



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Innovative approaches toward Sustainable provision of skills training for Agriculture based light engineering enterprises

Agricultural Mechanization in Bangladesh- The Future



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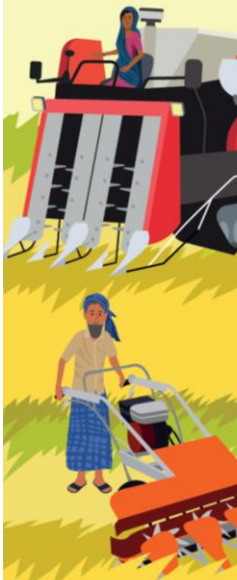
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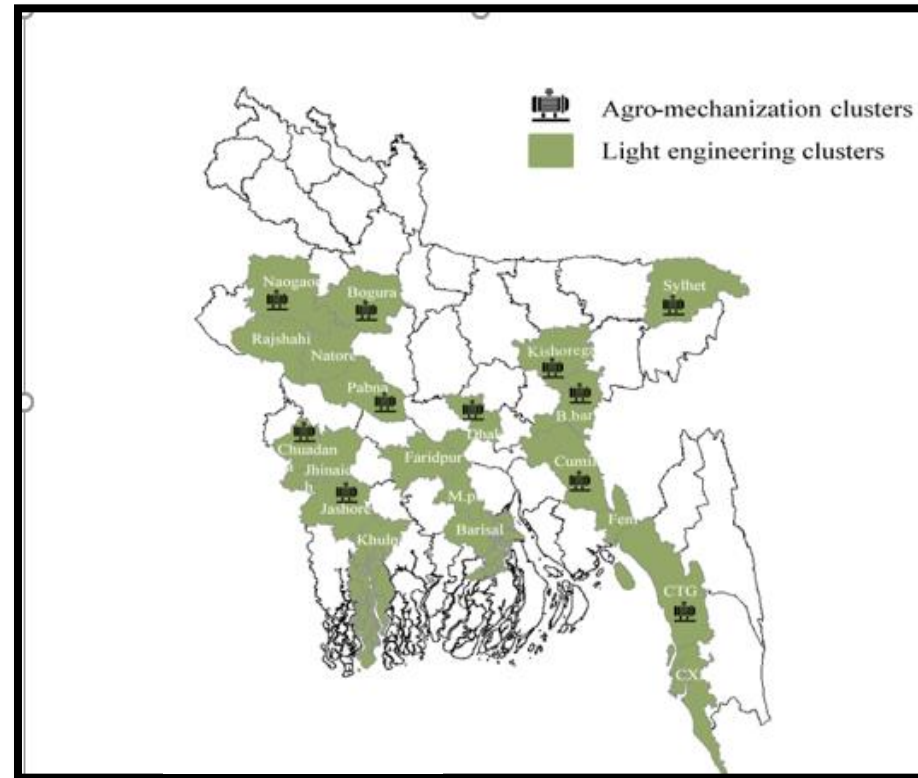
Outline of the presentation

- Light Engineering Clusters of Bangladesh
- Key messages from literature review
- Skill profile of Workforce
- Institutes and projects in training provision
- Experiences of CSISA-MEA
 - Training Strategies
 - Target groups
 - What worked, What did not work
- Way forward and Key questions



Light Engineering Clusters of Bangladesh at a glance

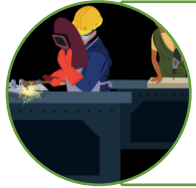
- Around 40,000 enterprises in the country
- Around 600,000 employees
- Agricultural machinery market size- USD 1.2 billion (2019)
- About 2,000-2,500 enterprises into agriculture machinery manufacture
- About 20,000 into repair & maintenance



Source: Study report by INSPIRA ADVISORY & CONSULTING LTD



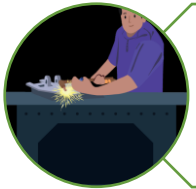
Key messages from Literature Review



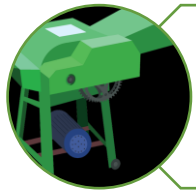
Our mechanics, with no academic qualification, can manufacture almost everything due to their ability to learn quickly, which can only be improved with training.



Lacking appropriate capital machines, design, drawing, and manufacturing processes have resulted in light engineering enterprises in producing poor quality products.



