka, one viewpoint expressed was that the cycles that were distributed in the early programme years were good but the quality has deteriorated over the last 2-3 years. The parents opined that at the present quality, the cycles last only 2 years. Parents become fed up of getting cycles repaired, and often leave the cycles at the cycle shop as scrap and don't take them back. In Shahapur Taluka of Yadgir, parents mentioned that only few students of class 10th use the cycles because of deteriorating quality over time. In Ankola Taluka of Uttara Kannada, parents stated that by the time the students reach 9th standard, the cycles become unsuitable for use, also because they rust faster in coastal areas. Parents from Kumta Taluka of Uttara Kannada district stated that, "For 10th class, around 60% cycles are kept in the home due to poor quality."

2. *Burden on parents and non-usage for shorter distances:* Parents from Chittapur Taluka in Gulbarga in expressed that because of the poor quality of bicycles, after few days it becomes a burden on the parents. In Belagavi Taluka, the view of parents was that the bicycle, with all its quality issues was relatively more useful to those living far away from the school; for others, it was easier to walk to school. Non-usage of bicycles because of quality problems is common. In Belagavi Taluka, one parent stated strongly that "Teachers ask our children - why you don't bring cycle to school? Our children will give some reasons or other and the cycle will be lying like a dead body in our house."

3. *Availability of mechanic shops and spare parts*: The frequent need for bicycle repairs has enhanced the demand for bicycle mechanics and the local bicycle servicing industry. Parents from Gulbarga district (Chittapur Taluka) said that "Since cycle gets damaged every week, we have many mechanics now." In the FGD held in Pharabad village of Gulbarga Taluka of Gulbarga District, however, parents mentioned that there was only one repair shop for 4-5 villages. In the FGD done in a village of Ankola and Kumta Talukas of Uttara Kannada too, the accessibility and distance of repair shop came up as a problem. Parents taking part in most FGDs done confirmed the local availability of spare parts in the repair shop itself.

4. *Disillusionment and loss of desire to clean the bicycle*: Parents from Chittapur Taluka in Gulbarga stated, "At the beginning the child cleaned it regularly and once it started troubling even the child left it as it is so now nobody cleans it."

4.4 Conclusion

This chapter has examined the major implementation processes involved in the provision of bicycles such as procurement, obtaining of parts and assembly, quality test and quality check, and the actual distribution of bicycles. The analysis of implementation processes finds that the majority of students receive bicycles in a delayed way.

Quality issues have been found in new bicycles but more notably in used bicycles. Bicycles thus become less usable with time, and thus their regular use and consequent positive outcomes on the student are unlikely to sustain for long. Implementation lacunae such as the inadequacy of quality check mechanisms and maintenance support systems affect the quality of bicycles, which affect the usage of bicycles, which in turn are likely to constrain the achievement of the expected academic and non-academic outcomes.

Chapter 5

RESULTS AND DISCUSSION

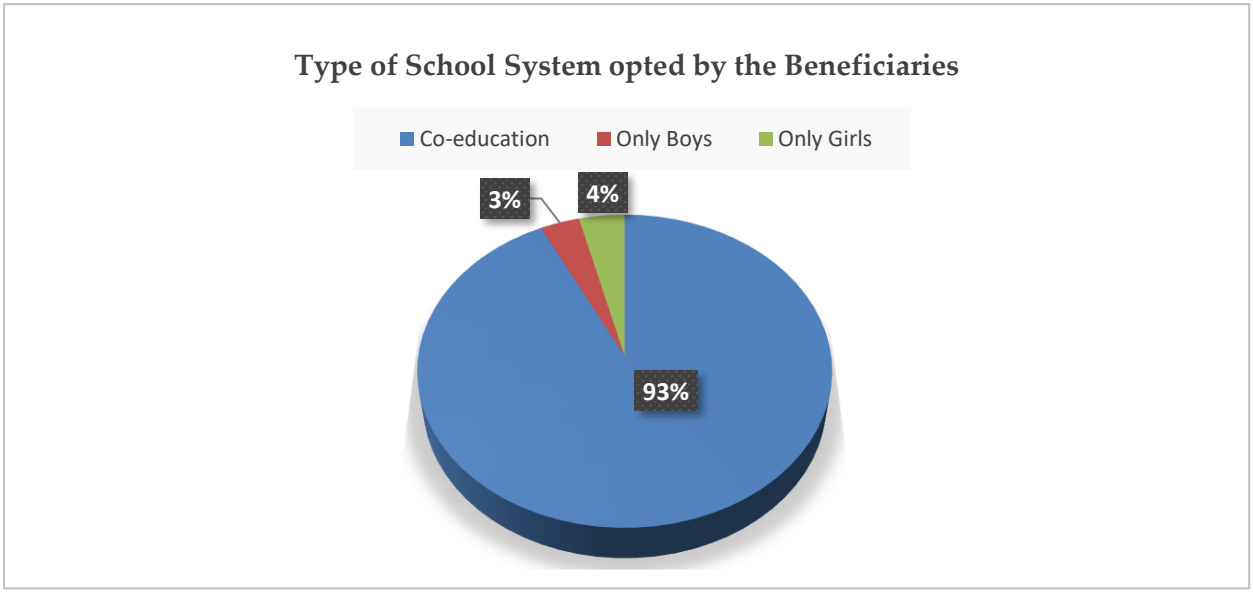
This chapter presents the demographic profile of the surveyed beneficiaries and also presents the scheme objective wise results of the study.

5.1 Demographic Profile of the Beneficiaries

5.1.1 Type of School

As a part of core exercise of the study, we have divided the type of government schooling system broadly into three categories viz., co-education, only boys' school and only girls' school. The sample of 5098 beneficiaries from sampled districts shows that majority of the beneficiaries are studying in the co-education system of schooling in Karnataka. Fig. 5.1 shows the type of schooling system opted by the beneficiaries in Karnataka.

Figure 4.7 Types of School System Opted by Beneficiary



The result reveals that 92.7 per cent of total beneficiaries are from co-education system, and 3.4 & 3.9 per cent of the total surveyed students are studying in the schools meant only for boys and girls respectively. Similar distribution trend is observed across all the eight sampled districts.

Further the study covered both day scholars as well as the students residing in the hostels run by social welfare department; however, as a result of predefined sampling design, only about

4.6 per cent of the surveyed beneficiaries are residing in the welfare hostel whereas the remaining 95.4 per cent of the beneficiaries are day scholars.

Table 4.12 District wise Number of Day Scholar

Districts	Co-education	Only boys	Only girls	Total
Bangalore	573(95.02)	14(2.32)	16(2.65)	603
Belagavi	542(90.33)	21(3.50)	37(6.17)	600
Chitradurga	559(93.48)	1(0.17)	38(6.35)	598
Kalburgi	616(99.04)	6(0.96)	0(0.00)	622
Kodagu	598(99.01)	4(0.66)	2(0.33)	604
Mysuru	604(99.51)	3(0.49)	0(0.00)	607
Uttara Kannada	626(99.68)	2(0.32)	0(0.00)	628
Yadgir	572(95.17)	9(1.50)	20(3.33)	601
Grand Total	**4690(96.44)**	**60(1.23)**	**113(2.32)**	**4863**

*Values in the parenthesis are percentages. Source: Field Survey

Table 4.13 District wise Distribution of Hostel Beneficiaries

Districts	Co-education	Only boys	Only girls	Total
Bangalore	14(46.67)	7(23.33)	9(30.00)	30
Belagavi	10(35.71)	8(28.57)	10(35.71)	28
Chitradurga	1(3.45)	14(48.28)	14(48.28)	29
Kalburgi	0(0.00)	22(75.86)	7(24.14)	29
Kodagu	0(0.00)	16(53.33)	14(46.67)	30
Mysuru	1(3.23)	15(48.39)	15(48.39)	31
Uttara Kannada	11(36.67)	9(30.00)	10(33.33)	30
Yadgir	1(3.57)	20(71.43)	7(25.00)	28
Grand Total	**38(16.17)**	**111(47.23)**	**86(36.60)**	**235**

*Values in the parenthesis are percentages. Source: Field Survey

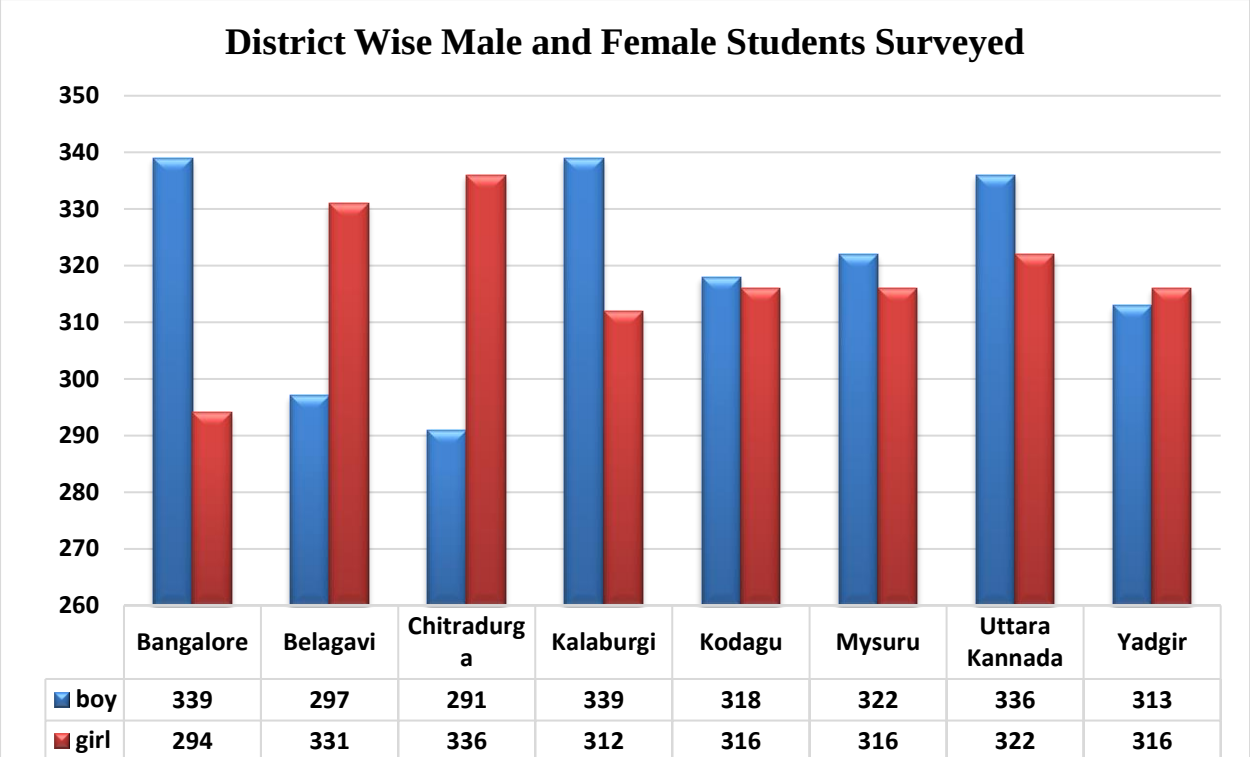
The segregated analysis among the day scholars and the students of welfare department hostels has shown a different pattern in the distribution of students across the categories of schools.

Among the hostel students, a larger share are studying in the boys' schools (47.2%) which is followed by 36.6 per cent students from girls' schools and the remaining 16.2 per cent students are from co-education system. Whereas, among the day scholars, the distribution patterns are similar as that of the desegregated level, i.e., a major portion of the students are from co-education system (96.4%), followed by students of girls' schools (2.3%) and only 1.2 per cent of them were going to the schools which are meant for only boys.

5.1.2 Gender and Social Category of the Beneficiaries

Girls are often treated as inferior and are socialized to put themselves last, thus undermining their self-esteem. In most countries, gender-bias can be seen in educational processes, including curriculum, educational materials and practices, teachers' attitudes and classroom interaction, which reinforce existing gender inequalities.

Figure 4.8 District wise Male and Female Students Surveyed



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir
boy	339	297	291	339	318	322	336	313
girl	294	331	336	312	316	316	322	316

On the other hand, India's caste system is one of the key dimensions for socially differentiating people by class, faith, place, tribe, gender, and language. Many labourers, fishermen, artisans, and servants were given the lowest rank in the hierarchy as a result of occupation-based caste categorization. Denial of wealth, education and other privileges has pushed the majority of this group into poverty. Looking at the division based on caste at the all-India level, we see that about 43.1 per cent of the total population belong to the other backward classes (OBC). Nearly

8.8 per cent of the households in the country belong to the scheduled tribes (ST), about 18.7 per cent belong to the scheduled castes (SC) (NSS 68th round, 2011-12).

In Karnataka, 17.2 per cent of the total population belonged to the scheduled castes (SC) and 6.9 per cent households belonged to the scheduled tribes (ST) community. The sampled beneficiaries for this study comprise 12.5 per cent STs, 29.3 per cent SCs and 11.3 per cent from the general category. The major portion of the sampled beneficiaries belong to the other backward classes (46.3%). Fig. 5.3 shows the gender and caste wise distribution of the beneficiaries. However, the approximate gender-wise share remains the same across all the categories.

Figure 4.9 Gender wise Social Category of the Beneficiary

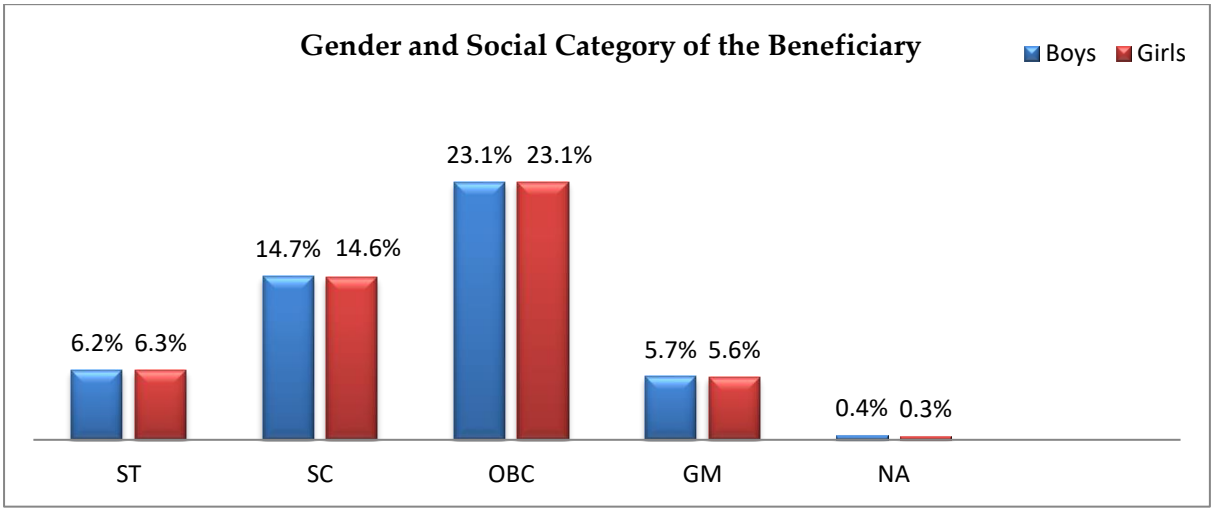


Table 4.14 District and Caste wise Distribution of Beneficiary

Districts	ST	SC	OBC	GM	NA	Total
Bangalore	53(8.37)	264(41.71)	206(32.54)	102(16.11)	8(1.26)	**633**
Belagavi	83(13.22)	93(14.81)	309(49.20)	138(21.97)	5(0.80)	**628**
Chitradurga	138(22.01)	237(37.80)	203(32.38)	46(7.34)	3(0.48)	**627**
Kalburgi	38(5.84)	244(37.48)	301(46.24)	65(9.98)	3(0.46)	**651**
Kodagu	121(19.09)	195(30.76)	245(38.64)	72(11.36)	1(0.16)	**634**
Mysuru	90(14.11)	173(27.12)	327(51.25)	46(7.21)	2(0.31)	**638**
Uttara Kannada	9(1.37)	117(17.78)	481(73.10)	44(6.69)	7(1.06)	**658**
Yadgir	105(16.69)	169(26.87)	287(45.63)	61(9.70)	7(1.11)	**629**
Grand Total	**637(12.50)**	**1492(29.27)**	**2359(46.27)**	**574(11.26)**	**36(0.71)**	**5098**

*Values in the parenthesis are percentages Source: Field Survey

Looking into district wise spread of the sample across different social categories, it is observed that out of 5098 respondents, there are 637 ST respondents (12.5%). Chitradurga district has 138 ST respondents, which is followed by Kodagu and Yadgir districts which had 121 and 105 respondents belonging to ST category respectively.

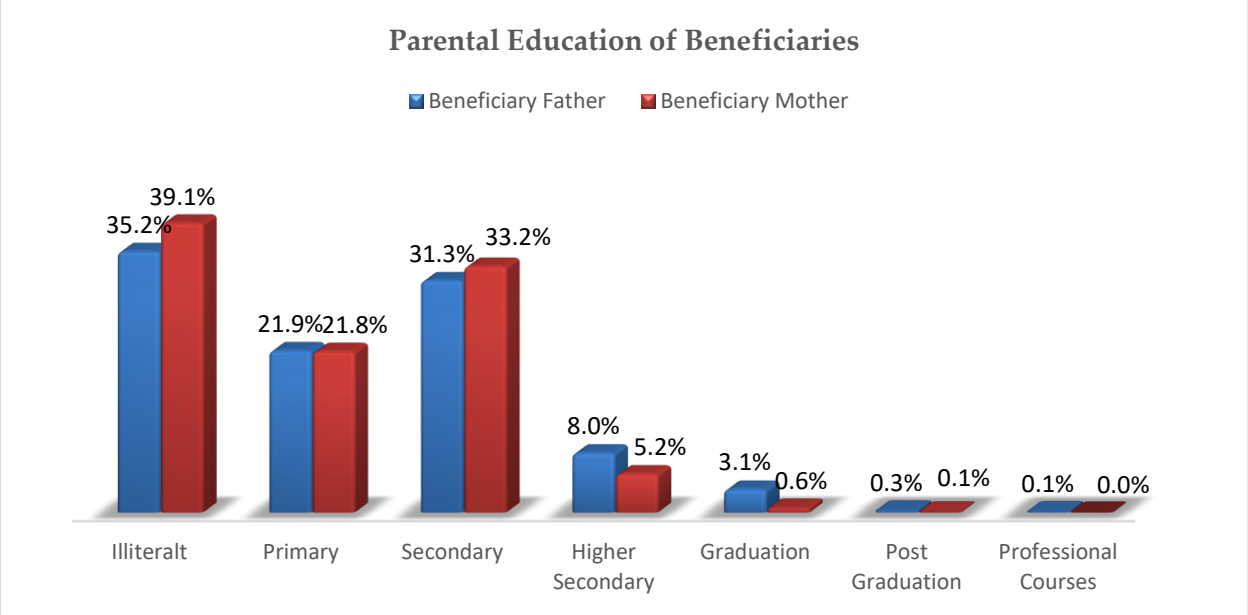
On the other hand, highest numbers of Scheduled Caste (SC) respondents (264) are from Bangalore district which is followed by Kalaburgi, Chitradurga and Kodagu districts where the numbers of SC beneficiaries are 244, 237 and 195 respectively. Similarly, the highest number of respondents belonging to other backwards classes and General category is observed in Uttara Kannada (481 respondents) and Belagavi (138 respondents) respectively. Further, there are 36 respondents (0.7% of the total sample) who didn't mention/were unable to mention social category.

5.1.3 Education Level of Beneficiary Parents

Literacy may empower learners to take individual and collective action in various contexts, such as household, workplace, and community. Many studies have confirmed that literacy empowered people (socially, economically, and politically) (UNESCO, 2006[5]). Therefore, it is important to understand the beneficiaries' parental literacy level in order to understand the relationship between parental education and the perspective of the parents to make their children more educated. Fig. 5.4 shows the education of beneficiaries' parents (Refer Annexure Table I & Table II).

[5] http://www.unesco.org/education/GMR2006/full/chapt5_eng.pdf extracted on 3 November 2019

Figure 4.10 Beneficiaries' Parental Education



Even though one-quarter of the general population of Karnataka is illiterate (2011), amongst our sample, 37.2 per cent of beneficiary parents are illiterate (35.2% respondents' fathers and 39.1% respondents' mothers are illiterate). However, 32.3 per cent of the parents had completed their secondary schooling and 21.8 per cent parents are found to have at least primary education. The number of respondents' parents who had undergone any professional courses or had completed post-graduation is as low as 0.1 per cent. It was interesting to observe that a greater share of mothers (33.3%) had secondary education compared to fathers (31.3%). Education level of the beneficiaries' parents is similar across the 8 sampled districts (Tables in Annexure). However, the breakdown of illiterate respondents across the district shows that Yadgir has the least literate parents (both fathers and mothers).

5.1.4 Owning House and Other Assets by the Beneficiary Family

Studies show that poverty is one of the important reasons for school dropout. Further, continuing children's education basically depends on the family's socio-economic background (Mathew, 2017[6]). Assets ownership is an indirect measure for economic wellbeing of a family. Therefore, it is important to know different assets own by any household to find out the relationship between the economic wellbeing of a family and education level of children in those families. According to Census 2011, 74.2% people are residing in the houses owned by

[6] https://mes.ac.in/wp-content/uploads/2017/10/Reasons-for-School-Dropouts-Survey-Report-by-Jomon.pdf extracted on 17 March

them followed by 23% staying in rented houses and 2.7% living in other kinds of accommodation.

Figure 4.11 Portion of Beneficiaries Owning a House

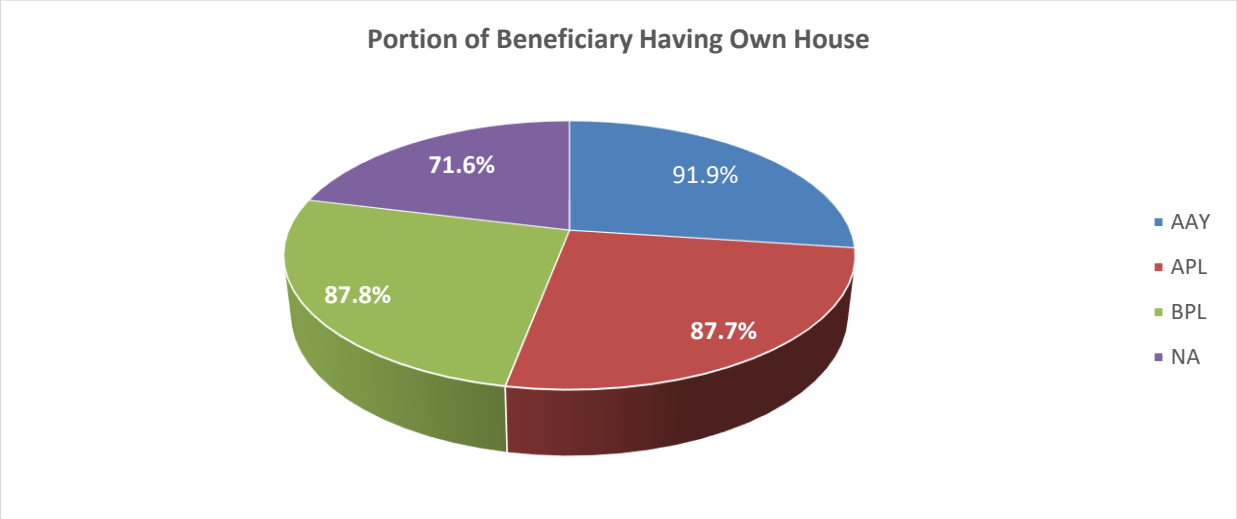
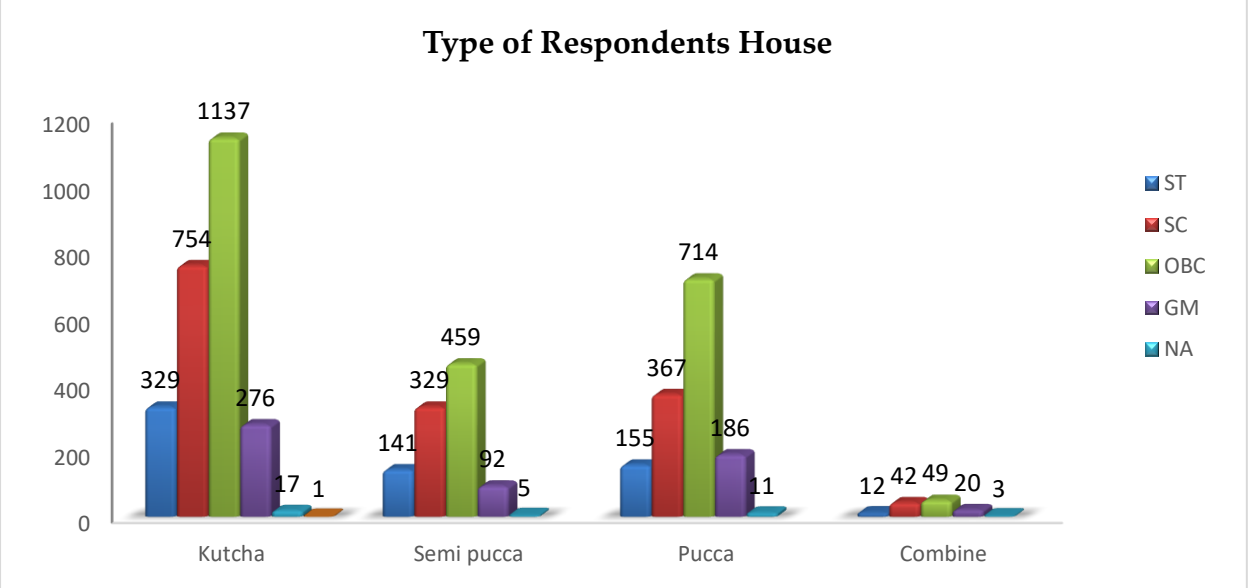


Figure 4.12 Type of Houses Beneficiaries Have



In the sample, about 87.5% of the beneficiaries are living in their own house. District-wise distribution of house ownership remains same across the sampled districts except in Bangalore and Kodagu where 62.4 per cent and 68.1 per cent beneficiaries respectively are living in their own house. There is not much association found between the type of house ownership and economic card holding (Antodaya/BPL/APL), as 91.9 per cent of Antodaya card holders and 87.8 per cent of BPL card holders are residing in their own house. However, the condition and type of houses need some consideration. Secondary data shows that at the state level, around 63 per cent of the households have concrete, hand and machine-made tiles as a material of roof, and rest have plastic, wood and other material (Census. 2011). Fig.5.6 has captured type of house lived/owned by the respondents.

As per our findings, a major portion of the respondents (approximately 49%) are living in the kutcha houses and 20 per cent (1026 respondents) are living in semi-pucca houses. 28 per cent (1433) respondents are residing in Pucca houses and only 2 per cent of the total respondents have combined house type (both pucca and semi-pucca). Not much variation is seen across the social categories with respect to the house type.

Table 4.15 District Wise Beneficiary House Type

*

Districts	Combine	Kutcha	Pucca	Semi pucca	Total
Bangalore	51(8.06)	259(40.92)	203(32.07)	120(18.96)	633
Belagavi	3(0.48)	326(51.91)	217(34.55)	82(13.06)	628
Chitradurga	1(0.16)	542(86.44)	72(11.48)	12(1.91)	627
Kalburgi	24(3.69)	379(58.22)	176(27.04)	72(11.06)	651
Kodagu	1(0.16)	157(24.76)	179(28.23)	297(46.85)	634
Mysuru	19(2.98)	190(29.78)	217(34.01)	212(33.23)	638
Uttara Kannada	4(0.61)	414(62.92)	100(15.20)	140(21.28)	658
Yadgir	23(3.66)	246(39.11)	269(42.77)	91(14.47)	629
Grand Total	**126(2.47)**	**2513(49.29)**	**1433(28.11)**	**1026(20.13)**	**5098**

Values in the parenthesis are percentages Source: Field Survey

When we look into the district wise variation for the house type, it is observed that Chitradurga has the highest number of Kutcha houses (542 households are residing in kutcha houses) which is followed by Uttara Kannada and Kalaburgi (414 and 379 households have kutcha houses). On the other hand, highest number of Pucca houses are observed in Yadgir (269 households) which is followed by Belagavi and Mysuru where 217 respondents are residing in pucca houses in each of the districts. However, with only 72 respondents having a pucca house, Chitradurga has the lowest share under the pucca category; similarly, under semi-pucca category, Kodagu comprises the highest share (297 households) and Chitradurga has the lowest number (only 12 households are residing in semi pucca house).

Similarly, while looking into the toilet and other sanitation facilities among the beneficiary households, it is found that only 55.3 per cent households have bathrooms and 76.1 per cent have toilets in their house premises. If a recent claim of the Ministry of Drinking Water and Sanitation has to be believed, then all the households in rural Karnataka have access to toilet facility by October 2, 2019. However, according to the Census 2011, less than the half (49%) of the households in Karnataka had in-house toilet facility. Similarly looking at the availability of electricity, the data shows that 95.6 per cent of the total households of sampled beneficiaries have electricity in their house and this share is same across all the districts except Yadgir, where only 79.8 per cent of the total sampled households have access to electricity.

5.1.5 Economic Status of the Beneficiary Household

Figure 4.13 Social Category wise Ration Card of Beneficiary

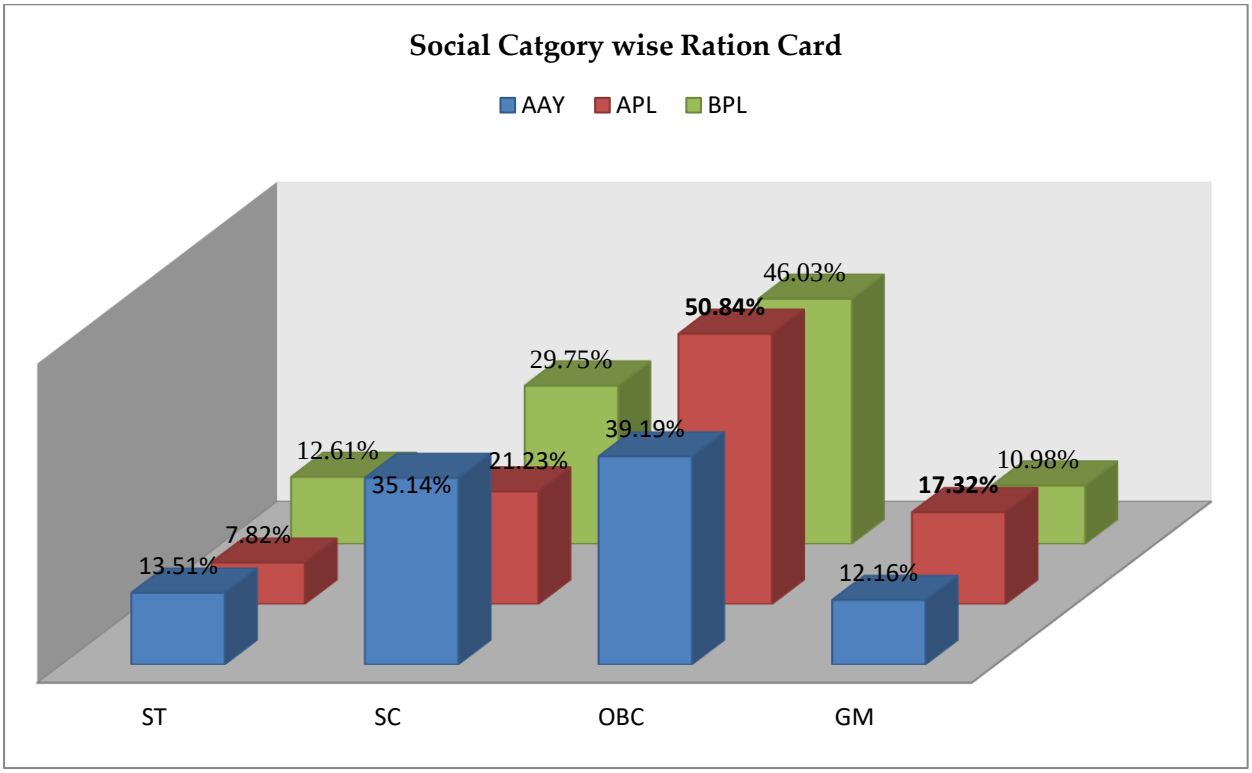


Table 4.16 District Wise Type of Ration Card of Beneficiary

Districts	AAY	APL	BPL	NA	Total
Bangalore	4(0.63)	11(1.74)	602(95.10)	16(2.53)	633
Belagavi	6(0.96)	47(7.48)	533(84.87)	42(6.69)	628
Chitradurga	6(0.96)	17(2.71)	598(95.37)	6(0.96)	627
Kalburgi	18(2.76)	24(3.69)	590(90.63)	19(2.92)	651
Kodagu	2(0.32)	24(3.79)	597(94.16)	11(1.74)	634
Mysuru	14(2.19)	6(0.94)	615(96.39)	3(0.47)	638
Uttara Kannada	7(1.06)	27(4.10)	618(93.92)	6(0.91)	658
Yadgir	17(2.70)	23(3.66)	583(92.69)	6(0.95)	629
Grand Total	**74(1.45)**	**179(3.51)**	**4736(92.90)**	**109(2.14)**	**5098**

*Values in the parenthesis are percentages Source: Field Survey

As per 2011 Census, 37.5 per cent of Karnataka's rural population consists of BPL families whereas the share is 26 per cent in case of urban population. However, amongst our sampled

beneficiaries, 92.90% per cent households are living below poverty line. Among the BPL beneficiaries, largest share (39.19%) belong to the OBC community.

Further analysis reveals that even though this distribution pattern is similar across the districts, Belagavi is the district where the lowest share of BPL households is observed (84.8% of the households of sampled beneficiaries in the district are BPL). It was also seen that 2.8, 2.7 and 2.1 per cent households in Kalburgi, Yadgir and Mysuru districts are Antodaya card holders. 2.1 per cent of the total surveyed respondents didn't mention their economic card holding.

Majority of the surveyed beneficiaries (92.9 percent) belongs to the BPL category with majority of their parents (39.1 percent Mothers and 35.2 percent Fathers) are illiterate and engaged in farm activities.

Further, looking into beneficiary parental occupation (Annexure Table II and Table III), it was found a major portion of respondents' parents are involved in the primary sector works; more precisely 41 per cent and 50 per cent respondents' mothers and fathers are engaged in farm-related works respectively (either farmer or agricultural labourer). Around 26 per cent respondents' fathers and 20 per cent respondents' mothers are wage labourers. It was also seen that 8.5 per cent of total respondents belong to families which have their own business. However, only 5 per cent respondents' parents are working with assured monthly income (private and govt. employees).

Figure 4.14 Beneficiary Fathers' Occupation

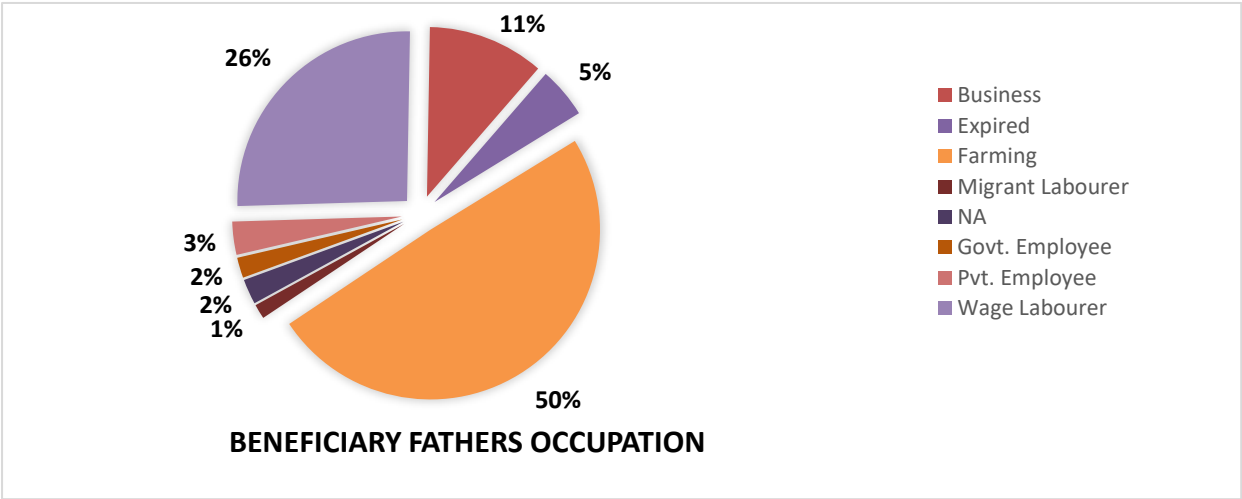
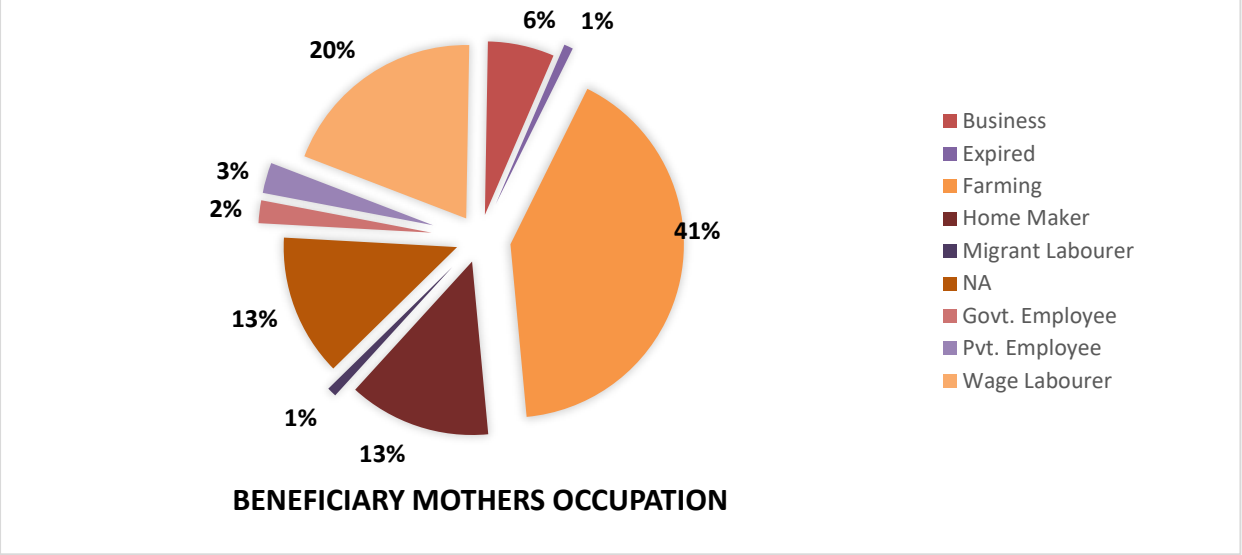


Figure 4.15 Beneficiary Mothers' Occupation



5.2 Accessibility and Usage

5.2.1 Accessibility of School

Education requires greater focus in terms of accessibility, equity and quality. In India, although the percentage of literacy is rising, what is alarming is that the number of illiterate children in the age group of 6 to 14 years is also increasing, it is estimated that at least 35 million and possibly as many as 60 million, children aged 6–14 years are not in school (Gouda & Sekher, 2014). As per the UNESCO statistical data report for India, the average value of secondary school enrolment as a percentage of all eligible children is 75.09 per cent for the year 2017 as compared to 23.84 per cent during the year 1971.

