University	:	National Chin-Yi University of Technology
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[SDGs 17] Partnership for the Goals

[17.4.4] Does your university as a body measure the sustainability literacy of students?

NCUT is committed to embedding sustainability literacy as a core learning outcome for all students. The university actively assesses, tracks, and enhances students' understanding of sustainability concepts to ensure graduates are equipped with the knowledge, skills, and values required to contribute to a sustainable future.

1.   Methods of Measuring Sustainability Literacy

(1.) Surveys and Literacy Assessments

- **Annual sustainability literacy surveys** administered across disciplines to evaluate awareness of climate change, waste management, renewable energy, and social equity.

- Pre- and post-course surveys track changes in student knowledge and awareness.

- Comprehensive literacy exams in environmental and engineering fields assess both theoretical knowledge and practical application.

(2.) Curriculum Integration

- Sustainability concepts embedded into environmental science, engineering, business, and management courses.
- Course evaluations measure students' ability to apply sustainability practices in real-world contexts.
- Capstone projects and case studies (e.g., renewable energy, waste reduction, cultural sustainability) are used as assessments.
- Cross-disciplinary courses ensure literacy assessment is not confined to environmental majors.

(3.) Integration of General Education Goals

Sustainability literacy is further strengthened through NCUT's General Education framework, which guarantees all students develop essential competencies aligned with sustainable development:

(4.) Strengthening Basic Academic Skills and Promoting Diversified Development – equips students with interdisciplinary knowledge for complex sustainability challenges.

- **Strengthening Communication and Inspiring Creative Thinking** – fosters the ability to articulate sustainability issues and propose innovative solutions.

- **Deepening the Humanities and Cultivating Appreciative Sensitivity** – enhances awareness of cultural sustainability and appreciation of diversity.

- **Internalizing Reflective Skills and Strengthening Scientific Logic** – ensures students critically analyze environmental and social issues using evidence-based reasoning.

- **Cultivating Civic Competence and Engaging in Social Care** – instills social responsibility and prepares students for active participation in community sustainability initiatives.

Through these goals, NCUT ensures sustainability literacy is both measured and internalized as part of a holistic education model.

(5.) Project-Based and Community Learning

- Service-learning projects and USR initiatives provide real-world contexts for literacy evaluation.
- Community partner feedback validates students' sustainability skills outside the classroom.
- Example: *Iron Bones, Tender Feelings – Echoes of Taiping* (Department of Applied English) – students applied sustainability literacy to cultural heritage preservation, winning the MOE National Excellence Award.

(6.) Longitudinal Tracking

- Multi-year tracking studies assess literacy development throughout academic careers.
- Alumni surveys measure application of sustainability literacy in professional practice.
- Annual sustainability literacy progress reports inform curricular refinement

2. Evidence of Outcomes

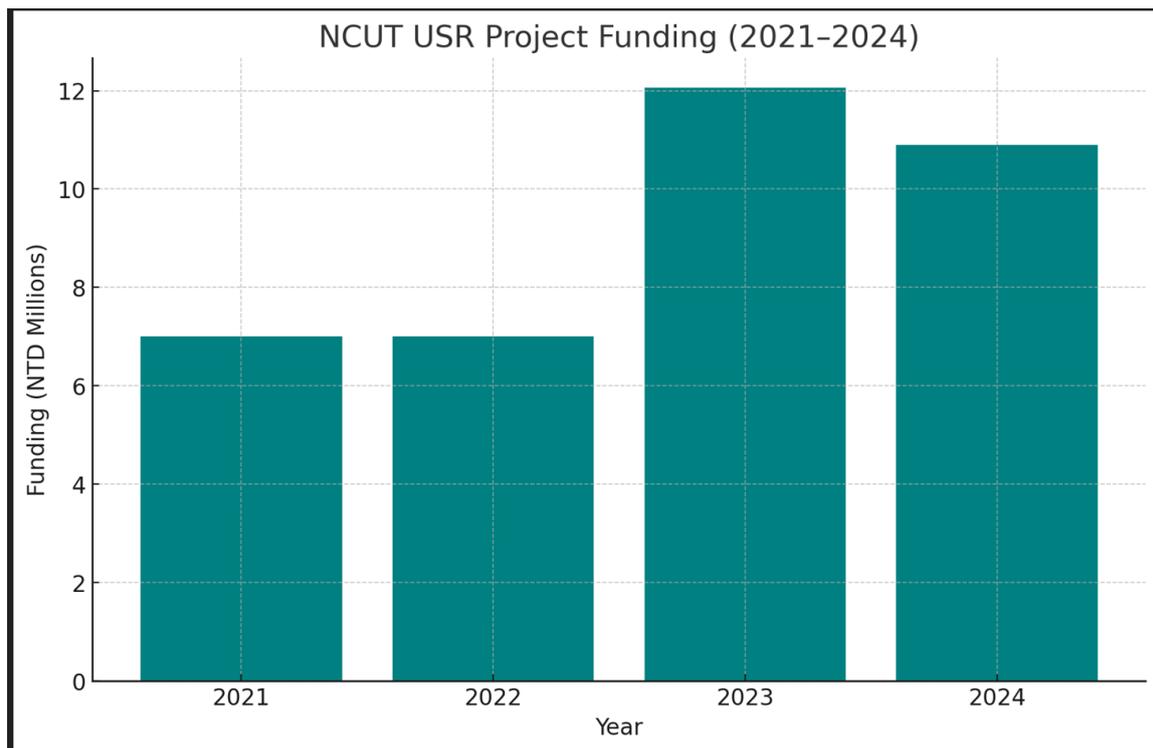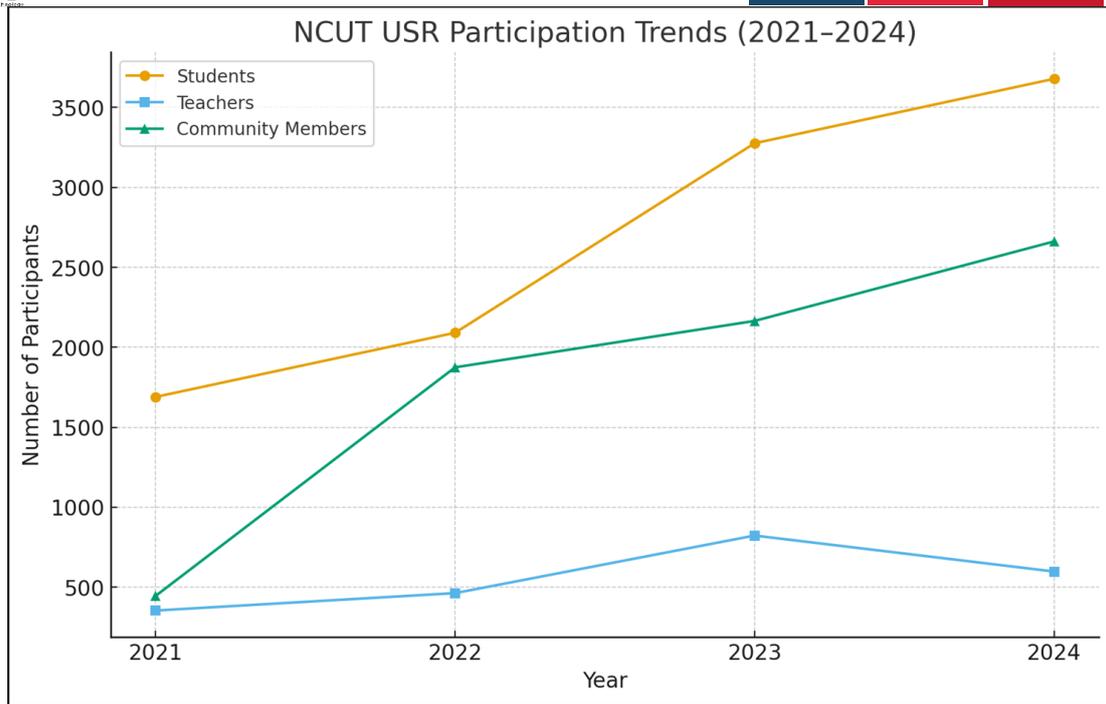### (1.) Student Participation in USR Projects