The small and medium enterprises are lacking in advanced manufacturing experiences and technical knowledge.



Local manufacturers are only meeting 20% of total demand for agricultural machinery, thus providing potential opportunity for import substitution.

References:

<https://www.thedailystar.net/business/news/light-engineering-sector-needs-skilled-workforce-policy-support-1965289>

<https://bida.gov.bd/storage/app/uploads/public/616/6c4/7da/6166c47dacedd867251640.pdf>



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Skill-Profile of Workforce in Agriculture based Light Engineering Enterprises



Unskilled and Semi skilled Youth

Perform all skill needed jobs in machine shops & foundries

No formal training

Learn from seniors in the workshop

Unskilled Apprentices

Helpers up to 3-5 years after joining

Gradually move to machine and foundry work

No formal training, learn by observation

Unskilled Women

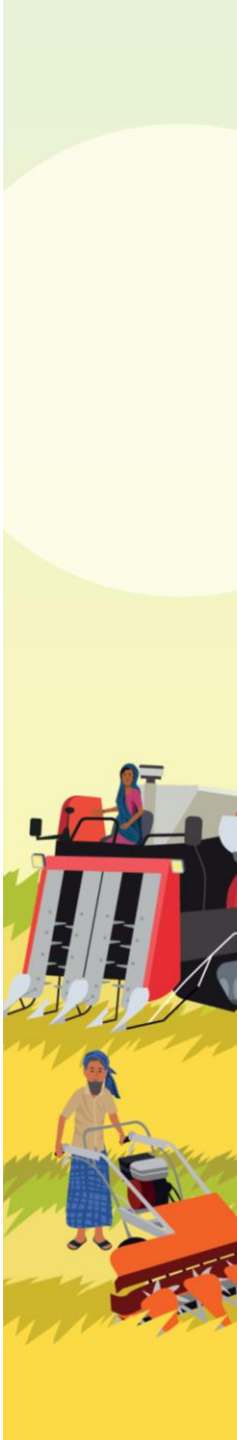
Perform unskilled jobs like cleaning & carrying materials

No training on any skill



Institutes and projects providing training to light engineering enterprises

- Bangladesh Industrial Technical Assistance Center (BITAC)
- Training Institute of Engineering Industry Owners Association
- Technical & Vocational Education & Training (TVET)
- Palli Karma Sahayak Foundation (PKSF) & associated partners
- Skills for Employment Investment Program (SEIP) and their partners
- BRAC
- Swiss Contact and their partners
- USAID funded CSISA-MEA and partners



Why is training needed?

To increase competitiveness of domestic enterprises

To create safe working environment for workforce

To ensure better employment opportunities for women and youth



Who need a training?



Managers



Engineers



Workers



Experiences from CSISA-MEA



What worked?
What Changed?
Lessons learnt!



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CSISA-MEA's partners in skill enhancement

Public sector



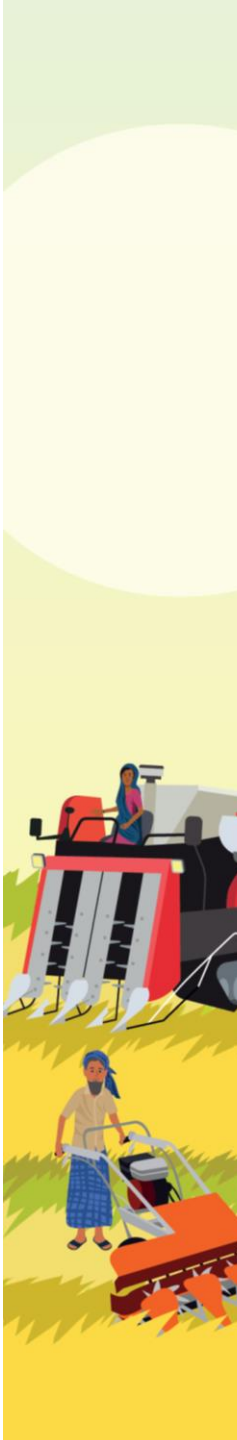
Private Sector



Non Government Organisations



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Key strategy in Workforce skill enhancement