However, the average annual dropout rate across secondary schools in India was approximately 17.06 per cent during 2014-15. While considerable progress has been made in reducing gender gaps in primary schooling, there continues to be a higher rate of secondary school drop out among girls (Karthik & Prakash, 2017). Further, gender-biased educational processes, including curricula, educational materials and practices, teachers' attitudes and classroom interaction, reinforce existing gender inequalities.

Dropout is influenced by a series of independent factors (variables), namely school environment, socio-economic and socio-psychological factors, the prevalence of child labour, age of the child, negative attitude of parents towards education and need to earn a livelihood at an early stage of life among certain sections of children. Coupled with the above, family

migrations and changes in residence are also responsible for dropout[7]. Studies had also shown that 11 per cent of children lived in villages without a primary school and 30 per cent lived in villages without a middle school. A similar picture is reflected in urban areas (Borooah, 2003). Poverty and lack of accessibility and availability are the major reasons for school dropouts in India.

The present study covers 243 schools and 32 hostels run by the social welfare department spread across all the eight sampled districts. With 41750 being the total number of students studying in the schools the girls to boys ratio turns out to be 832 girls for 1000 boys. Looking at the district-wise breakup, the ratio was as high as 932: 1000 at Belagavi which is followed by Chitradurga and Yadgir where the ratio turns out to be 930 and 872 girls per every 1000 boys respectively. However, on the other hand, the lowest ratio is seen in Mysuru and Bangalore where the consecutive figures are 728: 1000 and 753: 1000 respectively.

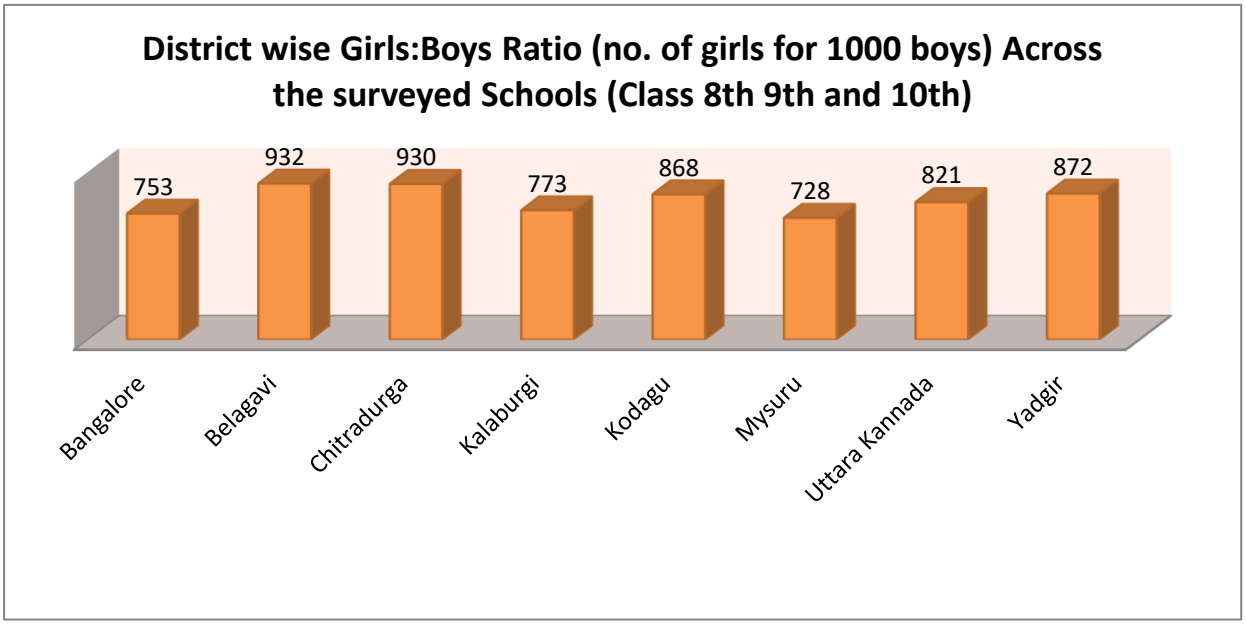
Table 4.17 District, Class and Gender Wise Distribution of Students in the Surveyed Schools

Districts	Class 8		Class 9		Class 10		Total Students
	Boys	Girls	Boys	Girls	Boys	Girls	
Bangalore	1145	747	1401	1092	1038	859	6282
Belagavi	982	871	1049	977	931	913	5723
Chitradurga	814	662	757	738	811	815	4597
Kalaburgi	533	380	1001	800	943	734	4391
Kodagu	637	486	647	529	487	522	3308
Mysuru	769	546	1135	731	1026	855	5062
Uttara Kannada	885	635	799	685	776	700	4480
Yadgir	1394	1322	1606	1273	1223	1089	7907
Grand Total	**7159**	**5649**	**8395**	**6825**	**7235**	**6487**	**41750**

Source: Field Survey

[7] http://www.schooleducation.kar.nic.in/pdffiles/Dropout%20Study%20Report_Final.pdf

Figure 4.16 District wise Girls: Boys Ratio across the Surveyed School



Source: Field Survey

Accessibility in term of distance, transportation facilities and quality of educational materials are among those important factors which have a direct influence on the dropout rate. According to the proceedings of Govt. of Karnataka[8] based on the recommendation of Karnataka Knowledge Commission for Karnataka state education policy, Karnataka has 44615 government primary schools, 5240 government high schools, and 1229 pre-university colleges which are providing education to nearly 50 lakh students each year and in addition to these the state also has several aided schools and private PU colleges. The proceedings also say that a higher dropout rate is seen among the higher classes which have been a challenge, and the current retention rate from class 1 to 10 is around 75 per cent only. Main causes for this dropout have always been the poor quality of education, and dropout at the time of transition from one level/stage to other[9] happens as the students need to take formal admission at each level. Dropout at the transition stage may be due to the distance which increases at every increased stage of schooling. According to the rules framed by Government of Karnataka on the right of children to free and compulsory education act 2009[10], lower primary and higher primary

[8] http://www.schooleducation.kar.nic.in/pdffiles/kps210518.pdf

[9] At present the state have 4 stage system of formal education viz., Lower Primary (Class 1-5), Higher Primary (Class 6-7/8), Secondary Schooling (Class 8/9 to 10) and Higher Secondary (Class 11 and 12).

[10] http://ssakarnataka.gov.in/html/int_schools.html

schools should be established within a walking distance of 3 km and for secondary schools, more precisely for class 8, the distance should be within 5 KM.

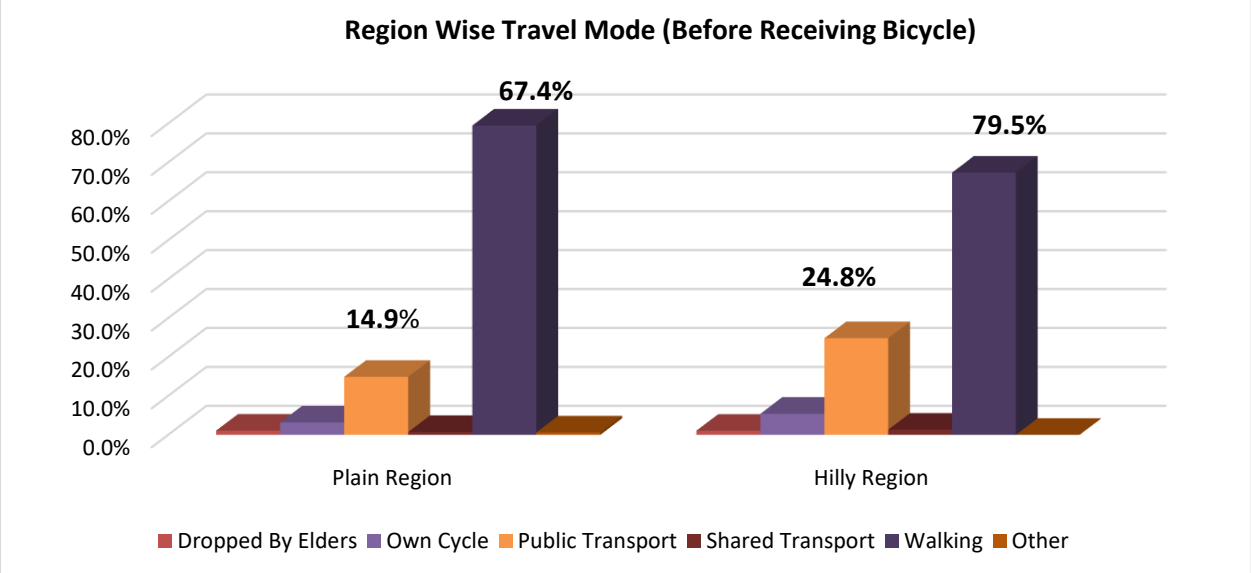
Table 4.18 District wise Average Distance (in meters) Between Beneficiary House and School

District	Plain Region	Hilly Region	Total
Bangalore	2432	2124	2403
Belagavi	1332	2324	1359
Chitradurga	2133	4867	2212
Kalaburgi	2586	1913	2551
Kodagu	2591	3768	3040
Mysuru	1804	2750	1807
Uttara Kannada	2179	3574	2652
Yadgir	2012	3056	2281
Total	**2109**	**3338**	**2291**

Source: Field Survey

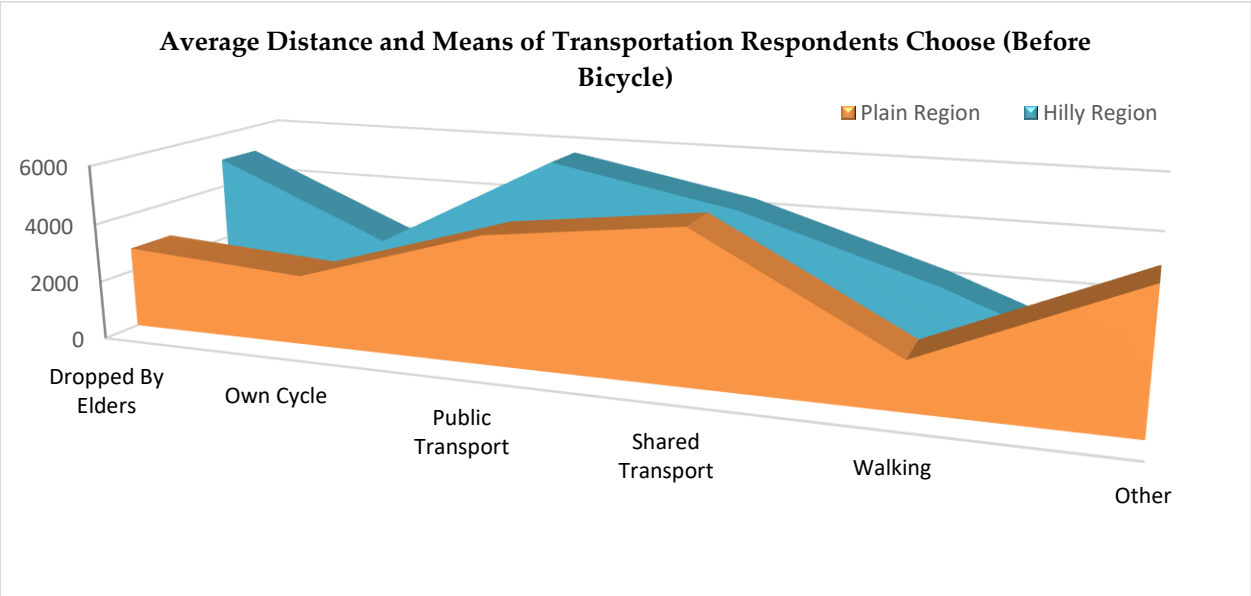
As per beneficiary survey data, the average distance between beneficiary house and school is 2291 meters (~2.3 KM). The distance is more in hilly regions in comparison with the plain region. **Before receiving the bicycle, overall, a major portion of the respondents preferred walking to school from their respective houses.** Despite having more than 3 KM as the average distance between schools and their homes, **before receiving bicycles, major portion of the beneficiaries from the hilly region preferred walking before receiving bicycles (79.5%), followed by 24.8 per cent respondents who used public transport as their regular mode of transportation**. **However, the consecutive figure for the plain region is 67.4 per cent and 14.9 per cent for walking and public transport respectively before receiving bicycles** (Annexure Table VII).

Figure 4.17 Region Wise Mode of Travel (Before Bicycle)



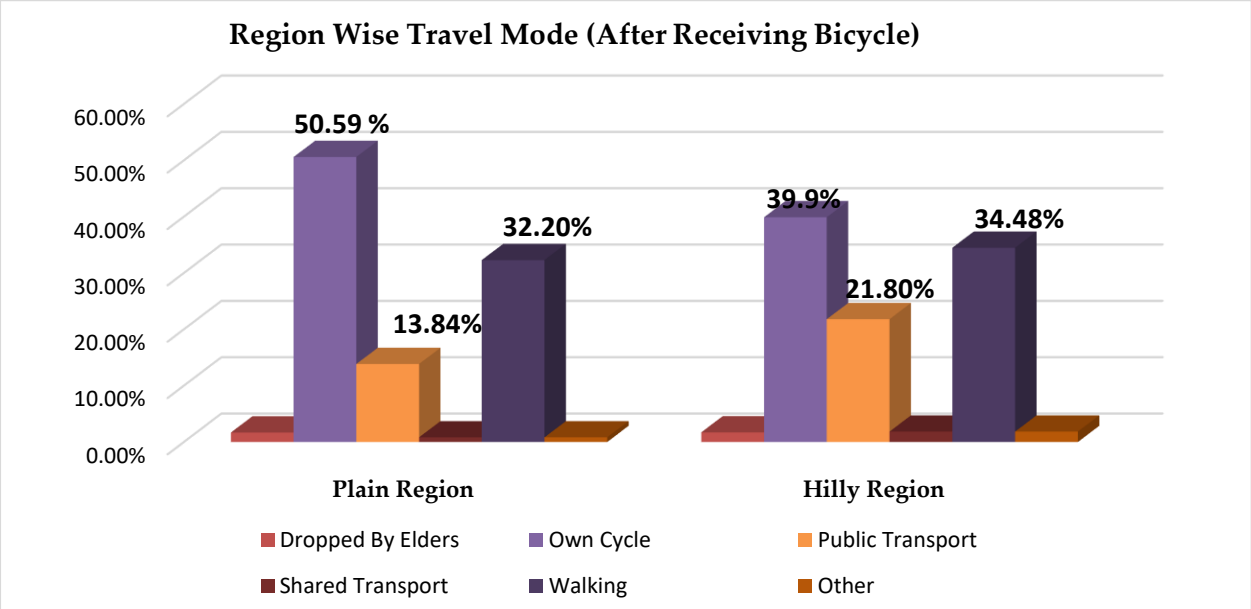
At the state level, the distance between schools and beneficiary house seems to be well within walkable range, however, taluk level/cluster level figures are quite different. As per the FGD with parents and SDMC members, there are villages which are around 8 to 10 KM away from the school or sometimes it is even more. Usually students from these villages use public transport or any other mode of transportation. Sometimes if the village is not well connected with public transport facility, the students are dropped by someone from the house up to certain distance where public transportation is available more frequently, and from there, they commute by public transport.

Figure 4.18 Region wise Average Distance and Means of Transportation



From the group discussion it was also found that some students had travelled in the bullock-cart to reach the school particularly in the northern districts like Gulbarga and Yadgir. Based on these de-segregated insights, the prevalent assumption that the mode of travels chosen by the individual respondents is associated with the amount of distance they travel is acceptable. Irrespective of the region (either plain or hilly), with increasing travel distance the respondents depended on public transport or shared mode of transport before receiving the bicycle.

Figure 4.19 Region Wise Mode of Travel (After Bicycle)



After receiving bicycle, larger portions of respondents preferred travelling in bicycle (49% of total respondents) rather than walking (32.6 %) or in public transport (15%) both in the plain and hilly region. The proportions of beneficiaries who walked and depended on public transport for their regular commute to school are higher in hilly regions than plain regions, which indicates the difficulty faced by the students of hilly regions (due to the bad road conditions combined with steep slopes) in riding bicycles.

Just as bicycles may be less useful for travelling long distances, they might also be of limited usefulness when the students live at very close proximity to the school. Parent FGD participants were asked whether bicycles were of any use for such children and whether they should be given to such children. Parents in Ankola Taluka of Uttar Kannada said that “it won’t be correct if we say that the students staying near to school don’t need bicycle as they might use it for other useful errands of the day.” Parents in Belgaum taluka, Belgaum district said that the bicycles should be given to all students since they induce a sense of responsibility among children to attend school and complete their studies. In Gulbarga taluka, Gulbarga district,

parents said that all the students should get cycle since the government should not discriminate among students based on any criteria. Parents in Yadgir taluka of the eponymous district felt that all the students should get the bicycle, since discrimination on the basis of criteria such as distance of home from school would lead to development of negativity among the students and create divides among them.

The usage of bicycles is linked not only to distance but also to terrain. Parent FGD participants in Madikeri taluka of Kodagu district pointed to low usage of bicycles for school travel, and expressed that the dominant share of students use buses and not cycles for school travel. The hilly terrain and steep slopes, aggravated by heavy rain were said to make it very difficult to use the bicycle.

From the discussion with parents and SDMC members, it is observed that the scheme had helped the female students more than male students under certain circumstances. Parent FGD participants in Belgaum taluka, Belgaum district and in Yadgir Taluka of Yadgir district opined that the bicycle distribution has benefitted girls more because a family would prefer to purchase a bicycle for the male child and they would be less interested to invest in a daughter's cycle.

5.2.2 Accessibility for Students of Hilly/Remote Areas

Around 15 per cent of the surveyed beneficiaries live in the hilly areas. Though all the eight sampled districts may not be considered as hilly regions however, some portion of students in each of the eight districts reside either in hilly region or in a very remote area. Further, beneficiaries of Kodagu, Uttara Kannada and Yadgir combined contribute around 83 per cent of total respondents in hilly region. Average house to school distance is 3.3 KM which ranged between 1.9 KM to 3.5 KM, and on an average a beneficiary spends around 61 minutes for travelling which ranged between 45 minutes in Belagavi and 86 minutes in Chitradurga.

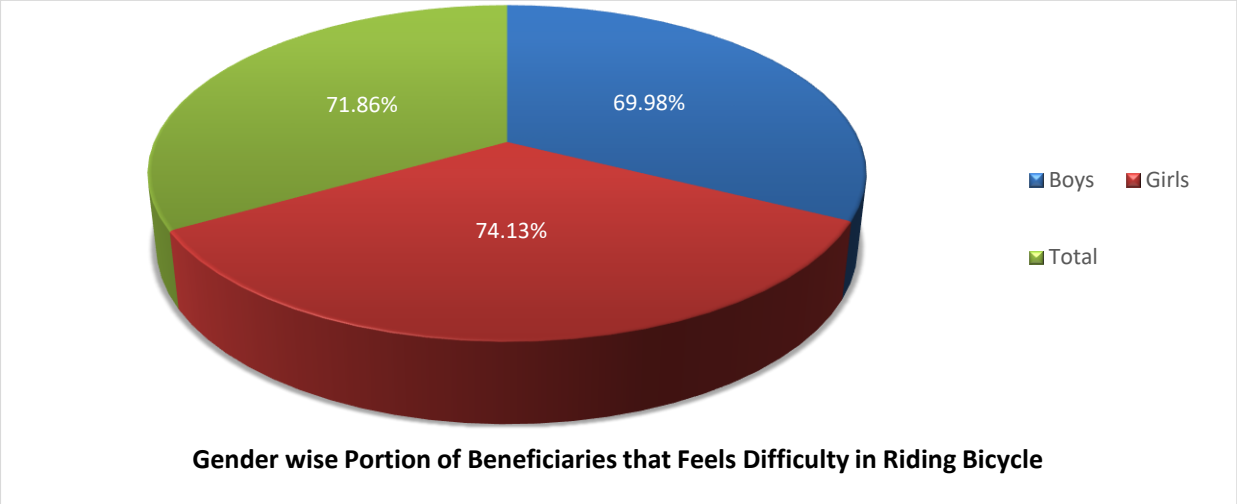
Table 4.19 District and Social Category wise No. of Students Residing in Hilly/Remote Area

Districts	SC	ST	OBC	GM	NA	Total
Bangalore	19(7)	6(11)	17(8)	17(17)	-	**59(9)**
Belagavi	3(3)	4(5)	9(3)	1(1)	-	**17(3)**
Chitradurga	11(5)	2(1)	5(2)	-	-	**18(3)**

Kalaburgi	12(5)	-	20(7)	2(3)	-	**34(5)**
Kodagu	74(38)	49(40)	93(38)	26(36)	-	**242(38)**
Mysuru	1	-	1	-	-	**2**
Uttara Kannada	36(31)	3(33)	168(35)	13(30)	3 (43)	**223(34)**
Yadgir	49(29)	26(25)	63(22)	22(36)	2(29)	**162(26)**
Grand Total	**205(14)**	**90(14)**	**376(16)**	**81(14)**	**5(14)**	**757(15)**

*Values in the parenthesis are percentages Source: Field Survey

Figure 4.20 Gender Wise Portion of Beneficiary Feeling Difficulty in Riding Bicycle



Further, **around 72 per cent of total surveyed beneficiaries in hilly/remote areas** (about 74.1% female & 69.8% male) **said that they face difficulty in riding bicycles due to the difficult terrain and sometime bad road conditions**. According to 18 per cent respondents, the roads between their house and school are very bad and filled with many potholes.

The difficulties faced by children in using the bicycle in hilly areas was also expressed by parents who took part in the FGD. FGD participants in Madikeri taluka of Kodagu district shared that the most students use buses and not cycles for school travel since the hilly terrain and steep slopes, aggravated by heavy rain were making it very difficult to use the bicycle.

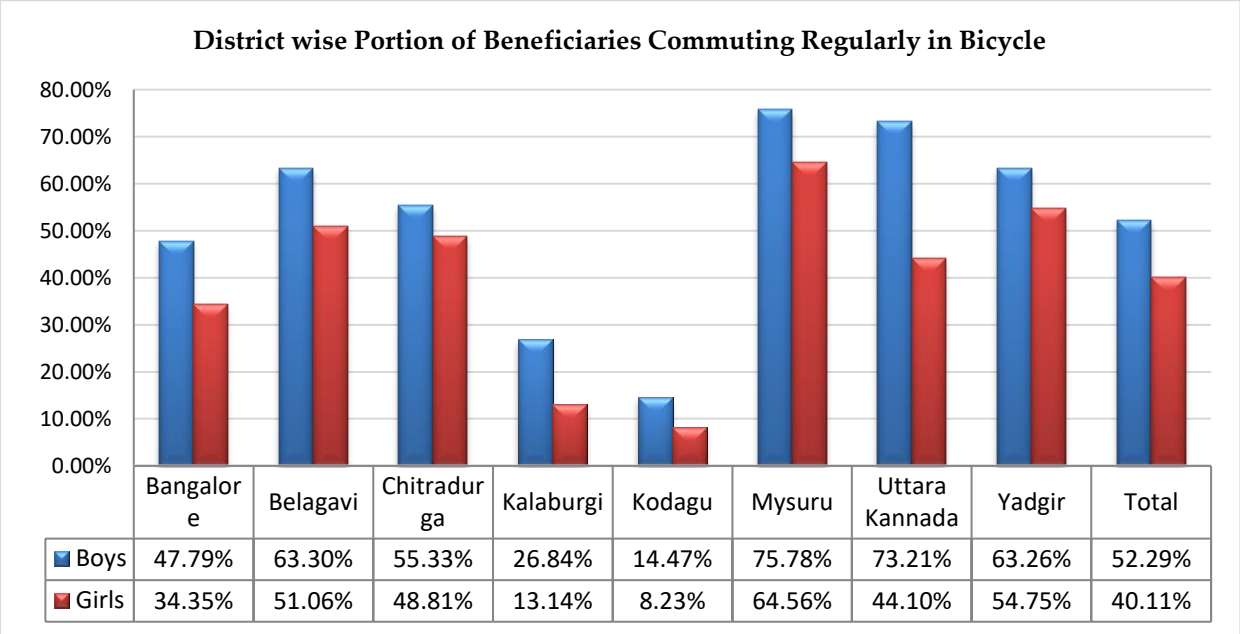
Approximately 72 percent of the respondent s from the hilly areas said they face difficulty in riding bicycle due to difficult terrain and bad road conditions. 27 percent of the respondents from the hilly areas don't bring the cycle to school at all.

5.2.3 Usage of Bicycle

Usage of bicycles is examined in this section in terms of usage for school commute and also in terms of usage for other purposes

5.2.3.1 Usage for School Travel

Figure 4.21 District Wise Portion of Beneficiaries Commuting Regularly in Bicycle



Only about 46.2 per cent of the total surveyed beneficiaries (40.1% girls and 52.3% boys) stated that they bring cycle regularly to the school, whereas the remaining 53.8 per cent said that very rarely do they commute in bicycle to the school. In all 4 social categories (Gen, OBC, SC and ST), less than 50% beneficiaries use bicycle regularly. Highest is for OBC (49.13%) and lowest is for SC(41.82%) (pl see Table XXXI in Annexure)

Table 4.20 Gender and Student Type wise Regular Use of Cycles

School/Hostel		Don't Use Regularly	Use Regularly	Total
Day Scholars	**Day scholar Total**	**2587(53.20)**	**2276(46.80)**	**4863**
	Boy	1136(46.96)	1283(53.04)	2419
	Girl	1451(59.37)	993(40.63)	2444
Social Welfare Hostel	**Social Welfare Hostel Total**	**155(65.96)**	**80(34.04)**	**235**
	Boy	83(61.03)	53(38.97)	136
	Girl	72(72.73)	27(27.27)	99

*Values in the Parenthesis are Percentages

It is also pertinent to examine the regularity of bicycle usage among the school day scholars and social welfare hostel students. The table above shows that the **school day scholars show relatively higher regular usage of bicycles (46.80%) compared to social welfare hostellers** (34.04%). While 40.63% girl day scholars regularly use bicycle for commute to school, only 27.27% girl social welfare hostellers do the same.

Further, among the 53.8 per cent beneficiaries that do not bring cycle regularly to school, around 14 per cent are residing in remote/hilly areas. **On the other hand, the proportion of female beneficiaries amongst those who bring bicycle to school regularly is lower across all the sampled districts, with Uttara Kannada having the highest gender gap** (male beneficiaries who bring cycle to school regularly are 66% higher in comparison with female beneficiaries who do so). Further, based on the survey data Kodagu has the lowest portion of respondents using bicycle regularly (14.5% Boys and 8.2% Girls) which is followed by Kalaburgi where the consecutive figures are 26.8 per cent and 13.4 per cent for male and female respondents respectively.

Amongst the surveyed respondents, a small number of 148 respondents said that they don't know how to ride a bicycle (out of which 91.2% are female respondents and 8.8% are male respondents). District wise breakup shows that a major portion of beneficiaries who don't know how to ride a bicycle are from Kodagu and Kalaburgi districts; both the districts combined comprise about 48 per cent respondents who don't know how to ride a bicycle (34% Kodagu and 14% Kalaburgi). Portion of female respondents who cannot ride a bicycle are higher in comparison with male respondents across the sampled districts. From district wise breakup, it is also observed that all the respondents of Mysuru and Belagavi who are not familiar with riding bicycle are female respondents.

It is pertinent to look at the frequency of using bicycle for commuting to school in a given week among the 46.2 per cent (2356) beneficiaries who said that they bring cycles regularly to school. Around 74.9 per cent male and 68.1 per cent female respondents said that they bring cycle every day, which is followed by 20.9 per cent respondents (18.9% Boys and 22.2% Girls) bringing cycles more than 3 days in a week. The next largest proportion (4.3%) is occupied by the cohort of students bringing cycle at least 3 days a week (3.8% male and 5% female respondents). Looking at the district-wise figures, it is obvious that Mysuru has the largest proportion of students (87%) who bring cycle to school every day, followed by Belagavi where around 85.7 per cent beneficiary students commute in bicycle every day**.** Further, it is also

observed that the proportion of beneficiaries who said that they bring cycle only one day in a week or only when it is not needed by the family member is lesser than 1 per cent for both male and female respondents.

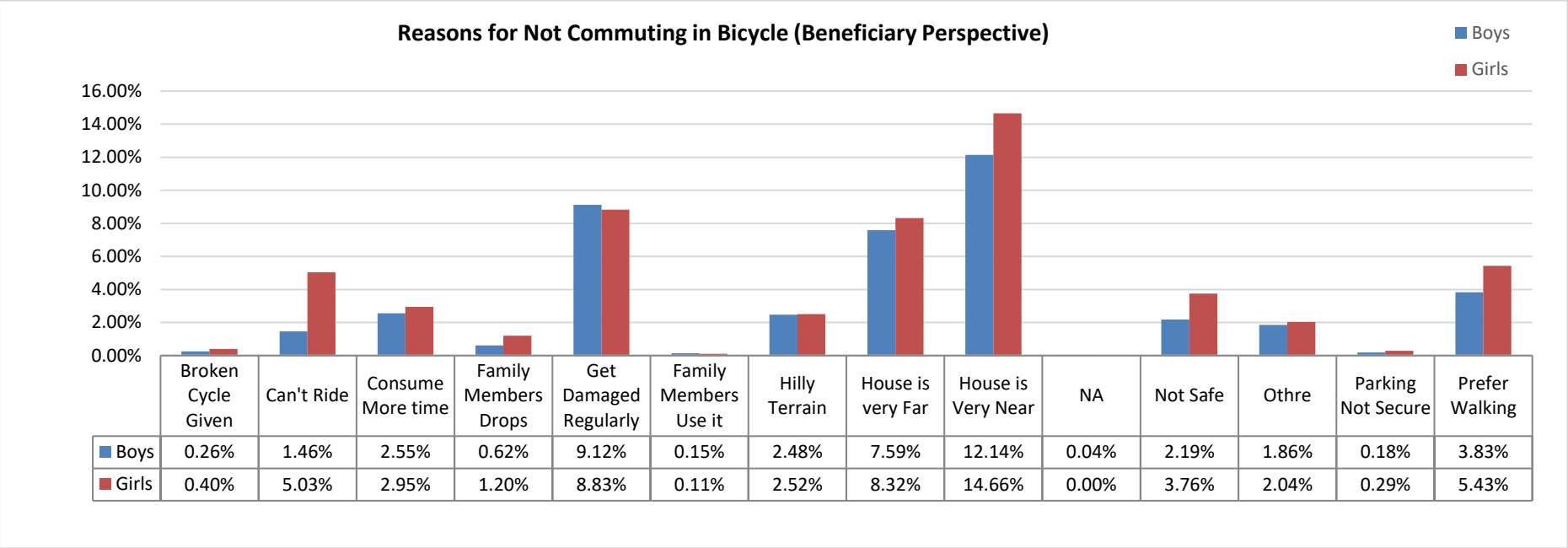
Table 4.21 District and Gender Wise Beneficiaries' Regularity of Using Bicycle for Commuting to School

District	Boy						Girl						Total
	Regularly	**1 Day a week**	**2 Days a week**	**3 Days a week**	**More than 3 Days a week**	**When Not needed by Family member**	**Regularly**	**1 Day a Week**	**2 Days a Week**	**3 Days a Week**	**More than 3 Days a week**	**When Not needed by Family member**	
Bangalore	124 (76.54)	3 (1.85)	3 (1.85)	10 (6.17)	22 (13.58)	-	70 (69.31)	9 (8.91)	1 (0.99)	6 (5.94)	14 (13.86)	1 (0.99)	**263**
Belagavi	168 (89.36)	-	-	1 (0.53)	19 (10.11)	-	138 (81.66)	1 (0.59)	4 (2.37)	4 (2.37)	22 (13.02)	-	**357**
Chitradurga	70 (43.48)	-	2 (1.24)	5 (3.11)	84 (52.17)	-	56 (34.15)	1 (0.61)	1 (0.61)	8 (4.88)	98 (59.76)	-	**325**
Kalaburgi	60 (65.93)	2 (2.20)	2 (2.20)	3 (3.30)	23 (25.27)	1 (1.10)	22 (53.66)	1 (2.44)	2 (4.88)	1 (2.44)	15 (36.59)	-	**132**
Kodagu	29 (63.04)	2 (4.35)	-	2 (4.35)	13 (28.26)	-	18 (69.23)	-	1 (3.85)	-	7 (26.92)	-	**72**
Mysuru	213 (87.30)	-	3 (1.23)	6 (2.46)	22 (9.02)	-	177 (86.76)	1 (0.49)	-	10 (4.90)	16 (7.84)	-	**448**
Uttara Kannada	187 (76.02)	2 (0.81)	6 (2.44)	12 (4.88)	39 (15.85)	-	81 (57.04)	1 (0.70)	21 (14.79)	16 (11.27)	23 (16.20)	-	**388**
Yadgir	150 (75.76)	-	5 (2.53)	12 (6.06)	31 (15.66)	-	133 (76.88)	-	3 (1.73)	6 (3.47)	31 (17.92)	-	**371**
Grand Total	**1001 (74.93)**	**9 (0.67)**	**21 (1.57)**	**51 (3.82)**	**253 (18.94)**	**1 (0.07)**	**695 (68.14)**	**14 (1.37)**	**33 (3.24)**	**51 (5.00)**	**226 (22.16)**	**1 (0.10)**	**2356**

*Values in the parenthesis are percentages

Source: Field Survey

Figure 4.22 Reasons for Not Commuting in Bicycle (Beneficiary Perspective)



	Broken Cycle Given	Can't Ride	Consume More time	Family Members Drops	Get Damaged Regularly	Family Members Use it	Hilly Terrain	House is very Far	House is Very Near	NA	Not Safe	Othre	Parking Not Secure	Prefer Walking
Boys	0.26%	1.46%	2.55%	0.62%	9.12%	0.15%	2.48%	7.59%	12.14%	0.04%	2.19%	1.86%	0.18%	3.83%
Girls	0.40%	5.03%	2.95%	1.20%	8.83%	0.11%	2.52%	8.32%	14.66%	0.00%	3.76%	2.04%	0.29%	5.43%

Looking into the reasons for beneficiaries not commuting in bicycle regularly, the largest portion of respondents (26.8%) said that as the house is very near, they don't commute in bicycle. This is followed by 17.9% respondents (9.1% Boys and 8.8% girls) who stated cycles getting damaged very frequently as the reason. Similarly, around 7.6 per cent boy and 8.3 per cent girl respondents quoted house being very far and hence preferring public transport as the prime reason for not commuting in bicycle. Further, around 5.5 per cent of the respondents said that as the bicycle consumes more time in travelling, they don't use cycle for regular commuting. Requirement of more time could be because many villages have roads meant only for walking which consumes comparatively less travel time in comparison with the travel time spent by an individual if s/he travels by regular roads meant for vehicles. Furthermore, a larger portion of beneficiaries from Kalburgi and Kodagu districts (districts where the lowest portion of beneficiaries uses bicycle regularly) said that bicycle being damaged frequently and their house being very near to the school are two important

reasons for not using bicycle regularly. On the other hand, around 15.8 per cent respondents of both the aforesaid districts said that house being very far from the school made them not to use bicycle regularly. In a similar fashion irrespective of distance and other difficulties, around 9.2 per cent beneficiary respondents preferred walking with friends instead of travelling either by cycle or by public transport. It was interesting to observe that around 21.4 percent respondents from Kalburgi district preferred walking with friend to the school, whereas the consecutive figure for Kodagu was only about 2.8 per cent. **A very small number of beneficiaries (7) mentioned family members usage of bicycle during school hours as reason for not regularly commuting to school in bicycle (0.15% boys and 0.11% girls mentioned such reason).** Social category wise details are given in Table XXXII in Annexure.

