



Progress Report on SDG 4 — Quality Education

1. Executive summary

The University of Science and Technology – Yemen (UST-Yemen) advances SDG 4 (Quality Education) by expanding equitable access (especially via distance learning), strengthening teaching quality and faculty development, embedding learning-outcomes assessment and educational innovation into curricula, and producing research that improves pedagogy and lifelong learning in Yemen. In 2023–2024 UST consolidated distance education provision, scaled professional development for faculty, hosted conferences and workshops (including international/ national events on distance learning and the *Conference on Administrative Sciences & Sustainable Development*), and produced applied research on online learning, teacher training and educational technologies that directly support quality and inclusive education. Key evidence is drawn from UST institutional pages and UST-affiliated research outputs.

2. Institutional commitment and strategic alignment

UST has institutionalised lifelong learning and inclusive access through dedicated units and strategy: the **Deanship of Electronic & Distance Learning**, the **Teaching & Learning Center**, and the **Consultation & Development Centre (CDC)** together support scalable, quality-assured education for diverse learners. UST’s public statements and annual communications emphasise over 25 years of distance-learning experience and an institutional priority to convert curricula into interactive e-learning formats to reach students in remote and conflict-affected areas. These structural investments align UST’s strategy with SDG 4 targets on universal quality tertiary education and lifelong learning opportunities.

UST’s mission emphasises excellence in higher education, research, and community service, with a vision to build a knowledge-based society in Yemen and the region.

The university promotes accessibility, e-learning innovation, and lifelong learning as part of its social responsibility mandate.

In recent years, UST has introduced and expanded:

- **Digital and blended-learning infrastructure** across faculties (especially during and after COVID-19 recovery years).
- **Continuous professional development (CPD)** for teaching staff on pedagogy, curriculum design, and e-assessment.
- **Community education initiatives** in health, entrepreneurship, and engineering to extend learning beyond the campus.

UST's strategy aligns with the principle of SDG 4: ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

3. Learning & student experience — access, retention and pedagogical quality

3.1 Expanding equitable access through distance learning

- **Deanship of Electronic & Distance Learning (DEDL):** UST operates a mature distance-learning system and the Smart-UST portal that enables students to complete programs remotely. The Deanship emphasises flexible admission, online registration, and e-assessment—critical in Yemen's fragile context to reduce geographic and socioeconomic barriers to tertiary education.
- **Distance & E-Learning Conference (2024):** UST hosted a major conference/workshop programme focused on e-learning prospects, quality assurance, and inclusive digital pedagogies. The event disseminated best practice for remote instruction, encouraged cross-institutional exchange, and promoted technologies that lower cost and access barriers for rural learners.

Impact: Distance provision increased access opportunities for students from remote governorates and internally displaced groups, and reduced dropout risk caused by travel, security and income constraints. Institutional systems now support remote graduation supervision and online assessments, improving completion prospects.

3.2 Teaching quality, faculty development & learning outcomes

- **Teaching & Learning Center:** runs professional-development diplomas for faculty (course design, assessment, ICT in teaching), experience-exchange programs, and training on measurement and evaluation of learning outcomes—raising the pedagogical standard across faculties.
- **Assessment & QA workshops:** UST conducted workshops and capacity building on measuring course learning outcomes, aligning curricula with national accreditation standards and international quality frameworks.

Impact: Improved course design and assessment practices increase the consistency of learning outcomes and help close the skills gap between graduates and employer needs.

3.3 Student support & inclusive learning

- UST provides remote academic supervision (including through the online portal) and student support services tailored to distance learners (online tutoring, e-library access, and virtual advising). Studies by UST faculty show continuous improvement in online supervision quality, informing practice improvements.

4. Research & innovation in education (2023–2025)

UST-affiliated researchers produced multiple peer-reviewed studies and conference papers with direct application to SDG 4 (teaching quality, ed-tech, teacher training and online learning).

Highlights include:

- **Evaluation of online supervision quality:** empirical studies evaluating academic supervision of graduation research via UST’s e-learning portal, demonstrating scalable supervision models for remote students.
- **AI and learning analytics for student performance prediction:** publications on ANN-LSTM models and early-warning systems for MOOC and large online cohorts—applied research that can improve retention and targeted learner support.
- **Embedding VR/AR into Yemeni higher education:** conference papers and pilots exploring virtual/augmented reality for practical skills training in constrained environments—innovations that can improve learning quality where physical labs are scarce.
- **Teacher training & continuing professional development:** UST’s CDC and Teaching & Learning Center support diplomas and short courses for school teachers and higher-education faculty; research outputs document impacts of these programs on pedagogical competencies.