Step 1
Basic skills training

Step 2
Specific skill
need analysis

Step 3
Advanced skill training
through
cost sharing



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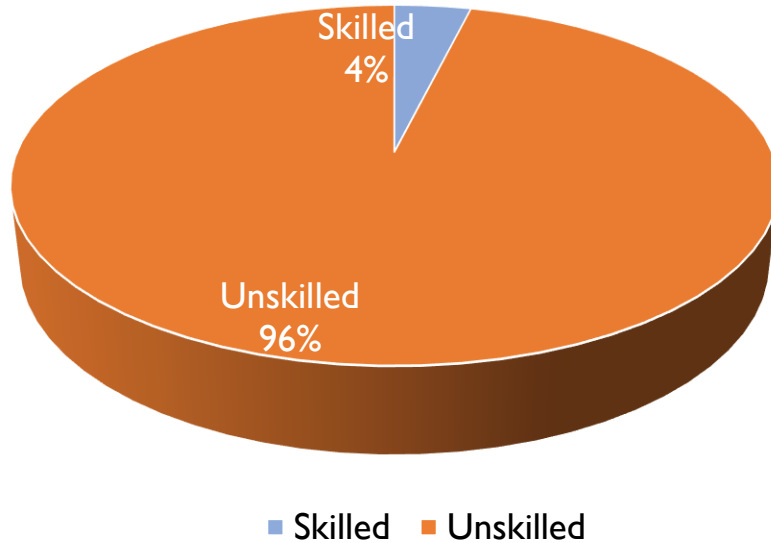
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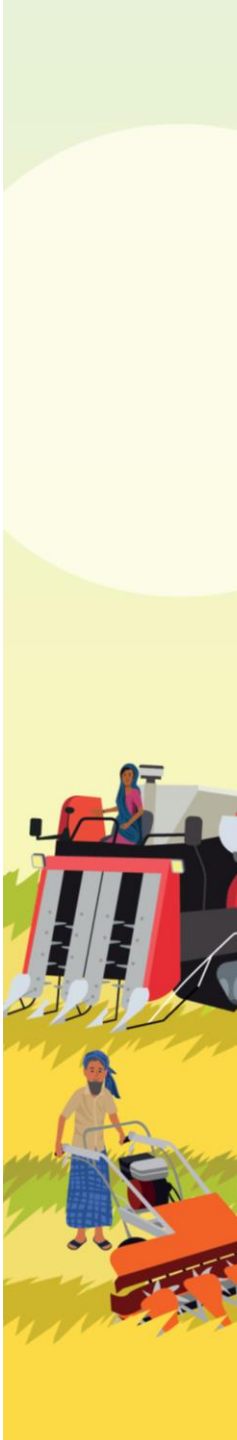
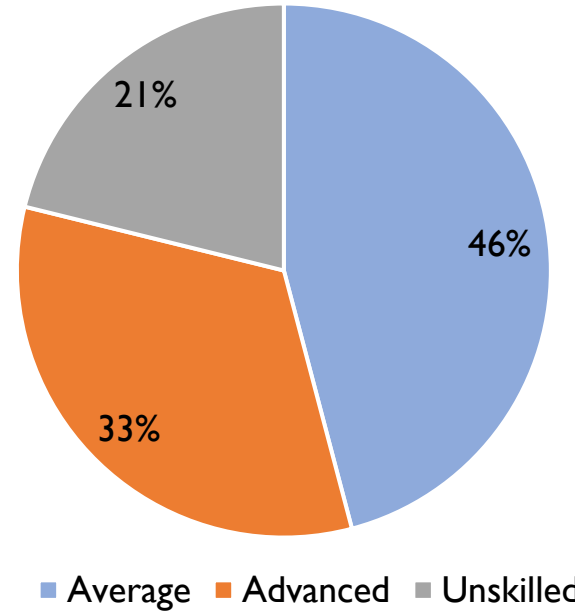


Skill assessment of Workforce- MACHINING SKILLS

Basic Machining Skill
(n= 780)