Table 4.22 Reasons for not commuting in Bicycle (Beneficiary Perspective)

Reasons	Bangalore	Belagavi	Chitradurga	Kalburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir	Total
Broken cycle given	1.08	1.11	0.99	0.19	1.25	0.00	0.00	0.00	**0.66**
Can't ride	9.46	7.01	4.64	2.70	8.90	4.74	4.44	9.69	**6.49**
Consume more time	3.78	2.95	9.93	5.59	6.05	9.47	5.56	1.16	**5.51**
Dropped by family member	3.78	1.85	2.65	1.16	0.53	1.58	1.85	2.33	**1.82**
Gets damaged frequently	5.14	10.70	34.11	24.28	22.78	14.74	6.67	15.89	**17.94**
Given for family use	0.00	0.37	0.00	0.39	0.00	2.11	0.00	0.00	**0.26**
Hilly terrain	5.68	1.85	1.66	1.35	11.57	1.58	7.41	4.26	**5.00**
House is far away	23.24	8.86	9.60	15.80	15.84	7.89	29.6	12.02	**15.90**
House is very nearer	37.57	45.02	22.52	22.54	15.12	41.05	16.7	31.40	**26.81**
NA	0.00	0.37	0.00	0.00	0.00	0.00	0.0	0.00	**0.04**

Riding bicycle is nor safe	3.24	1.85	3.97	1.93	14.23	7.89	5.6	5.43	**5.94**
Other	0.54	9.96	3.31	2.50	0.71	6.84	12.2	1.94	**3.90**
Parking not secure	1.08	0.00	0.33	0.19	0.18	0.53	0.37	1.55	**0.47**
Prefer walking	5.41	8.12	6.29	21.39	2.85	1.58	9.63	14.34	**9.26**

Source: Field Survey

Table 4.23 Reasons for not commuting in Bicycle (Principal Perspective)

Districts	Puncture	Not Well	School Nearer	Prefer Walking with friends	Can't Ride	Hilly Terrain	Family members use it	Others
Bangalore	28(93.33)	18(60.00)	17(56.67)	16(53.33)	6(20.00)	6(20.00)	3(10.00)	1(3.33)
Belagavi	26(86.67)	28(93.33)	23(76.67)	19(63.33)	16(53.33)	6(20.00)	15(50.00)	1(3.33)
Uttara Kannada	18(60.00)	14(46.67)	12(40.00)	11(36.67)	0(0.00)	14(46.67)	0(0.00)	1(3.33)
Chitradurga	13(40.63)	15(46.88)	20(62.50)	22(68.75)	2(6.25)	2(6.25)	12(37.50)	4(12.50)
Kalaburgi	20(66.67)	9(30.00)	5(16.67)	6(20.00)	2(6.67)	4(13.33)	2(6.67)	1(3.33)
Kodagu	13(41.94)	14(45.16)	6(19.35)	1(3.23)	1(3.23)	16(51.61)	0(0.00)	1(3.23)
Mysuru	27(90.00)	25(83.33)	15(50.00)	3(10.00)	0(0.00)	1(3.33)	1(3.33)	3(10.00)
Yadgir	29(96.67)	20(66.67)	18(60.00)	16(53.33)	4(13.33)	3(10.00)	1(3.33)	0(0.00)
Grand Total	**174(71.60)**	**143(58.85)**	**116(47.74)**	**94(38.68)**	**31(12.76)**	**52(21.40)**	**34(13.99)**	**12(4.94)**

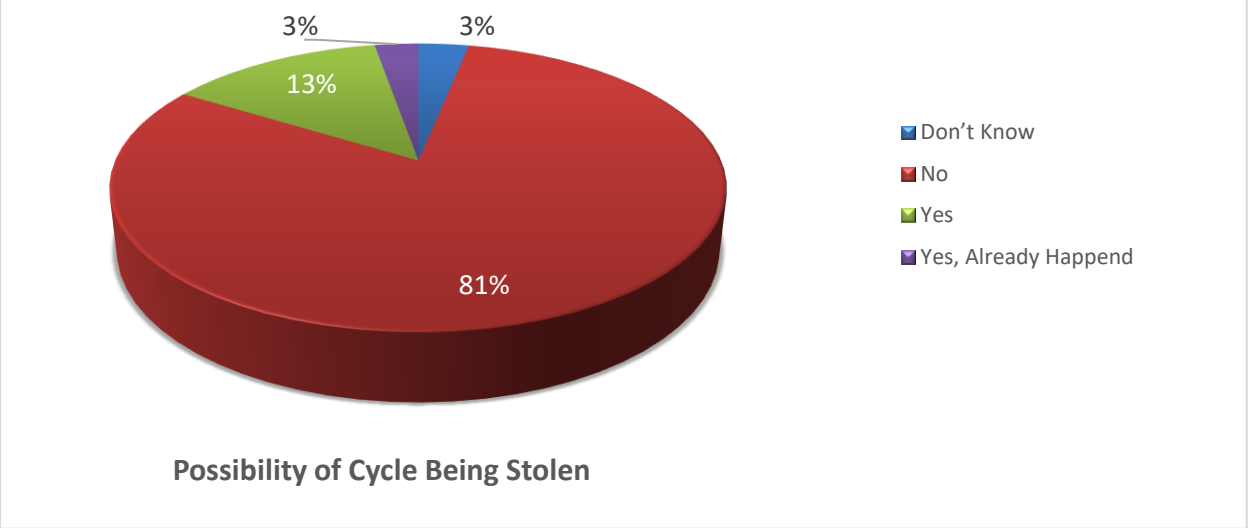
*Values in the parenthesis are percentages Source: Field Survey

Principals also expressed their perspective on why students don't commute to school in bicycles. According to the school principals, the prime reason for not bringing the cycle is the cycles being damaged. According to the data, around 71.6 per cent principals said that the students don't bring cycles if they are punctured or damaged. Similarly, around 58.8 per cent of the respondent principals quoted students being unwell as the reason for not commuting in the bicycle. Whereas, 47.7 per cent of them said that since the school is near (within walkable range) the students walk to school. However, 38.6 per cent principals quoted that irrespective of distance and road conditions between houses to school, some portion of beneficiary students also prefer walking with friends rather than riding bicycle or travelling thorough any other means. Similarly, 21.4 per cent respondent principals said that the hilly terrain could also be a reason for students not commuting in bicycle.

Approximately 46.2 percent of the respondents bring bicycle regularly to the school with 17.9 percent of the respondents quoting cycles getting damaged very frequently as the reason for not bringing them to school regularly. On an average, an individual needs to spend around 100 rupees per month to keep the cycle running.

From the discussion with parents and SDMC members, one of the major reasons for not commuting in bicycle turn out to be cycles getting damaged regularly which in turn becomes an extra burden for the parents to get it repaired every time. Further, respondents house being very near to the school had also been a reason for the beneficiary to not bring cycle to school regularly. From the parents' discussion, it has also been noted that, in the hilly regions like Kodagu, due to its extreme slope and sudden heights, it becomes very difficult for the child to ride bicycle and hence majority of them travel by public transport or by shared mode of transportation. In the case of students who are staying far away from the school, they prefer a combination of cycling and public transport for daily commute, i.e., up to a certain distance the students travel by the cycle (usually from their home till the bus stop) than they use public transport to reach school.

Figure 4.23 Beneficiaries' Perception about Possibility of Cycle Being Stolen



As per beneficiary responses, it is found that around 3 per cent of the total surveyed schools don't have parking places and as a result, the students need to park their respective cycles in nearby free spaces or nearby houses or sometimes even on the road which is not always safe as there is always a possibility of the cycle being stolen from such parking places. As per the survey data, around 13 per cent of the respondent students said that yes, there is always a possibility of the cycle being stolen from the parking place and 3 per cent of them said that similar incidents had already happened and hence there is a high risk that the cycle can be stolen from the parking place.

Table 4.24 District and Location wise Road Condition

District	Plain region				Hilly region				Total
	Good, Fully Tarred	Tarred, with Potholes	Only Some part is tarred	Not Tarred	Good, Fully Tarred	Tarred, with Potholes	Only Some part is tarred	Not Tarred	
Bangalore	452 (78.75)	99 (17.25)	18 (3.14)	5 (0.87)	49 (83.05)	6 (10.17)	3 (5.08)	1 (1.69)	**633**
Belagavi	529 (86.58)	50 (8.18)	30 (4.91)	2 (0.33)	13 (76.47)	3 (17.65)	-	1 (5.88)	**628**
Chitradurga	550 (90.31)	34 (5.58)	16 (2.63)	9 (1.48)	16 (88.89)	-	2 (11.11)	-	**627**
Kalaburgi	530 (85.90)	57 (9.24)	17 (2.76)	13 (2.11)	27 (79.41)	7 (20.59)	-	-	**651**
Kodagu	272 (69.39)	109 (27.81)	10 (2.55)	1 (0.26)	158 (65.29)	74 (30.58)	8 (3.31)	2 (0.83)	**634**
Mysuru	483 (75.94)	142 (22.33)	11 (1.73)	-	2 (100.00)	-	-	-	**638**
Uttara Kannada	293 (67.36)	42 (9.66)	97 (22.30)	3 (0.69)	160 (71.75)	39 (17.49)	21 (9.42)	3 (1.35)	**658**
Yadgir	343 (73.45)	36 (7.71)	75 (16.06)	13 (2.78)	140 (86.42)	6 (3.70)	12 (7.41)	4 (2.47)	**629**
Grand Total	**3452 (79.52)**	**569 (13.11)**	**274 (6.31)**	**46 (1.06)**	**565 (74.64)**	**135 (17.83)**	**46 (6.08)**	**11 (1.45)**	**5098**

*Values in the parenthesis are percentages

Source: Field Survey

Road condition between beneficiary house and school seems to have a considerable association with beneficiaries commuting in bicycle regularly. According to the data, around 79.5 per cent beneficiaries residing in plain regions and 74.6 per cent respondents from hilly regions said that the road condition is good and the entire road is tarred. Whereas, 17.8 per cent hilly region residents and 13.1 per cent residents from plain region said that even though the entire road is tarred, it is filled with many potholes which in turn makes it difficult for the students to ride bicycles. Similarly, according to 6.3 per cent respondents, only some part of the road is tarred whereas the remaining is mud road. Furthermore, around 1 per cent respondents each from the hilly region and plain region responded saying that the entire road from their respective house to school is made of mud, which in turn make it very difficult for the students to cycle regularly. During the rainy season it becomes much more difficult for the respondents to travel either in the bicycle or by foot.

Road Condition	**Bringing Cycle Regularly**	
	Yes	**No**
Good, Fully Tarred	1990 (1856)	2027 (2161)
Tarred with Potholes	222 (325)	482 (379)
Partially Tarred	122 (148)	198 (172
Completely Mud Road	22 (26)	35 (31)
H_0: There is no association between road condition and beneficiary using bicycle regularly. **H_1:** There is significant association between road condition and beneficiary using bicycle regularly.		
Chi-Squared Calculated Value: 89 **Chi-Squared Table Value:** 7.81 at 95 per cent confidence level		
* Values in the Parenthesis are Expected Frequencies		

Further, chi-square test of association for 'MxN' group is carried out to test the ***null hypothesis that there is no association between road condition and beneficiary commuting in bicycle, against the alternative hypothesis saying that there is a significant association between road condition and beneficiary using bicycle regularly.*** Based on the test result, it can be concluded that beneficiary commuting in bicycle regularly is directly related to road condition between beneficiary houses and school, as the null hypothesis is rejected with 95 per cent confidence level.

Parent FGD participants also shed light on the reasons for usage or non-usage of bicycles. The expressed difficulties with respect to usage and consequent low usage in hilly terrains such as Kodagu has already been mentioned in this chapter. Even in non-hilly areas, it was difficult to use the bicycle during rains. In Ankola taluka of Uttar Kannada, a minority of students were said to be travelling from very far and also on uneven and unmade roads, because of which they were not using the bicycle regularly. Also, because of coastal area and humidity, bicycles tend to rust easily and hence students don't use them regularly. In the same taluka, participants said that the cycle was not of any use for those living in small islands in the sea. In Kumta, Uttar Kannada, as expressed by parent FGD participants, a small share of students were using the bicycle to travel only up to the bus stand, after which they parked the cycle near the bus stand and took the bus to school.

Parents across the board said that girls were not able to use the cycle during their menstrual periods. In Chittapur taluka of Gulbarga district, parents said that students were using the bicycle to travel to school barring days when the bicycle was broken down and being repaired. In Belgaum taluka of the eponymous district, some students were using the bus to travel to school because of the bus connectivity recently made available because of the construction of the ring road. Some students who have younger brother or sister studying in middle school come by bus with their sibling because they consider it unsafe to double ride in the bicycle. For some students staying near the school, there was less incentive to repair the broken-down bicycle compared to those staying further away for whom the bicycle was more needed for school travel. In Yadgir taluka of the eponymous district, parents said that many students were coming by bus, since the school came under the Taluka Panchayat and the students had bus passes.

From the parents' FGD in Belgaum taluka of Belgaum district, it became known that boys sometimes find it easier to use the bicycle compared to girls because boys find it easier to get the cycles repaired at a cycle shop in the event of mechanical failures (on the way to school). Girls, on the other hand, have to go to some known person's house, park the cycle there and then come to school.

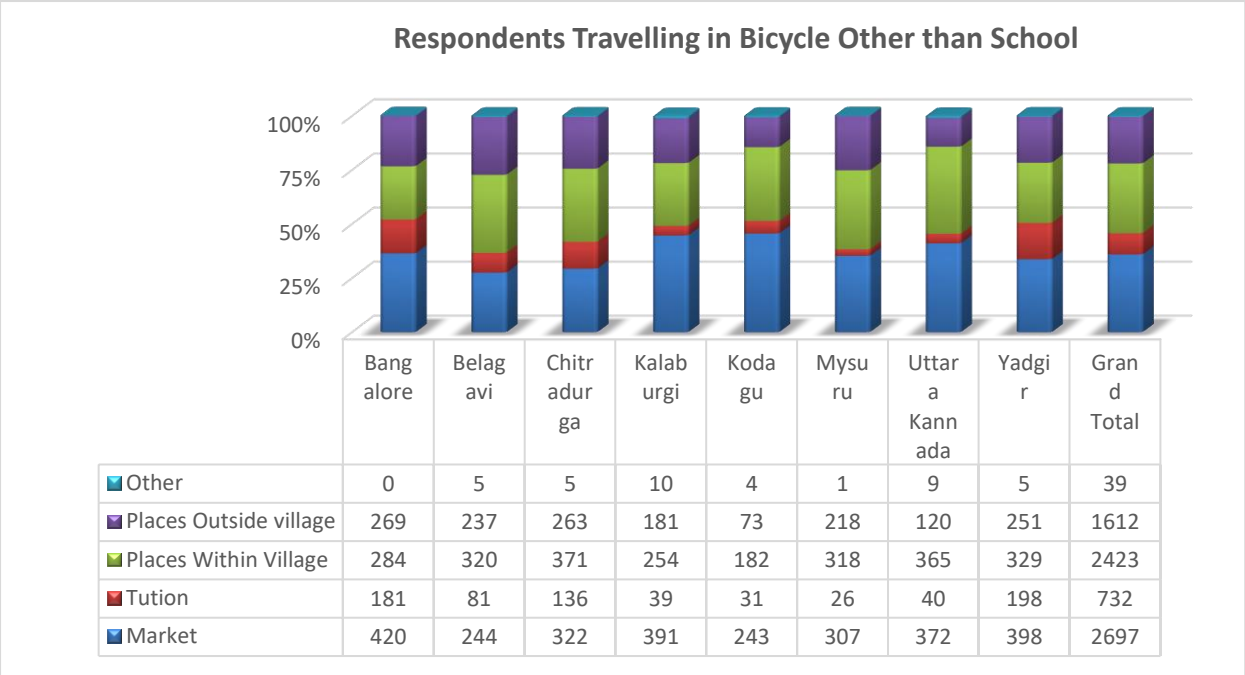
In Shahapur taluka, Yadgir, parents shared that many students of class 9^{th} uses the cycle regularly however only few students of class 10^{th} use the cycle, because of the deteriorating quality and decision by parents not to repair the cycle. The bicycle was however helpful for

those students staying 5-6 kms away from the school, since the bus services were not up to the mark.

5.2.3.2 Usage for Purposes other than school commute

Based on the survey responses, beneficiaries use bicycle in travelling to other places as well (apart from school travel). According to the data, most of them said that they travel to market (2697 respondents) followed by 2423 respondents who said that they use bicycle for travelling to places such as friend's house play-ground etc., which are within the village. Furthermore, around 1612 respondents responded saying that they use the bicycle to visit places such as relatives' house which are outside the respondent's village.

Figure 4.24 District Wise Beneficiary Travelling Places



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir	Grand Total
Other	0	5	5	10	4	1	9	5	39
Places Outside village	269	237	263	181	73	218	120	251	1612
Places Within Village	284	320	371	254	182	318	365	329	2423
Tution	181	81	136	39	31	26	40	198	732
Market	420	244	322	391	243	307	372	398	2697

The parent FGD responses indicated that bicycles were sometimes used for non-school travel such as:

- For going to tuition classes
- Going to the farm
- Going to friends and relatives houses
- Market visit

It was expressed in one FGD that even those who live very near the school (and wouldn't need to use bicycle for school travel) use bicycle for other travel like going to tuitions. In some FGDs it was stated that siblings were also using the bicycle (though other family members were not).

Table 4.25 District wise Use of Bicycle (Other than Beneficiary)

District	Mostly father	Mother	Brother	Elder sister	Other relatives	Total
Bangalore	332 (41.92)	78 (9.85)	215 (27.15)	138 (17.42)	29 (3.66)	**792**
Belagavi	121 (27.38)	3 (0.68)	214 (48.42)	90 (20.36)	14 (3.17)	**442**
Chitradurga	66 (23.49)	(0.00)	127 (45.20)	85 (30.25)	3 (1.07)	**281**
Kalaburgi	42 (9.38)	7 (1.56)	246 (54.91)	141 (31.47)	12 (2.68)	**448**
Kodagu	23 (6.07)	(0.00)	213 (56.20)	131 (34.56)	12 (3.17)	**379**
Mysuru	169 (39.95)	1 (0.24)	106 (25.06)	69 (16.31)	78 (18.44)	**423**
Uttara Kannada	121 (48.79)	2 (0.81)	91 (36.69)	25 (10.08)	9 (3.63)	**248**
Yadgir	240 (31.25)	83 (10.81)	300 (39.06)	126 (16.41)	19 (2.47)	**768**
Grand Total	**1114 (29.46)**	**174 (4.60)**	**1512 (39.99)**	**805 (21.29)**	**176 (4.65)**	**3781**

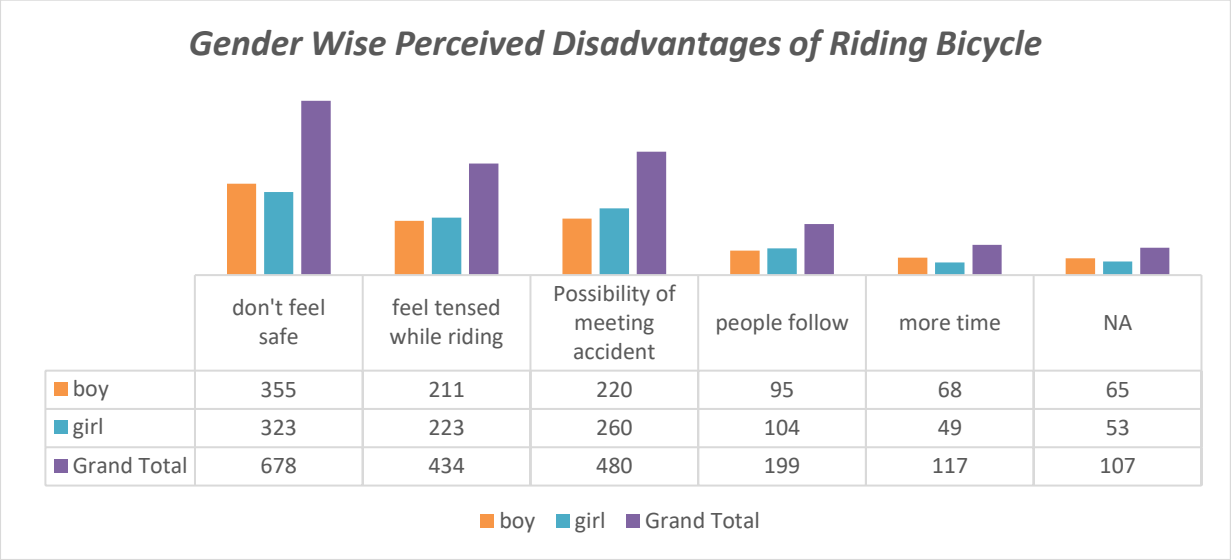
*Values in the Parenthesis are Percentages Source: Field Survey

The cycles are not only used by the beneficiaries themselves; perhaps, it is also used by beneficiary family members. However, priority is first given to the beneficiary need. Based on the beneficiary survey data, around 45 per cent of the respondents said that their family members use the bicycle whenever they need it. When it comes to asking permission of the respondents before using the cycle, quite a high number of respondents (around 67%) nodded positively saying that family members ask/ inform the respondents before using the bicycle. Further, looking at the persons using the cycle, it can be seen from the above table that 1512 (39.9%) respondents say that the cycles are majorly used by their brother followed by father (1114 respondents). Further, according to 805 respondents (21.29%) the cycles are used by respondents' elder sisters as well. Similarly, according to 176 respondents, if not the immediate family members, then cycles are used by some other relatives such as uncles or cousins or nearest neighbours. Frequent usage of bicycles by adult members who are of heavier body weight may naturally aggravate the wear and tear of bicycles.

5.2.3.3 Safety Issues in riding bicycles and disadvantages of riding bicycles

In addition to the regular usage of bicycle by the students, attention should also be given towards their safety issues. According to the responses recorded, around 20.8 per cent respondents agreed to the statement that there exist certain disadvantages in riding bicycle though there exist no gender-wise variations in the same. However, at the district level, 6 per cent respondents each from Bangalore, Kalaburgi and Yadgir district said that there exist certain disadvantages whereas the corresponding portion of respondents from other districts are either only 1 per cent or even lesser.

Figure 4.25 Gender Wise Perceived Disadvantages of Riding Bicycle (Beneficiary Perspective)



	don't feel safe	feel tensed while riding	Possibility of meeting accident	people follow	more time	NA
boy	355	211	220	95	68	65
girl	323	223	260	104	49	53
Grand Total	678	434	480	199	117	107

According to the survey data, 355 boy and 323 girl respondents said that they feel riding bicycle is not safe as there is always a possibility of falling. Similarly, 211 male respondents and 223 female respondents quoted that they are always tensed while riding the cycle, which may lead to falling down. 220 boy respondents and 260 female respondents spoke of possibility of meeting with an accident. Similarly, 49 female respondents and 68 male respondents said that travelling in bicycle consumes more time (reasons for the same have already been discussed while discussing the reasons for not commuting in bicycle regularly). In the same fashion, 199 respondents also quoted that they are followed by strangers whenever they travel alone in the cycle, which in turn leads to students getting tensed while riding. Further, according to the surveyed principals, main disadvantages of riding bicycles are that students generally go for roaming after school hours instead of going home. The students also compete among

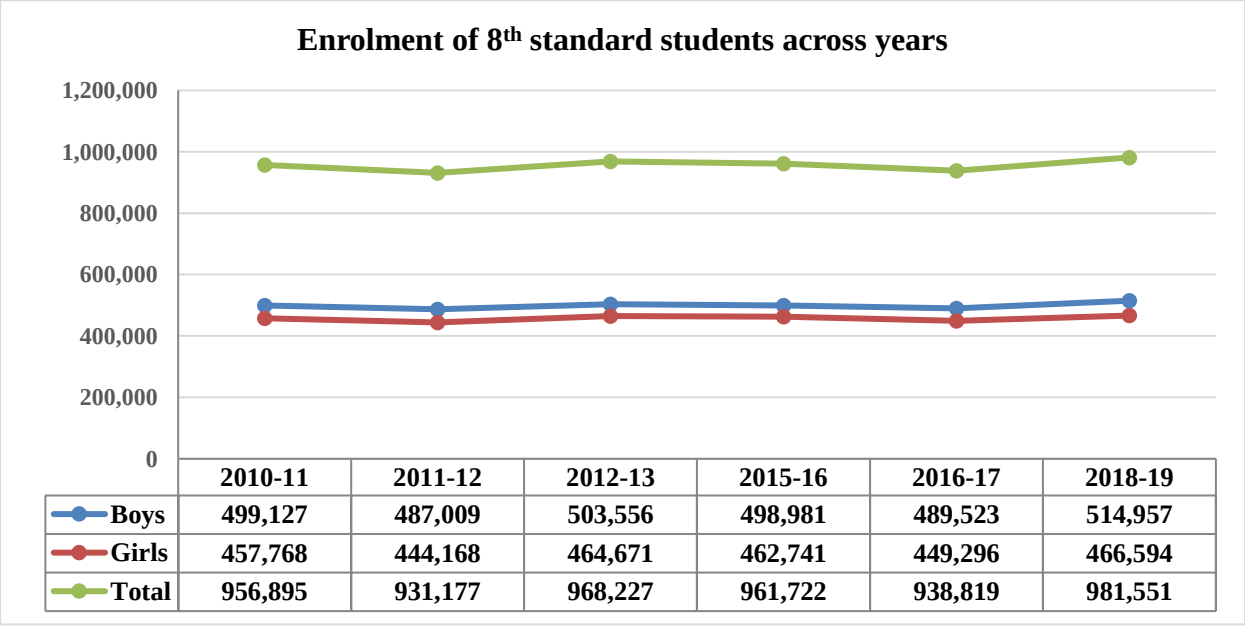
themselves (male respondents) and may fall down and also due to the heavy traffic on the road, there is always a possibility of meeting with an accident if the students show any negligence. Further, there is always a possibility of girl student being harassed as sometimes they travel alone. Further, the beneficiary students feel that travelling in groups, travelling with male friends, or with someone older can help the students in overcoming disadvantages.

5.3 Enrolment, Attendance, and Regularity

As per UDISE annual analytical report, at the state level, annual enrolment of total students in secondary school has shown a consistently increasing trend over the last 6 academic years. According to the data, annual increment rate is 4 per cent for class 8 (4% for Boys and 3% for Girls), 7 per cent for class 9 (8% Boys & 7% Girls) and the consecutive figure for class 10 is 14 per cent both for boys and girls.

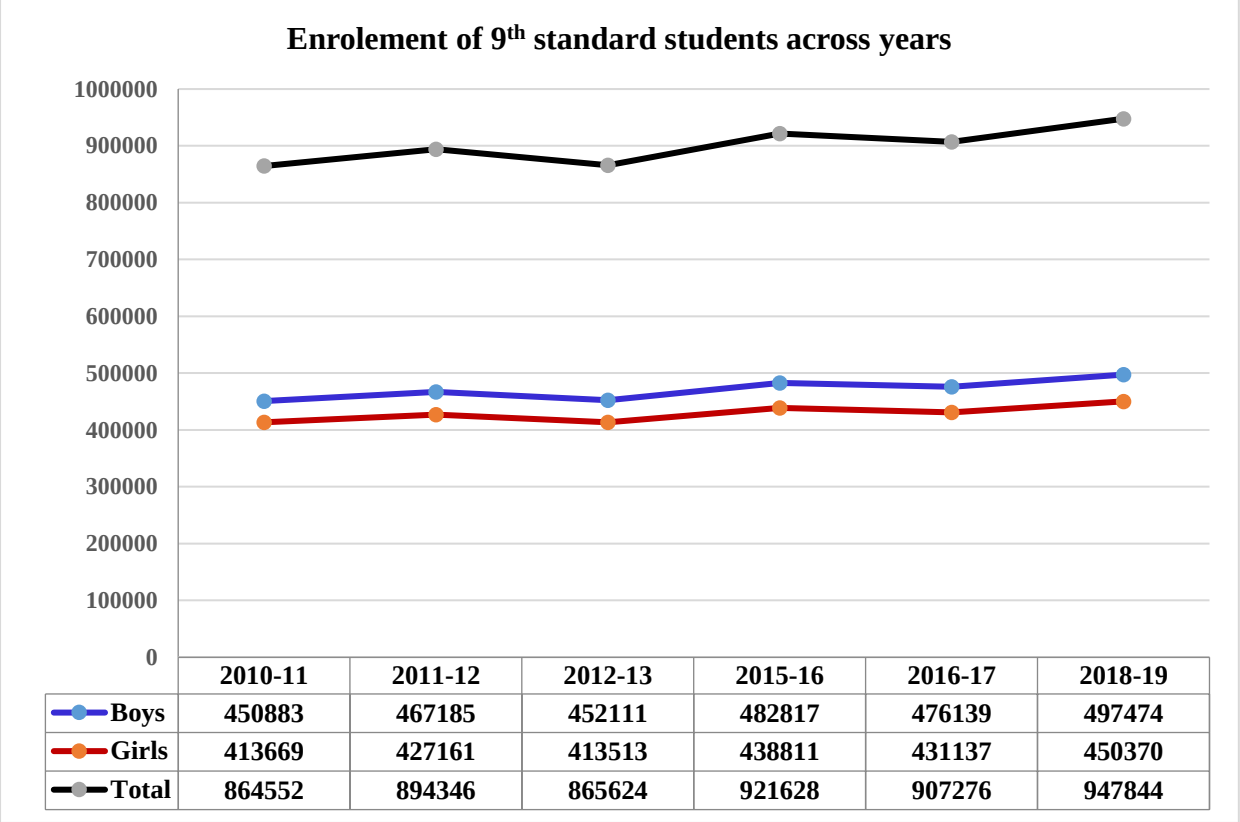
Muralidharan and Prakash in their study of Bihar showed that being in a cohort that is exposed to the Cycle program increased girls' enrolment in secondary school by 30 per cent and also reduced the gender gap in age-appropriate secondary school enrolment by 40 per cent (Muralidharan & Prakash, 2013). However, in Karnataka, the gender gap in enrolment was 25 per cent for class 8 and 13 percent for class 9.

Figure 4.26 Enrolment of 8th Standard Students across Years



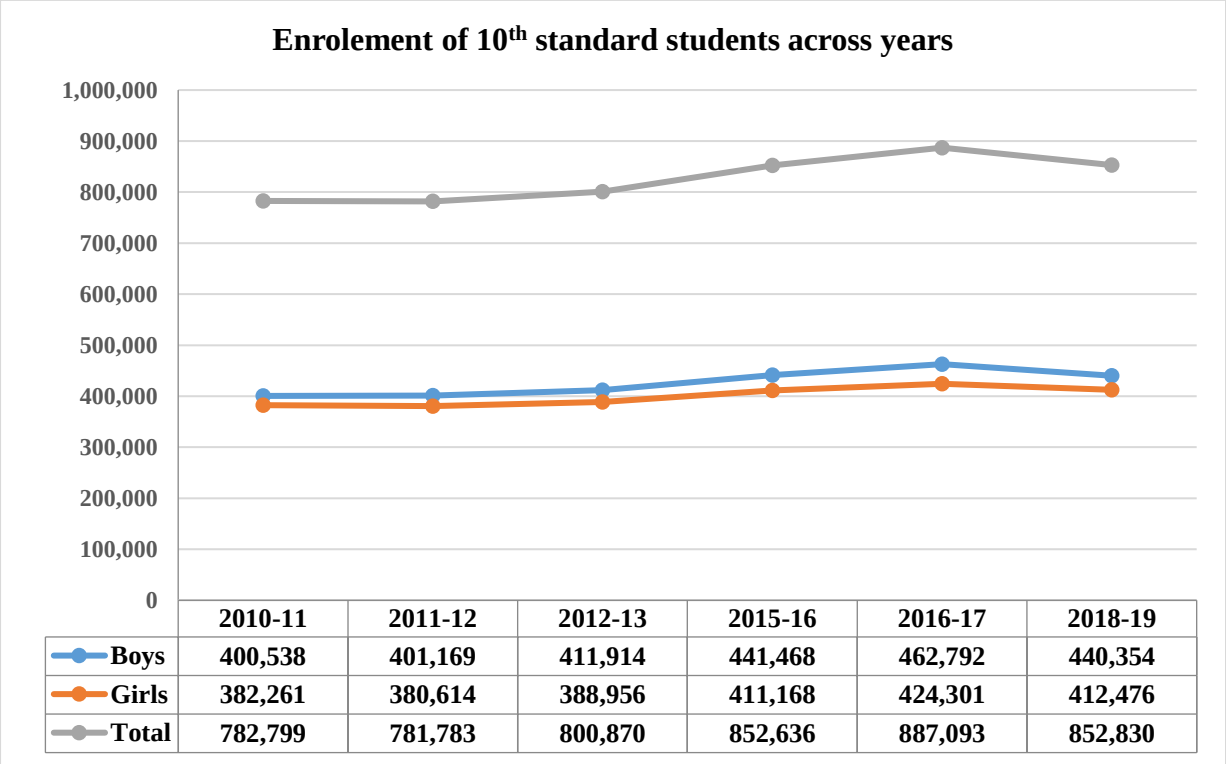
	2010-11	2011-12	2012-13	2015-16	2016-17	2018-19
Boys	499,127	487,009	503,556	498,981	489,523	514,957
Girls	457,768	444,168	464,671	462,741	449,296	466,594
Total	956,895	931,177	968,227	961,722	938,819	981,551

Figure 4.27 Enrolment of 9th Standard Students across Years



	2010-11	2011-12	2012-13	2015-16	2016-17	2018-19
Boys	450883	467185	452111	482817	476139	497474
Girls	413669	427161	413513	438811	431137	450370
Total	864552	894346	865624	921628	907276	947844

Figure 4.28 Enrolment of 10th Standard Students across Years



	2010-11	2011-12	2012-13	2015-16	2016-17	2018-19
Boys	400,538	401,169	411,914	441,468	462,792	440,354
Girls	382,261	380,614	388,956	411,168	424,301	412,476
Total	782,799	781,783	800,870	852,636	887,093	852,830

Table 4.26 Districts wise Principals' Perception about Improving Enrolment

Districts	Category of Improved Enrolment			Total
	Yes, Great Extent	Yes, Some extent	Marginally or Not at all	
Bangalore	29(96.67)	0(0.00)	1(3.33)	**30**
Belagavi	27(90.00)	0(0.00)	3(10.00)	**30**
Chitradurga	32(100.00)	0(0.00)	0(0.00)	**32**
Kalaburgi	19(63.33)	4(13.33)	7(23.33)	**30**
Kodagu	22(70.97)	3(9.68)	6(19.35)	**31**
Mysuru	29(96.67)	0(0.00)	1(3.33)	**30**
Uttara Kannada	28(93.33)	0(0.00)	2(6.67)	**30**
Yadgir	26(86.67)	0(0.00)	4(13.33)	**30**
Grand Total	**212(87.24)**	**7(2.88)**	**24(9.88)**	**243**

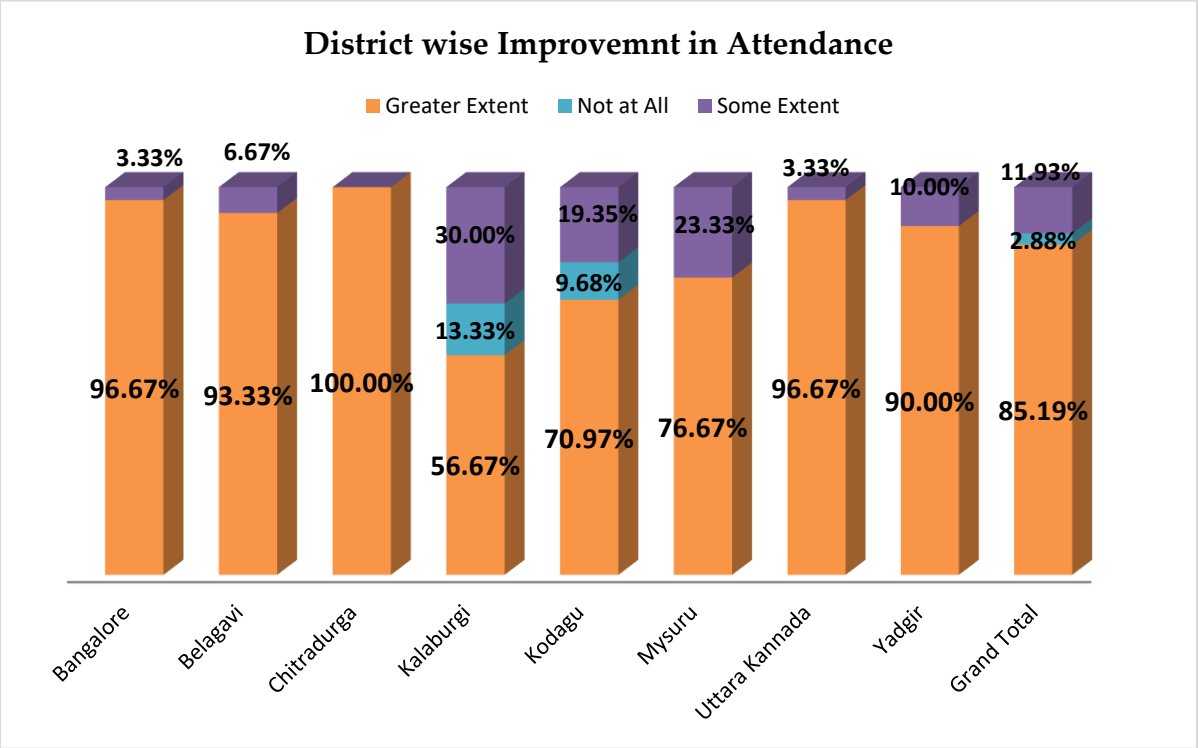
*Values in the Parenthesis are Percentages Source: Field Survey

Further, according to survey data, about 87.2 per cent respondent principals attributed bicycle as a reason for improving enrolment at the secondary schools to a great extent. However, 2.9 per cent of them mentioned that bicycle program has improved the enrolment by some extent, whereas 9.9 per cent of the total surveyed respondent principal said the total enrolment has increased only marginally or not at all on account of bicycles.

According to the respondents' parents and SDMC members the dropout rate had decreased in the past 7 to 8 years. But the reason is not the bicycle alone. Providing free food in the afternoon had also made an impact in reducing dropout; many children whose parents are daily wage labourers and migrant labourers go to school regularly for the afternoon food.

With improving total enrolment, bicycle had also made a significant impact on improving attendance. As per the surveyed data, about 85.1 per cent school's principal said bicycle has improved attendance to a greater extent, whereas 2.8 per cent respondent principals said attendance has improved to some extent as a result of bicycle program.

