

# Scooter for the physically challenged

TRANSPORT NATIONAL SECOND

**Dhanjibhai Kerai** (31) is from a middle class farmers' family in Mundra taluka, Kutch district of Gujarat. He did not go to school but later on out of his own wish, he went to "Praudh Sikshan Kendra" – Elders' Education Program of the Government for three months and learnt reading and writing to some extent. Dhanjibhai was born physically challenged. Yet, he displays tremendous determination. Standing hardly one and a half feet (0.5 M) tall, he weighs just 19 kg. At the age of two years, a severe attack of polio left him disabled permanently and ever since he has no use of his legs and one hand. His movements are excruciatingly slow. But unfazed by this disability, he is full of zeal. Though he does not have any formal education or training, he has acquired knowledge of repairing electrical appliances and automobiles and is reputed as an excellent mechanic in his area. This self-taught young man is always on a look out for ways to make his life more useful and comfortable. He has designed for himself a special scooter with which he can travel 150 km in a day. Dhanjibhai is unmarried and lives with his parents. He has 20 acres of non-irrigated land and his father is looking after the farming.

**Genesis** Dhanjibhai had always wanted to drive a scooter but it seemed practically impossible for a man who was unable to use two feet and a hand. Gradually, his desire turned into determination. To fulfill his dream, he started collecting a number of items with which to retrofit a scooter in a way that his constraints would not be obstacles in riding it.

The first predicament was that he could not hold the handlebar of a two-wheeler with both hands and keep his balance. So he decided to convert the two-wheeler into a four-wheeler. This was to be a unique experiment. He bought two old auto rickshaw wheels and picked up a fairly strong steel pipe. With these, he set himself on the job and succeeded in modifying the scooter and customizing it as per his needs for his day to day conveyance so that he could drive the vehicle himself.

## The Innovation

Basically this is an assembled scooter with the chassis and engine being that of a Bajaj Priya and the outer body of a Bajaj Chetak. The scooter has two support wheels (Modified Luna supports) on either side for balancing the vehicle. A removable seat has been fixed in front of the usual driver seat for Dhanjibhai to reach the handle bars. A lever has been attached to the rear wheel brake, for the driver to be able to apply the brakes with his hand. The two rear wheels are kept a little higher so that the vehicle does not skid. With this set up the driver is able to conveniently drive the vehicle and reach a maximum speed of 60-70 km/ hour.

His friend, Kamalbhai, first test-rode the scooter for two days before giving Dhanjibhai his go-ahead for trying it. This whole experiment had taken about three months and it took Dhanjibhai three days



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to learn how to drive this scooter. Around Rs.3000 was spent on this experiment. The only problem he faces is in starting the scooter for which he requires somebody's help. A person lifts Dhanjibhai and places him on the seat of the scooter and he positions himself and holds the handlebar. The person then starts the scooter by cranking the kick pedal after which Dhanjibhai rides away merrily on *kuchcha* and *pucca* roads. The significance of the innovation being that it frees this physically challenged person from dependence on other people and provides him with a reasonable degree of mobility.

### **Dependence to self-reliance**

Dhanjibhai recalls that he used to travel on his mother's back, wherever she went, until he was 15 years old. It was at that point in his life, that he decided to take matters into his hands and literally so. Since then, he attends to all his personal chores himself. Not satisfied with that, he was also determined to become self-reliant and to earn his own living.

Once Dhanjibhai's maternal uncle staying in London had sent him a two-in-one radio set-cum-tape recorder. After a few days, Dhanjibhai dismantled the tape recorder and decided to put it back again. But he did not succeed in doing so even after trying for three consecutive days. He left the tape recorder at that stage and concentrated on fixing an engine of a moped to his bicycle. One of his friends Kamalbhai Singhal helped him in welding the engine on his cycle. The moped-engine-powered bicycle was ready in four days and encouraged by this success, he once again returned to the tape recorder. After carefully observing the wiring he started reassembling it and this time he succeeded.

The success with his uncle's two-in-one radio set-cum-tape recorder, gave Dhanjibhai the confidence to repair electrical and electronic appliances. Soon, he was trying out his skill on television sets, radio sets and other electrical and electronic gadgets. He bought a few old tape recorders and radio sets to work on in order to perfect the art. *"Many people willingly gave away their old gadgets to me,"* he says. He repaired them, and

sold them off to those who could not afford brand new items.

Dhanjibhai relates his learning and exploratory experience:

*"There was nobody in our village to whom people could take their tape recorders, radio sets or watches when they developed some problem and they had to be simply abandoned. I first bought a repairing kit and started work. I kept my charges very reasonable. Also, I put my most sincere efforts in getting things working. Then, I started mending and vulcanizing bicycle and scooter tyres. By and by, I graduated from audio to video. I got a VCR from a relative, studied its mechanism and learnt to repair that too. As soon as I mastered one skill, I began looking for another to study and master."*

Gradually, he found enough work to keep himself busy. Thus he took to repairing electrical gadgets as a profession and this provides him with a decent livelihood.

### **A sought after mechanic**

Dhanjibhai eventually started assembling new tape recorders and television sets out of components sourced from the electronics market. He has assembled and sold 150 tape recorders, 80 radio receivers and 50 television sets, 20 colour TVs and 30 black-and-white TVs. He does not assemble the sets for stock but starts work only after securing an order. He earns Rs 200 to Rs 300 per day on an average and that makes him financially self-reliant.

Owners of electronic-goods shops in Bhuj, Mundra and Mandvi vouch that Dhanjibhai is a reliable and skilled mechanic. They often pass on the repairing jobs they get on Dhanjibhai.

*"Sometimes, they even insist that I should carry out repairs on sophisticated and latest gadgets. That is the time when I realise that the sky is*

*the limit for a person to keep learning,"* Dhanjibhai declares proudly. The users of 'Dhanjibhai-assembled machines' are very happy with the performance of the products and claim that these are even better than branded goods from established companies.

**Looking to the future with hope**

Dhanjibhai is very grateful to his friends who have always helped and supported him. As he cannot start the scooter by himself, he has to always take a friend with him wherever he goes. He is not very comfortable with this 'dependence' and so is all set to incorporate a

self-starting mechanism in the scooter which he plans to develop it himself.

It is a pity that many scooter companies when contacted by SRISTI, which honoured him with the SRISTI *Sanmaan* in 1999, have not given much response as yet. But sooner or later, the industry will have to respond. There are enough Dhanjibhai like young people in this world who want to be independent and self-reliant. Markets will have to eventually respond to this un-met need of the physically challenged.