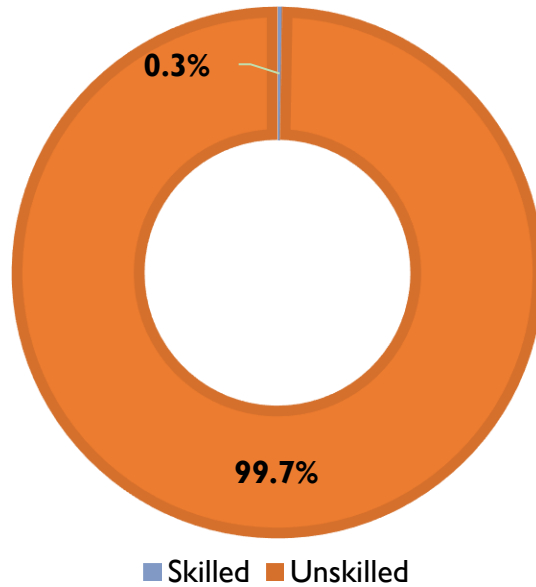


Specialized machining skill (n=780)

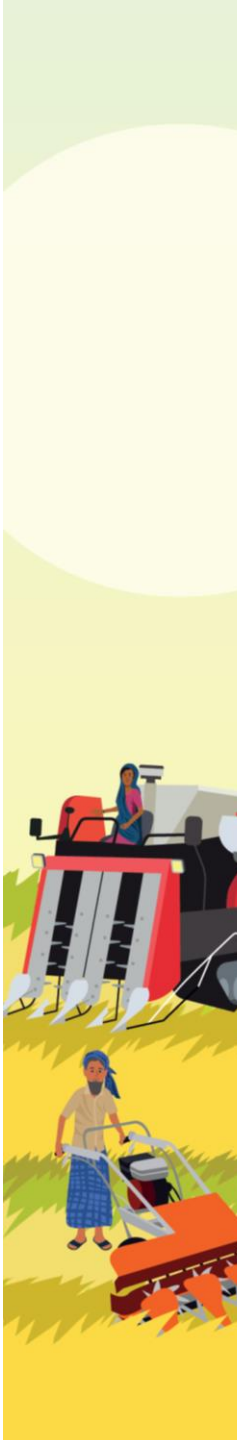
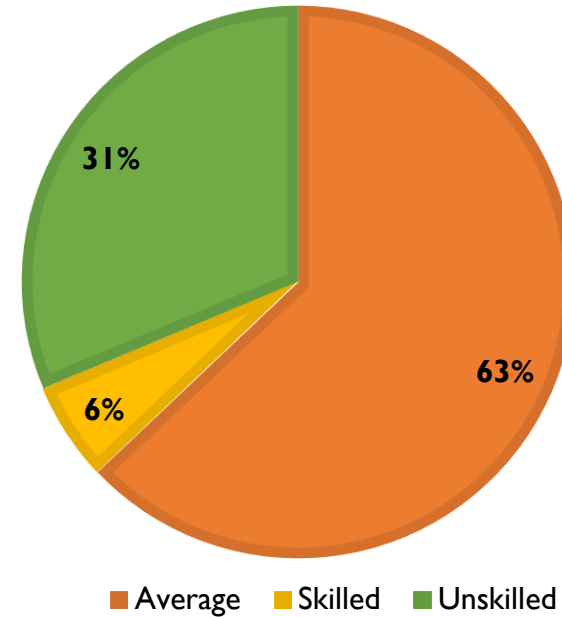


Skill assessment of Workforce- FOUNDRY SKILLS

BASIC FOUNDRY SKILL (N=766)



SPECIALIZED FOUNDRY SKILL (N=766)



Workforce trained on basic skills



Changing lives through training



“We now started using goggles and gloves as we learnt how important they are for our safety.”
He is very proud of the **21 teeth gear** that he made during the training.



“I realized that unplanned work resulted in unfinished products. We used to make a product without proper measurement. Now I know basic engineering design”.



“Monitoring the quality of finished products has become easier after learning technical aspects in the training” said an SME owner.



Management trained



Better factory layout (5S)