Figure 4.29 District wise Improvement in Attendance

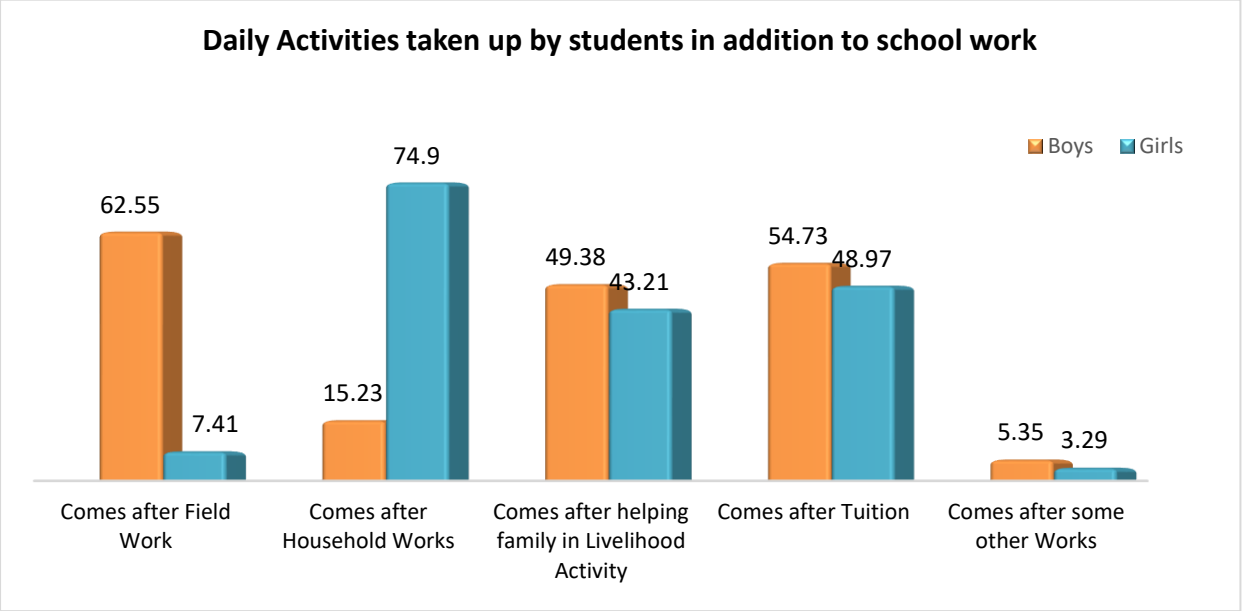


Similarly, 11.9 per cent of total surveyed principals attributed bicycle program as the reason for improving attendance marginally or not at all. However, the principals' view should be interpreted only as a perception and not factual reality, since students have reported that missing classes after receiving bicycle reduced from two classes per month to one class per month, which may be interpreted as a marginal improvement.

Previous studies show that socio-economic condition of any family has a direct influence on the education of their children and also responsibilities away from schools are shown to have a serious impact on the school attendance and attendance rates are indirectly proportionate to after school hours of work (Reich et al, 2013). Amongst our sampled data about 92 per cent of the total beneficiary belongs to BPL families and farming activities are the major source of their family earnings which made the beneficiary to involve themselves in various household chores and income-generating activates to support the family. According to the data, about 62.5 per cent of boys are involved with the day to day field activities whereas around 74.9 per cent girls are involved with household chores. Similarly, about 49.3 per cent of total boys and 43.2 per cent of the total sampled girls are helping their families in income generation activities of their families. According to the school principals due to the bicycle program, all these students

are able to reach school on time and are able to maintain appropriate attendance even after finishing all the extra hour of works.

Figure 4.30 Activities taken by Students



With increasing attendance average number of missed classes also had come down. **Before receiving cycle, on an average, irrespective of gender, individual beneficiaries missed 2 classes per month, however, the consecutive figure had come down to one or even less than one class per month**. Parents' ill-health, ill-health of beneficiary themselves, household chores, missing public transports etc., are the few important reasons mentioned by the respondent beneficiary for missing schools.

Table 4.27 Gender wise Reasons for Missing School Before and After Receiving Bicycle

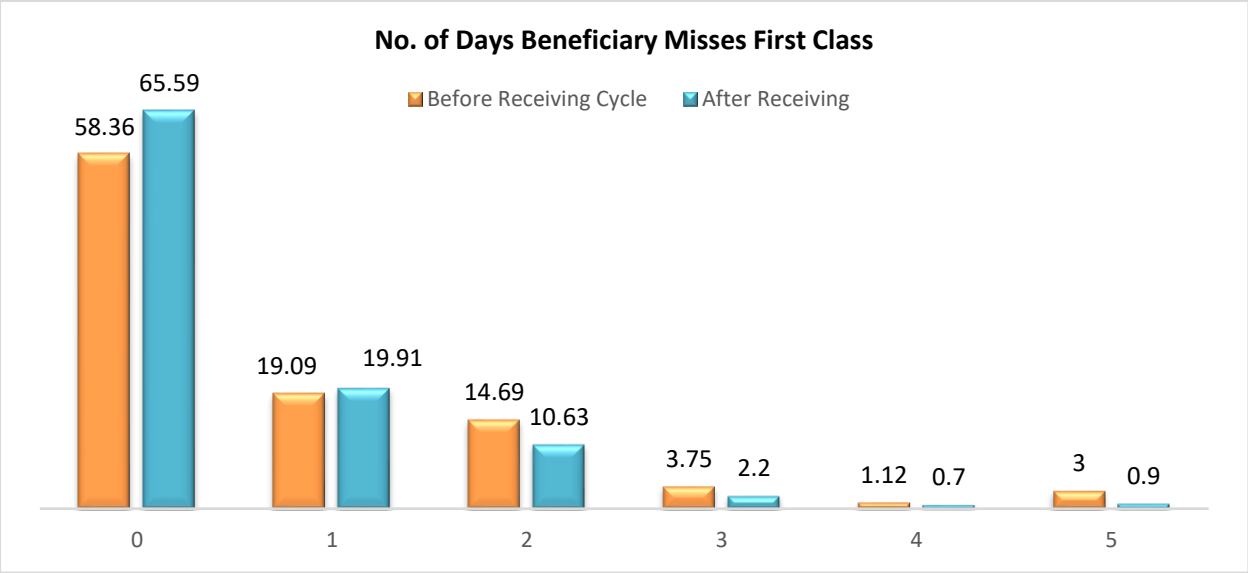
Reasons	Before Receiving Cycle			After Receiving Cycle		
	Boys	Girls	Total	Boys	Girls	Total
Ill Health	2253 (88.18)	2163 (85.06)	4416 (86.62)	2235 (87.48)	2148 (84.47)	4383 (85.97)
Parents ill Health	535 (20.94)	486 (19.11)	1021 (20.03)	509 (19.92)	497 (19.54)	1006 (19.73)
Works at Home	506 (19.80)	472 (18.56)	978 (19.18)	416 (16.28)	412 (16.20)	828 (16.24)

Help/Support Parents	341 (13.35)	287 (11.29)	628 (12.32)	304 (11.90)	258 (10.15)	562 (11.02)
Missed Buss	133 (5.21)	120 (4.72)	253 (4.96)	103 (4.03)	105 (4.13)	208 (4.08)
Not Willing to Walk	105 (4.11)	108 (4.25)	213 (4.18)	63 (2.47)	61 (2.40)	124 (2.43)
Lack of Transport Facility	55 (2.15)	49 (1.93)	104 (2.04)	24 (0.94)	22 (0.87)	46 (0.90)
Other	287 (11.23)	359 (14.12)	646 (12.67)	298 (11.66)	368 (14.47)	666 (13.06)

*Values in the Parenthesis are Percentages Source: Field Survey

Introduction of the cycle had also made a significant impact on reaching students timely basis, about **65.5 per cent students said after receiving the cycle they can reach school within the official time and thereby they can attend all the classes, whereas the consecutive figure for the same was 58.3 before receiving the cycle.**

Figure 4.31 Average No. of Days Beneficiary Misses First

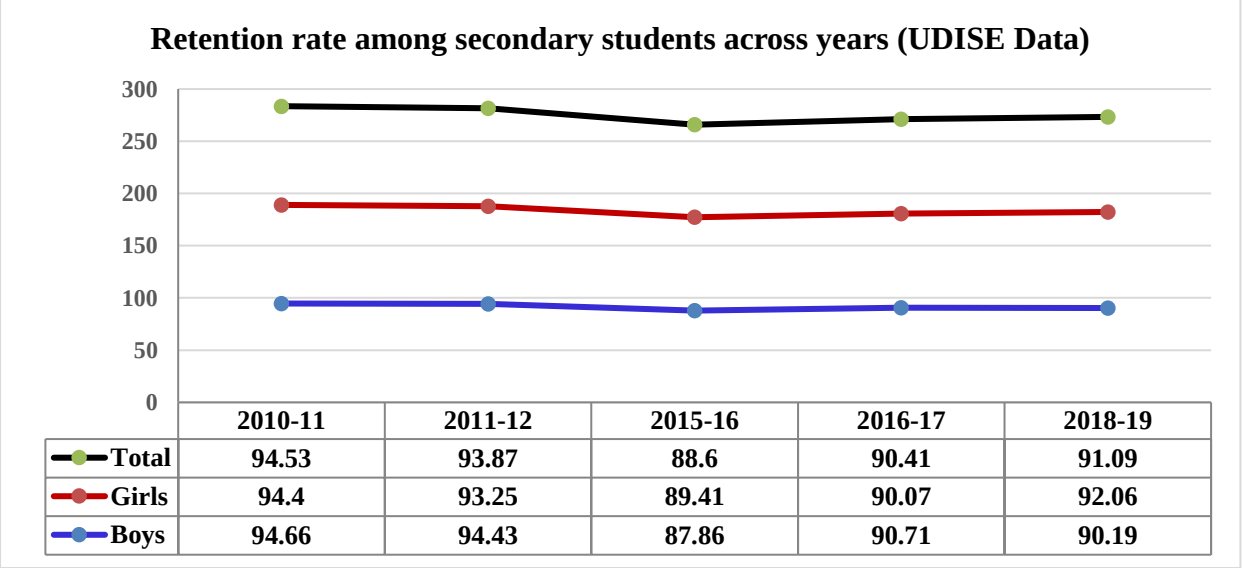


Similar response on improvement of attendance and punctuality had come out from the discussion with parents and SDMC, according to them, when the distance between house to school is considerably more, the parents may not allow the girls child to walk alone for such long distance regularly and also it is not possible for the parents to drop her every day which ends up in missing schools regularly. However, now because of the cycle those female students can travel in group and reaches school early and also can come back home safely. On the other hand, some parents had also mentioned that, before the scheme, due to the long distance between houses to school few students found to miss classes regularly saying as they are not well, they can't walk till the school. But now since they have the cycle the students happily go to school every day along with all other students.

5.4 Retention and Continuation till Class 10th and 12th

Enhancement of secondary school retention is one of the main objectives of bicycle distribution, and thus it is pertinent to examine the association between bicycle distribution and secondary school retention. State-level retention figures (data are taken from UDISE annual analytical report) seem to indicate slightly declining secondary overall school retention since 2010-11 (four years after introduction of bicycle distribution scheme) which then rose after reaching a low in 2015-16.

Figure 4.32 Retention Rate among Secondary School Students

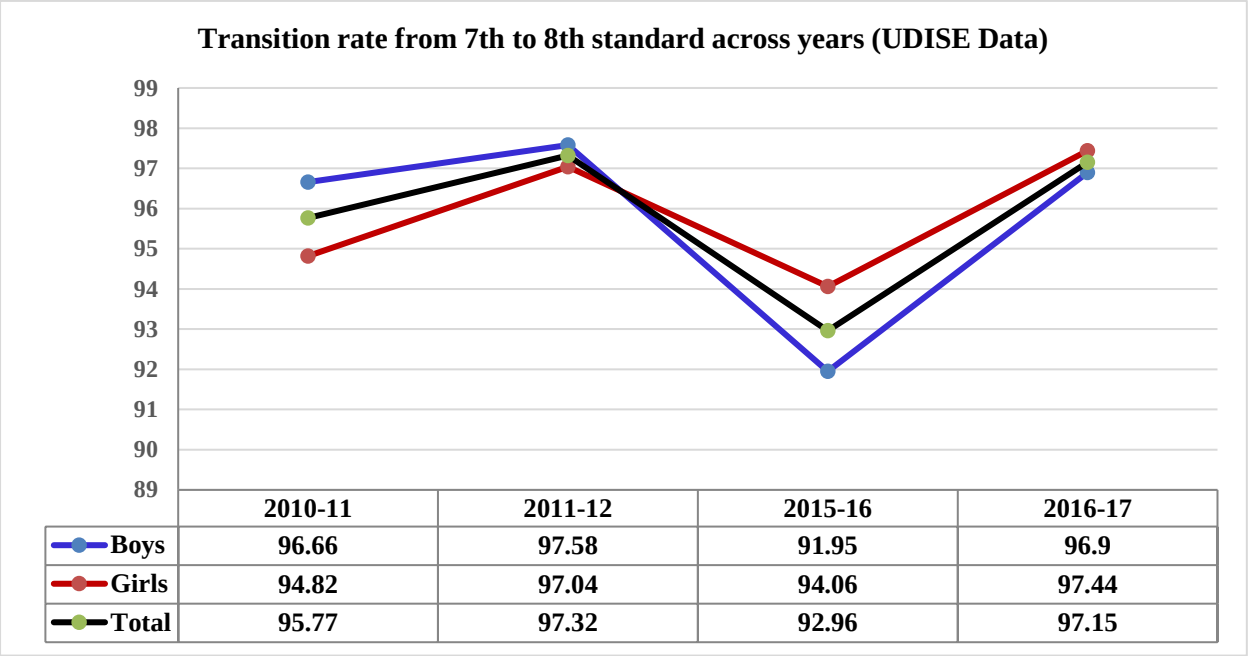


	2010-11	2011-12	2015-16	2016-17	2018-19
Total	94.53	93.87	88.6	90.41	91.09
Girls	94.4	93.25	89.41	90.07	92.06
Boys	94.66	94.43	87.86	90.71	90.19

As show in the figure above, the overall retention rate has improved in the subsequent years and gained the inclining trend.

Principals perceive that bicycle provision has led to enhanced school retention or reduced drop out. 77.4 per cent of total surveyed principals said, with the incidence of bicycle program school dropout rate had reduced to a great extent. Whereas around 4 per cent respondent principals spoke of reduction in drop out to some extent being achieved by the introduction of bicycle program. However, there were about 17 per cent principal respondents who said the impact of bicycle in reducing dropout is marginal or non-existent.

Figure 4.33 Transition Rate from Class 7 to Class 8



	2010-11	2011-12	2015-16	2016-17
Boys	96.66	97.58	91.95	96.9
Girls	94.82	97.04	94.06	97.44
Total	95.77	97.32	92.96	97.15

With improved accessibility in terms of reduction in travelling time and dependency on public transport/other modes of transport (which were the main reasons for discontinuation at secondary school level) transition rate from higher primary to secondary and also to higher secondary has improved over the years. As per UDISE data at the state level, the transition rate for secondary school is increased by 1 per cent. Looking at the gender-wise breakup shows that, in the academic year 2010-11 transition rate among girls were the lowest (94.8 per cent), however, the trend has changed over the year and with 3 per cent increment the transition rate has reached to 97.4 per cent in the academic year 2016-17 which is the highest in compared to that of boys and total students in the state.

Amongst the surveyed beneficiaries, about 98 per cent of them showed a positive response in continuing their secondary schooling. Similar kind of responses was recorded across the districts, gender and social category indicating a similar level of motivation among the students irrespective of their gender, location, and social community to which they belong. Further, about 93 per cent of total respondents showed a positive attitude towards completing higher secondary schooling (Class 12). The responses were similar across the social category, gender and districts except that of in Bangalore, where only 68 per cent of total surveyed respondents responded positively for completing higher secondary schooling (consecutive figures for all other districts are more than 95%) and 28 per cent of them had rejected the idea of higher secondary schooling.

As the variability with respect to the beneficiaries' motivation level in completing secondary and higher secondary schooling are negligible, it is difficult to identify the factors which may have a direct influence on respondent motivation level. Nevertheless, two separate ordinal logistic regression models were fitted separately, taking respondents motivation level as the dependent variable and all the predisposing factors as the independent variable in order to find the influence of those predisposing factors on the motivation level of the beneficiary, however, due to less variation in the responses none of the variables showed to have any considerable impact on the motivational level.

Insights from the parents' FGDs shed light on the ways in which the bicycle provision might have shaped school retention and transition. The view the parents expressed in most of the FGDs was that they would continue their children's education irrespective of the bicycle being provided. In Chittapur, Gulbarga however a section of parents revealed that some students who had dropped out of school long ago had re-enrolled in school due to the bicycle incentive. The bicycle was said to have helped those staying in far-away villages who may have discontinued education. A similar view was expressed in Shahapur taluka, Yadgir district where parents said that the bicycle had helped, since parents may not have allowed their daughters to walk alone for 4-5 kms to school. In Yadgir Taluka of the eponymous district, parents shared that the bicycle had prevented the dropout of students living more than 4 km away from the school who would otherwise have had to walk to school. The bicycle was said to have especially benefitted poor families that would find it difficult to spend on public transport. In a FGD held in Gulbarga taluka of the eponymous district, parents shared that there is not much dropout since the last 5 to 6 years, but the reduction in dropout cannot only be attributed to the cycle provision. As the school also gives midday meals, many children whose parents go to work are incentivized to come to school to obtain the meal. In Gulbarga taluka of Gulbarga district, parents said that without the bicycle also, all the students of their village would have completed till 10. However, they conceded that the cycle had been helpful to the students of other villages where there was no high school located inside or near the village.

5.5 Impact of the Scheme on Learning Achievements (Cognitive Skills) and non-cognitive skills of the Beneficiaries

Learning achievement itself is a complex and very subjective term which varies from person to person and stage to stage. However, as defined by Ebel and Frisbie in 1991 (Ebel & Frisbie, 1991), the primary function of schools is overall development of individuals or in other words, schools should help an individual in developing both cognitive and non-cognitive traits. The

cognitive traits which is also known as scholastic traits refers to the intellectual skills and knowledge, whereas the non-cognitive traits are the psychomotor skills such as socio personal qualities, moral values, interest etc., Thus, measuring learning outcomes of an individual should include both cognitive and non-cognitive competencies which are necessary for the overall development of an individual.

According to Sujatha (2014), assessment tools do not yet test the acquisition of non-cognitive skills. Hence research on learning achievement has focused majorly on measuring the gain of intellectual skills and knowledge about the formal subjects. However, in this study, an attempt has been made to evaluate both cognitive and non-cognitive behaviours of the respondent students. Scholastic traits are measured in terms of academic scores obtained by the respondents, the amount of time an individual spends on studying and the traits are also measured by mapping the individuals' behavioural practices such as attending tuition classes, group study seasons etc., which will have a direct impact on respondents' intellectual development. Further, the non-cognitive or psychomotor traits are measured in terms of improving confidence level and interpersonal relationship of the targeted beneficiary.

Measuring learning achievements based on academic scores is a very crude way of deciding children's progress about the subject, as the scores are given by teachers based on their assessment and hence it is obvious that the scores will vary based on the teachers' judgement. However, academic scores are direct indicators for the level of understanding and depth of knowledge an individual has about any new concepts which he/she had been taught. For the study, annual average scores obtained by respondent students at the end of class seven and class eight are recorded in terms of percentages.

Table 4.28 District wise Average Score Obtained by Students

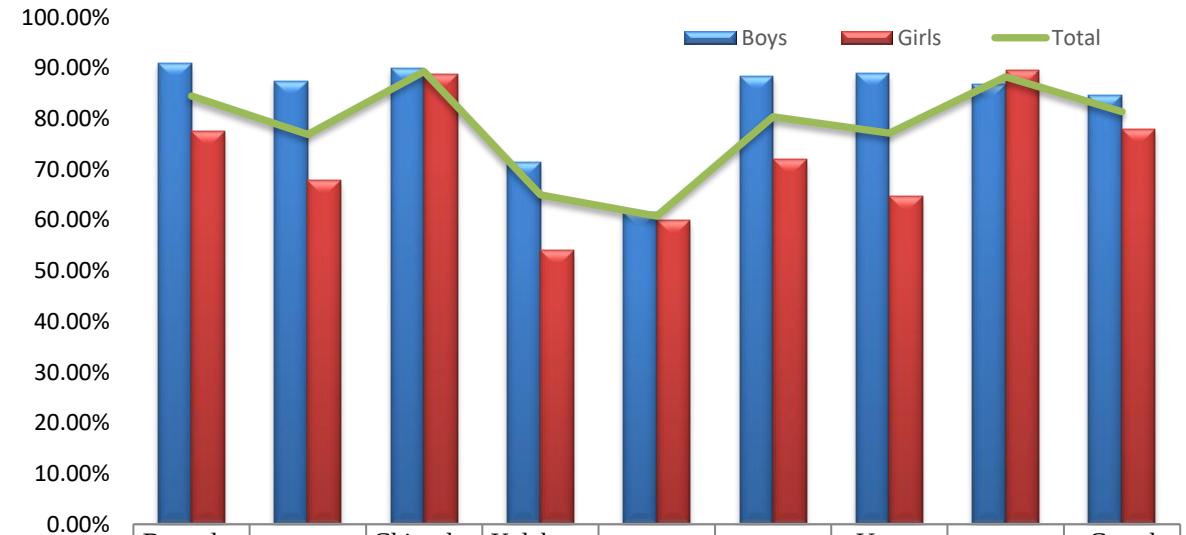
Districts	Average score in Class 7	Average score in Class 8
Bangalore	53	59
Belagavi	78	78
Chitradurga	73	75
Kalaburgi	65	70
Kodagu	68	71
Mysuru	67	74
Uttara Kannada	76	75
Yadgir	65	69
Grand Total	**68**	**71**

Source: Field Survey

Based on surveyed data, average score obtained by the respondent beneficiary in class seven is about 68 per cent, which ranged between 53 to 78 per cent where 53 being the lowest average score obtained by the students (Bangalore district) and 78 being the highest marks in terms of overall percentages obtained by the respondents (Belagavi District). Whereas average percentages of marks obtained by the same group of respondents in class eight is 71 per cent which ranged between 59 per cent to 78 per cent, indicating a slight improvement in the scores of beneficiary respondents by around 3 per cent.

It is evident from the surveyed data that, irregularity in attending school had come down significantly among the beneficiary respondents after receiving cycle. Irrespective of gender, on an average, surveyed respondents were found to miss 2 classes in a month before receiving bicycle, however, the subsequent number had come down to 1 class per month.

Figure 4.34 Portion of Beneficiary Attending Tuition



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir	Grand Total
Boys	91.04%	87.50%	90.00%	71.43%	61.54%	88.46%	88.89%	86.81%	84.68%
Girls	77.42%	67.86%	88.73%	54.05%	60.00%	72.00%	64.71%	89.61%	78.02%
Total	84.50%	76.92%	89.31%	65.00%	60.78%	80.39%	77.14%	88.26%	81.37%

Bicycle Being Helpful in Attending Tuition (Beneficiary Perspective)

Though the evidence shows that bicycles have a marginal effect on academic scores (learning outcomes), it is pertinent to see if bicycle provision is shaping study practices/enabling students to obtain academic support (e.g. tuition classes, group study sessions) which they otherwise would find more difficult to obtain.

Amongst the survey respondents, only about 18 per cent of total beneficiary attend tuition classes (9% boys and 9% girls). Further, within the beneficiary who attend tuition classes, around 80 per cent of them (85% boys and 78% girls) said bicycle had helped them in attending tuition. Difference between male and female beneficiary attributing bicycle being helpful for attending tuition classes is seen across the districts. At the state level, the difference is 7 per cent (higher percentage of boys see bicycle as helpful for attending tuition classes), whereas, highest difference between male and female respondents are observed in Uttara Kannada district which is followed by Belagavi (Boys-girls difference in the districts are 24% and 20% respectively).

Table 4.29 Districts, Gender and Social Category wise Beneficiary Attend Group Study Seasons

Districts	Boys						Girls					
	ST	SC	OBC	GM	NA	Total	ST	SC	OBC	GM	NA	Total
Bangalore	22 (9.17)	104 (43.33)	71 (29.58)	39 (16.25)	4 (1.67)	240	17 (7.73)	96 (43.64)	75 (34.09)	30 (13.64)	2 (0.91)	220
Belagavi	32 (12.55)	37 (14.51)	122 (47.84)	62 (24.31)	2 (0.78)	255	34 (12.36)	41 (14.91)	139 (50.55)	60 (21.82)	1 (0.36)	275
Chitradurga	49 (20.94)	94 (40.17)	76 (32.48)	13 (5.56)	2 (0.85)	234	59 (24.28)	86 (35.39)	83 (34.16)	15 (6.17)	0 (0.00)	243
Kalaburgi	9 (4.86)	73 (39.46)	86 (46.49)	17 (9.19)	0 (0.00)	185	8 (4.68)	51 (29.82)	96 (56.14)	16 (9.36)	0 (0.00)	171
Kodagu	30 (17.14)	49 (28.00)	77 (44.00)	19 (10.86)	0 (0.00)	175	19 (18.10)	40 (38.10)	34 (32.38)	12 (11.43)	0 (0.00)	105
Mysuru	34 (12.50)	78 (28.68)	140 (51.47)	19 (6.99)	1 (0.37)	272	35 (18.23)	58 (30.21)	85 (44.27)	13 (6.77)	1 (0.52)	192
Uttara Kannada	3 (1.09)	44 (16.06)	206 (75.18)	18 (6.57)	3 (1.09)	274	2 (0.89)	40 (17.86)	163 (72.77)	16 (7.14)	3 (1.34)	224
Yadgir	51 (17.83)	81 (28.32)	129 (45.10)	22 (7.69)	3 (1.05)	286	46 (15.81)	75 (25.77)	135 (46.39)	31 (10.65)	4 (1.37)	291
Grand Total	230 (11.97)	560 (29.15)	907 (47.21)	209 (10.88)	15 (0.78)	1921	220 (12.78)	487 (28.30)	810 (47.07)	193 (11.21)	11 (0.64)	1721

* Values in the Parenthesis are Percentages Source: Field Survey

According to the data, about 71 per cent of total respondents are able to go for group study seasons which they have attributed to bicycles, which includes 75 per cent boy and 68 per cent girl respondents out of total respondents surveyed. District wise figures don't show considerable variations except that of in Kalaburgi and Kodagu with respect to boys, and Kalaburgi, Kodagu and Mysuru in case of girls.

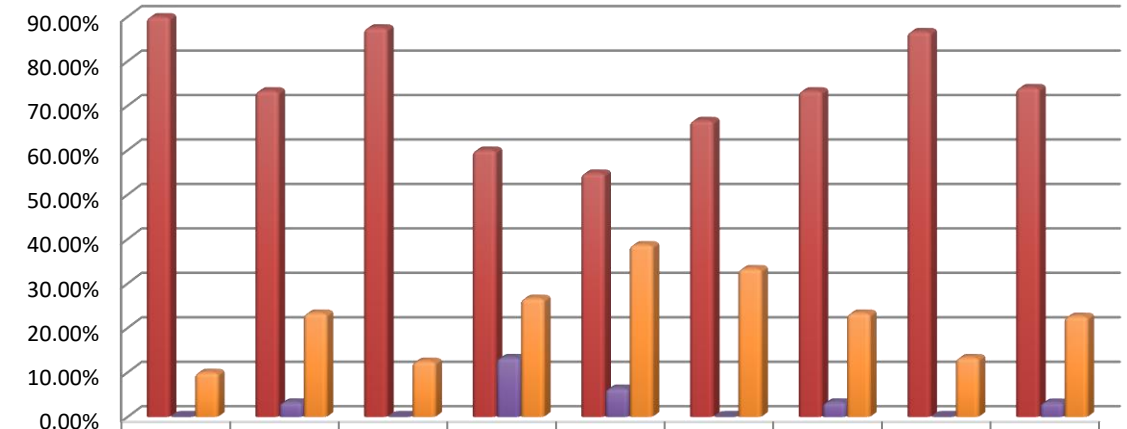
The quantitative evidence presented shows that bicycle provision is having only a marginal effect on learning outcomes, though there is some evidence of bicycles influencing study practices and the ability to seek academic support (similar to the above seen quantitative findings). Qualitative evidence shows that bicycle provision may be having a subtle and indirect influence on academic performance. Parent FGD participants in Kumta taluka, Uttar Kannada said that students using bicycles were getting healthier, coming back from school on time and thus getting more time to study, and were also able to go for tuitions or spend more time on homework. Some students were also said to be using the saved time to study at the library or play sports at school. Reaching the school on time was also helping the students to clear their doubts. Participants in Chittapur, Gulbarga pointed to the saved energy because of which children were able to study better after coming back from school. Some students experienced enhanced motivation and enthusiasm for studies while some other students were already self-motivated and thus the bicycle provision made no difference to their involvement in studies. However, some boy students were said to be using the freed-up time to chat at their friends' houses, indicating that the *reaping of the benefits of the bicycle for improving academic effort also depends on the student's self-motivation*.

5.6 Self-confidence (non-cognitive skills) of the beneficiaries

As defined at the beginning, learning achievements are measured in-terms of both cognitive and non-cognitive skills. Therefore, it is important to map the effect of program on improving both cognitive and non-cognitive skills. Non-cognitive skills can be identified as 'patterns of thoughts, feelings and behaviors that are socially determined and can be developed throughout life, the skills also include personal traits, attitude and motivational level (Borghans, Duckworth, Heckman, & Ter, 2008). Further, studies shows that non-cognitive skills such as self-perception, perseverance, self-control, social competencies, creativity and metacognitive strategies etc., showed a positive association between the skills and academic achievement (Gutman & Schoon, 2013). According to the surveyed data, about 97 per cent of total surveyed principals found significant improvement in the overall confidence level of girl students after

receiving bicycle. Reaching school on time, freedom of travelling with friends, active participation in extracurricular activities are being few important reasons for improving beneficiary confidence level.

Figure 4.35 Reduction in Students' Travel Dependency



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir	Grand Total
>80%	90.00%	73.33%	87.50%	60.00%	54.84%	66.67%	73.33%	86.67%	74.07%
40-80%	0.00%	3.33%	0.00%	13.33%	6.45%	0.00%	3.33%	0.00%	3.29%
<40%	10.00%	23.33%	12.50%	26.67%	38.71%	33.33%	23.33%	13.33%	22.63%

About 74 per cent of total surveyed principals mentioned that providing bicycle have a direct and positive impact on decreasing the travel dependency for the students i.e., more than 80 per cent travel freedom among the students are mainly due to the provision of bicycle. Whereas around 23 per cent of total surveyed principals feels bicycle had not made any significant impact on increasing the travel freedom, according to them, impact of bicycle is even lesser than 40 per cent in increasing the travel independence among the cohort. Looking at the district-wise figures, around 90 per cent principals of Bangalore, 87 per cent principals from Chitradurga and about 86 per cent of total surveyed principals from Yadgir attributed bicycle to a greater extent for improvement in travel freedom among the beneficiary (i.e., >80% improvement in travel independence is due to the bicycle program). Further, only 55 per cent principals from Kodagu feels bicycle helped the students in providing travel freedom to a greater extent (>80%), whereas, 39 per cent of them said bicycle had not made any significant impact, i.e., impact of bicycle program in improving travel independence is lesser than 40 per cent.

Further, according to the respondent principals, with improvement in the overall confidence level and travel independency, the program had also improved self-esteem of the students. More precisely, according to 78 per cent of the surveyed principals' bicycle has helped in improving self-esteem of the students by more than 80 per cent. District wise spread for the same is almost similar except that of in Chitradurga, Kalaburgi, Kodagu and Mysuru. Around 97 per cent respondent principals from Chitradurga attributed bicycle as a major reason for improving beneficiaries' self-esteem (More than 80 per cent). Whereas only around 60 per cent of the total surveyed principals from Kalaburgi, Kodagu and Mysuru attributed bicycle as a major reason for improving self-esteem of beneficiary students.

Figure 4.36 Confidence in travelling to other Place (Boys)

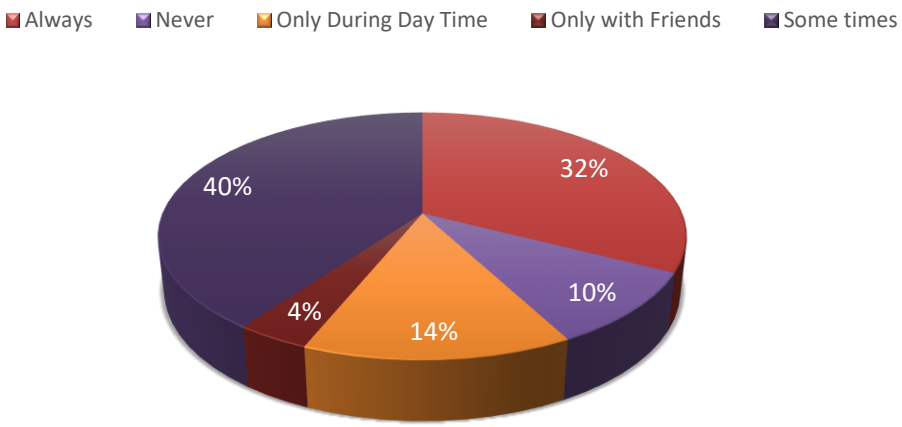
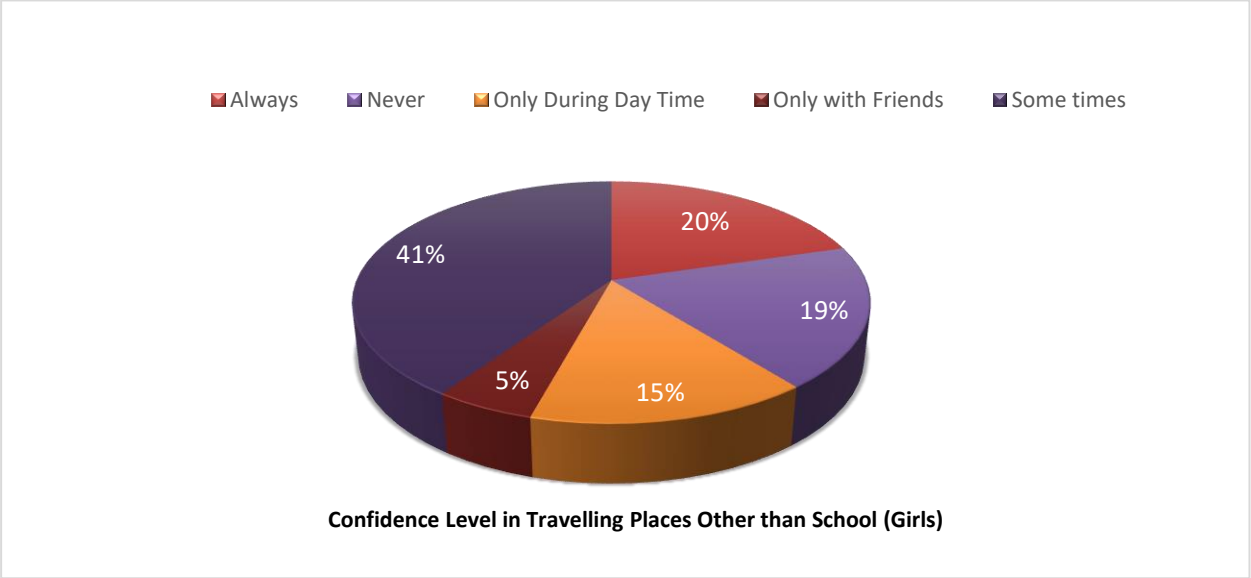


Figure 4.37 Confidence in travelling to other Place (Girls)



According to respondent beneficiaries, only about 32 per cent boys and 20 per cent girls are confident in travelling to places other than school like market, friend's house or relatives' house etc., all alone, whereas major portion of the beneficiary (40% boys & 41% girls) feels they are confident only during some specific time. Similarly, 4 per cent boys and about 5 per cent of total surveyed girls can travel to any place at any specific time provided they are accompanied by friends. On the other hand, 15 per cent of surveyed girls and 14 per cent of boys can visit places according to their wish without any accompany but at the day time only. However, 10 per cent of total surveyed boys' responded saying they are not at all confident in travelling to any other places apart from school and the consecutive figure for girl respondent is about 90 per cent higher than that of boys.