Knowledge translation: UST’s research has been channelled into teaching practice (improved online supervision, assessment rubrics) and into conference proceedings that inform national teacher-training programs.

5. Enriching communities — outreach, lifelong learning & skills training

5.1 Continuing professional education & vocational courses

Through the **Consultation & Development Center (CDC)** and short-course programmes, UST delivers targeted vocational training, certification courses and capacity building for public-sector staff and community learners—focusing on ICT literacy, small-enterprise management, pedagogy and digital skills that improve employability and lifelong learning.

5.2 Field training & experiential learning

UST’s field training programmes link students to employers and public institutions, strengthening transition to work and local development. The university’s emphasis on practical training helps graduates contribute to local service delivery and societal recovery.

5.3 Conferences and public events

UST hosted and organised conferences and workshops (e-learning, administrative sciences & sustainable development) that disseminate pedagogical innovations, provide professional development for teachers, and create networks to scale quality education practices.

6. Partnerships & policy engagement

UST maintains national and regional linkages that strengthen education systems: memberships in Arab and international higher-education networks (e.g., Association of Arab Universities, ICDE) enable knowledge exchange on best practices for open and distance education. The university works with ministries, accreditation bodies and schools to align teacher-training and curriculum reform initiatives with national needs.

7. Performance indicators & 2024 results

Indicator	2024 result
Number of students enrolled through distance-learning programmes	>1000
Research outputs on education & ed-tech (2023–2025)	≥ 25 (conference papers + journal articles)
Conferences & professional events hosted	2 (Distance & E-Learning Conference; Administrative Sciences & Sustainable Development)

8. Case studies (2024)

Case study 1 — Distance & E-Learning Conference (2024)

Objective: Share best practice for remote teaching, assessment and student support; accelerate digital inclusion. Outcome: national delegates, workshop outputs on e-assessment and remote supervision adopted by multiple faculties; practical guidance for scaling distance provision.

Case study 2 — Faculty Development Diploma (Teaching & Learning Center)

Objective: Improve lecturers' competencies in course design, measurement and ICT in teaching. Outcome: improved course specifications, standardized rubrics, and pilot adoption of blended learning across departments.

Case study 3 — Research → Practice: Online Supervision Study

Objective: Evaluate quality of academic supervision via the online portal for graduation research. Outcome: evidence-based recommendations implemented to strengthen supervisor training and monitoring for distance learners.

9. Challenges & mitigation

Challenges

- Digital divide: unequal access to internet and devices among remote and low-income students.
- Quality assurance at scale: converting many programs to high-quality online delivery requires time and capacity.
- Funding and infrastructure: limited resources to upgrade platforms, e-libraries and digital assessment tools.

Mitigations

- Incremental rollout of blended learning, prioritizing low-bandwidth materials and asynchronous content.
- Faculty upskilling via the Teaching & Learning Center and targeted diplomas on online pedagogy.
- Partnering with donors/NGOs to provide devices and data packages for the most vulnerable students; leverage low-cost open educational resources.

10. Priorities & targets for 2025

1. **Increase distance-learning enrolment** by X% (insert institutional target) and report disaggregated access by governorate and socioeconomic status.
2. **Deliver 200+ CPD training places** for school teachers and faculty via CDC and Teaching & Learning Center.
3. **Publish a UST Policy Brief (2025)** summarizing best practices in online supervision and blended assessment for fragile contexts.
4. **Scale low-bandwidth learning materials** and provide targeted device/data support to at least 300 students from remote governorates.
5. **Host a regional blended-learning symposium** (follow-up to the 2024 conference) to disseminate UST models for scaling quality distance education.

11. Conclusion

UST-Yemen is delivering measurable progress on SDG 4 through institutional investments in distance learning, faculty development and applied research that directly improve teaching quality and broaden access. By combining technology, capacity building and evidence-informed policy engagement, UST provides scalable, context-sensitive models of quality education for a country facing major access barriers. Final evidence and numerical indicators should be completed with registry data (distance-learner enrolments, faculty participants, CPD attendance) to strengthen external reporting to THE and other stakeholders.