

# Trash to Treasure: Students recycling plastics into Teaching-Learning Materials, Saving Dhaka city from Plastic Pollution

## Plastic Pollution in Dhaka

- Current plastic waste: 821,250 tons
- More than 30% of the total plastic waste in the country is generated in Dhaka alone (Dhaka Tribune, 04 Jun 2023 )



Approximately 10 lac students (Primary, Secondary, Higher Secondary, inclusive)



Awareness program



Collecting plastic waste from houses and schools



Recycling plastics into Teaching-Learning Materials



Interactive and effective classrooms

## How the research will help?



Sustainable Dhaka City with less plastic pollution

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### SUSTAINABILITY:

- Manpower doesn't decline
  - Cost-effective
  - Waste management
  - Environment-conscious citizens
  - Connecting the dots
- SDG 4 (Quality education) + SDG 11 (Sustainable cities and communities) + SDG 13 (Climate action)

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### ENVIRONMENTAL BENEFITS

- Less plastic pollution
- Less Carbon Emission in the air
- Less soil pollution
- Heat reduction
- Water conservation
- Air purification

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### EDUCATIONAL OUTCOME

#### Cognitive domain

- Awareness of the
- alarming effects of plastic pollution in Dhaka
  - possible ways of cooling the city down
  - Reducing, reusing, and recycling plastic

#### Psychomotor domain:

- Hands-on activities
- Physical and mental well-being
- Acquiring skills
- Experiential learning

#### Affective domain:

- Positive attitude towards the green and sustainable Dhaka city with less plastic and thus air pollution

### Monitoring

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- Teachers as monitors
- 'Green Genius' app
- Performance-based marking
- Motivation/reinforcement

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### Challenges

- Lack of awareness
- No or less scope for students to collect plastic waste beyond their reach (i.e. households and institutions)
- Maintenance

The solution lies in the problem itself

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### Implementation

- Inclusion of Recycling plastic materials in the Curriculum
- Organizing awareness programs
- Students collecting and storing plastics from their residents, local areas, and educational institutions
- Recycling the plastics into Teaching-learning materials with the help of Teachers
- Technical support- knowledge dissemination (Vygotsky theory: MKO)

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### Research Method

- Action Research

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### Action plan Raising funds

- Decentralized
- Institutional fund
- Contribution from students

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### Feasibility

- Existing manpower (Students)
- Low-cost / no-cost resources (Recyclable Plastic, Polythene bags, etc.)

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### Cost-benefit analysis

- Raising 10 taka per student \*10 lac students = 1 crore taka + Other funds
- Students working without payment
- Long-term benefit