Table 4.30 District and Location-wise Beneficiary Confidence in Reaching School on Time

Districts	Hilly Region				Plain Region				Total
	Always	Mostly	Never	Sometimes	Always	Mostly	Never	Sometimes	
Bangalore	31 (52.54)	16 (27.12)	-	12 (20.34)	233 (40.59)	191 (33.28)	15 (2.61)	135 (23.52)	**633**
Belagavi	4 (23.53)	10 (58.82)	-	3 (17.65)	173 (28.31)	246 (40.26)	4 (0.65)	188 (30.77)	**628**
Chitradurga	17 (94.44)	-	-	1 (5.56)	346 (56.81)	168 (27.59)	14 (2.30)	81 (13.30)	**627**

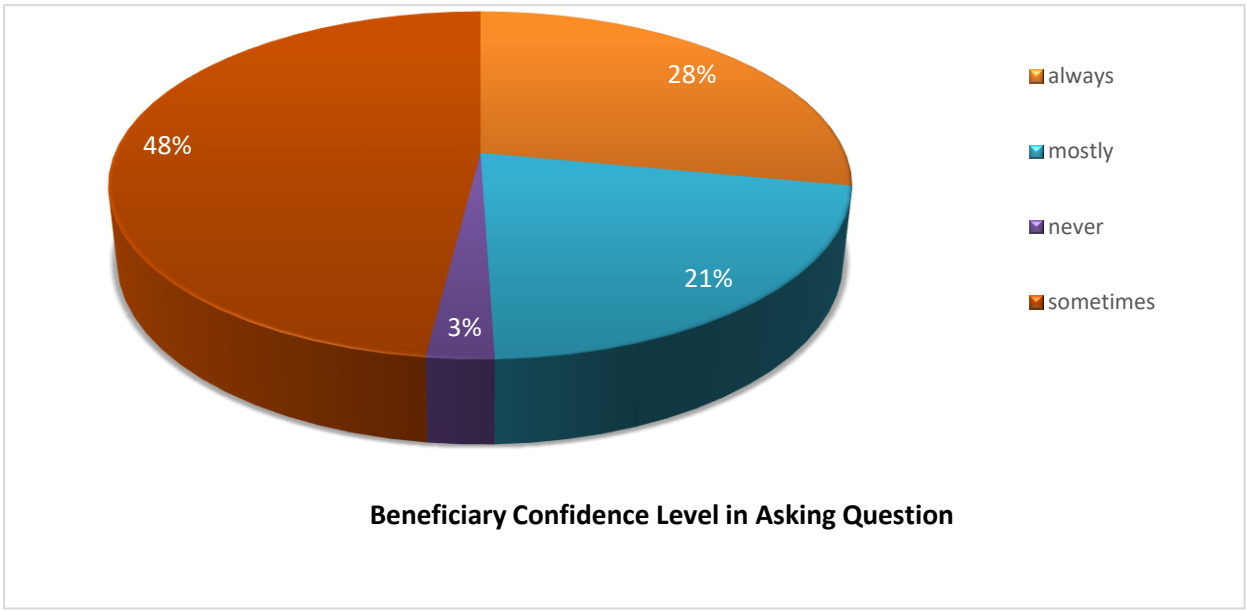
Kalaburgi	27 (79.41)	2 (5.88)	-	5 (14.71)	309 (50.08)	151 (24.47)	13 (2.11)	144 (23.34)	**651**
Kodagu	57 (23.55)	18 (7.44)	3 (1.24)	164 (67.77)	153 (39.03)	119 (30.36)	5 (1.28)	115 (29.34)	**634**
Mysuru	-	-	-	2 (100.00)	134 (21.07)	304 (47.80)	20 (3.14)	178 (27.99)	**638**
Uttara Kannada	79 (35.43)	101 (45.29)	2 (0.90)	41 (18.39)	162 (37.24)	216 (49.66)	3 (0.69)	54 (12.41)	**658**
Yadgir	13 (8.02)	34 (20.99)	9 (5.56)	106 (65.43)	46 (9.85)	219 (46.90)	7 (1.50)	195 (41.76)	**629**
Grand Total	**228 (30.12)**	**181 (23.91)**	**14 (1.85)**	**334 (44.12)**	**1556 (35.84)**	**1614 (37.18)**	**81 (1.87)**	**1090 (25.11)**	**5098**

*Values in the Parenthesis are Percentages Source: Field Survey

Similar responses are recorded from the beneficiary for their confidence level in reaching school on time irrespective of the type of region they are residing (Hilly or Plain region). According to the responses, only about 30 per cent respondents from hilly region and around 36 per cent respondents residing in the plain region showed confidence in reaching school on time. Whereas about 44 per cent respondent from hilly region and 25 per cent beneficiary from plain region said they can reach on time only once in a while. Further, about 24 per cent respondents belonging to hilly region and 37 per cent respondents who are residing in plain region responded saying in most of the days in a given week they can reach school on or before the school begins.

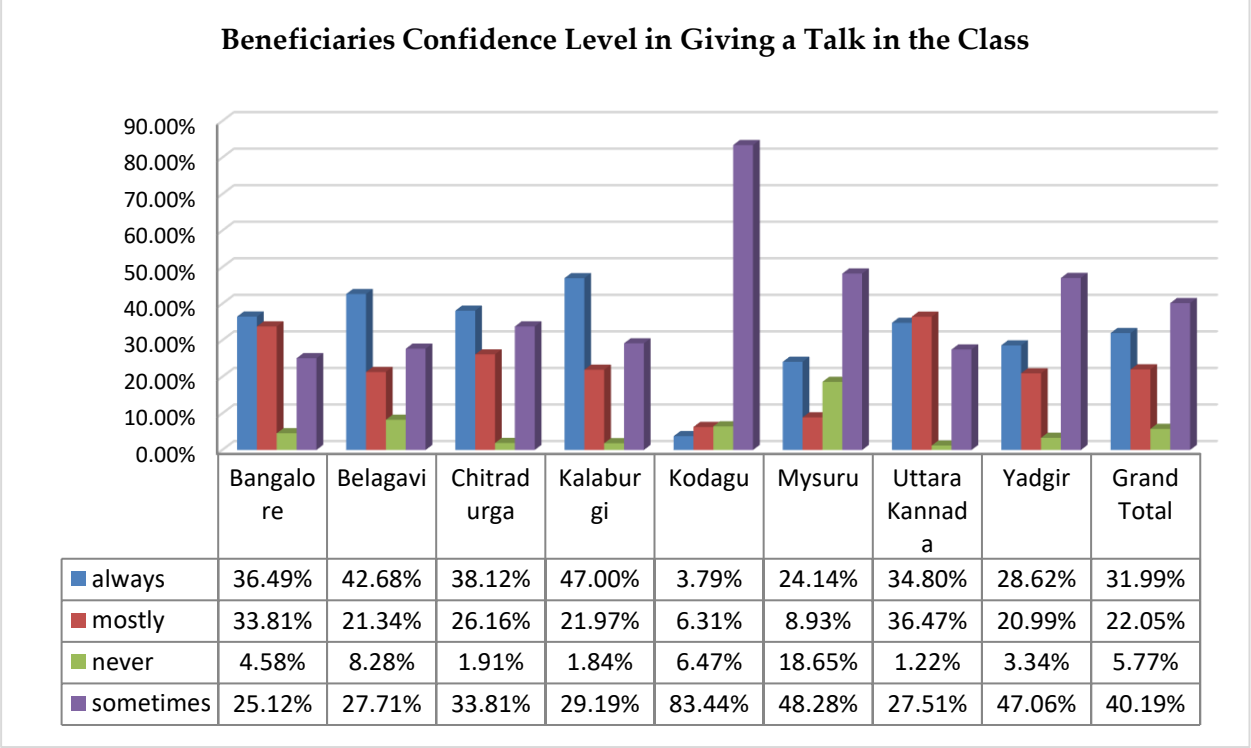
Further, looking into students overall confidence level in asking questions (Annexure Table XXVIII), it is observed that, close to half of the students (48% of total surveyed respondents) are comfortable and confident in asking questions only for any specific subjects or to any specific teachers, whereas 28 per cent of them are confident enough in asking question in almost all the time and 21 per cent of the total respondents responded saying they get clarified their doubts from the specific teachers whenever they felt difficulties in understanding the topic irrespective of subjects and teachers. 3 per cent of the total respondents said they are not at all confident in asking question in the class.

Figure 4.38 Confidence in Asking Question in Class



No variation across the social category and gender is observed for the same. In continuation with respondent's confidence level in asking questions, about 40 per cent of total surveyed respondents said they can give a talk in the class without any hesitation only for specific subjects (sometimes), whereas around 32 per cent respondents are confident in talking about any allotted topic (always). Similarly, around 22 per cent of the total surveyed students said they can talk about almost all the subjects without any hesitations (mostly) provided they are given appropriate preparatory time.

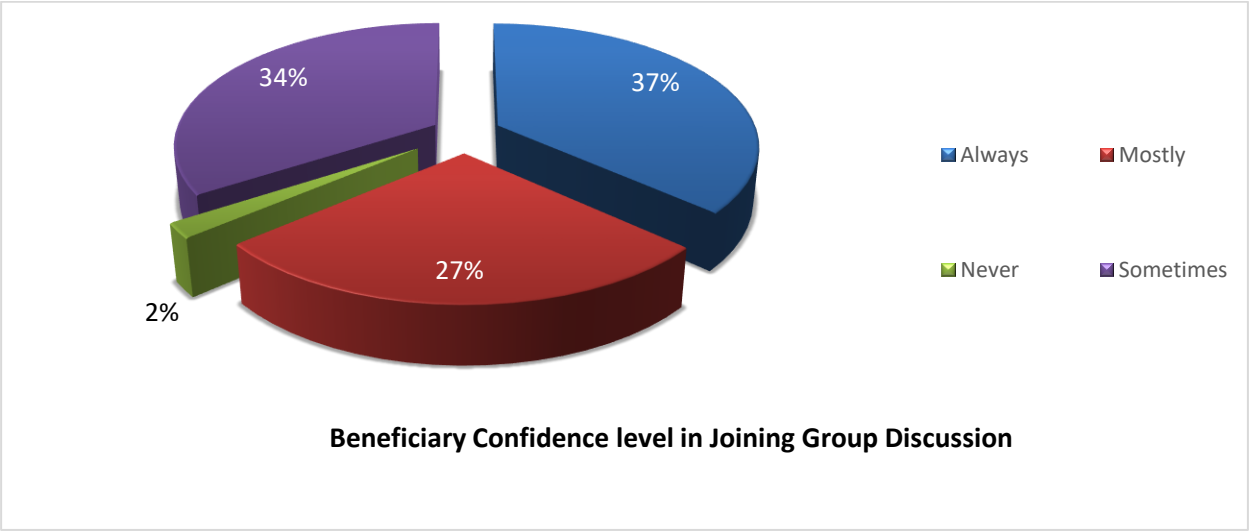
Figure 4.39 Beneficiaries Confidence in Giving a Talk in the Class



	Bangalore	Belagavi	Chitradurga	Kalaburgi	Kodagu	Mysuru	Uttara Kannada	Yadgir	Grand Total
always	36.49%	42.68%	38.12%	47.00%	3.79%	24.14%	34.80%	28.62%	31.99%
mostly	33.81%	21.34%	26.16%	21.97%	6.31%	8.93%	36.47%	20.99%	22.05%
never	4.58%	8.28%	1.91%	1.84%	6.47%	18.65%	1.22%	3.34%	5.77%
sometimes	25.12%	27.71%	33.81%	29.19%	83.44%	48.28%	27.51%	47.06%	40.19%

A greater number of respondent beneficiaries (37% of total surveyed respondents) showed confidence in always joining a group discussion in the class.

Figure 4.40 Respondents Confidence in Joining Group Discussion



Can bicycles have an effect on the confidence levels or non-cognitive skills of students, irrespective of their social background or category? Triandis and Suh (2002) showed that cultural background of an individual is *the key environmental determinant* of a person's personality non-cognitive skills. Research has shown that caste (social category) affiliation affects self-esteem of students (Thaiparambil et al, 2013)

The following test is performed, first to check if social category is a significant determinant of non-cognitive skills. Based on the improvement in non-cognitive skills of the respondents, a combined score is calculated for individual respondent separately by assigning appropriate weights. Thereby, in order to understand the relationship between gain in non-cognitive skills and sociocultural behaviour of the respondent, individual respondents were categorised into 3 different groups depending upon the combined scores obtained by them. A chi-square test of association for 'MxN' group is carried out to test the null hypothesis that there is no association between social category of the respondent and gain in non-cognitive skills, against the alternative hypothesis saying, there is significant association between social category of the respondent and gain in non-cognitive skills. Based on the test result, it is confirmed that non-cognitive skills of individual respondents are significantly associated with respondent's social community as the null hypothesis is rejected at 95 per cent confidence level. The results of chi-square test are on-par with the findings of

Social Category	**Gain in Non-cognitive Skills**		
	High	**Low**	**Moderate**
NA	31 (27)	2 (6)	3 (4)
GM	464 (427)	64 (88)	46 (59)
OBC	1675 (1756)	416 (363)	268(241)
SC	1151 (1110)	205 (229)	136 (152)
ST	473 (474)	97 (98)	67 (65)
H_0: There is no association between social category and gain in non-cognitive skills. **H_1:** There is significant association between Beneficiary's social Category and gain in non-cognitive skills			
Chi-Squared Calculated Value: 36 **Chi-Squared Table Value:** 15.51 at 95 per cent confidence level			
* Values in the Parenthesis are Expected Frequencies			

While social background or social category is an important determinant of confidence as seen from the chi-square test results above, one can also see from the qualitative findings (from parent FGDs and

student case studies presented below) that bicycles are able to increase confidence of students, including students from less privileged categories such as BPL and Scheduled Caste. According to the parent FGD participants, the children now travel in groups by bicycle to school which in returns boost up their confidence level. The effects on confidence described by the parents were mostly not related to academics specifically – for example gaining confidence to ride the bicycle on the highway, gaining confidence to travel to nearby villages to play games etc where they were earlier scared to go alone. In Yadgir taluka of Yadgir district, however parents shared that students gained in confidence because of being able to reach school on time, because of which they feel motivated to attend school regularly and not miss classes.

Case studies of beneficiary students can also illustrate how bicycle provision shapes confidence of girl students of less privileged sections. Two such case studies of girl students are presented below, which also illustrate that there are varied and less obvious ways in which bicycles shape the personality and confidence of students.

Case Study 1

Spandana[11] aged 15 years, belongs to Horalavadi village of Nanjangud taluk of Mysore District, and is from the Scheduled Caste category. Her father is not working because of his disability. Her mother is working as a daily wage labourer and is the only earning member of the family.

Spandana earlier used to walk with friends to the school. After receiving the bicycle, she used it for commuting to school. While she often used to be late before receiving the bicycle, she used to reach school on time after receiving the bicycle. Using the bicycle saved her the walking time, since the school's distance was nearly 1 km from her house.

For the first six months after receiving the bicycle, she was using it regularly; at that time she learnt how to ride a bicycle properly as well. In the mean time, her self-confidence increased because of riding the bicycle on the road by herself. This not only increased her braveness but also enhanced her motivation to learn riding the motor bike with confidence.

Since their family income was very less (approximately Rs 2000/- per month), the bicycle was also utilised for travelling to other places such as the market, ration shop and hospital to save travel costs.

According to Spandana, the bicycle made her more open in society and outspoken in the community and in the school, compared to the time when she was shy girl.

[11] Name changed to protect respondent's identity

However, the practical benefits of using a bicycle could not be sustained for long, since the bicycle started to show problems especially punctures. Due to non-availability of wage, her mother stopped giving her money for bicycle repair. After that, she resumed walking to school. She opined that the quality of the tyre and tube were not good. Therefore, she suggested that good quality bicycles should be provided to students.

Case Study 2

Smitha (name changed), is aged 16 years and studying in 9th standard in Udbur village of Mysore district. She belongs to the lower middle class and is staying with her parents and younger brother in her village.

Her school is located 4km away from the village. Before receiving the bicycle, she was walking to the school everyday. It was almost 30 to 40 minutes walk from her house. Her school is located outside the village boundary. She used to walk to school sometime alone and sometimes with friends.

While walking to school, she had observed that many times, there was no hygiene in the roadside and sometimes the edge of the road was covered by faeces because of prevalent open defecation practices in the area. She felt uncomfortable while walking to school. Sometimes when her friends moved fast, she had to walk alone, making her all the more uncomfortable.

After she entered the 8th standard, she received the bicycle from her school. She started cycling to school everyday with friends. Because of this, she could reach the school on time. She could also avoid the earlier discomfort faced while walking to school. Over time, she also became more comfortable and confident in riding the bicycle on the road.

Her attention in class increased because of less strain faced during the school commute and it also increased her confidence and boldness as a result.

5.7 Conclusion

Bicycle distribution has had some effect on immediate and intermediate outcomes such as enhancement of school access. There is a notable reduction in the proportion of students walking to school after receiving bicycles. However, students of hilly areas still find it difficult to use bicycles for the school commute. However, the enhancement of school access is constrained because of the low rate of regular usage.

Bicycle distribution is also found to be associated with only with a marginal improvement in attendance, punctuality and learning outcomes. However, qualitative findings show that bicycle distribution is associated with non-tangible outcomes such as the enhancement of confidence for girls of less privileged sections.

Chapter 6

MAJOR FINDINGS

6.1 Findings from Process Evaluation

The bicycle distribution process covers four process categories- procurement, obtaining of parts and assembly, quality test and quality check, and distribution of bicycles at school level. The findings of this study on these processes are summarized below:

6.1.1 Processes related to delay in receiving bicycles

1. An overwhelming share of students receive bicycles late. Only 13% beneficiaries received the bicycles in the first or second month of academic year. The single largest share (27%) receive the bicycles 2 months after start of AY. More than 10% also receive in January, which is 5 months after start of AY.

2. Given that it takes 90-120 days for the suppliers to provide the bicycles, the current closing date for submitting bid and technical bid evaluation date (February) appear too late to ensure supply of bicycles by the first or second month of the academic year. Intermediate processes like evaluation of commercial bid, finalization of bidder, assembly, multi-level quality check and distribution to schools need to be completed before bicycles can be distributed at school level.

3. Factors such as delay in finalizing supplier (procurement stage) and delayed indenting by principals contribute to the delay in bicycle distribution at school level. Principals are indenting on the basis of current enrolment or attendance, which is enhancing the delay.

6.1.2 Processes related to Quality checks

1. Quality check processes are embodied at multiple levels right from the manufacturing stage to the school level distribution.

2. There is no physical quality testing mechanism or centre available in Karnataka. Bicycles have to be sent to R&D Centre in Ludhiana for quality test.

3. The members of school level, district, division level committees responsible for quality check have not undergone any training for carrying out visual quality check. Training at Ludhiana is however mandated as per guidelines for members of district and division level

committees. Proceedings of a government meeting revealed that inadequate quality check at district level is a reason for quality gaps in distributed bicycles.

4. Members of the school level inspection committees feel that they are not empowered to take any action on quality shortcomings noticed in checked bicycles.

5. The current guidelines require suppliers to conduct service camp within six months after supply; however, this is not early enough given the quality gaps in cycles.

6.1.3 Performance of Bicycle scheme with respect to quality and maintenance requirements

1. The bicycles (especially the used bicycles) are affected by quality problems. The visual quality inspection of bicycles, beneficiary responses and parents' opinions show that the bicycles suffer from quality defects. Despite the BIS standards followed in all bicycle parts, quality concerns about received bicycles are widespread

2. At the time of receipt, the major concern relates to the quality of fitting or assembly of bicycles, with parents having to spend Rs 300-600 to get refitting done

3. A minority (but significant share of 44%) had to add parts to newly received bicycles. Bell was the most common missing part in new bicycles.

4. The bicycles show deteriorating condition over time. On the relatively stable parameters, more than 40% used bicycles subject to visual inspection had quality defects such as rusted frame and fork, and worn gear teeth and tyre. Additionally, majority of used cycles checked had rusted brakes and rusted locks. Compared to the 8% bicycles damaged at receipt, 24% one-year old cycles and 33% two-year old cycles were damaged. Parents opined that by the time students reach class X, bicycles mostly become unusable.

5. Beneficiaries invest considerable effort and costs in maintaining bicycles. 90% beneficiaries themselves clean the cycles. On average, beneficiaries spend Rs 100/- on repair of bicycles every month. Punctures have to be repaired twice a month.

6.2 Performance of Bicycle distribution scheme with respect to scheme objectives and other outcome indicators

6.2.1 Improvement of the school access and secondary school enrolment of children because of bicycles

1. A dominant share of beneficiaries belongs to economically less privileged backgrounds (BPL and SC/ST/OBC). Also, a significant share of beneficiaries has illiterate mothers (39%) and

illiterate fathers (35%) and close to half are living in kutcha houses. These socio-economic characteristics have 2 implications: a) Need to incentivize children (especially girls) from less privileged sections to enrol school and b) It highlights the need for equity as a major policy concern. Uniformity in the standard/type of bicycles given and the in-kind provision of bicycles addresses this equity concern.

2. Bicycle provision has made it easier for children to reach school and changed the mode of commuting to school. Before bicycle provision, almost 80% of beneficiaries in hilly areas and 67% in plain areas were compelled to walk to school despite the school being on average 3 km away from house. After obtaining bicycle, only about 32% beneficiaries, overall, walk to school and almost half of them use bicycle to travel to school.
3. While bicycle provision has made it easier overall for children to reach school, children with bicycles in hilly areas are still finding it difficult to reach school. A dominant share of beneficiaries from hilly areas face difficulty in riding the bicycle due to difficult terrain and bad road condition, and 27% beneficiaries from hilly areas don't bring the bicycle to school at all.
4. Usage of bicycles is critical to shaping whether bicycle provision is improving school access. Regular usage of bicycle for school travel is not up to the mark, as this study reveals. Overall, less than half the beneficiaries bring bicycles to school regularly. Regular bicycle usage is even less among girls. The reasons for not bringing bicycles to school regularly are as follows: road condition, house being very near, frequent damage of cycles and house being too far. Road condition has a significant effect on the regular usage of bicycles.
5. Family members also use the cycles, though that does not necessarily prevent the child from bringing the cycle to school. For 45% beneficiaries, family members use bicycle when required. A minute share of beneficiaries (less than 1%) mention giving cycles to family members as reason for not bringing cycle to school.
6. While families would have anyway bought bicycles for their boy children, the free bicycle distribution has ensured that girls are also getting the cycles and benefitting from enhanced school access. This has implications for the enhanced school access of girls.
7. Growing secondary school enrolment in Karnataka over the last six years indicate an association of bicycle provision and school enrolment. However, persisting gender gap in enrolment in class VIII (25%) at the state level shows that bicycle provision has not been able to bring male and female secondary school enrolment on par.

6.2.2 Improvement of Attendance of Children

Bicycle provision has marginally improved the punctuality of children/timeliness of reaching school and their attendance. While earlier children were on average missing two classes a month, now they are missing one or less classes a month. Before receiving bicycles, 58.3% students were reaching school on time, which has increased to 65.5% students after receipt of bicycles.

6.2.3 Arresting of Dropouts and helping students complete High-school

Bicycles are having a positive effect on the intention to continue secondary school. Almost all beneficiaries intend to complete their secondary school education, and 93% also intend to complete their higher secondary education.

6.2.4 Improvement in Learning Outcomes

1. Enhancement of learning outcomes is not a stated scheme objective of the bicycle scheme, though it is one of the evaluation objectives to study the effect of bicycle distribution on learning outcomes.
2. The study findings show that the bicycle provision is associated with improved academic performance of beneficiaries in Class VIII compared to Class VII, though such improvement is marginal (3%). Such marginal improvement in learning outcomes can be seen as a supplementary benefit of the scheme.

6.2.5 Improvement in non-cognitive outcomes such as confidence

1. Bicycle provision has also led to enhanced confidence of beneficiaries. Students have gained in confidence and self-esteem, owing to reasons such as reaching school on time, freedom of travelling with friends, active participation in extracurricular activities.
2. The students' confidence gains extent beyond the school environs. Children have gained confidence through cycling in groups and being able to cycle on the highway and travel to nearby villages for playing games.

6.3 Conclusion

This study, unlike previous studies on bicycle distribution has generated findings on the process and outcome side of bicycle distribution. The findings show that the objective of enhancing school access has been achieved to a certain (but constrained) degree. The objectives pertaining to the intended academic outcomes of bicycle distribution have only been achieved to a modest degree.

Programme authorities should examine the benefits of the scheme relative to the costs, and any decision on scheme continuation should ensure that the implementation gaps pertaining to quality and timeliness of bicycle distribution are well addressed.

Chapter 7

RECOMMENDATIONS

Specific policy and implementation recommendations arising from the findings of this study are thematically elaborated below. The first set of recommendations are concerned with the achievement of scheme objectives and the second set of recommendations are concerned with addressing the implementation process gaps in bicycle distribution, which should be put into effect if the scheme is continued.

7.1 Effect of Bicycle on School Access, Enrolment, Attendance, Retention, and Learning Outcomes

1. *Alternatives to bicycles to improve school access in hilly terrain*: Given the difficulties faced by beneficiaries in using bicycles in hilly areas with difficult terrain, these areas should be included on conditional basis under the scheme, and alternative transportation should be arranged for secondary school students to reach school in excluded areas. Bicycle provision should be replaced with private jeep or minibus service hired by the schools in highly difficult terrains such as parts of Kodagu district. If bicycle provision is retained for difficult terrain, then high-density tubes/tyres should be provided.
2. *Study to own contract*: Under the BEEP programme in Zambia, students signed a 'study to own' contract, whereby they committed to attend school regularly to continue owning the bicycle. Such a contract could be tried out in the Indian context, where students would need to continue being in school, attend school regularly (or even obtain passing marks) to continue owning the bicycle. The bicycle provision may create stronger incentivisation for retention, attendance and even improved learning outcomes in this way.
3. *Need for alternative measures or additional incentives*: In view of the high costs and marginal gains in punctuality and learning outcomes, the scheme should be reviewed for better alternatives for motivating students such as enhancing scholarship amount or additional incentives.
4. *Need for other measures to deal with the persisting secondary school enrolment gap between boys and girls:* Since bicycle provision by itself has not been enough to bridge the enrolment gap, there is a need to ensure effective implementation of other measures pertaining to proper

sanitation, separate toilets for girls in co-education schools, and provision of menstrual hygiene education, sanitary napkins and sanitary napkin incinerators. Additionally, the government should also consider enhanced scholarship amounts for girl students or conditional cash transfers for BPL girl students (family will receive cash incentive subject to attendance requirement and transition requirement being fulfilled by the female wards). Such incentives may help families defray the opportunity costs of engaging girls in paid or unpaid labour or getting them married, and may incentivize them to continue their female wards' high school education. Also parents should be provided with information on the economic returns to education through well-designed informational campaigns (Mbiti, n.d.).

5. *Need to examine cost effectiveness of the scheme from the point of view of limited punctuality gains:* This study finds that 65.5% students are reaching school on time after receiving bicycles, compared to 58.3% who were reaching school on time before receiving the cycles. This is not a major change (only about 7%) compared to the investment of Rs 3600/Rs 3900 on each student. The state should thus examine the cost effectiveness of the scheme from the point of view of punctuality gains, and consider the alternative transport option especially in areas with hilly terrain.

7.2 Process Evaluation

7.2.1 Addressing Delay in receiving the Bicycles

1. *Advance the date of procurement and expedite bid evaluation*: Since it takes suppliers 90-120 days to supply the bicycles, the bidding process should happen even earlier (November or early December), with not more than one month given for bid submission. The deadline for tender submission should be not more than six months before date of school reopening. Technical and commercial bid evaluation should be completed promptly after the bids have closed.
2. *Indentation for schools based on previous years' enrolment*: Delayed indenting by principals is a reason for the delay in bicycles reaching the schools. Indentation of bicycles by principals should be done on the basis of class 7 enrolment in the school, since many schools are HPS which have 7th and 8th standards. For other schools, the average of last 3 years' enrolment numbers may be taken as the basis for indenting bicycles. Surplus bicycles if any can be kept in the district/block stock, which can also be used to cater to shortages in bicycles in any school.

7.2.2 Quality Check, Maintenance, and Quality Improvement

1. *Facilities for quality testing and technical supervision of assembled cycles*: Except for the quality check made by the R&D Centre for Bicycles and Sewing Machines, Ludhiana, nowhere else is a technical quality assessment being done. There is a lot of reliance on mere visual check. At the R&D Centre in Ludhiana, the samples for testing should be mandatorily selected randomly. Testing should be incorporated to a greater extent in the quality check process within the state. One option is to open a testing centre in Karnataka and the other more economical option is to use the laboratories of Mechanical Engineering colleges for testing of parts such as tyre and gauge. Before distribution of assembled bicycles, a third-party assessment supervised by a technical consultant must be carried out at district level to ensure that the acceptable quality of bicycles reach the actual stakeholder. The technical institute faculty represented on the district level committees should thus play a more effective role in checking quality.
2. *Point of distribution inspection and complaint redressal, and post distribution service camp at the end of first month*: Inspection reports must be generated at the time of distribution and actions on any dissatisfaction should be taken and recorded. Major complaints must be separately categorized and corrective measure should be recommended to the supplier. A free service workshop at the school level should be conducted by the supplier at the end of the first month after bicycle distribution. A coordinator (Teacher) at the school level should be designated to receive and record complaints by the students on a day to day basis (especially in the first 3 months after the receipt of bicycles) which would lead to a real time evidence-based assessment of quality.
3. *Capacity building of children*: Children should be trained in an engaging and simple way on the regular care and maintenance of bicycles including regular oiling of bicycles. Bi-monthly or quarterly bicycle workshop/camps facilitated by experts should be organized in schools or clusters of schools, in which children themselves will handle bicycle repair under the guidance of the experts and thus hone their basic mechanical skills. There should also be mandatory tests of the bicycle riding skills of all students at the outset and all students found less confident/less comfortable in riding bicycles should be coached in the same by the Physical training teacher or any volunteer or other reliable adult from the village. Students should also be trained in road safety.
4. *School level maintenance responsibility:* Students should be involved in a more active way in bicycle maintenance which would also enhance their sense of responsibility and leadership. There should be a ‘bicycle club’ in every school, and every club should have a

maintenance kit which can be used for manageable bicycle repair activities. The club should be connected to the school cabinet; for e.g., the sports minister of school cabinet can oversee the bicycle club. Students may be required to pay a small subscription for bicycle club, which can be used for financing maintenance.

5. *Community level maintenance responsibility*: As tried out under the BEEP programme in Zambia, the community should be involved more extensively in bicycle monitoring and maintenance to relieve the burden of the 3-member school committee consisting of already overburdened functionaries such as Principal, SDMC President and local government official. A Bicycle Supervisory Committee (BSC) should be formed in every village, consisting of teacher representatives, PTA members, students and local leaders. As tried in Zambia, the BSCs may also arrange the appointment and training of a field mechanic to cater to the village or school level.

6. *Capacity building of Inspection committees at division, district and school levels by Master trainers*: The study found that none of the division and district level committee members who were interviewed underwent training programmes in quality check at the R&D Centre in Ludhiana, as mandated by the guidelines. It may not be practical to train all members at the R&D Centre at Ludhiana as envisaged by the Guidelines. GoK should instead constitute a group of Master trainers within the State. These Master Trainers should be from a mechanical engineering background, preferably with work experience in the bicycle/related industry. They should be sent to Ludhiana for orientation and refresher training programmes in quality testing and quality check. The trained Master Trainers should be deployed for carrying out the training of all Division and District level committee members. Workshops should also be organized in each taluka HQ to train the members of the school level three member committees, and the abovementioned Master trainers should be resource persons for such training programmes as well.

7. *Simplify visual quality check through suitable checklists*: Interview responses indicate that the present checklists used in the school level quality check are not sufficiently detailed or explanatory. Quality check manuals should be prepared in simple language and with plenty of pictures to help members of quality check committees at different levels in their work

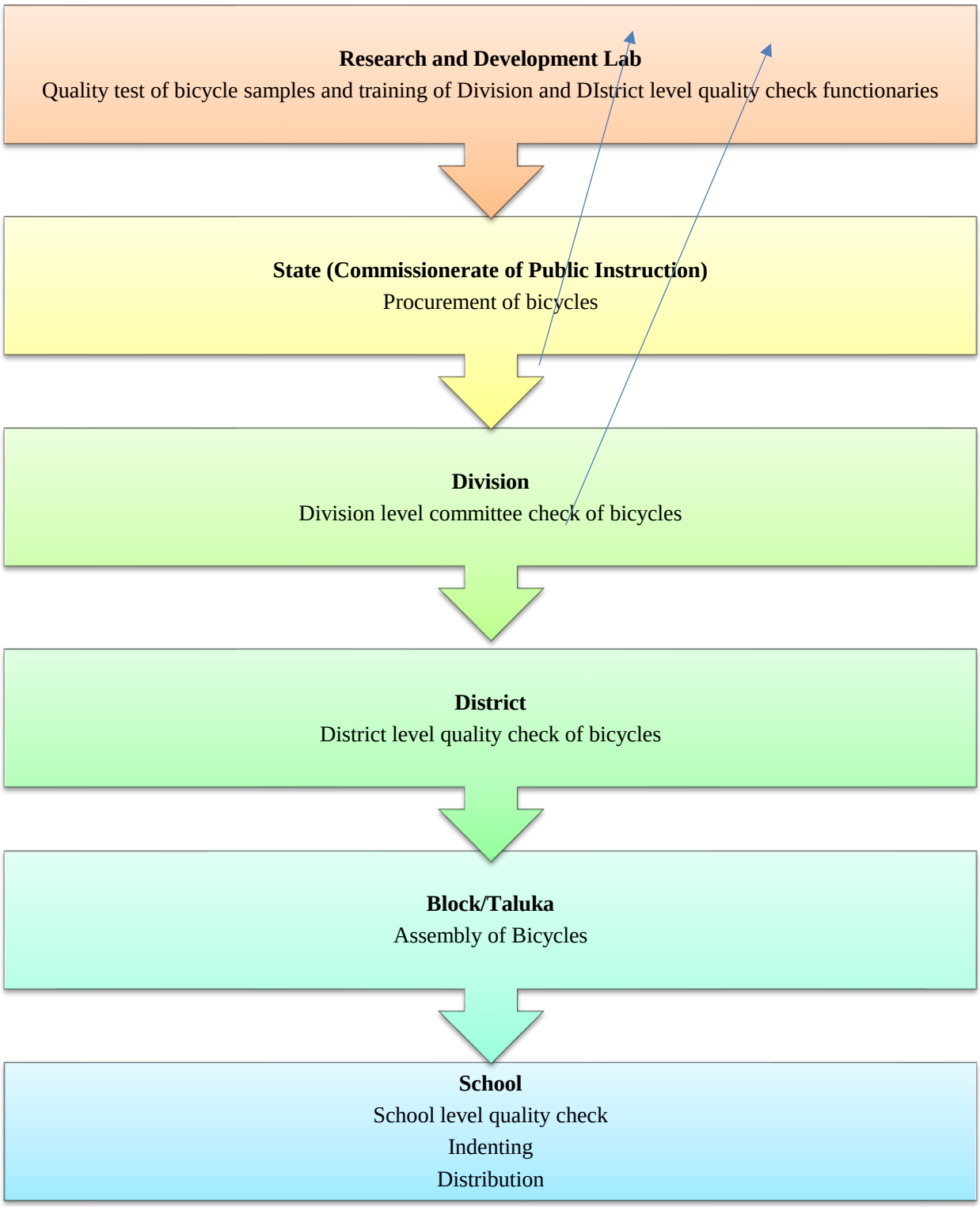
8. *Strengthen and decentralize complaint redressal mechanisms*: The school level three member committees lack powers to take any action against quality faults that are discovered. The committees should be empowered to take corrective action including rejection of faulty

bicycles, and to register complaints that have to be mandatorily redressed by the DDPI or another designated officer. The guidelines should establish time bound procedures for the redressal of such complaints and replacement of bicycles. A concrete grievance registration and redressal mechanism should be developed, with due decentralization of grievance redressal powers at the school, block and district level, depending on the severity of the grievance.

9. *Ensure that bicycles have all parts and that assembled bicycles are not damaged in transit:* Careful transportation of assembled bicycles should be ensured to reduce damage. State should take efforts to ensure that complete bicycles are distributed. State should take steps to address the problem of common missing parts such as bell and seat cover.

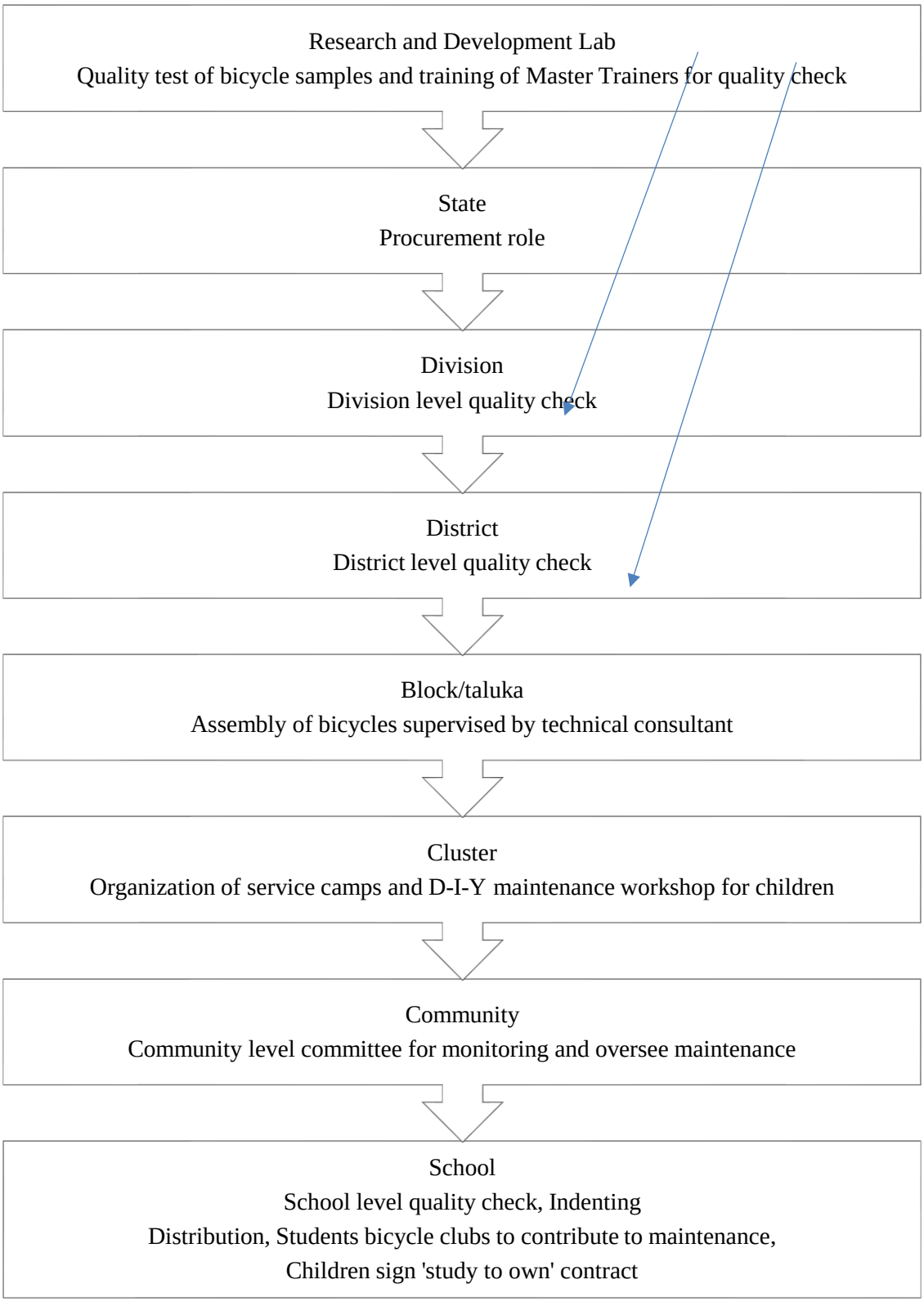
10. *Functional warranties and service camps at cluster level every six months*: This study has shown that one year and two-year bicycles have quality defects, even on stable parameters such as frame and fork. To address such quality issues in used bicycles, bicycle warranties should be effective and functional (five-year warranties for parts such as handle, frame and fork and 2-year warranty on other parts). Beneficiaries should be oriented to carefully preserve warranty cards and seek the repair services within the applicable warranty periods. The recent instructions of government to have simple maintenance instructions printed on warranty cards should be implemented and followed through. Given the high financial burden on maintenance, servicing camps should also be held every six months at each school level or at least at the cluster level (after the first camp which should be held a month after distribution).
11. *Replacement of damaged bicycles*: Bicycles that are found to be damaged or with quality defects at the time of receipt should be replaced immediately. Given that this study finds quality defects on even the relatively stable parameters for used bicycles (more than 40% used bicycles had quality defects such as rusted frame and fork, and worn gear teeth and tyre), steps should be taken at an early stage to ensure quality bicycles that are less prone to deterioration over a one year or two-year period.

