



**GOVERNMENT OF KARNATAKA**

**EVALUATION OF THE SCHEME : FREE SUPPLY OF  
BICYCLES TO 8<sup>th</sup> 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**

**OCTOBER, 2020**



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**KARNATAKA EVALUATION AUTHORITY  
DEPARTMENT OF PLANNING, PROGRAMME MONITORING AND  
STATISTICS  
GOVERNMENT OF KARNATAKA  
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# Executive Summary

## Introduction:

The Government of India and state governments have taken up a number of schemes to enhance secondary school enrolment and retention. These schemes include provision of mid-day meals, free bicycle distribution, free text books and uniforms and free bus pass facility, residential hostel buildings and regular training for teachers which would reduce education related expenses for less privileged families and also incentivize them to enrol and retain their wards in secondary school.

Like other state governments such as West Bengal and Chhattisgarh, Government of Karnataka also started the scheme of distribution of bicycles for secondary school students. The bicycle distribution scheme, in which bicycles are given to class VIII students, has objectives such as ensuring transition from class VII to class VIII, improving school access and school enrolment, arresting dropout and helping students complete high school.

The present evaluation study by GRAAM, commissioned by Karnataka Evaluation Authority, has examined the process related issues and challenges faced in free bicycle distribution and has also generated insights on the extent to which the scheme has been successful in achieving its professed objectives.

## Methodology and Sample Size:

- This mixed methods study has collected quantitative and qualitative methods to gather data from various stakeholders.
- In the quantitative study, a primary survey was done of 9<sup>th</sup> and 10<sup>th</sup> Std students who had 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).
- Since comparison of beneficiaries and non-beneficiaries has been done on learning outcomes, data was also gathered from non-beneficiary students; 90 non-beneficiary students from urban schools were therefore also covered in the survey.
- 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:

#### ***Process Evaluation Related Findings***

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:

##### *Processes contributing to delay*

- Most students receive the bicycle in delayed manner. Only 13% receive the cycles in the first two months of the academic year (June or July).
- The current dates for procurement, bid evaluation and selection of supplier are not early enough to ensure timely supply of cycles to students, since it takes 90-120 days for the supplier to provide cycles and other processes like quality check at various levels and assembly also need to be completed.
- Delayed indenting of cycles by presidents also adds to the delay in bicycle distribution. 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*

- Karnataka state mandates BIS standards to be followed with respect to different bicycle parts, which are comparable to those followed by other states like West Bengal and Chhattisgarh.

- Quality check procedures are mandated not only at the manufacturing stage but also at the distribution stage. Bicycles from each division are sent to the R&D Centre for Bicycles and Sewing machines in Ludhiana for testing. Visual quality check is mandated through the division level committees, district level committees and three member school level committees.
- The members of the division and district level committees are not trained in the R&D Centre at Ludhiana as required by the guidelines. The absence of mandated training is significant, since the gaps in district level quality checks have been linked to the quality gaps in bicycles.
- The quality check within the state rests only on visual check with no physical quality testing facility located in the state.
- The quality check functionaries at school level perceive the lack of effective mechanisms for raising complaints pertaining to bicycle defects.

*Findings pertaining to the 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.
- More than 40% students encountered missing parts in newly received bicycles and had to add parts such as bell and seat cover.
- Bicycle quality is seen 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% used bicycles 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 sections.

## ***Findings pertaining to the attainment of school 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 about 32% beneficiaries walk to school and almost half use bicycles to travel 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.
- In spite of greater relative ease of travelling to school, students from hilly areas still face difficulties in the 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 improve school access only if they were used regularly. However, less than half 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.
- 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 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 shows an association of bicycle provision with school enrolment. School principals also feel that bicycles have been able to significantly enhance secondary school enrolment. However 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. 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 also been improved through the bicycles. The share of children missing the first two classes has also come down. 65.5% students are reaching school on time and not missing any class, compared to 58.3% who were reaching school on time before receiving the cycles.

#### *Effects on school retention*

- Survey findings indicate that bicycles have been able to enhance school retention. 79.4% of total surveyed principals see bicycle as the main reason for significantly improving school retention. 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 higher average exam scores (71%) than class VII students (68%), which shows an association of learning outcomes with bicycle provision.
- Exam scores of Class VIII had improved for both boys and girls. Also, higher share of beneficiaries had improved scores compared to non-beneficiaries.
- Most surveyed beneficiaries had more time to study as a result of bicycle provision. The regression analysis shows that such saving of time has significant effect on academic scores.

#### *Improvement in confidence and other non-cognitive outcomes*

- Parents and principals felt that 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:**

- Advance the date of procurement and expedite bid evaluation.

- Indent for schools based on previous years' enrolment or average of last three years' enrolment.
- Use Mechanical engineering institute labs for quality testing of bicycles.
- Organize a third-party assessment of assembled bicycle supervised by a technical consultant/representative of technical institute at district level
- Conduct a free service workshop at the school level (by the supplier) at the end of the first month after bicycle distribution.
- Replace bicycles reported to be damaged at receipt.
- Train children on the regular care and maintenance of bicycles.
- Involve students in a more active way in bicycle maintenance through activities such as bicycle club linked to school cabinet.
- Designate a coordinator (Teacher) 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)
- Carry out mandatory tests of the bicycle riding skills of all students at the outset and train students who lack bicycle riding competency.
- Involve community representatives such as parents, SHG members and local leaders more extensively in bicycle monitoring and maintenance to relieve the burden of the 3-member school committee
- Train members of the Division and District level quality check committees in quality check through Master trainers.
- Empower the three-member school level committees to take corrective action on faulty bicycles, and to register complaints that have to be mandatorily redressed by the DDPI or other designated officer.
- Establish time bound procedures for the redressal of complaints and replacement of bicycles.
- Ensure effective and functional bicycle warranties and make students more aware of them.
- Organize Servicing camps 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).
- Provide alternative transportation for students in hilly areas such as hired jeeps or minibuses.
- Require students to sign a 'study to own' contract' to further incentivize students to attend school regularly and study well.

- Consider other measures such as cash transfers, since bicycles are not sufficient in bridging enrolment gap between boys and girls. Cash transfers would offset the opportunity cost of engaging girls in paid or unpaid work or getting them married and incentivise families to continue the secondary education of female wards.
- From the point of view of limited punctuality gains, there is a need to examine the cost effectiveness of the scheme and consider alternative transportation especially in areas with difficult terrain.