# Nepal: Strengthening STEM Education

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# 1. Context: Optimizing service delivery in decentralized, federal system

**STEM Education**

**Key challenges:**

- Nepali students perform consistently underperform in Science, Math and English at both basic and secondary levels.
- Limited availability of schools offering science subjects( core subjects) in grades 11-12 nationwide

**Strategic directions:**

- Since 2017, Nepal has strategically expanded access to quality science education by increasing the number of schools offering grades 11-12 science programs
- The government partnered with ADB through a programmatic approach leveraging results based financing and technical assistances to implement multi-pronged interventions

# 2. Multipronged approach to STEM strengthening

**Expand Access:** Provide pro-poor scholarships, prioritizing girls, disadvantaged groups, and students in remote areas for grades 11–12 science programs

**Digital Learning:** Develop high-quality e-learning resources in Science, Math, and English; establish the **Sikai Chautari** online learning portal hosted by the federal government.

**Strengthening STEM**

**School Upgradation:** Select high-potential schools nationwide for facility upgrades and improved science infrastructure.

**Examination Reforms:** Introduce standardized, high-quality test items focused on STEM subjects and digitize the examination process for efficiency and transparency.

# 4. The progress so far

- **Science Enrollments :** Increased to 20.4% for boys ( from 16.9% in 2022) and 17.6% for girls (10.9% in 2022)
- **Student Achievement: Improved performance** in 2025 secondary terminal exams in SME (further analysis ongoing)

## SME teacher provision

Subject teacher provision gradually improving (though still below 50%)

## Digital Learning

Roadmap for strengthening Sikai Chautari approved ( though requires herculean task)

Model e-learning resources under development in secondary level SME subjects

## Science facilities

Selected schools have developed plans for strengthening science

Infrastructure upgradation underway through decentralized financing

## Examination reforms

Assessment Frameworks approved to implement higher order standardized test items in terminal examinations at grades 8 and 12, especially in SME subjects

Strong partnership with local governments and schools for teacher training, item development, and exam administration

# 5. Moving forward

1

**Harness digital technology**: Partner with the private sector to adapt high-quality, freely available e-resources and introduce virtual labs.

2

**Strengthen Teacher Support:** Develop innovative models for teacher mentoring and professional development tailored to the decentralized context.

3

**Enhance Assessment Systems:** Build long-term partnerships with universities to improve exam quality and sustainability beyond technical assistance.

4

**Continue Multi-Pronged Approach:** Sustain reforms through collaborative efforts with local governments using results- based financing.


Government of Nepal
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## Learning Portal

# Reading Materials

Reading Materials | Search courses

**ECED**

14 lessons

**Grade 1**

12 lessons

**Grade 2**

17 lessons

**Grade 3**

9 lessons

# Thank you