Figure 6.1 Base model of actors: Actors and their interaction in bicycle distribution and quality check as per present system



Note – The arrows represent the stipulated movement of quality check functionaries for training to the R&D Lab at Ludhiana

Figure 1.2 Recommended model of actors: Actors and their interaction in bicycle distribution and quality check as per recommendations



7.3 Conclusion

The bicycle provision scheme has very apt and desirable stated objectives such as the enhancement of school enrolment, attendance and retention. This evaluation study shows that in the actual implementation of the scheme, however, the effect of bicycle provision on such parameters and on enhancing learning outcomes is marginal or of small magnitude.

Furthermore, regular usage of bicycle is by less than 50% students, and students in hilly areas face considerable difficulties in using bicycles to reach school. Therefore, there is a need to acknowledge that alternative means might be required to further improve school access, and alternative incentives such as scholarships, cash transfers etc. might be needed to further enhance secondary school attendance, punctuality and learning outcomes and bridge the secondary school enrolment gap between girls and boys.

The implementation of the scheme is also affected by process gaps such as shortcomings in the quality of bicycles, lacunae in quality check processes, and notable delays in the distribution of bicycles. Such process issues also affect the usage of bicycles and constrain the achievement of intended outcomes. If the bicycle distribution scheme is to be retained, then concrete steps must be taken to enhance the quality, maintenance mechanisms and timeliness of distribution.

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APPENDIX

Appendix 1: IDI with Principals/Headmaster/Headmistress

A. Information about the School

1	Name of the Principal	N. Krishnappa	
2	School	GHPS, Kote	
3	Type of school	1. Co-Education 2. Only for boys 3. Only for girls	
4	Village		
5	Taluk		
6	District		
8	Classes in school	Standard _____ To Standard ____	
9	Total number of students		
10	Total number of boy students		
11	Total number of girl students		
12	Total number of teachers		
13	Number of teachers absent for more than a month due to health reasons, maternity leave etc		
14	Total number of vacancies for teachers post in the school and their subject	Number of teachers	Subject
7	How you will describe the terrain of the area (mostly)	1. Plain 2. Plateau 3. Hilly 4. Mixed terrain	

15	School catering to the villages (write names with tentative distance)		**Villages**	**Terrain of the village (plateau/plain/hilly)**	**Average distance from school (in KMs)**
		1			
		2			
		3			
		4			
		5			
		6			
		7			

16 Number of students in school

	VII					**VIII**					**IX**					**X**				
	SC	ST	Minority	OBC	General	SC	ST	Minority	OBC	General	SC	ST	Minority	OBC	General	SC	ST	Minority	OBC	General
Boys																				
Girls																				
Total																				

17 Attendance on the day of the survey

	VII	**VIII**	**IX**	**X**
Boys				
Girls				
Total				

B. **DISTRIBUTION OF BICYCLES TO STANDARD 8th STUDENTS**

18	Had your school distributed bicycles to the students in the academic year of 2019-20?	1. Yes 2. No

19	If no, then when it is expected to be distributed to the children? (skip it if the answer is yes in the previous question)	
20	Usually, by which month the cycles are distributed? (dd,mm,yyyy) (if the distribution is made in batches then write the date of the last distribution)	
21	Are the bicycles distributed in the same period in each academic year	Yes No
22	If **no**, then give the major reasons for delays?	

23	Details of the bicycle distributed over the last three years								
		Number of cycles requested		Number of cycles sanctioned		Number of cycles distributed		Month and Year of distribution (dd,mm,yyyy)	Number of cycles remained undistributed
		Boys	Girls	Boys	Girls	Boys	Girls		
B	2017-18								
C	2018-19								
D	2019-20								

24	What is the reason of Cycles remaining undistributed in the last academic year (2019-20) (skip if the last column is not filled)	
25	Do all the students of Class VIII gets bicycle?	1. Yes 2. No
26	If no, then give the reasons of excluding students from the list? (skip it if the answer is yes in the previous question)	
27	How the scheme has benefited the following students (please rank them between 1 to 4 • 1= Helped them a lot (only if it helped more than 80 percent of the students in the respective group) • 2 = Helped them (more than 60 percent of the students are benefitted in the respective group) • 3 = Not much (if more than 40 percent students are benefitted in the respective group) • 4 = Not at all (if you think that less than 40 percent of the students are benefitted in the respective group)	
A	Girls	
B	Boys	
C	Girls coming from far off areas	
D	Boys coming from far off areas	
	How the bicycles had helped the students, especially	

	girls	
28	Had the bicycles helped in improving the self-confidence of the girl students?	1. Yes 2. No
29	If yes, how it has helped the girls to increase their self-confidence? (Like they are participating in school activities actively). (skip it if the answer is no in the previous question)	
30	Do you think, the scheme has helped in improving the attendance of the students?	1. Yes 2. No
31	Give reasons that how the scheme has helped in improving the attendance of the students:	
a.	Boys	1. Comes after supporting family in field 2. Comes after distributing newspaper 3. comes after helping family in their livelihood (other than agriculture) 4. Comes after their tuition 5. Any other, please mention
B	Girls	1. Comes after supporting family in household works 2. Comes after supporting family in field 3. Comes after helping family in their livelihood (other than agriculture) 4. Comes after their tuition 5. Any other, please mention
32	Are there any risks/disadvantages of coming to school by bicycles?	
A	Boys	1. No 2. They roam after school hours 3. The compete and fall (met with an accident) 4. Heavy trafficked roads/Highways. Therefore, possibility of meeting an accident. 5. Any other _____
B	Girls	1. No 2. Not safe as they travel alone 3. Harassed on the way to school by rowdies 4. Heavy trafficked roads/Highways. Therefore, possibility of meeting an accident.

		5. Any other _____
33	How many (tentative) students uses bicycles to come to school regularly (give tentative percentage) (consider only those who have received cycles under the scheme)?	
A	Boys	90
B	Girls	90
34	Does your school have enough parking space within the school premises to park bicycles of all the children in the school?	1. Yes 2. No
35	If no, then where the students are parking their bicycles? (skip if the answer is yes in above question)	1. Outside the school boundary wall 2. Open areas outside school 3. Nearby houses 4. Any other _____ 5. Don't know
36	If the bicycles are parked outside school, then what about the security? (skip if the answer is yes in question)	1. School has appointed security guard to ensure that cycles don't get stolen during school hours 2. It is not the responsibility of school to provide security for the bicycles 3. Villagers/children themselves look after the bicycles 4. This area is very secure, incidences like theft has never happened 5. Any other, please specify _____
37	Any incidences of bicycle getting stolen from the school in last three years (doesn't matter where are they parked but it should be when the student got the bicycle the school)	1. Yes 2. No
38	What are the reasons of not using bicycles for commuting to school (mark all the responses)?	1. Puncture 2. Ill- health 3. School is not far 4. The prefer to walk to school with their friends 5. They don't know how to ride a cycle 6. Area is hilly, thus riding to school is not convenient 7. Their family members are using it 8. Any other, please specify
39	Can you give suggestion to improve the usage of bicycles by students?	
40	Do you agree to continue the scheme?	1. Yes 2. No
41	If yes, why?	
42	If no, why?	
43	Do you have any suggestions to improve the	

	achievements of the scheme?	
Process followed by the school to get the bicycles		
44	When you have given the requirements (proposal) to the government? (dd/mm/yyyy)	
45	To whom the proposal is submitted?	
46	What are the documents needed to be submitted along with the proposal? (mention all please) (multiple options, and the options of adding responses)	1. Separate list of students as per gender 2. List of students staying in welfare hostels 3. Letter signed by SDMC members 4. 5.
47	How you have calculated the number of bicycles to be distributed?	1. As per the attendance 2. As per the registration
48	What was the condition of the bicycles when they were received?	1. New 2. Used 3. Few are broken 4. Any other, please specify _____
49	Was the bicycle received are ready for riding?	1. Yes 2. No
	If no, give reasons?	3.
50	Items received	1. Seat cover 2. Stand 3. bell 4. Front carrier 5. Back carrier 6. Wheel guard 7. Lock 8. Any other, please specify _____
	How you rate the quality of the bicycle received?	1. Excellent (all the parts of the bicycle are new (including tyres), without any rust and bent) 2. Very Good (the bicycles given are new but few bicycles were rusted and have bents) 3. Good (the bicycles given are new but most of the bicycles were rusted/broken/bent) 4. Poor (the bicycles are not new, most of the bicycles were rusted/broken/bent)

51	Do you constitute a committee to inspect the bicycles before distribution?	1. Yes 2. No
52	If yes, then mention the people who should be in the committee?	1 2 3
53	How you select the committee members for the inspection?	1. Government official: _____ 2. SDMC member: _____
54	What is the role of the committee?	1. To inspect the quality of the bicycles to be given 2. To verify the number of bicycles to be given 3. To verify the quality of assembling the bicycles 4. Any other, please specify _____
55	Who bears the cost of travel to the centre for inspection?	1. School (government fund) 2. The members themselves 3. The principals/headmasters (from his/her personal cost) 4. Any other, please specify _____
56	If the committee reports an issue, is it addressed?	1. Yes 2. No
57	After how many days of inspection, the bicycles are received in the school?	
58	Are all the required number of bicycles are delivered on a single day?	6. Yes 7. No
59	If no, then by how many days all the required number of bicycles are delivered?	_____ days
60	In such circumstances, what you do?	1. You distribute the bicycles as and when received (in different batches) 2. You wait for all the bicycles to be delivered, and then distribute to all the students in single day 3. Any other, please mention _____
61	During the distribution of bicycles, who else need to be present, other than school staff?	1. SDMC President 2. SDMC members (how many_____) 3. BEO 4. Government officials, (other than department of Public Instruction

<table>
<tr><td></td><td></td><td>_____)

5. Officials from Department of Public Instruction (who: _____)

6. Any other, please specify _____</td></tr>
<tr><td>61</td><td>Do they (other than school staff, like SDMC President/members, government officials) must submit a report of distribution?</td><td>1. Yes

2. No

3. Don’t know</td></tr>
<tr><td>62</td><td>What is the verification process for distribution of bicycles, like who need to sign, how the distribution is done, whom the receipts are sent, and what happens to extra cycles (if a student leaves the school between the proposal and distribution)?</td><td></td></tr>
<tr><td>63</td><td>Do you think that the scheme has been implemented in fair manner?</td><td>1. Yes

2. No</td></tr>
<tr><td>64</td><td>If no, then please give the reason</td><td></td></tr>
<tr><td>65</td><td colspan="2">Do you think, this scheme has positively impacted on following component?</td></tr>
<tr><td></td><td colspan="2">
<table>
<tr><th>S.No</th><th>Component</th><th>Yes to great extent (above 80%)</th><th>Yes, to some extent (40 to 80 %)</th><th>Note at all (less than 80%)</th></tr>
<tr><td>a.</td><td>Improved Enrolment</td><td></td><td></td><td></td></tr>
<tr><td>b</td><td>Improved attendance</td><td></td><td></td><td></td></tr>
<tr><td>c</td><td>Improved retention</td><td></td><td></td><td></td></tr>
<tr><td>d</td><td>Reduced drop out</td><td></td><td></td><td></td></tr>
<tr><td>E</td><td>Positive attitude towards continuation of schooling till 12th standard</td><td></td><td></td><td></td></tr>
<tr><td>f</td><td>Greater desire for higher education</td><td></td><td></td><td></td></tr>
<tr><td>g</td><td>Increased timing for home study</td><td></td><td></td><td></td></tr>
<tr><td>h</td><td>Increased self esteem</td><td></td><td></td><td></td></tr>
<tr><td>i</td><td>Students have the independence to travel to market/tuition or other places by their own</td><td></td><td></td><td></td></tr>
<tr><td>j</td><td>Positive attitude among girls to enroll in secondary schooling</td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>66</td><td colspan="2">Difference between the bicycle’s given to boys and girls</td></tr>
</table>

		Girls	Boys
A	Brand		
B	Colour		
C	Stand (middle or side)		
D	Front Basket		
E	Carrier		
F	Wheel guard		
G	Front rods		
H	Size of seat		
I	Any other, please specify		
68	Please provide following information's:		
a.	When was the bicycle distributed in 2019-18?		
b.	Attendance of Class VIII students in the academic year of 2018-19		

	June	July	August	September	October	November	December	January	February	March
Boys										
Girls										
Total										

Appendix 2: Questionnaire for Beneficiary Students

A.	**LOCATION DETAILS ABOUT THE SCHOOL**	
1	School	
2	Type of school	1. Co-ed 2. Only boys' school 3. Only girls' school
4	Village	
5	GP/TP	
6	Taluk	
7	District	
B	**STUDENT DETAILS**	
8	Name of the student	
9	Father's name	
10	Class of the student	1. VIII 2. IX 3. X
11	Gender	1. Boy 2. Girl
12	Caste	1. General 2. SC 3. ST 4. OBC 5. Don't know
13	Colour of your ration card	1. Green (BPL) 2. Blue (APL) 3. Pink (AAY) 4. Don't know
14	Number of family members staying in your house (include yourself).	

15	Number of siblings you have?		Brother	Sister	Total
		Older than you			
		Younger than you			
		Total			

16	Education of your parents (consider only if it is completed) (tick mark)		Father	Mother
		1. Illiterate		
		2. Primary (Class V and below)		
		3. Secondary (Class X and Below)		
		4. Higher Secondary (Class XII and below)		
		5. Degree (BA/BSc/BCom/Pharm)		
		6. PG (MA/MsC/MCom/MPharm and Equivalent)		
		7. Professional courses (BE/MBBS/any other)		
		8. Any other, please specify		

17	Occupation of the parents (tick all that is applicable)		Father	Mother
		1. Salaried (government employee)		
		2. Salaried (non-government employee)		
		3. Farmer (working in own field)		
		4. Agricultural worker (working in others field)		
		5. Wage labourer (other than agriculture) (not regular monthly/daily wage worker)		
		6. Own business (craftsmen, shop keeper, driver of own vehicle etc) (for which s/he is not paying the profits)		
		7. Temporarily migrates to other places for work		
		8. Any other, please specify		
		9. Not Applicable (not working)		
		10. Don't Know		
18	Are you living in your own house? (owned by your family members and rent is not paid)	1. Yes 2. No		
19	Type of house	1. Kutcha (roof and walls are not concrete) 2. Pucca (roof and walls are concrete) 3. Semi- Pucca (roof is not concrete) 4. Combine (one house is pucca and other is sem-pucca or kutcha		
20	Assets in your house	**S.No**	**Items**	**Yes/No**
		1.	TV	1. Yes 2. No
		2.	Mobile	1. Yes 2. No
		3.	Motorcycle/scooter/moped	1. Yes 2. No
		4	Total Number of motorcycles/scooter/moped in house	
		5	Bicycle	1. Yes 2. No
		6	Number of bicycles	
		7	Car/jeep/van	1. Yes 2. No
		8	Electricity	1. Yes 2. No
		9	Latrine (within premises)	1. Yes 2. No
		10	Separate Bathroom (within premises)	1. Yes 2. No
		11	Walls of the bathroom	1. Concreate

				2. Plastic 3. Clothes/jute bags 4. other
C	**AFTER RECEIVING THE CYCLE**			
21	Have you received a bicycle from the school?	1. Yes 2. No		
22	Which brand of bicycle you have received?	1. Hero 2. Hercules 3. Nandi 4. BSA 5. Don't know 6. Others, please specify_____		
23	What is the colour of your bicycle?	1. Black 2. Dark Green 3. Pink 4. Maroon 5. Dark Blue 6. Any other, please specify _____		
24	When? (mm, yyyy)			
	Where are you staying?	1. In my house with parents 2. In my house with relatives (parents are not staying in the house) 3. In my relatives house with parents 4. In my relative house (parents are staying somewhere else) 5. Government Hostel 6. Private Hostel 7. Other		
25	How far is your house from the school?	_____ KMs		
26	What is the total travel time from your home to school?	_____ Minutes		
27	Can you ride a bicycle?	1. Yes 2. No, and I am not interested to learn it 3. No, because of my physical condition, I cannot ride a bicycle		
28	If yes, when did you learnt?	1. Before receiving the bicycle 2. After receiving the bicycle		
29	Are you commuting to school in bicycle?	1. Yes 2. No		
30	Did you cycle to your school, today?	1. Yes 2. No		
31	How regularly do you commute to school in bicycle?	1. Everyday 2. More than 3 days in a week 3. 3 days in a week 4. 2 days in a week 5. 1 day in a week 6. Not regularly 7. Whenever the bicycle was not needed by my family members		
32	If you are not commuting to school in bicycle, then give	1. Don't know how to ride 2. My house/hostel is not far 3. Because of hilly terrain it is not possible to ride to school in		

	reason?	bicycle 4. Coming to school by cycle consumes more time. 5. Parking space given is not secure, any cycles got stolen from there 6. I prefer to walk to school with my friends 7. My house is too far, and public/private transport are better option 8. My family member (brother/father) drops me at school 9. It is not safe to commute by bicycle as the approach road is deserted (through forest) or not used by many people 10. It gets damaged quite regularly (like chain coming out, tyres get punctured etc) 11. Cycle given was not good enough to ride (broken bicycle given) 12. Any other, please mention _____
33	What is the condition of road from your home/hostel to school?	1. It is next to school, so the condition of road does not matter 2. Its good, fully tarred road 3. Not so good, fully tarred road but with many pot holes 4. Some part of the road is tarred 13. It's a non-tarred road
34	Is it difficult to drive the bicycle (driving ease), because	1. Roads have many potholes 2. Roads are not tarred and gets muddy during rainy season 3. Full of traffic so difficult to drive 4. Difficult terrain (hilly) 5. Any other, please specify _____
35	Does your school have enough parking space to park bicycles of all children?	1. Yes 2. No
36	If no, then where are you parking your bicycle?	1. Outside the gate of the school 2. Nearby free space 3. On the road 4. Friends/relative's house 5. Houses, surrounding the school 6. Any other, please specify _____
37	Do you think that your bicycle can be stolen from the parking space?	1. Yes 2. Yes, similar incidence had happened before 3. No 4. Don't know, nothing has happened until now
D	**FOR STUDENTS FROM HILLY AREAS**	
	Time taken	**_____ Minutes**
38	From home to school	_____ Minutes
39	From school to home	
40	Is it difficult to travel in your area in bicycle	1. Yes 2. No
41	Are you commuting to school in your bicycle?	1. Yes, everyday 2. Yes, some days in a week 3. Rarely 4. Not at all
42	Has the bicycle helped you in anyway to	1. Yes 2. Yes, as I travel some part in bicycle

	travel to school?	3. No, it is not of much use as I use other modes of transportation (other than bicycle)
E	**Ownership and Usage of Bicycle**	
43	Can you list out three things that you own and very proud of owning it? (Don't list things that is owned by any other members of the home)	1. 2. 3
44	Do you think, you own the bicycle?	1. Yes 2. No 3. Not sure
45	Do your family members ask you before using your bicycle?	1. Yes 2. No 3. Sometime 4. No one uses it other than me
46	Who is responsible to clean the bicycle?	1. Me 2. My brother/sister 3. My father 4. Other family members (excluding above 3) 5. No one, as it never gets cleaned 6. Any other, _____
47	Who pays for the maintenance?	1. Father/mother 2. Brother/other family members 3. Self (from pocket money) 4. Any other, please specify _____
48	Do you use bicycle for purpose other than commuting to school?	1. Yes 2. No
49	If yes, then where? (multiple option)	1. Market 2. Tuition 3. Other places within the village 4. Outside village 5. Any other, please specify _____
50	If you are not using the bicycle to commute to school or other places, then what is happening to it? (multiple option)	1. Used by family members 2. Sold it 3. Given it to a relative/friend 4. Rented it out 5. Nothing, it is at home 6. Don't know 7. Any other, please specify _____
51	Does your siblings/parents (or any other family members) also uses your bicycle?	1. Yes 2. No
52	If yes, then who other than you are using it? (multiple option)	1. Mostly father 2. Mostly mother 3. Mostly brother/s 4. Mostly my elder sister/s

<table>
<tr><td></td><td></td><td colspan="4">5. Mostly other relatives (other than brother, sister, father and mother)
6. None</td></tr>
<tr><td>53</td><td>What is the present condition of the bicycle?</td><td colspan="4">1. Good, and I am only using it
2. Good, me and my family members use it.
3. Good, but my family members are using it
4. Good, but nobody is using it
5. Its damaged, need to be repaired
6. Its damaged, but still I am using it
7. Don’t know where it is but it is not in my house
8. Any other, please mention</td></tr>
<tr><td>F</td><td colspan="5">BICYCLE MAINTENANCE AND ITS EXPENDITURES</td></tr>
<tr><td>54</td><td>Do you have to spend on the maintenance of the bicycle? like filling air, puncture etc</td><td colspan="4">1. Yes
2. No</td></tr>
<tr><td rowspan="7">55</td><td rowspan="7">Please mention how much you spend in last month for the maintenance of your bicycle?</td><td>S.No</td><td>Reasons of expenditure</td><td>How many times in a month</td><td>How much in a month? (in INR)</td></tr>
<tr><td>1.</td><td>Filling air in the tyres</td><td></td><td></td></tr>
<tr><td>2.</td><td>Punctures</td><td></td><td></td></tr>
<tr><td>3.</td><td>Changing parts of the bicycle</td><td></td><td></td></tr>
<tr><td>4.</td><td>Fittings of the bicycle</td><td></td><td></td></tr>
<tr><td>5.</td><td>Any other, please describe
_____</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>56</td><td>Do you have a bicycle repair shop near your house?</td><td colspan="4">1. Yes
2. No
3. Don’t know</td></tr>
<tr><td>57</td><td>If no, then how far you have to travel to repair your bicycle?</td><td colspan="4">_____ KM</td></tr>
<tr><td>58</td><td>If the shop is far, how many days are required to get repaired the bicycle? (day of damage to day of getting repaired)</td><td colspan="4">_____ day/s</td></tr>
<tr><td>59</td><td>Can you fill air in the tyres with a pump?</td><td colspan="4">1. Yes
2. No</td></tr>
<tr><td>60</td><td>If no, then why?</td><td colspan="4">1. It is difficult to fill
2. Only older people can fill the air
3. Only a cycle repair person can fill it
4. Only men/boys can fill air in a bicycle
5. Any other, please specify</td></tr>
<tr><td>61</td><td>Will you be able to put the chain back in place, if it comes out?</td><td colspan="4">1. Yes
2. No</td></tr>
<tr><td>G</td><td colspan="5">ADVANTAGES OF HAVING YOUR OWN BICYCLE</td></tr>
<tr><td>62</td><td>Are there any advantages of having a</td><td colspan="4">1. Yes
2. No</td></tr>
</table>

	bicycle?	
63	What are the advantages of having a cycle? (Take multiple responses if any)	1. I save time on travelling 2. I am not dependent on parents/siblings for dropping me to school 3. I do not have to depend on public transport 4. I do not have to walk to school 5. I can reach early to school as well as home 6. I feel safe 7. I can go wherever I want to? 8. I am able to take tuition 9. Any other, please specify 10. _____
64	Are there any disadvantages of having a bicycle, like meeting an accident, people harass you?	1. Yes 2. No
65	What are the disadvantages of having a bicycle	1. I don't feel safe riding a bicycle as road to school is not safe 2. I feel tensed riding a bicycle 3. I meet with an accident quite often 4. People follow me/us 5. I spend time riding on bicycle rather than reaching home early 6. None 7. Any other, please specify _____
66	What measures you have taken to overcome the disadvantages (if any)?	1. Travelling in groups (with friends) 2. Travelling with male friends 3. Accompanied by older people 4. Any other, please specify _____
H	**ATTENDANCE AND REGULARITY**	
67	Do you cycle to school regularly?	1. Yes 2. No
68	Has the bicycle helped you to travel to school regularly?	3.
69	Do you enjoy your travel to school by bicycle?	1. Yes 2. No
70	If yes, then how?	1. I can roam around with my friends 2. I don't feel tired while going and coming from school 3. It saves time 4. Any other, please specify _____
71	Whether you would have continued schooling after Class VIII, if you had not received the bicycle?	1. Yes 2. No 3. Not sure
72	If no, then why	1. Have to travel long distance to school 2. Have to travel in public transport 3. Non availability of public transport 4. Can't afford public transport 5. It would have been unsafe 6. Any other, please specify
73	Do you think you will continue your studies till class XII as you	1. Yes 2. No 3. Not sure

	have a bicycle now? (bicycle if one of the major factors for continuing studies till Class XII)	
I	**SELF-CONFIDENCE**	
74	Are you confident about communicating to strangers?	1. Always 2. Mostly 3. Sometimes 4. Never
75	How confident you are to reach school in time?	1. Always 2. Mostly 3. Sometimes 4. Never
76	Do you join in class or group discussions?	1. Always 2. Mostly 3. Sometimes 4. Never
77	Do you ask questions when you don't understand in a class? (to the teacher)	1. Always 2. Mostly 3. Sometimes 4. Never
78	Do you feel comfortable giving a 'talk' in a class or school assembly?	1. Always 2. Mostly 3. Sometimes 4. Never
79	Are you confident to travel to market, relatives/friend's house, tuition etc any time of the day?	1. Always (Day and Night) 2. Not at night 3. Sometimes 4. Only if I cycling with a friend/family member 5. Never
80	Do you feel 'happy'?	1. Yes, Always True 2. Yes, but sometimes I am not happy 3. No, most of the time I am not happy 4. No, I never feel happy
81	Do you "like yourself"?	1. I'm happy the way I am 2. I like most things about myself 3. Sometimes I don't like myself that much 4. I wish I were somebody else
82	What was your score in Std VII and VIII?	S.No. | Class | Score 1 | VII | 2 | VIII |
83	Are you confident to perform well in Board Exams?	1. Yes (above 80 Percent) 2. Not sure (between 60-80 percent) 3. Not sure as other problems remain same (40-60 percent) 4. No (less than 40)
84	Do you now feel more confident in solving interpersonal issues with classmates?	1. Yes 2. No 3. Don't know
85	Do you feel that now	1. Yes

	you are in a better position to interact with your parents/siblings and raise your points with firmness?	2. No 3. Don't know		
86	Do you think that your level of interaction with persons/social groups in your neighbourhood is now much more open and without any complex or fear?	1. Yes 2. No 3. Don't know		
87	Do you think that now you are in a better position to negotiate with the shop keepers?	1. Yes 2. No 3. Don't know		
J	**BEFORE YOU RECEIVED THE BICYCLE**			
87			**Before Receiving the Bicycle**	**After Receiving the Bicycle**
88	What was the mode of travelling to the school?	1. walking 2. Public transport, like bus, auto etc 3. Own bicycle 4. Dropped by the elders of the house in own vehicle 5. Shared transport, like rickshaw/auto-rickshaw which picks children from the village and then drop them in the school 6. Any other, please specify _____ _____		
89	Total time spent on travelling to school?	Answer in minutes (includes up and down travel time)		
90	How often you are missing the first class in a week?	Give number of days in a week (answer should be between 0 -6)		
91	How often you are missing school in a month?	Give number of days in a month (answer should be between 0-30 days)		
92	What are the reasons of missing school? (multiple option)	1. Not applicable as not missing the schools 2. Not well		

		3. Parents/siblings not well 4. Have to work at home 5. Have to support parents at work 6. Missed the bus/vehicle 7. Was not willing to walk to school 8. Lack of transport facilities 9. Any other		
93	How often you are missing school during rainy season	Give number of days in a week (answer should be between 0 -7)		
	For girl students only			
94	How often you are missing classes during menstruation	Number of days in a month		
95	Do you feel secure to travel to school?	1. Yes 2. No		
K	**EDUCATION ENGAGEMENT**			
96	If you are cycling to school, then how much time you are able to save?	_____ Minutes		
97	Are you able to give more time to study as you are saving in travel time?	1. Yes 2. No		
98	If yes, then how much time you are getting extra to study?	_____ Minutes		
99	Do you go to tuition?	1. Yes 2. No		
100	If Yes, does bicycle have helped you to go to tuition?	1. Yes 2. No		
101	Are you going to your friend's house to study as you have a bicycle now?	1. Yes 2. No		
102	Does having bicycle has helped you in any other ways for studies?	1. Yes 2. No		
103	If yes, then how?			
L	**STATUS OF THE BICYCLE, WHEN RECEIVED**			
104	Are the Bicycles were given to you immediately after they arrived to the school?	1. Yes 2. No		
105	If No, after how many months it was given to you	----------Months		
106	What was the status of	1. New, without any damage		

	the bicycle, when received	2. New, but parts are not properly fitted 3. Bew, but certain parts are missing 4. New, but damaged 5. It was looking old (like rusted parts) 6. Any other, please specify _____
107	If it is damaged, then please specify the type of damage?	
108	How much you had spent to repair the damage?	INR _____
109	Do you have to add any parts after receiving the bicycle, like bell?	1. Yes 2. No
110	If yes, what are they	1. Bell 2. Seat cover 3. Back Carrier 4. Front Carrier (for girls only) 5. Chain Cover 6. Handle Cover 7. Any other thing, please specify
111	How was the paint of the bicycle?	1. New 2. Dull because it was old
112	How was the seat?	1. New 2. Appeared old
113	How were the tyres?	1. New and strong 2. New and weak 3. Appeared old 4. Any other status ……....
114	How were the rims?	1. Non-rusted and Shiny 2. Non-rusted and Non-shiny 3. Rusted 4. Others specify…….
M	**WORK AND PLEASURE**	
115	What are your responsibilities at home?	1. Cleaning the house 2. Filling water 3. Looking after the younger siblings 4. Bringing vegetables/other household items from market 5. Helping in field/household livelihood 6. Helping mother in cooking/Cleaning utensils 7. Washing clothes 8. Work related to puja at home 9. Any other work, please specify
116	How much time in a day you spend on household chores? (other than studies and getting ready for school)	_____ Hours
117	Do you play outdoor	1. Yes

	sports?	2. No
118	If yes, then what?	
119	Do you participate in any sports in school sports program?	1. Yes 2. No
120	If no, then why	1. Lack of interest 2. Lack of opportunity in school 3. Lack of co-players 4. Not allowed by family members 5. Any other, please specify _____
121	Do you think, riding bicycle has made you physically fit?	1. Yes 2. No 3. Some bit

Appendix 3: Questionnaire for Non-Beneficiary Students

(Student living in welfare hostel should not be covered under this)

Why the student has not received a bicycle from the school?	1. Student is not entitled to as s/he is not in government/government-aided school 2. The student is in government/government-aided school but s/he lives in welfare hostel 3. The student is in government/government-aided school but s/he is coming by bus and for that s/he have got bus pass from government 4. The student is in government and government-aided school but s/he is not eligible under the scheme, give reason for that _____

B.	**LOCATION DETAILS ABOUT THE SCHOOL**					
1	School					
2	Type of school	4. Co-ed 5. Only boys' school 6. Only girls' school				
4	Village					
5	GP/TP					
6	Taluk					
7	District					
B	**STUDENT DETAILS**					
8	Name of the student					
9	Father's name					
10	Class of the student	4. VIII 5. IX 6. X				
11	Gender	3. Boy 4. Girl				
12	Caste	6. General 7. SC 8. ST 9. OBC 10. Don't know				
13	Colour of your ration card	5. Green (BPL) 6. Blue (APL) 7. Pink (AAY) 8. Don't know				
14	Number of family members staying in your house (include yourself).					
15	Number of siblings you have?		Brother	Sister	Total	
		Older than you				
		Younger than you				
		Total				
16	Education of your parents		Father		Mother	

	(consider only if it is completed) (tick mark)	1. Illiterate		
		2. Primary (Class V and below)		
		3. Secondary (Class X and Below)		
		4. Higher Secondary (Class XII and below)		
		5. Degree (BA/BSc/BCom/Pharm)		
		6. PG (MA/MsC/MCom/MPharm and Equivalent)		
		7. Professional courses (BE/MBBS/any other)		
		8. Any other, please specify		

17	Occupation of the parents (tick all that is applicable)		Father	Mother
		2. Salaried (government employee)		
		2. Salaried (non-government employee)		
		3. Farmer (working in own field)		
		4. Agricultural worker (working in others field)		
		5. Wage labourer (other than agriculture) (not regular monthly/daily wage worker)		
		6. Own business (craftsmen, shop keeper, driver of own vehicle etc) (for which s/he is not paying the profits)		
		7. Temporarily migrates to other places for work		
		8. Any other, please specify		
		9. Not Applicable (not working)		
		10. Don't Know		

18	Are you living in your own house? (owned by your family members and rent is not paid)	3. Yes 4. No
19	Type of house	5. Kutcha (roof and walls are not concrete) 6. Pucca (roof and walls are concrete) 7. Semi- Pucca (roof is not concrete) 8. Combine (one house is pucca and other is sem-pucca or kutcha

20	Assets in your house	**S.No**	**Items**	**Yes/No**
		1.	TV	3. Yes 4. No
		2.	Mobile	3. Yes 4. No
		3.	Motorcycle/scooter/moped	3. Yes 4. No

		4	Total Number of motorcycles/scooter/moped in house	
		5	Bicycle	3. Yes 4. No
		6	Number of bicycles	
		7	Car/jeep/van	3. Yes 4. No
		8	Electricity	3. Yes 4. No
		9	Latrine (within premises)	3. Yes 4. No
		10	Separate Bathroom (within premises)	3. Yes 4. No
		11	Walls of the bathroom	5. Concreate 6. Plastic 7. Clothes/jute bags 8. Other
C	**MODE OF TRAVEL**			
21	Have you received a bicycle from the school?	3. Yes 4. No		
22	If no, then how you are travelling to school? (most of the days in a month) – one option only	7. Walking 8. Public transport, like bus, auto etc 9. Own bicycle 10. Dropped by the elders of the house in own vehicle 11. Shared transport, like rickshaw/auto-rickshaw which picks children from the village and then drop them in the school 12. Any other, please specify _____		
23	How much time you are taking to travel to school (other than bicycle)?	_____ Minutes		
24	If yes (from Q 21), do you cycle to school regularly? (if no, move to Q 32)	4. Yes 5. No		
25	If you are cycling to school, then how much time you are able to save?	_____ Minutes		
26	Are you able to give more time to study as you are saving in travel time?	3. Yes 4. No		
27	If yes, then how much time you are getting extra to study?	_____ Minutes		
28	Has the bicycle helped you to travel to school regularly?	6.		
29	Do you enjoy your travel to school by bicycle?	3. Yes 4. No		

30	If yes, then how?	5. I can roam around with my friends 6. I don't feel tired while going and coming from school 7. It saves time 8. Any other, please specify _____
31	Have you even been taunted by strangers while coming/going to school?	1. Yes 2. No
D	**ATTENDANCE AND REGULARITY**	
32	How often you are missing the first class in a week?	Give number of days in a week (answer should be between 0 -6) _____ days
33	How often you are missing school in a month?	Give number of days in a month (answer should be between 0-30 days) _____ days
34	What are the reasons of missing school? (multiple option)	10. Not applicable as not missing the schools 11. Not well 12. Parents/siblings not well 13. Have to work at home 14. Have to support parents at work 15. Missed the bus/vehicle 16. Was not willing to walk to school 17. Lack of transport facilities 13. Any other
35	How often you are missing school during rainy season?	Give number of days in a week (answer should be between 0 -7) _____ days
38	Will you continue your studies till class XII?	4. Yes 5. No
39	If no, then why?	7. Have to travel long distance to school 8. Have to travel in public transport 9. Non availability of public transport 10. Can't afford public transport 11. It would have been unsafe 12. My parents are not willing to 13. I don't want to study further 14. I have to contribute in my family's economic condition Any other, please specify
41	Are you going to continue your studies after Class VIII?	4. Yes 5. No 6. Not sure
42	If no, then why	15. Have to travel long distance to school 16. Have to travel in public transport 17. Non availability of public transport 18. Can't afford public transport 19. It would have been unsafe 20. My parents are not willing to 21. I don't want to study further 22. I have to contribute in my family's economic condition 23. Any other, please specify
43	Would you have continued the studies if you had a bicycle?	_____minutes
	For girl students only	
44	How often you are	14. Number of days in a month

	missing classes during menstruation	
45	Do you feel secure to travel to school?	3. Yes 15. No
E	**EDUCATION ENGAGEMENT**	
46	Do you go to tuition?	3. Yes 4. No
47	How you travel for tuition?	1. Walking 2. Public transport, like bus, auto etc 3. Own bicycle 4. Dropped by the elders of the house in own vehicle 5. Shared transport, like rickshaw/auto-rickshaw which picks children from the village and then drop them in the school 6. Any other, please specify _____
48	Are you going to your friend's house to study?	3. Yes 4. No
F	**SELF-CONFIDENCE**	
49	Are you confident about communicating to strangers?	5. Always 6. Mostly 7. Sometimes 8. Never
50	How confident you are to reach school in time?	5. Always 6. Mostly 7. Sometimes 8. Never
51	Do you join in class or group discussions?	5. Always 6. Mostly 7. Sometimes 8. Never
52	Do you ask questions when you don't understand in a class? (to the teacher)	5. Always 6. Mostly 7. Sometimes 8. Never
53	Do you feel comfortable giving a 'talk' in a class or school assembly?	5. Always 6. Mostly 7. Sometimes 8. Never
54	Are you confident to travel to market, relatives/friend's house, tuition etc any time of the day?	6. Always (Day and Night) 7. Not at night 8. Sometimes 9. Only if I cycling with a friend/family member 10. Never
55	Do you feel 'happy'?	5. Yes, Always True 6. Yes, but sometimes I am not happy 7. No, most of the time I am not happy 8. No, I never feel happy
56	Do you "like yourself"?	5. I'm happy the way I am 6. I like most things about myself