- **2021 (AY 110)**

- Engineering College: 1,358 students, 251 faculty, 61 community members, NTD 3.5M.
- Management College: 332 students, 103 faculty, 385 community members, NTD 3.5M.

- **2022 (AY 111)**

- Engineering College: 1,486 students, 333 faculty, 1,703 community members, NTD 3.5M.
- Management College: 605 students, 130 faculty, 172 community members, NTD 3.5M.

- **2023 (AY 112)**

  - Institutional level: 720 students, 517 faculty, 244 community members, NTD 1.6M.

  - Engineering College: 1,555 students, 199 faculty, 404 community members, NTD 6.8M.

  - Humanities & Creativity College: 973 students, 97 faculty, 1,482 community members, NTD 2.5M.

  - Management College: 28 students, 10 faculty, 35 community members, NTD 1.16M.

- **2024 (AY 113)**

  - Institutional level: 684 students, 216 faculty, 719 community members, NTD 1.6M.

  - Engineering College: 1,965 students, 229 faculty, 783 community members, NTD 6.8M.

  - Humanities & Creativity College: 1,030 students, 153 faculty, 1,160 community members, NTD 2.5M.

3. **Why This Matters for Sustainability Literacy**

   - **Broad Student Involvement:** Across 2021–2024, thousands of students from multiple colleges (Engineering, Management, Humanities & Creativity, and institutional-level initiatives) actively engaged in USR projects.

   - **Cross-Disciplinary Coverage:** Not limited to STEM fields—also includes management, arts, and humanities, reflecting sustainability literacy across disciplines.

   - **Community Impact:** Each year, hundreds to thousands of community members were directly engaged, providing opportunities to measure student literacy in real-world contexts.

   - **Financial Investment:** Substantial funding (NTD 1.16M–6.8M per project) demonstrates institutional commitment to embedding sustainability learning and assessment into practice.

NCUT USR Participation Trends (2021–2024)

NCUT USR Project Funding (2021–2024)

(1.) Case Studies and Achievements

- **Xinshe Mushroom Industry Innovation (USR):** Students applied sustainability knowledge to address climate impacts, labor shortages, and recycling challenges.

- **Taiping Ironwork Cultural Heritage Project:** Students combined sustainability, digital tools, and languages to promote local art globally.

- **Remote Community Service:** Students demonstrated social equity literacy by tutoring children and designing creative local learning activities.

4. **Continuous Improvement Mechanisms**

- Using literacy data to **revise course content** (e.g., carbon inventory practice, ESG modules).

- Setting **targets**, such as ensuring all graduates complete at least one sustainability literacy assessment by 2030.

- Publishing **annual literacy progress reports** to benchmark growth and identify areas for improvement.

NCUT ensures that sustainability literacy is **measured, practiced, and improved continuously**. Through surveys, curriculum integration, general education, project-based learning, and longitudinal tracking, sustainability becomes a **core learning outcome** for every student. By aligning educational goals with SDGs and embedding them in all aspects of student life, NCUT cultivates graduates who are academically competent, socially responsible, and globally aware.