Proper Inventory management

Moving towards gender sensitiveness

Safety equipment installed

Workers' roles and responsibilities revised

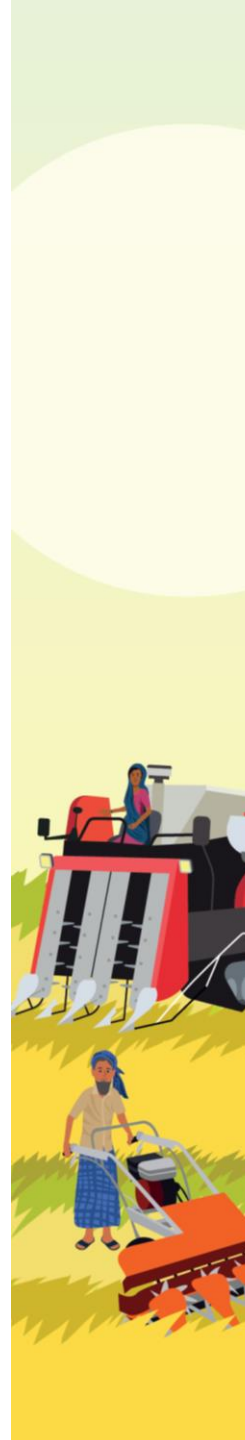
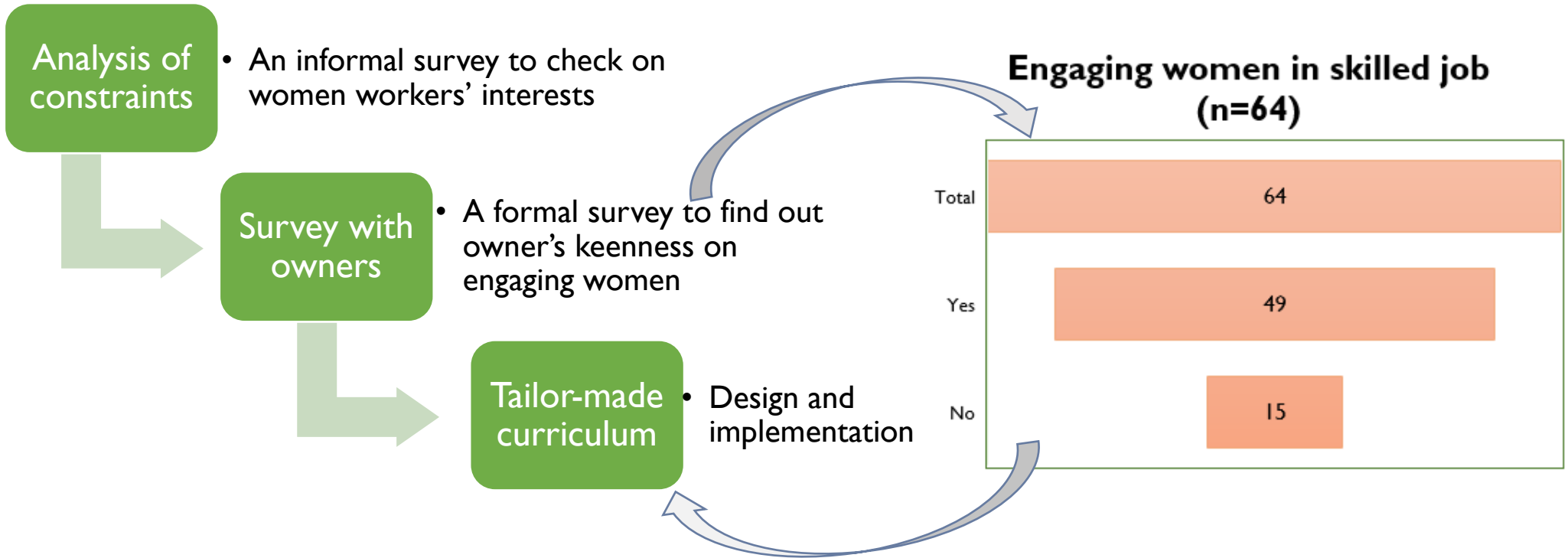
Modern measuring tools and machinery purchased