<table>
<tr><td></td><td></td><td>7. Sometimes I don’t like myself that much
8. I wish I were somebody else</td></tr>
<tr><td rowspan="3">57</td><td rowspan="3">What was your score in Std VII and VIII?</td><td>S.No. | Class | Score</td></tr>
<tr><td>1 | VII |</td></tr>
<tr><td>2 | VIII |</td></tr>
<tr><td>58</td><td>Are you confident to perform well in Board Exams?</td><td>5. Yes (above 80 Percent)
6. Not sure (between 60-80 percent)
7. Not sure as other problems remain same (40-60 percent)
8. No (less than 40)</td></tr>
<tr><td>59</td><td>Do you now feel more confident in solving interpersonal issues with classmates?</td><td>4. Yes
5. No
6. Don’t know</td></tr>
<tr><td>G</td><td colspan="2">WORK AND PLEASURE</td></tr>
<tr><td>60</td><td>What are your responsibilities at home?</td><td>10. Cleaning the house
11. Filling water
12. Looking after the younger siblings
13. Bringing vegetables/other household items from market
14. Helping in field/household livelihood
15. Helping mother in cooking/Cleaning utensils
16. Washing clothes
17. Work related to puja at home
18. Any other work, please specify</td></tr>
<tr><td>61</td><td>How much time in a day you spend on household chores? (other than studies and getting ready for school)</td><td>_____ Hours</td></tr>
<tr><td>62</td><td>Do you play outdoor sports?</td><td>3. Yes
4. No</td></tr>
<tr><td>63</td><td>If yes, then what?</td><td></td></tr>
<tr><td>64</td><td>Do you participate in any sports in school sports program?</td><td>3. Yes
4. No</td></tr>
<tr><td>65</td><td>If no, then why</td><td>6. Lack of interest
7. Lack of opportunity in school
8. Lack of co-players
9. Not allowed by family members
10. Any other, please specify _____</td></tr>
<tr><td>66</td><td>Do you think, riding bicycle has made you physically fit?</td><td>4. Yes
5. No
6. Some bit</td></tr>
</table>

Appendix 5: Questionnaire for the Beneficiary Students (in hostel)

A	**LOCATION DETAILS ABOUT THE HOSTEL**				
1	Hostel				
2	Type of school	7. Co-ed 8. Only boys' school 9. Only girls' school			
3	Village				
4	GP/TP				
5	Taluk				
6	District				
B	**STUDENT DETAILS**				
7	Name of the student				
8	Father's name				
9	Class of the student	7. VIII 8. IX 9. X			
10	Gender	5. Boy 6. Girl			
11	Caste	11. General 12. SC 13. ST 14. OBC 15. Don't know			
12	Colour of your ration card	9. Green (BPL) 10. Blue (APL) 11. Pink (AAY) 12. Don't know			
13	Number of family members staying in your house (include yourself).				
14	Number of siblings you have?		Brother	Sister	Total
		Older than you			
		Younger than you			
		Total			
15	Education of your parents (consider only if it is completed) (tick mark)		Father	Mother	
		1. Illiterate			
		2. Primary (Class V and below)			
		3. Secondary (Class X and Below)			
		4. Higher Secondary (Class XII and below)			
		5. Degree (BA/BSc/BCom/Pharm)			
		6. PG (MA/MsC/MCom/MPharm and Equivalent)			
		7. Professional courses (BE/MBBS/any other)			
		8. Any other, please specify			

<table>
<tr><td>16</td><td>Occupation of the parents (tick all that is applicable)</td><td>
<table>
<tr><td></td><td>Father</td><td>Mother</td></tr>
<tr><td>3. Salaried (government employee)</td><td></td><td></td></tr>
<tr><td>2. Salaried (non-government employee)</td><td></td><td></td></tr>
<tr><td>3. Farmer (working in own field)</td><td></td><td></td></tr>
<tr><td>4. Agricultural worker (working in others field)</td><td></td><td></td></tr>
<tr><td>5. Wage labourer (other than agriculture) (not regular monthly/daily wage worker)</td><td></td><td></td></tr>
<tr><td>6. Own business (craftsmen, shop keeper, driver of own vehicle etc) (for which s/he is not paying the profits)</td><td></td><td></td></tr>
<tr><td>7. Temporarily migrates to other places for work</td><td></td><td></td></tr>
<tr><td>8. Any other, please specify</td><td></td><td></td></tr>
<tr><td>9. Not Applicable (not working)</td><td></td><td></td></tr>
<tr><td>10. Don’t Know</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>17</td><td>Do your parents own a house? (owned by your family members and rent is not paid)</td><td>5. Yes
6. No</td></tr>
<tr><td>18</td><td>Type of house</td><td>9. Kutcha (roof and walls are not concrete)
10. Pucca (roof and walls are concrete)
11. Semi- Pucca (roof is not concrete)
12. Combine (one house is pucca and other is sem-pucca or kutcha</td></tr>
<tr><td>19</td><td>Assets in your house</td><td>
<table>
<tr><th>S.No</th><th>Items</th><th>Yes/No</th></tr>
<tr><td>1.</td><td>TV</td><td>5. Yes
6. No</td></tr>
<tr><td>2.</td><td>Mobile</td><td>5. Yes
6. No</td></tr>
<tr><td>3.</td><td>Motorcycle/scooter/moped</td><td>5. Yes
6. No</td></tr>
<tr><td>4</td><td>Total Number of motorcycles/scooter/moped in house</td><td></td></tr>
<tr><td>5</td><td>Bicycle</td><td>5. Yes
6. No</td></tr>
<tr><td>6</td><td>Number of bicycles</td><td></td></tr>
<tr><td>7</td><td>Car/jeep/van</td><td>5. Yes
6. No</td></tr>
<tr><td>8</td><td>Electricity</td><td>5. Yes
6. No</td></tr>
</table>
</td></tr>
</table>

		9	Latrine (within premises)	5. Yes 6. No
		10	Separate Bathroom (within premises)	5. Yes 6. No
		11	Walls of the bathroom	9. Concreate 10. Plastic 11. Clothes/jute bags 12. other
C	**AFTER RECEIVING THE CYCLE**			
20	Have you received a bicycle from the school?	5. Yes 6. No		
21	Have you received a bicycle from the hostel?	7.		
22	Which brand of bicycle you have received?	7. Hero 8. Hercules 9. Nandi 10. BSA 11. Don't know 12. Others, please specify_____		
23	What is the colour of your bicycle?	7. Black 8. Dark Green 9. Pink 10. Maroon 11. Dark Blue 12. Any other, please specify _____		
24	When? (mm, yyyy)			
25	From when you are staying in the hostel?	Write year: _____ 8.		
26	How far is your hostel from the school?	1. Within the premises 2. If not within the premises, then mention distance: _____ KMs		
27	What is the total travel time from your hostel to school?	_____ Minutes		
28	Can you ride a bicycle?	4. Yes 5. No, and I am not interested to learn it 6. No, because of my physical condition, I cannot ride a bicycle		
29	If yes, when did you learnt?	3. Before receiving the bicycle 4. After receiving the bicycle		
30	Are you commuting to school in bicycle?	3. Yes 4. No		
31	Did you cycle to your school, today?	3. Yes 4. No		
32	How regularly do you commute to school in bicycle?	8. Everyday 9. More than 3 days in a week 10. 3 days in a week 11. 2 days in a week		

		12. 1 day in a week 13. Not regularly 14. Whenever the bicycle was not needed by my family members
33	If you are not commuting to school in bicycle, then give reason?	14. Don't know how to ride 15. My house/hostel is not far 16. Because of hilly terrain it is not possible to ride to school in bicycle 17. Coming to school by cycle consumes more time. 18. Parking space given is not secure, cycles got stolen from there 19. I prefer to walk to school with my friends 20. My hostel is too far, and public/private transport are better option 21. It is not safe to commute by bicycle as the approach road is deserted (through forest) or not used by many people 22. It gets damaged quite regularly (like chain coming out, tyres get punctured etc) 23. Cycle given was not good enough to ride (broken bicycle given) 24. It is not with me, I have given it to my family members 25. Any other, please mention _____
34	What is the condition of road from your home/hostel to school?	5. It is next to school, so the condition of road does not matter 6. Its good, fully tarred road 7. Not so good, fully tarred road but with many pot holes 8. Some part of the road is tarred 26. It's a non-tarred road
35	Is it difficult to drive the bicycle (driving ease), because --	1. Roads have many potholes 2. Roads are not tarred and gets muddy during rainy season 3. Full of traffic so difficult to drive 4. Difficult terrain (hilly) 5. Any other, please specify _____
36	Does your school have enough parking space to park bicycles of all children?	1. Yes 2. No
37	If no, then where are you parking your bicycle?	1. Outside the gate of the school 2. Nearby free space 3. On the road 4. Friends/relative's house 5. Houses, surrounding the school 6. Any other, please specify _____
38	Do you think that your bicycle can be stolen from the parking space?	1. Yes 2. Yes, similar incidence had happened before 3. No 4. Don't know, nothing has happened until now
39	Does your hostel have enough parking space	1. Yes 2. No

	to park all the bicycles?	
40	Do you think that your bicycle can be stolen from the parking space of the hostel?	1. Yes 2. Yes, similar incidence had happened before 3. No 4. Don't know, nothing has happened until now
E	**Ownership and Usage of Bicycle**	
41	Can you list out three things that you own and very proud of owning it? (Don't list things that is owned by any other members of the home)	1. 2. 3
42	Do you think, you own the bicycle?	1. Yes 2. No 3. Not sure
43	Who is responsible to clean the bicycle?	1. Me 2. My friends 3. Staff from hostel 4. My father 5. Other family members (excluding above 3) 6. No one, as it never gets cleaned 7. Any other, _____
44	Who pays for the maintenance?	1. Father/mother 2. Brother/other family members 3. Self (from pocket money) 4. Any other, please specify _____
45	Do you use bicycle for purpose other than commuting to school?	1. Yes 2. No
46	If yes, then where? (multiple option)	1. Market 2. Tuition 3. Other places within the village 4. Outside village 5. Any other, please specify _____
47	If you are not using the bicycle to commute to school or other places, then what is happening to it? (multiple option)	1. Used by family members 2. Sold it 3. Given it to a relative/friend 4. Rented it out 5. Nothing, it is at home 6. Don't know 7. Any other, please specify _____
48	Does your siblings/parents (or any other family members) also uses your bicycle?	1. Yes 2. No
49	If yes, then who other than you are using it? (multiple option)	1. Mostly father 2. Mostly mother 3. Mostly brother/s

		4. Mostly my elder sister/s 5. Mostly other relatives (other than brother, sister, father and mother) 6. None			
50	What is the present condition of the bicycle?	1. Good, and I am only using it 2. Good, me and my family members use it. 3. Good, but my family members are using it 4. Good, but nobody is using it 5. Its damaged, need to be repaired 6. Its damaged, but still I am using it 7. Don't know where it is but it is not in my house 8. Any other, please mention			
F	**BICYCLE MAINTENANCE AND ITS EXPENDITURES**				
51	Do you have to spend on the maintenance of the bicycle? like filling air, puncture etc	1. Yes 2. No			
52	Please mention how much you spend in last month for the maintenance of your bicycle?	S.No	Reasons of expenditure	How many times in a month	How much in a month? (in INR)
		1.	Filling air in the tyres		
		2.	Punctures		
		3.	Changing parts of the bicycle		
		4.	Fittings of the bicycle		
		5.	Any other, please describe _____		
53	Do you have a bicycle repair shop near your hostel?	1. Yes 2. No 3. Don't know			
54	If no, then how far you have to travel to repair your bicycle?	_____ KM			
55	If the shop is far, how many days are required to get repaired the bicycle? (day of damage to day of getting repaired)	_____ day/s			
56	Can you fill air in the tyres with a pump?	1. Yes 2. No			
57	If no, then why?	1. It is difficult to fill 2. Only older people can fill the air 3. Only a cycle repair person can fill it 4. Only men/boys can fill air in a bicycle 5. Any other, please specify			
58	Will you be able to put the chain back in place, if it comes out?	3. Yes 4. No			
G	**ADVANTAGES OF HAVING YOUR OWN BICYCLE**				
59	Are there any	3. Yes			

	advantages of having a bicycle?	4. No
60	What are the advantages of having a cycle? (Take multiple responses if any)	1. I save time on travelling 2. I 3. I do not have to depend on public transport 4. I do not have to walk to school 5. I can reach early to school as well as home 6. I feel safe 7. I can go wherever I want to? 8. I am able to take tuition 9. Any other, please specify 10. _____
61	Are there any disadvantages of having a bicycle, like meeting an accident, people harass you?	3. Yes 4. No
62	What are the disadvantages of having a bicycle	8. I don't feel safe riding a bicycle as road to school is not safe 9. I feel tensed riding a bicycle 10. I meet with an accident quite often 11. People follow me/us 12. I spend time riding on bicycle rather than reaching home early 13. None 14. Not applicable as the hostel is within the premises of the school 15. Any other, please specify _____
63	What measures you have taken to overcome the disadvantages (if any)?	5. Travelling in groups (with friends) 6. Travelling with male friends 7. Accompanied by hostel staff 8. Any other, please specify _____
H	**ATTENDANCE AND REGULARITY**	
64	Do you cycle to school regularly?	7. Yes 8. No (go to question 71)
65	Has the bicycle helped you to travel to school regularly?	9.
66	Do you enjoy your travel to school by bicycle?	5. Yes 6. No
67	If yes, then how?	9. I can roam around with my friends 10. I don't feel tired while going and coming from school 11. It saves time 12. Any other, please specify _____
68	Whether you would have continued schooling after Class VIII, if you had not received the bicycle?	7. Yes 8. No 9. Not sure
69	If no, then why	24. Have to travel long distance to school 25. Have to travel in public transport 26. Non availability of public transport 27. Can't afford public transport

		28. It would have been unsafe 29. Any other, please specify
70	Do you think you will continue your studies till class XII as you have a bicycle now? (bicycle if one of the major factors for continuing studies till Class XII)	6. Yes 7. No 8. Not sure
I	**SELF-CONFIDENCE**	
71	Are you confident about communicating to strangers?	9. Always 10. Mostly 11. Sometimes 12. Never
72	How confident you are to reach school in time?	9. Always 10. Mostly 11. Sometimes 12. Never
73	Do you join in class or group discussions?	9. Always 10. Mostly 11. Sometimes 12. Never
74	Do you ask questions when you don't understand in a class? (to the teacher)	9. Always 10. Mostly 11. Sometimes 12. Never
75	Do you feel comfortable giving a 'talk' in a class or school assembly?	9. Always 10. Mostly 11. Sometimes 12. Never
76	Are you confident to travel to market, relatives/friend's house, tuition etc any time of the day?	11. Always (Day and Night) 12. Not at night 13. Sometimes 14. Only if I cycling with a friend/family member 15. Never
77	Do you feel 'happy'?	9. Yes, Always True 10. Yes, but sometimes I am not happy 11. No, most of the time I am not happy 12. No, I never feel happy
78	Do you "like yourself"?	9. I'm happy the way I am 10. I like most things about myself 11. Sometimes I don't like myself that much 12. I wish I were somebody else
79	What was your score in Std VII and VIII?	S.No. / Class / Score 1 / VII / 2 / VIII /
80	Are you confident to perform well in Board Exams?	9. Yes (above 80 Percent) 10. Not sure (between 60-80 percent) 11. Not sure as other problems remain same (40-60 percent)

		12. No (less than 40)		
81	Do you now feel more confident in solving interpersonal issues with classmates?	7. Yes 8. No 9. Don't know		
82	Do you feel that now you are in a better position to interact with your parents/siblings and raise your points with firmness?	4. Yes 5. No 6. Don't know		
83	Do you think that your level of interaction with persons/social groups in your neighbourhood is now much more open and without any complex or fear?	4. Yes 5. No 6. Don't know		
J	**BEFORE YOU RECEIVED THE BICYCLE**			
84			**Before Receiving the Bicycle**	**After Receiving the Bicycle**
86	What was the mode of travelling to the school?	16. Walking 17. Public transport, like bus, auto etc 18. Own bicycle 19. Dropped by the elders of the house in own vehicle 20. Shared transport, like rickshaw/auto-rickshaw which picks children from the village and then drop them in the school 21. Any other, please specify _____ _____		
87	Total time spent on travelling to school?	Answer in minutes (includes up and down travel time)		
88	How often you are missing the first class in a week?	Give number of days in a week (answer should be between 0 -6)		
89	How often you are missing school in a month?	Give number of days in a month (answer should be between 0-30 days)		

90	What are the reasons of missing school? (multiple option)	18. Not applicable as not missing the schools 19. Not well 20. Parents/siblings not well 21. Have to work at home 22. Have to support parents at work 23. Missed the bus/vehicle 24. Was not willing to walk to school 25. Lack of transport facilities 26. Any other		
91	How often you are missing school during rainy season	Give number of days in a week (answer should be between 0 -7)		
	For girl students only			
92	How often you are missing classes during menstruation	Number of days in a month		
93	Do you feel secure to travel to school?	4. Yes 5. No		
K	**EDUCATION ENGAGEMENT**			
94	If you are cycling to school, then how much time you are able to save?	_____ Minutes		
95	Are you able to give more time to study as you are saving in travel time?	5. Yes 6. No		
96	If yes, then how much time you are getting extra to study?	_____ Minutes		
97	Do you go to tuition?	5. Yes 6. No		
98	If Yes, does bicycle have helped you to go to tuition?	3. Yes 4. No		
99	Are you going to your friend's house to study as you have a bicycle now?	5. Yes 6. No		
100	Does having bicycle has helped you in any other ways for studies?	3. Yes 4. No		
101	If yes, then how?			
L	**STATUS OF THE BICYCLE, WHEN RECEIVED**			
103	Are the Bicycles were given to you immediately after they arrived to the hostel	7. Yes 8. No		
104	If No, after how many	----------Months		

	months it was given to you	
105	What was the status of the bicycle, when received	1. New, without any damage 2. New, but parts are not properly fitted 9. Bew, but certain parts are missing 10. New, but damaged 11. It was looking old (like rusted parts) 12. Any other, please specify _____
106	If it is damaged, then please specify the type of damage?	
107	How much you had spent to repair the damage?	INR _____
108	Do you have to add any parts after receiving the bicycle, like bell?	3. Yes 4. No
109	If yes, what are they	1. Bell 2. Seat cover 3. Back Carrier 4. Front Carrier (for girls only) 5. Chain Cover 6. Handle Cover 7. Any other thing, please specify
110	How was the paint of the bicycle?	3. New 4. Dull because it was old
111	How was the seat?	3. New 4. Appeared old
112	How were the tyres?	5. New and strong 6. New and weak 7. Appeared old 8. Any other status …….....
113	How were the rims?	5. Non-rusted and Shiny 6. Non-rusted and Non-shiny 7. Rusted 8. Others specify…….
M	**WORK AND PLEASURE**	
114	What are your responsibilities at hostel?	19. Cleaning the hostel 20. Serving food 21. Cooking 22. Monitoring the cooking 23. Getting groceries for hostel Any other work, please specify
115	How much time in a day you spend on hostel chores? (other than studies and getting ready for school)?	_____ Hours

116	Do you play outdoor sports?	5. Yes 6. No
117	If yes, then what?	
118	Do you participate in any sports in school sports program?	5. Yes 6. No
119	If no, then why	11. Lack of interest 12. Lack of opportunity in school 13. Lack of co-players 14. Not allowed by family members 15. Any other, please specify _____
120	Do you think, riding bicycle has made you physically fit?	7. Yes 8. No 9. Some bit

Appendix 6: Deputy Director, Department of Public Instruction

1.	District			
2				
3	Name of the DDPI			
4	Period of service as DDPI			
5	Are you a member of the division committee for quality check			1. Yes 2. No
6	Process of forming division level committee (how the people are selected, are they changed every year)			
7	When was the committee formed in your division?			
8	List the members of the committee?			
9	Name	Department	From when s/he is member of the committee	Is he trained by the Research and Development Centre for Bicycles ad Sewing Machines, Ludhiana?
10	How often the training is given by the Research and Development Centre from Bicycles and Sewing Machines Company, Ludhiana?			
11	When was the last time the training has been given to the committee members?			
12	Had you done the quality check of the bicycles for the last Academic Year?			
13	Are all the committee members were present on the day of the quality check?			
14	Had you/committee members had submitted the report?			
15	Where?			

16	Please share a copy of the report for last three years	
17	Is the report submitted is a consolidate one or each member had submitted a separate report?	
18	If the report had suggested 'not satisfied with the quality of the bicycles', then what are the steps taken?	
19	Are you satisfied with the process of quality checking?	
20	If no, then why?	
21	What are the suggestions you want to give to improve the process of quality check?	
22	What are the difficulties faced in timely supply of bicycles to the students?	
23	Are the funds required for obtaining the school is sufficient and timely?	
24	Give reasons if the funds received were insufficient and untimely	
25	What are the difficulties faced by your department under the scheme?	
26	Do you have any suggestions to deal with the issues?	
27	Do you want the scheme to be continued?	
28	Do you want to suggest any changes in the scheme?	
29	If yes, what are they?	

Appendix 7: QUESTIONNAIRE FOR BEO & DDPI

1.	District			
2	Block			
3	Name of the BEO			
4	Period of service as BEO			
5	Are you a member of the block committee for quality check?	1. Yes 2. No		
6	Process of forming block level committee (how the people are selected, are they changed every year)			
7	When was the committee formed in your block?			
8	List the members of the committee?			
9	Name	Department	From when s/he is member of the committee	Is he trained by the Research and Development Centre for Bicycles ad Sewing Machines, Ludhiana?
10	How often the training is given by the Research and Development Centre from Bicycles and Sewing Machines Company, Ludhiana?			
11	When was the last time the training has been given to the committee members?			
12	Had you done the quality check of the bicycles for the last Academic Year?			
13	All the committee members were present on the day of the quality check? If no, why			
14	Had you/committee members had submitted the report?			

15	Where?	
16	Please share a copy of the report for last three years	
17	Is the report submitted is a consolidate one or each member had submitted a separate report?	
18	If the report had suggested ‘not satisfied with the quality of the bicycles’, then what are the steps taken?	
19	Are you satisfied with the process of quality checking?	
20	If no, then why?	
21	What are the suggestions you want to give to improve the process of quality check?	
22	What happened to undistributed (balance bicycles)? where they distributed in the next year?	
23	What are the difficulties faced in timely supply of bicycles to the students?	
24	Are the funds required for obtaining the school is sufficient and timely?	
25	Give reasons if the funds received were insufficient and untimely	
26	What are the difficulties faced in timely supply of bicycles to the students?	
27	What are the difficulties faced by your department under the scheme?	
28	Do you have any suggestions to deal with the issues?	
29	Do you want the scheme to be continued?	
30	Do you want to suggest any changes in the scheme?	
31	If yes, what are they?	

Appendix 8: Checklist for quality checking team or enumerators

1	What is the condition of frame?	Bent	1. Yes 2. No
2		Cut	1. Yes 2. No
3		Rust	1. Yes 2. No
4	Condition of paint	Metal Exposed	1. Yes 2. No
5		Faded	1. Yes 2. No
6	Condition of Rim	Bent	1. Yes 2. No
7		Rust	1. Yes 2. No
8		Spokes	1. All the spokes are in good condition 1. Few are broken or not available
9	Brake	Condition	1. Tight 2. Loose
10		Status	1. Unbroken 2. Broken
11		Rust	1. Yes 2. No
12	Fork	Bent	1. Yes 2. No
13		Rust	1. Yes 2. No
14	Chain Sporcket	Gear Teeth	1. Worn 2. Unworn
15		Rust	1. Yes 2. No
16	Mudguard	Cut	1. Yes 2. No
17		Rust	1. Yes 2. No
18	Seat	Condition	1. Soft 2. Hard
19		Cut	1. Yes 2. No
20	Lock	Rust	1. Yes 2. No
21			1. Broken 2. Unbroken
22	Tyres	Condition	1. Soft 2. Hard
23		Condition	1. Worn 2. Unworn

Appendix 9

Technical Specifications for bicycles in Karnataka

Specification Category	Bicycle specifications
Standard	IS 10613- 2014 with hand operated lever brake system
Frame	As per IS 623-2008 Made up of steel tube with following chemical composition: Carbon 0.20% Silicon 0.15% Manganese 0.90% Phosphorus 0.05% Sulphur 0.05%
Gear Case	Full Gear case on both sides, with 22 to 23 gauge thickness sheet for girls Half Gear Case - with 22 to 23 gauge thickness sheet for boys
Rim	26” x 1 ½” as per IS-624 : 2003
Tube	As per IS-2415 : 2004
Tyre	26” x 1 ½” – 7 ply as per IS-2414 : 2005
Pedal	As per IS-628 : 1993 reaffirmed 2005/10613:2014, with two reflectors
Chain	As per IS: 2403:1991 reaffirmed 2001 with latest amendment if any and it should be ISI marked
Mudguard	As per IS:6218:2008
Brakes	As per IS:10613:2014
Handle bar	As per IS:625:2006 with suitable hand grips on each end.
Size	20” with seat adjustable upto 1.5 inches as per IS 10613-2014 for girls 20” with seat adjustable up to 3 Inches as per IS 10613-2014 for boys
Fork	As per IS No: 2061-1995
Reflectors	10 reflectors of standard ISO 6742-2 as per Supreme Court Road Safety Committee recommendations.

Source: Tender Document 2016-17

Appendix 10

Bicycle Part Wise Quality Status for Stable Parameters

Part	Indicator	One Year Old Cycle	2-Year-Old Cycle	Total
Frame	**Frame Bent**	**136(26.82)**	**124(26.96)**	**260(26.89)**
	Frame Not Bent	**371(73.18)**	**336(73.04)**	**707(73.11)**
	Frame Cut	97(19.13)	100(21.74)	197(20.37)
	Frame Not cut	410(80.87)	360(78.26)	770(79.63)
	Frame Rusted	201(39.64)	212(46.09)	413(42.71)
	Frame not Rusted	306(60.36)	248(53.91)	554(57.29)
Rim	Rim Bended	135(26.63)	139(30.22)	274(28.34)
	Rim Not Bended	372(73.37)	321(69.78)	693(71.66)
	Rim Rusted	80(15.78)	97(21.09)	177(18.30)
	Rim Not Rusted	427(84.22)	363(78.91)	790(81.70)
	All spokes are Good	407(80.28)	330(71.74)	737(76.22)
	Few Spokes are Broken	100(19.72)	130(28.26)	230(23.78)
Fork	Fork is Bended	166(32.74)	153(33.26)	319(32.99)
	Fork is Not Bended	341(67.26)	307(66.74)	648(67.01)
	Rusted Fork	209(41.22)	221(48.04)	430(44.47)
	Fork is Not Rusted	298(58.78)	239(51.96)	537(55.53)
Chain Sprockets	Worn Gear Teeth	250(49.31)	266(57.83)	516(53.36)
	Unworn Gear Teeth	257(50.69)	194(42.17)	451(46.64)
	Rusted Gear Teeth	192(37.87)	193(41.96)	385(39.81)
	Gear Teeth is not Rusted	315(62.13)	267(58.04)	582(60.19)
Tyres	Tyre Worn	317(62.52)	340(73.91)	657(67.94)
	Tyre Unworn	190(37.48)	120(26.09)	310(32.06)
	Tyre Hard	4(0.79)	12(2.61)	16(1.65)
	Tyre New and Strong	240(47.34)	186(40.43)	426(44.05)
	Tyre New but Weak	132(26.04)	123(26.74)	255(26.37)
	Tyre Old	100(19.72)	114(24.78)	214(22.13)
	Tyre Soft	31(6.11)	25(5.43)	56(5.79)

*Values in the Parenthesis are Percentages. Source: Field Survey

Bicycle Part Wise Quality Status for Less Stable Parameters

Part	Indicator	One Year Old Cycle	2-Year Old Cycle	Total
Paint Condition	Metal Exposed	156(30.77)	158(34.35)	314(32.47)
	Metal Not Exposed	351(69.23)	302(65.65)	653(67.53)
	Pain Faded	173(34.12)	197(42.83)	370(38.26)
	Paint Not Faded	334(65.88)	263(57.17)	597(61.74)
Brakes	Brake Tight	305(60.16)	246(53.48)	551(56.98)
	Brake Loose	202(39.84)	214(46.52)	416(43.02)
	Broken Brake	114(22.49)	143(31.09)	257(26.58)
	Un-Broken Brake	393(77.51)	317(68.91)	710(73.42)
	Rusted Brake	284(56.02)	282(61.30)	566(58.53)
	Non-Rusted Brake	223(43.98)	178(38.70)	401(41.47)
Mudguard	Cut Mudguard	139(27.42)	126(27.39)	265(27.40)
	Un-cut Mudguard	368(72.58)	334(72.61)	702(72.60)
	Rusted Mudguard	185(36.49)	199(43.26)	384(39.71)
	Un-rusted Mudguard	322(63.51)	261(56.74)	583(60.29)
Seat	Seat Appeared Old	190(37.48)	193(41.96)	383(39.61)
	Seat is Hard	25(4.93)	25(5.43)	50(5.17)
	Seat Appeared New	249(49.11)	187(40.65)	436(45.09)
	Seat is Soft	43(8.48)	55(11.96)	98(10.13)
	Cut Seat	132(26.04)	126(27.39)	258(26.68)
	Un-cut Seat	375(73.96)	334(72.61)	709(73.32)
Lock	Rusted Lock	248(48.92)	267(58.04)	515(53.26)
	Un-rusted Lock	259(51.08)	193(41.96)	452(46.74)
	Broken Lock	158(31.16)	179(38.91)	337(34.85)
	Un-Brocken Lock	349(68.84)	281(61.09)	630(65.15)

*Values in the Parenthesis are Percentages. Source: Field Survey

Appendix 11

Evaluation Objective Wise Results: Summary of Stakeholder Views

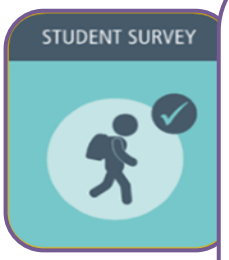
Summary of Stakeholders View on the Implementation Process and Quality Check Parameters

Stakeholders			
Beneficiaries/Students (Survey)	**Principals/Headmasters of Selected Schools (survey)**	**Parents (FGD)**	**IDIs with Govt. Officials/Quality check Committee Members**
Timely Distribution: **The single largest share (27%) of students received bicycle in August, 2 months after beginning of academic year.** **7.2% receive in July and only 5.8% receive in June, the beginning of academic year.** **18.4 % received bicycle 5 months after beginning of academic year and 11.7 % received 7 months after beginning of academic year.**	More than half the surveyed principals said they submit the bicycle number requirement (based on school enrolment) in the first month of Academic Year (June). However, a notable share (almost 29%) submits in July, which delays the bicycle distribution process. Cycle distribution at school level is mostly completed in one day	Time of receipt varies from one taluka to another. It ranges from distribution in first two months after beginning of academic year (in Ankola taluka of Uttar Kannada district) to five months after beginning of academic year (November) in Gulbarga taluka.	NA
Quality Check and Quality Assurance: **NA**	72% principals showed a positive response in forming the 3-member committee at school level. Majority were not clear about the specific criterion to be followed in selecting government officials as 3rd member in 3-member committees. 65% respondents said that quality issues reported by school level	NA	DDPIs and BEOs were not trained in the R&D centre at Ludhiana as required by guidelines All the interviewed DDPIs and most interviewed BEOs are involved in quality check process

	inspection authorities have been addressed, but at the cost of delayed delivery of the bicycle.		All district committee members are present during inspection. School level 3-member committees have not been constituted in certain locations in Gulbarga, Belgaum and Yadgir districts. In Gulbarga and Yadgir, SDMC president is also not involved in quality check. No training is provided to 3-member committees on quality check Quality check checklists received by 3 member committees in some districts but not in others Deviation in composition of 3-member committee- senior teacher appointed in place of local govt official as 3rd member 3-member committee cannot take action against quality issues, can only report issues to higher levels and higher

			authorities also don't take action on reported quality issues.

Summary of Stakeholders View on Quality and maintenance of of received bicycles



1. 85.84% said that they had received bicycles that were new and without damage.
2. Deterioration of bicycles over time is inferred. While close to 8% bicycles were damaged at the time of receipt, significantly larger shares of two year old bicycles (32.58%) and one year old bicycles (24.48%) were damaged.
3. The overall proportion of damaged bicycles among two year old cycles is eight percentage points higher compared to one year old cycles
4. In a given period of 1 month on an average , student had filled air in the tyre thrice, repaired the puncture twice and done overall fitting once.
5. Average distance between the beneficiary house and cycle repair shops is around 2.7 KM.
6. Average monthly maintenance cost is Rs 100 but individual maintenance cost can be as high as Rs 1500.

Principals (Survey)

86.76% stated that they had received all new bicycles.

Parents (FGD)

1. Parents pointed to poor assembly of received cycles and need to spend Rs 300-600 for refitting of newly received bicycles.
2. At the present quality, the cycles last only 2 years.
3. One section of parents mentioned that only few students of class 10th are able to use the cycles while another section of parents stated that by the time the students reach 9th standard, the cycles become unsuitable for use, also because they rust faster in coastal areas.
4. Major repairs are needed every month and minor repairs like fixing punctures need to be done once every fortnight; the expenses range between Rs 300-800 every month.

Physical Quality Check

1. 67.94% checked used bicycles had worn tyres and 53.36% had worn gear teeth.
2. On stable parameters, rusted fame, rusted rim, broken spokes, rusted fork, worn gear teeth and worn tyre are the quality issues most susceptible to increasing age of bicycles.
3. On less stable parameters, faded paint, broken brakes, broken locks and rusted mudguard respectively are quality issues most susceptible to increasing age of cycles.

Summary of Stake Holders View on the Impact of the scheme with respect to enrolment, attendance, and retention rate of children in 8th Std and subsequent grades

Stakeholders			
Beneficiaries/Students (Survey)	**Principals/Headmasters of Selected Schools (survey)**	**Parents (FGD)**	**Secondary Data**
NA	1. 87.2 percent Principals attributed bicycle as a reason for improving the enrolment at secondary schools to a greater extent 2. 85.1 percent Principals believe that providing bicycle has improved the attendance to a great extent. 3. 77.4 percent Principals believe that providing bicycle has helped in reducing school dropout rate to a great extent.	1. For increase in enrolment and decrease in dropouts, the bicycle scheme is not the only reason. Providing free food in the afternoon has also made an impact since most of us are daily wage labourers and migrant labourers. 2. In Chittapur, Gulbarga a section of parents revealed that some students who had dropped out of school long ago had re-enrolled in school due to the bicycle incentive. The bicycle was said to have helped those staying in far-away villages who may have discontinued education. 3. The bicycle was said to have especially benefitted poor families that would find it difficult to spend on public transport.	1. As per UDISE report, at state level the enrolment rate has seen an annual increment rate of 4 percent for class 8, 7 percent for class 9, and 14 percent for class 10. 2. As per UDISE report, the state level retention rate also seems to have an inclining trend in recent years. The figures declined during the academic year 2015-16 but since then it has shown promising trend.

Summary of Stake Holders View on the Impact of the scheme on transition rate and continuation of education till 10 Std.

Stakeholders			
Beneficiaries/Students (Survey)	**Principals/Headmasters of Selected Schools (survey)**	**Parents (FGD)**	**Secondary Data**
1. 98 percent of the beneficiaries showed a positive response in continuing their secondary schooling. **2. 93 percent of the beneficiaries showed a positive response towards completing higher secondary schooling.**	80 percent Principals believe that more than 80 percent students have a positive attitude towards completing higher secondary schooling.	NA	As per UDISE data, at the state level the transition rate for secondary school has increased by 1 percent.