Wash and sanitation facilities improved

Business networks strengthened



Steps for a Gender Inclusive program



Women workers trained



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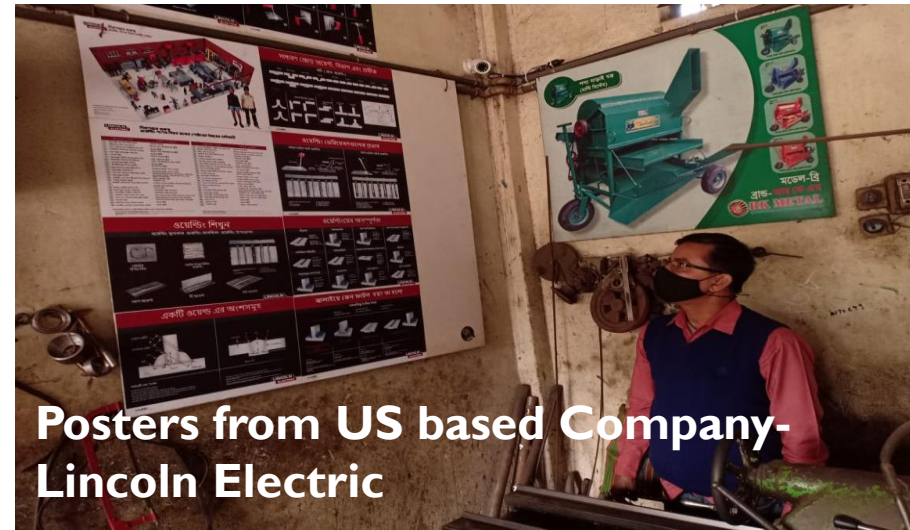
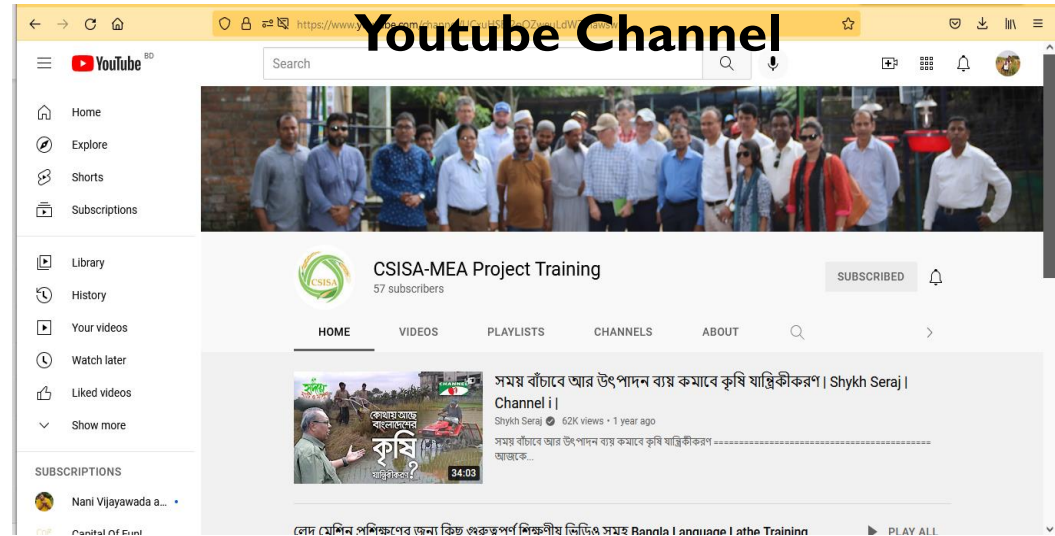
Skilled jobs and better wages for women
Additional workers available for jobs



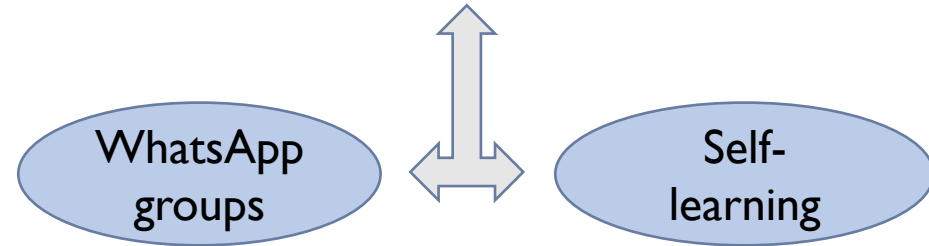
Novel approaches for mass learning



Online live training



Posters from US based Company- Lincoln Electric



Interventions that worked

Capacity Building of management

- Training the management on business related soft skills and technical aspects
- Developing the curriculum in consultation with course participants
- Arranging learning visits to public and private firms

Tailor-made curriculum for Workforce

- Long duration courses for workers on foundry and machining skills
- One-day and two-day courses for women
- Follow-up technical support after the training

SME to SME training

- Leading SMEs train workforce from other SMEs
- Engaging resources and expertise from public and private leading institutes in the region.

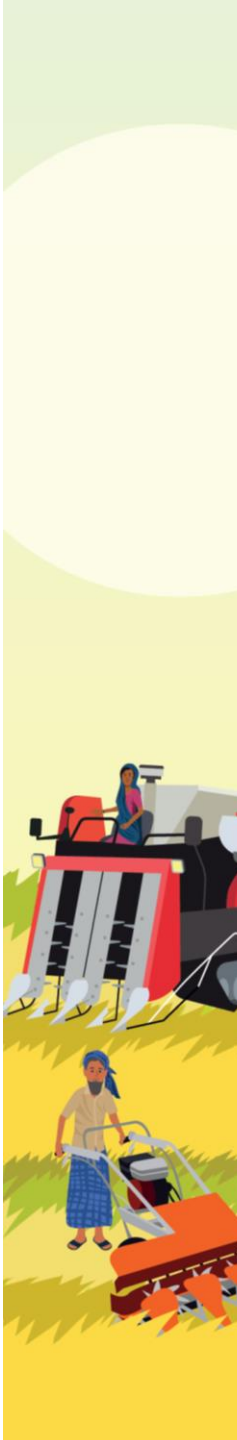
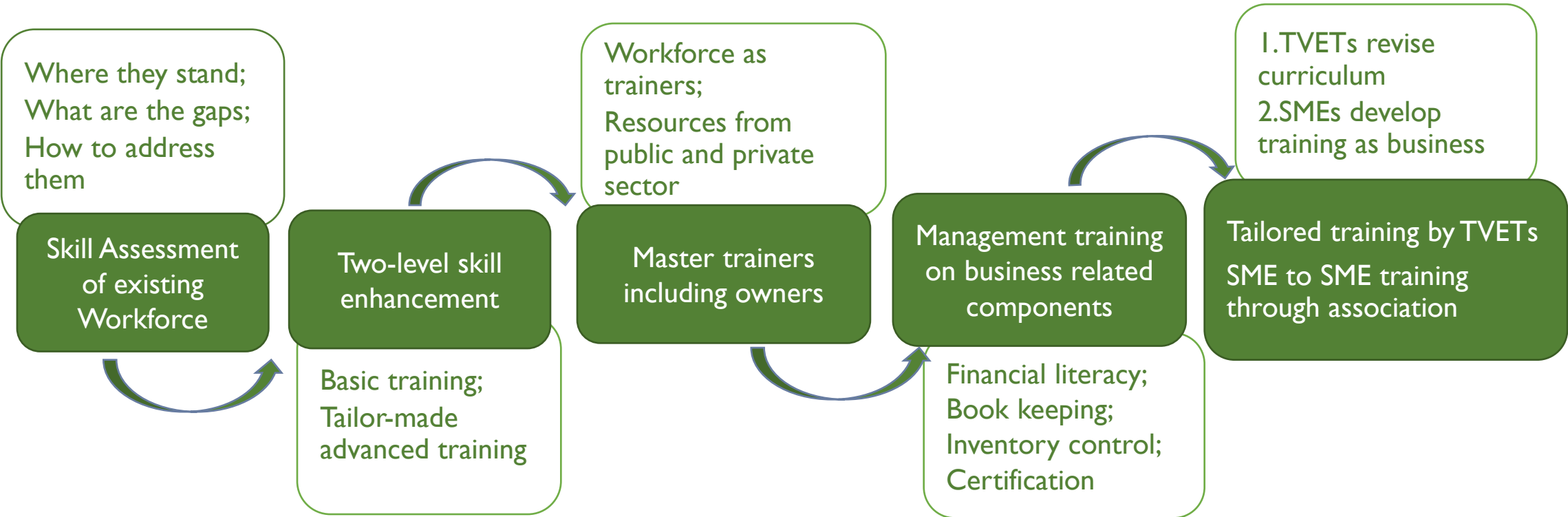
Key lessons learnt

- ✓ Trained workers transfer their knowledge to their co-workers informally as needed.
- ✓ Full-day training over weekend works better than few hour- classes on a tiring long work day.
- Cascading the training through a formal curriculum is challenging.



Way forward-

A potential approach toward a sustainable training provision



Key Questions for discussion



- Can the government pay for this training?
- Can the private sector share costs?
 - Will SMEs be ready to pay for their training?
 - Will the manufacturing companies or leading light engineering enterprises train the micro and small enterprises?
- Can Bangladesh depend on donor support?





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