Summary of Stakeholders View on Impact of Scheme on the Students of Hilly Region

Stakeholders			
Beneficiaries/Students (Survey)	**Principals/Headmasters of Selected Schools (survey)**	**Parents (FGD)**	**Secondary Data**
Only about 15 percent respondents reside in the hilly area and the average distance between beneficiary house to school is about 3.3 KM which ranged between 1.9 KM to 3.5 KM. 72% students in hilly areas face difficulty in using bicycles for commute to school.	NA	FGD participants pointed to low usage of bicycles for school travel, and expressed that the dominant share of students use buses and not cycles for school travel. The hilly terrain and steep slopes, aggravated by heavy rain make it very difficult to use the bicycle.	NA

Summary of Stakeholders View on Usage of Bicycle

Stakeholders			
Beneficiaries/Students (Survey)	**Principals/Headmasters of Selected Schools (survey)**	**Parents (FGD)**	**Secondary Data**
Usage for School travel: Only about 46 per cent of total surveyed respondents bring bicycle regularly to school and remaining 54 per cent of them use the cycle rarely.	The portion of male beneficiary who brings cycle regularly is more than that of female beneficiary. About 71.6 per cent principal said the students don't bring cycle only if it has got punctured or damaged and given for repair. Further, ill-health of the beneficiary and house being very nearer are the other important reasons for not bringing the cycle.	Even though a larger portion of beneficiary uses cycle for commuting to school, a small share of students, however were using the bicycle to travel only up to then bus stand, after which they parked the cycle near the bus stand and take the bus to school. Students being travelling from long distances, and bad road conditions are the important reasons for not using cycle regularly. Further, due to humid weather of coastal regions, bicycles tend to rust easily and hence students don't use them regularly. Parents across the board said that girls were not able to use the cycle during their menstrual periods. Students were using the bicycle to travel to school barring days when the bicycle was broken down and being repaired. Some students who have younger brother or sister studying in middle school come by bus with their sibling because they consider it unsafe to double ride in the bicycle.	NA

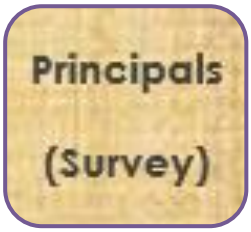
		Since the school come under the Taluka Panchayat and the students had bus passes, they prefer travelling in bus, Students of class 9th uses the cycle regularly however, only few students of class 10th use the cycle, because of the deteriorating quality and decision by parents not to repair the cycle. The bicycle is however helpful for those students staying 5-6 kms away from the school, since the bus services are not up to the mark.	
Usage for Other Travel: **Majority of the respondents uses bicycle for going to market, friends house, play ground, and also to nearby relatives' house which are outside the respondent's village proximity.**	NA	The bicycles were sometimes used for : - For going to tuition classes - Going to the farm - Going to friends and relatives' house - Market visit It was expressed in one FGD that even those who live very near the school (and wouldn't need to use bicycle for school travel) use bicycle for other travel like going to tuitions.	NA
Usage by Family Members: **About 45 per cent respondents said the cycle is used by other family members and majority of them takes**	NA	NA	NA

prior permission from the respondent before using. **Further, among the family members in majority of the cases the cycle is used by their siblings and respondent's father.**			

Summary of Stakeholders View on the Impact of Scheme on Learning Achievements and non-cognitive outcomes

1. The academic score of the beneficiary had improved marginally after receiving bicycle.
2. Almost half of the respondents, (irrespective of gender and social category) are confident in asking questions in the class.

1. Travelling in bicycle making the students healthier, they are able to come back from school on time and thus getting more time to study, and were also able to go for tuitions or spend more time on homework.
2. Using the bicycle saved time to study at the library or play sports at school. Reaching the school on time was also help the students to clear their doubts.
3. According to the parents, the beneficiaries are gaining confidence to ride the bicycle on the highway and to travel to nearby villages to play games etc where they were earlier scared to go alone.
4. Further, students gained confidence in reaching school on time which further motivate them to attend all the classes regularly without missing the school and classes.



1. About 97 per cent of total surveyed principals found significant improvement in the overall confidence level of girl students after receiving bicycle.
2. According to 74 per cent of total surveyed principal bicycle had made significant impact in reducing travel dependency of beneficiary.
3. Further, with improvement in the overall confidence level and travel independency, the programme had also improved self-esteem of the students.

Summary of Stakeholders View on the Impact of the scheme on girls - with regard to their access to education, convenience, and on development of self-confidence among them

1. On an average after receiving bicycles, Girls are missing only 1 class in a month in comparison to 2 classes in a month before receiving bicycles.
2. 78 percent of the Girls were quoted as saying that bicycles has helped them in regularly attending the tuition classes.
3. 20 percent Girls are confident in travelling to places other than school like market, friends' house, etc. all alone after receiving bicycles.

Principals (Survey)

97 percent Principals found significant improvement in the overall confidence level of the girl students after receiving bicycles.

Parents (FGD)

1. Parents in Belgaum taluka, Belgaum district and in Yadgir Taluka of Yadgir district opined that the bicycle distribution has benefitted girls more because a family would prefer to purchase a bicycle for the male child and they would be less interested to invest in a daughter's cycle.
2. The bicycle scheme has improved the enrolment and attendance rate among the female students since now they can travel in group and can come back home safely. It has also reduced the instances on children falling sick and missing classes because of too much of walking.
3. In Shahapur taluka, Yadgir district parents said that the bicycle had helped, since they may not have allowed their daughters to walk alone for 4-5 kms to school.

Secondary Data

1. As per UDISE report, at state level the enrolment rate among girls has seen an annual increment of 3 percent for class 8 and 7 percent for class 9.
2. In the academic year 2010-11 transition rate among girls were the lowest (94.8 per cent), however, the trend has changed over the year and with 3 per cent increment the transition rate has reached to 97.4 per cent in the academic year 2016-17.

ANNEXURE

Tables of the Study

Section: Demographic Profile of the Beneficiary

Table I: Social Category Wise Ration Card Type of the Beneficiary

Social Category	AAY	APL	BPL	NA	Grand Total
ST	10(1.57)	14(2.20)	597(93.72)	16(2.51)	637
SC	26(1.74)	38(2.55)	1409(94.44)	19(1.27)	1492
OBC	29(1.23)	91(3.86)	2180(92.41)	59(2.50)	2359
GM	9(1.57)	31(5.40)	520(90.59)	14(2.44)	574
NA	0(0.00)	5(13.89)	30(83.33)	1(2.78)	36
Grand Total	74(1.45)	179(3.51)	4736(92.90)	109(2.14)	5098

Table II: Beneficiary Father Education Vs Occupation

Row Labels	degree	Higher secondary	illiterate	PG	primary	Professional course	secondary	Grand Total
Agril. Worker	16(1.50)	42(3.94)	406(38.09)	3(0.28)	284(26.64)	0(0.00)	315(29.55)	1066
Business	32(5.65)	73(12.90)	95(16.78)	6(1.06)	127(22.44)	0(0.00)	233(41.17)	566
don't know	1(1.92)	3(5.77)	27(51.92)	0(0.00)	7(13.46)	0(0.00)	14(26.92)	52
Expired	3(1.21)	9(3.64)	156(63.16)	0(0.00)	33(13.36)	0(0.00)	46(18.62)	247

Farmer	45(3.10)	126(8.67)	628(43.22)	0(0.00)	257(17.69)	5(0.34)	392(26.98)	1453
Migrate	4(5.63)	8(11.27)	17(23.94)	1(1.41)	23(32.39)	0(0.00)	18(25.35)	71
NA	3(4.29)	10(14.29)	20(28.57)	0(0.00)	13(18.57)	0(0.00)	24(34.29)	70
Salaried gvt.	20(20.20)	21(21.21)	9(9.09)	1(1.01)	10(10.10)	2(2.02)	36(36.36)	99
Salaried pvt.	16(9.94)	22(13.66)	36(22.36)	3(1.86)	24(14.91)	0(0.00)	60(37.27)	161
Wage labourer	20(1.52)	96(7.31)	403(30.69)	0(0.00)	336(25.59)	0(0.00)	458(34.88)	1313
Grand Total	160(3.14)	410(8.04)	1797(35.25)	14(0.27)	1114(21.85)	7(0.14)	1596(31.31)	5098

Table III: Beneficiary Mother Education Vs Occupation

Row Labels	**Degree**	**Higher secondary**	**illiterate**	**PG**	**primary**	**Professional course**	**secondary**	**Grand Total**
Agril worker	0(0.00)	33(2.60)	638(50.36)	0(0.00)	273(21.55)	0(0.00)	323(25.49)	1267
Business	6(1.90)	19(6.01)	83(26.27)	0(0.00)	79(25.00)	0(0.00)	129(40.82)	316
don't know	1(2.63)	4(10.53)	21(55.26)	0(0.00)	5(13.16)	0(0.00)	7(18.42)	38
Expired	0(0.00)	1(2.33)	30(69.77)	0(0.00)	5(11.63)	0(0.00)	7(16.28)	43
farmer	2(0.24)	18(2.16)	494(59.30)	1(0.12)	153(18.37)	0(0.00)	165(19.81)	833
Home Maker	6(0.96)	52(17.15)	137(43.11)	1(0.16)	160(41.51)	0(0.00)	320(97.12)	676
migrate	0(0.00)	4(8.89)	13(28.89)	0(0.00)	13(28.89)	0(0.00)	15(33.33)	45
NA	4(0.63)	54(8.49)	120(18.87)	0(0.00)	153(24.06)	0(0.00)	305(47.96)	636
Salaried gvt.	6(5.56)	18(16.67)	12(11.11)	1(0.93)	18(16.67)	1(0.93)	52(48.15)	108
Salaried pvt.	2(1.38)	21(14.48)	36(24.83)	0(0.00)	19(13.10)	0(0.00)	67(46.21)	145
Wage labourer	4(0.40)	42(4.24)	409(41.27)	0(0.00)	231(23.31)	0(0.00)	305(30.78)	991

Grand Total	31(0.61)	266(5.22)	1993(39.09)	3(0.06)	1109(21.75)	1(0.02)	1695(33.25)	5098

Table IV: Divisions Wise Beneficiary Families Asset Ownership

Districts	**Own House**	**TV**	**Mobile**	**Motor Cycle**	**Bi-cycle**	**Car**	**Electricity**	**Toilet**	**Bathroom**
Bangalore	395(62.40)	605(95.58)	625(98.74)	312(49.29)	608(96.05)	77(12.16)	611(96.52)	576(91.00)	387(61.14)
Belagavi	571(90.92)	522(83.12)	616(98.09)	369(58.76)	605(96.34)	37(5.89)	613(97.61)	550(87.58)	556(88.54)
Chitradurga	594(94.74)	571(91.07)	610(97.29)	312(49.76)	613(97.77)	22(3.51)	622(99.20)	541(86.28)	600(95.69)
Kalburgi	611(93.86)	526(80.80)	635(97.54)	215(33.03)	622(95.55)	9(1.38)	631(96.93)	220(33.79)	166(25.50)
Kodagu	432(68.14)	553(87.22)	623(98.26)	162(25.55)	538(84.86)	44(6.94)	613(96.69)	417(65.77)	236(37.22)
Mysuru	611(95.77)	557(87.30)	634(99.37)	356(55.80)	633(99.22)	15(2.35)	633(99.22)	580(90.91)	189(29.62)
Uttara Kannada	639(97.11)	496(75.38)	649(98.63)	254(38.60)	636(96.66)	26(3.95)	648(98.48)	644(97.87)	596(90.58)
Yadgir	606(96.34)	455(72.34)	525(83.47)	217(34.50)	585(93.00)	56(8.90)	502(79.81)	351(55.80)	88(13.99)
Grand Total	4459(87.47)	4285(84.05)	4917(96.45)	2197(43.10)	4840(94.94)	286(5.61)	4873(95.59)	3879(76.09)	2818(55.28)

Table V: Social Category wise house Type

Row Labels	combine	kutcha	pucca	Semi pucca	Grand Total
ST	12(1.88)	329(51.65)	155(24.33)	141(22.14)	637
SC	42(2.82)	754(50.54)	367(24.60)	329(22.05)	1492
OBC	49(2.08)	1137(48.20)	714(30.27)	459(19.46)	2359
GM	20(3.48)	276(48.08)	186(32.40)	92(16.03)	574
NA	3(8.33)	17(47.22)	11(30.56)	5(13.89)	36
Grand Total	126(2.47)	2513(49.29)	1433(28.11)	1026(20.13)	5098

Table VI: District wise Average Distance Between House/Hostel and School (in meters)

Districts	Average Distance between School		
	House	Hostel	Grand Total
Bangalore	2482	1091	2433
Belagavi	1382	1438	1384
Chitradurga	2233	1825	2215
Kalburgi	2606	1362	2551
Kodagu	3084	2167	3040
Mysuru	1866	683	1812
Uttara	2669	2362	2656
Yadgir	2373	875	2353
Grand Total	**2340**	**1560**	**2311**

Section: Access, Attendance, Regularity and Continuation

Table VII: Region Wise Travel Mode

Travel Mode	Before Bicycle		After Bicycle	
	Plain Region	Hilly Region	Plain Region	Hilly Region
Dropped by house elders	47	8	73	13
Other	27	_	33	2
Own cycle	138	41	2196	302
Public transport	647	188	601	165
Shared transport	32	10	36	14
Walking	3450	510	1402	261
Grand Total	**4341**	**757**	**4341**	**757**

Table VIII: Districts wise Principles Perception about Improving Retention

Districts	**Category of Improving Retention**			**Total**
	Yes, Great Extent	**Yes, Some extent**	**No at all**	
Bangalore	30(100.00)	0(0.00)	0(0.00)	**30**
Belagavi	23(76.67)	0(0.00)	7(23.33)	**30**
Chitradurga	32(100.00)	0(0.00)	0(0.00)	**32**
Kalaburgi	15(50.00)	5(16.67)	10(33.33)	**30**
Kodagu	22(70.97)	4(12.90)	5(16.13)	**31**
Mysuru	19(63.33)	0(0.00)	11(36.67)	**30**
Uttara Kannada	27(90.00)	0(0.00)	3(10.00)	**30**
Yadgir	25(83.33)	0(0.00)	5(16.67)	**30**
Grand Total	**193(79.42)**	**9(3.70)**	**41(16.87)**	**243**

Table IX: Districts wise Principles Perception about Improving Attendance

Districts	**Category of Improving Retention**			**Total**
	Yes, Great Extent	**No at all**	**Yes, Some extent**	
Bangalore	29		1	30
Belagavi	28		2	30
Chitradurga	32			32
Kalaburgi	17	4	9	30
Kodagu	22	3	6	31
Mysuru	23		7	30
Uttara Kannada	29		1	30
Yadgir	27		3	30
Grand Total	**207**	**7**	**29**	**243**

Table X: Districts wise Principles Perception about Reduce Dropout

Districts	**Category of Reducing Dropout**			**Total**
	Yes, Great Extent (>80%)	**Yes, Some extent (40-80%)**	**No at all (<40%)**	
Bangalore	28(93.33)	0(0.00)	2(6.67)	**30**
Belagavi	24(80.00)	0(0.00)	6(20.00)	**30**
Chitradurga	31(96.88)	0(0.00)	1(3.13)	**32**
Kalaburgi	15(50.00)	5(16.67)	10(33.33)	**30**
Kodagu	18(58.06)	3(9.68)	10(32.26)	**31**
Mysuru	25(83.33)	1(3.33)	4(13.33)	**30**
Uttara Kannada	22(73.33)	3(10.00)	5(16.67)	**30**
Yadgir	25(83.33)	0(0.00)	5(16.67)	**30**
Grand Total	**188(77.37)**	**12(4.94)**	**43(17.70)**	**243**

Table XI: Districts and Gender wise Average No. of Days Beneficiary Misses School in a Month

Districts	**Before Receiving Cycle**			**After Receiving Cycle**		
	boy	**girl**	**Total**	**boy**	**girl**	**Total**
Bangalore	1	1	1	1	1	1
Belagavi	3	2	3	2	1	2
Chitradurga	2	1	1	1	1	1
Kalaburgi	4	3	4	2	2	2
Kodagu	2	2	2	2	2	2
Mysuru	2	1	1	1	1	1
Uttara Kannada	1	1	1	1	1	1
Yadgir	2	2	2	1	1	1
Grand Total	**2**	**2**	**2**	**1**	**1**	**1**

Table XII: Districts Wise Principles Perception about Reasons for Improving Boys Attendance

Districts	**Comes after Field Work**	**Comes after News Paper Distribution**	**Comes after helping family in**	**Comes after Tuition**	**Comes after some other Works**
Bangalore	21(70.00)	12(40.00)	22(73.33)	13(43.33)	1(3.33)
Belagavi	25(83.33)	2(6.67)	15(50.00)	19(63.33)	2(6.67)
Chitradurga	20(62.50)	2(6.25)	22(68.75)	22(68.75)	2(6.25)
Kalaburgi	14(46.67)	1(3.33)	6(20.00)	15(50.00)	0(0.00)
Kodagu	6(19.35)	1(3.23)	11(35.48)	23(74.19)	1(3.23)
Mysuru	28(93.33)	5(16.67)	20(66.67)	5(16.67)	0(0.00)
Uttara	11(36.67)	3(10.00)	5(16.67)	17(56.67)	6(20.00)
Yadgir	27(90.00)	11(36.67)	19(63.33)	19(63.33)	1(3.33)
Grand	**152(62.55)**	**37(15.23)**	**120(49.38)**	**133(54.73)**	**13(5.35)**

Table XIII: Districts Wise Principles Perception about Reasons for Improving Girls Attendance

Districts	**Comes after House hold Work**	**Comes after Field Work**	**Comes after helping family in Livelihood Activity**	**Comes after Tuition**	**Comes after some other Works**
Bangalore	26(86.67)	8(26.67)	21(70.00)	13(43.33)	1(3.33)
Belagavi	26(86.67)	0(0.00)	14(46.67)	19(63.33)	2(6.67)
Chitradurga	24(75.00)	0(0.00)	20(62.50)	24(75.00)	0(0.00)
Kalaburgi	21(70.00)	0(0.00)	7(23.33)	9(30.00)	0(0.00)
Kodagu	7(22.58)	1(3.23)	10(32.26)	22(70.97)	1(3.23)
Mysuru	27(90.00)	1(3.33)	16(53.33)	6(20.00)	0(0.00)
Uttara Kannada	21(70.00)	0(0.00)	4(13.33)	13(43.33)	4(13.33)
Yadgir	30(100.00)	8(26.67)	13(43.33)	13(43.33)	0(0.00)
Grand Total	**182(74.90)**	**18(7.41)**	**105(43.21)**	**119(48.97)**	**8(3.29)**

Table XIV: Districts wise Principles Perception about Improving Attendance

Districts	**Category of Improved Attendance**			**Total**
	Yes, Great Extent (>80%)	**Yes, Some extent (40-80%)**	**No at all (<40%)**	
Bangalore	29(96.67)	0(0.00)	1(3.33)	**30**
Belagavi	28(93.33)	0(0.00)	2(6.67)	**30**
Chitradurga	32(100.00)	0(0.00)	0(0.00)	**32**
Kalaburgi	17(56.67)	4(13.33)	9(30.00)	**30**
Kodagu	22(70.97)	3(9.68)	6(19.35)	**31**
Mysuru	23(76.67)	0(0.00)	7(23.33)	**30**
Uttara Kannada	29(96.67)	0(0.00)	1(3.33)	**30**
Yadgir	27(90.00)	0(0.00)	3(10.00)	**30**
Grand Total	**207(85.19)**	**7(2.88)**	**29(11.93)**	**243**

Table XV: District Wise Number of Days Beneficiary Misses First Class in a Week

Districts	**Before Receiving Bicycle**						**After Receiving Bicycle**					
	0	**1**	**2**	**3**	**4**	**5**	**0**	**1**	**2**	**3**	**4**	**5**
Bangalore	401(63.35)	94(14.85)	106(16.75)	20(3.16)	3(0.47)	9(1.42)	409(64.61)	107(16.90)	94(14.85)	14(2.21)	5(0.79)	4(0.63)
Belagavi	284(45.22)	108(17.20)	104(16.56)	44(7.01)	21(3.34)	67(10.67)	355(56.53)	156(24.84)	88(14.01)	15(2.39)	8(1.27)	6(0.96)
Chitradurga	342(54.55)	193(30.78)	69(11.00)	18(2.87)	3(0.48)	2(0.32)	391(62.36)	173(27.59)	53(8.45)	7(1.12)	1(0.16)	2(0.32)
Kalaburgi	351(53.92)	147(22.58)	93(14.29)	23(3.53)	9(1.38)	28(4.30)	390(59.91)	153(23.50)	77(11.83)	13(2.00)	11(1.69)	7(1.08)
Kodagu	376(59.31)	105(16.56)	118(18.61)	18(2.84)	6(0.95)	11(1.74)	439(69.24)	81(12.78)	84(13.25)	20(3.15)	6(0.95)	4(0.63)
Mysuru	390(61.13)	157(24.61)	64(10.03)	14(2.19)	2(0.31)	11(1.72)	442(69.28)	129(20.22)	43(6.74)	7(1.10)	4(0.63)	13(2.04)
Uttara Kannada	514(78.12)	73(11.09)	53(8.05)	8(1.22)	5(0.76)	5(0.76)	539(81.91)	76(11.55)	33(5.02)	9(1.37)	1(0.15)	0(0.00)
Yadgir	317(50.40)	96(15.26)	142(22.58)	46(7.31)	8(1.27)	20(3.18)	379(60.25)	140(22.26)	70(11.13)	27(4.29)	3(0.48)	10(1.59)
Total	**2975(58.36)**	**973(19.09)**	**749(14.69)**	**191(3.75)**	**57(1.12)**	**153(3.00)**	**3344(65.59)**	**1015(19.91)**	**542(10.63)**	**112(2.20)**	**39(0.77)**	**46(0.90)**

Table XVI: Districts & Gender wise beneficiary Perception of Continuing Schooling after class 8.

Districts	Number of Boys				Number of Girls			
	Yes	Not Sure	No	Boys Total	Yes	Not Sure	No	Girls Total
Bangalore	321(94.69)	3(0.88)	15(4.42)	339(100.00)	280(95.24)	2(0.68)	12(4.08)	294(100.00)
Belagavi	296(99.66)	1(0.34)	0(0.00)	297(100.00)	326(98.49)	0(0.00)	5(1.51)	331(100.00)
Chitradurga	288(98.97)	1(0.34)	2(0.69)	291(100.00)	334(99.40)	1(0.30)	1(0.30)	336(100.00)
Kalaburgi	329(97.05)	2(0.59)	8(2.36)	339(100.00)	306(98.08)	1(0.32)	5(1.60)	312(100.00)
Kodagu	318(100.00)	0(0.00)	0(0.00)	318(100.00)	313(99.05)	0(0.00)	3(0.95)	316(100.00)
Mysuru	321(99.69)	0(0.00)	1(0.31)	322(100.00)	312(98.73)	2(0.63)	2(0.63)	316(100.00)
Uttara Kannada	330(98.21)	1(0.30)	5(1.49)	336(100.00)	316(98.14)	3(0.93)	3(0.93)	322(100.00)
Yadgir	308(98.40)	0(0.00)	5(1.60)	313(100.00)	308(97.47)	0(0.00)	8(2.53)	316(100.00)
Grand Total	2511(98.28)	8(0.31)	36(1.41)	2555(100.00)	2495(98.11)	9(0.35)	39(1.53)	2543(100.00)

Table XVII: Social Category and Gender wise Beneficiary Perception of Continuing Schooling after class 8.

Social Category	Number of Boys				Number of Girls			
	Yes	Not Sure	No	Boys Total	Yes	Not Sure	No	Girls Total
ST	314(98.74)	1(0.31)	3(0.94)	318(100.00)	311(97.49)	1(0.31)	7(2.19)	319(100.00)
SC	734(98.00)	4(0.53)	11(1.47)	749(100.00)	730(98.25)	3(0.40)	10(1.35)	743(100.00)
OBC	1162(98.56)	2(0.17)	15(1.27)	1179(100.00)	1160(98.31)	4(0.34)	16(1.36)	1180(100.00)
GM	281(97.23)	1(0.35)	7(2.42)	289(100.00)	280(98.25)	1(0.35)	4(1.40)	285(100.00)
NA	20(100.00)	0(0.00)	0(0.00)	20(100.00)	14(87.50)	0(0.00)	2(12.50)	16(100.00)
Grand Total	2511(98.28)	8(0.31)	36(1.41)	2555(100.00)	2495(98.11)	9(0.35)	39(1.53)	2543(100.00)

Table XVIII: Districts & Gender wise Non-beneficiary Perception of Continuing Schooling after class 8.

Districts	Boys			Girls		
	Yes	Not Sure	No	Yes	Not Sure	No
Bangalore	90.00%	0.00%	10.00%	100%	0.00%	0.00%
Belagavi	100.00%	0.00%	0.00%	100%	0.00%	0.00%
Chitradurga	66.67%	33.33%	0.00%	100%	0.00%	0.00%
Kalaburgi	100.00%	0.00%	0.00%	100%	0.00%	0.00%
Kodagu	100.00%	0.00%	0.00%	100%	0.00%	0.00%
Mysuru	100.00%	0.00%	0.00%	100%	0.00%	0.00%
Uttara Kannada	100.00%	0.00%	0.00%	100%	0.00%	0.00%
Yadgir	100.00%	0.00%	0.00%	100%	0.00%	0.00%
Grand Total	**96.30%**	**1.85%**	**1.85%**	100%	0.00%	0.00%

Table XIX: Districts & Gender wise beneficiary Perception of Continuing Education till class 12.

Districts	Number of Boys				Number of Girls			
	Yes	Not Sure	No	Boys Total	Yes	Not Sure	No	Girls Total
Bangalore	231(68.14)	21(6.19)	87(25.66)	339(100.00)	197(67.01)	7(2.38)	90(30.61)	294(100.00)
Belagavi	288(96.97)	2(0.67)	7(2.36)	297(100.00)	315(95.17)	4(1.21)	12(3.63)	331(100.00)
Chitradurga	282(96.91)	2(0.69)	7(2.41)	291(100.00)	327(97.32)	7(2.08)	2(0.60)	336(100.00)
Kalaburgi	322(94.99)	4(1.18)	13(3.83)	339(100.00)	292(93.59)	5(1.60)	15(4.81)	312(100.00)
Kodagu	315(99.06)	1(0.31)	2(0.63)	318(100.00)	311(98.42)	0(0.00)	5(1.58)	316(100.00)
Mysuru	320(99.38)	0(0.00)	2(0.62)	322(100.00)	315(99.68)	0(0.00)	1(0.32)	316(100.00)
Uttara Kannada	325(96.73)	4(1.19)	7(2.08)	336(100.00)	306(95.03)	3(0.93)	13(4.04)	322(100.00)
Yadgir	304(97.12)	0(0.00)	9(2.88)	313(100.00)	300(94.94)	3(0.95)	13(4.11)	316(100.00)
Grand Total	2387(93.42)	34(1.33)	134(5.24)	2555(100.00)	2363(92.92)	29(1.14)	151(5.94)	2543(100.00)

Table XX: Social Category and Gender wise Beneficiary Perception of Continuing Education till class 12

Social Category	Number of Boys				Number of Girls			
	Yes	Not Sure	No	Boys Total	Yes	Not Sure	No	Girls Total
ST	306(96.23)	4(1.26)	8(2.52)	318(100.00)	295(92.48)	7(2.19)	17(5.33)	319(100.00)
SC	689(91.99)	9(1.20)	51(6.81)	749(100.00)	686(92.33)	6(0.81)	51(6.86)	743(100.00)
OBC	1111(94.23)	13(1.10)	55(4.66)	1179(100.00)	1109(93.98)	6(0.51)	65(5.51)	1180(100.00)
GM	264(91.35)	7(2.42)	18(6.23)	289(100.00)	260(91.23)	9(3.16)	16(5.61)	285(100.00)
NA	17(85.00)	1(5.00)	2(10.00)	20(100.00)	13(81.25)	1(6.25)	2(12.50)	16(100.00)
Grand Total	2387(93.42)	34(1.33)	134(5.24)	2555(100.00)	2363(92.92)	29(1.14)	151(5.94)	2543(100.00)

Table XXI: Districts & Gender wise non-beneficiary Perception of Continuing Education till class 12.

Districts	Boys		Girls
	Yes	No	Yes
Bangalore	80.00%	20.00%	100%
Belagavi	100.00%	0.00%	
Chitradurga	100.00%	0.00%	
Kalaburgi	100.00%	0.00%	
Kodagu	100.00%	0.00%	
Mysuru	100.00%	0.00%	
Uttara Kannada	100.00%	0.00%	
Yadgir	100.00%	0.00%	
Grand Total	**96.30%**	**3.70%**	

Table XXII: Districts wise Principles Perception about positive attitude among girls For secondary education

Districts	**Perception of Principles**			**Total**
	Yes, Great Extent (>80%)	**Yes, Some extent (40-80%)**	**No at all (<40%)**	
Bangalore	29(96.67)	1(3.33)	0(0.00)	30(100.00)
Belagavi	23(76.67)	7(23.33)	0(0.00)	30(100.00)
Chitradurga	30(93.75)	2(6.25)	0(0.00)	32(100.00)
Kalaburgi	16(53.33)	10(33.33)	4(13.33)	30(100.00)
Kodagu	17(54.84)	10(32.26)	4(12.90)	31(100.00)
Mysuru	25(83.33)	5(16.67)	0(0.00)	30(100.00)
Uttara Kannada	25(83.33)	5(16.67)	0(0.00)	30(100.00)
Yadgir	28(93.33)	2(6.67)	0(0.00)	30(100.00)
Grand Total	193(79.42)	42(17.28)	8(3.29)	243(100.00)

Table XXIII: Districts wise Principles Perception about students positive attitude towards continuing schooling till 12th.

Districts	**Perception of Principles**			**Total**
	Yes, Great Extent (>80%)	**Yes, Some extent (40-80%)**	**No at all (<40%)**	
Bangalore	29(96.67)	1(3.33)	0(0.00)	30(100.00)
Belagavi	23(76.67)	7(23.33)	0(0.00)	30(100.00)
Chitradurga	28(87.50)	3(9.38)	1(3.13)	32(100.00)
Kalaburgi	17(56.67)	8(26.67)	5(16.67)	30(100.00)
Kodagu	19(61.29)	7(22.58)	5(16.13)	31(100.00)
Mysuru	26(86.67)	4(13.33)	0(0.00)	30(100.00)
Uttara Kannada	25(83.33)	3(10.00)	2(6.67)	30(100.00)
Yadgir	27(90.00)	3(10.00)	0(0.00)	30(100.00)
Grand Total	194(79.84)	36(14.81)	13(5.35)	243(100.00)

Table XXIII: Districts wise Principles Perception about students' positive attitude towards Higher Education.

Districts	**Perception of Principles**			**Total**
	Yes, Great Extent (>80%)	**Yes, Some extent (40-80%)**	**No at all (<40%)**	
Bangalore	27(90.00)	3(10.00)	0(0.00)	30(100.00)
Belagavi	22(73.33)	8(26.67)	0(0.00)	30(100.00)
Chitradurga	28(87.50)	2(6.25)	2(6.25)	32(100.00)
Kalaburgi	16(53.33)	10(33.33)	4(13.33)	30(100.00)
Kodagu	18(58.06)	8(25.81)	5(16.13)	31(100.00)
Mysuru	23(76.67)	7(23.33)	0(0.00)	30(100.00)
Uttara Kannada	24(80.00)	4(13.33)	2(6.67)	30(100.00)
Yadgir	25(83.33)	5(16.67)	0(0.00)	30(100.00)
Grand Total	183(75.31)	47(19.34)	13(5.35)	243(100.00)

Table XXIV: District wise Portion of Beneficiary and non-Beneficiary Reaching School on-time

Districts	**Beneficiary**				**Non-Beneficiary**			
	Always	**Mostly**	**Sometimes**	**Never**	**always**	**mostly**	**sometimes**	**Never**
Bangalore	41.71%	32.70%	2.37%	23.22%	27.27%	72.73%	0.00%	0.00%
Belagavi	28.18%	40.76%	0.64%	30.41%	18.18%	36.36%	0.00%	45.45%
Chitradurga	57.89%	26.79%	2.23%	13.08%	70.00%	10.00%	0.00%	20.00%
Kalaburgi	51.61%	23.50%	2.00%	22.89%	13.33%	80.00%	0.00%	6.67%
Kodagu	33.12%	21.61%	1.26%	44.01%	50.00%	20.00%	10.00%	20.00%
Mysuru	21.00%	47.65%	3.13%	28.21%	9.09%	45.45%	0.00%	45.45%
Uttara Kannada	36.63%	48.18%	0.76%	14.44%	27.27%	63.64%	9.09%	0.00%
Yadgir	9.38%	40.22%	2.54%	47.85%	0.00%	27.27%	0.00%	72.73%
Grand Total	**34.99%**	**35.21%**	**1.86%**	**27.93%**	**25.56%**	**46.67%**	**2.22%**	**25.56%**

Table XXV: Social Category wise Portion of Beneficiary and non-Beneficiary Reaching School on-time

Social Category	**Beneficiary**				**Non-Beneficiary**			
	Always	**Mostly**	**Sometime**	**Never**	**always**	**mostly**	**sometime**	**Never**
ST	32.81%	32.34%	3.77%	31.08%	0.00%	100.00 %	0.00%	0.00%
SC	35.52%	34.38%	2.08%	28.02%	0.00%	55.56%	0.00%	44.44%
OBC	35.65%	35.95%	1.19%	27.21%	29.41%	41.18%	3.92%	25.49%
GM	32.75%	38.15%	2.09%	27.00%	19.05%	66.67%	0.00%	14.29%
NA	44.44%	25.00%	0.00%	30.56%	50.00%	12.50%	0.00%	37.50%
Grand Total	**34.99 %**	**35.21 %**	**1.86%**	**27.93 %**	**25.56 %**	**46.67%**	**2.22%**	**25.56 %**

Table XXVI: District Wise Principles Perception About Improving Self-Esteem of the Students

Districts	Greater extent	Not at All	Some extent	Total
Bangalore	25		5	30
Belagavi	26	1	3	30
Chitradurga	31		1	32
Kalaburgi	18	3	9	30
Kodagu	19	4	8	31
Mysuru	18		12	30
Uttara Kannada	26		4	30
Yadgir	26		4	30
Grand Total	**189**	**8**	**46**	**243**

Table XXVII: District Wise Beneficiary Confidence About Communicating with Strangers

Districts	**Always**	**Mostly**	**Never**	**Sometimes**	**Total**
Bangalore	290	98	140	105	633
Belagavi	281	87	146	114	628
Chitradurga	124	15	191	297	627
Kalaburgi	431	75	13	132	651
Kodagu	120	24	45	445	634
Mysuru	164	42	257	175	638
Uttara Kannada	385	112	25	136	658
Yadgir	378	99	44	108	629
Total	**2173**	**552**	**861**	**1512**	**5098**

Table XXVIII: District Wise Beneficiary Confidence in Asking Questions

Districts	**Always**	**Mostly**	**Never**	**Sometimes**	**Total**
Bangalore	243	197	9	184	633
Belagavi	171	168	12	277	628
Chitradurga	158	114	9	346	627
Kalaburgi	356	135	8	152	651
Kodagu	29	32	18	555	634
Mysuru	134	75	40	389	638
Uttara Kannada	201	220	7	230	658
Yadgir	137	153	23	316	629
Total	**1429**	**1094**	**126**	**2449**	**5098**

Table XXIX: District Wise Beneficiary Confidence in Giving Talk in Class

Districts	**Always**	**Mostly**	**Never**	**Sometimes**	**Total**
Bangalore	231	214	29	159	633
Belagavi	268	134	52	174	628
Chitradurga	239	164	12	212	627
Kalaburgi	306	143	12	190	651
Kodagu	24	40	41	529	634
Mysuru	154	57	119	308	638
Uttara Kannada	229	240	8	181	658
Yadgir	180	132	21	296	629
Total	**1631**	**1124**	**294**	**2049**	**5098**

Table XXX: District, Gender and Social category wise Beneficiary perception about bicycle being helpful in their study

Districts	Boys						Girls					
	ST	SC	OBC	GM	NA	To	ST	SC	OBC	GM	NA	To
Bangalor	14(7.9	74(41.	55(31.	30(16.	4(2.	17	15(8.5	76(43.	59(33.	24(13.	2(1.	17
Belagavi	35(12.	37(13.	141(5	60(21.	2(0.	27	40(13.	43(14.	150(5	64(21.	3(1.	30
Chitradu	41(20.	84(40.	67(32.	12(5.8	1(0.	20	55(22.	88(35.	82(33.	19(7.7	1(0.	24
Kalabur	8(4.42	68(37.	85(46.	20(11.	0(0.	18	9(4.84	61(32.	99(53.	17(9.1	0(0.	18
Kodagu	26(18.	37(26.	62(43.	16(11.	0(0.	14	21(20.	36(34.	35(33.	11(10.	0(0.	10
Mysuru	38(13.	78(26.	156(5	19(6.5	1(0.	29	38(15.	61(25.	116(4	22(9.2	1(0.	23
Uttara	1(0.37	43(15.	208(7	16(5.9	3(1.	27	3(1.29	44(18.	165(7	16(6.9	4(1.	23
Yadgir	39(18.	62(29.	88(42.	16(7.6	3(1.	20	39(18.	57(27.	84(40.	26(12.	2(0.	20
Grand	202(1	483(2	862(4	189(1	14(0	17	220(1	466(2	790(4	199(1	13(0	16

Table XXXI: Social Category Wise Beneficiary Regular Use of Bicycle

	No regular use	**no regular use %**	**Regular use**	**Regular use %**	tot
don't_know	16	44.44	20	55.55	36
GM	328	57.14	246	42.86	574
OBC	1200	50.87	1159	49.13	2359
SC	868	58.18	624	41.82	1492
ST	330	51.80	307	48.19	637
Grand Total	**2742**		**2356**		**5098**

Table XXXII: District and Social Category wise Beneficiary Who don’t bring Cycle as Family Members Use it

District	**GM**	**OBC**	**SC**	Total
Belagavi	1			1
Kalaburgi		1	1	2
Mysuru		1	3	4
Grand Total	**1**	**2**	**4**	**7**

EVALUATION OF THE SCHEME: FREE SUPPLY OF BICYCLES TO 8th STD. STUDENTS STUDYING IN GOVERNME AND AIDED SCHOOLS AND STUDENTS IN HOSTELS OF SOCIAL WELFARE DEPARTMENT IN KARNATAKA FOR THE PERIOD 2006-07 to 2017-18

Karnataka Evaluation Authority
#542, 5th Floor, 2nd Gate
Dr. B.R Ambedkar Veedhi
M.S. Building
Bengaluru – 560 001

Website: kea.karnataka.gov.in
Contact No: 080 2203 2561
Email Id: keagok@karnataka.gov.in