Institute for Innovation in International Engineering Education, School of Engineering, The University of Tokyo

Jorg Entzinger
j-entzinger@t-adm.t.u-tokyo.ac.jp

Kumiko Morimura
morimura@t-adm.t.u-tokyo.ac.jp

Shinji Suzuki
tshinji@mail.ecc.u-tokyo.ac.jp

Idea
A student in the development team suggested we could make a "virtual studying abroad" program, offering e-learning modules based on open courseware of overseas universities in SNOWBALLS. Students who successfully complete these courses could be awarded a badge for their avatar indicating their achievements in internationalization.

Platform
SNOWBALLS® is an e-learning system developed by and for students of the University of Tokyo. It offers a game-like environment with various forms of user-user and user-system interaction to increase active learning and to raise learner motivation. The development started in 2009 and we presented the platform at OCWC2010 in Hanoi [1].

Content
The main objective is to teach technical English vocabulary to Japanese university students, to prepare them for taking lectures in English and joining the international research community. Additionally, we aim to create SNOWBALLS content for international students to learn Japanese, and for faculty and administrative staff to learn to communicate with international students and researchers.

Current topics:
- Geometrical figures & shapes
- Line types & styles
- Angles
- Reading of equations
- Types of graphs/charts
- Figures & tables
- Measurement tools
- Units
- Materials
- Linear algebra
- Robotics
- Manufacturing tools
- Statistics
- Pollution & climate change
- World energy problem
- Life cycle assessment

Example of a textbook module

Example of time trial questions

Students start studying an online textbook module and do practice questions. Then they can ask questions or post comments in the forum, play multi-user battle games, or do time trial quizzes to gather snowballs (points). Snowballs can be spent in the shop to buy clothes for one’s avatar. Avatars provide both anonymity and motivation.

Students play a central role in creating the courseware. They discuss about the platform features, topics to be taught, vocabulary per topic, and the presentation style. Finally they create texts and quiz questions for use in SNOWBALLS.

We like to discuss about topics for literacy learning, how or where to find useful courseware resources, and possible rights issues. Please contact us at the conference or by email!

ACKNOWLEDGEMENTS
We wish to thank all the students involved in the SNOWBALLS project as part of the e-learning seminars, as well as the ICOM Corporation (http://www.icomcorp.jp/) for the professional implementation they made from our ideas.

in the Bilingual Campus Action Plan

Leaders with a global mind-set and a pioneering spirit

Open and attractive campus to learners, instructors, researchers and workers with a variety of nationalities, experiences, backgrounds and objectives

Development of global leadership skill

Creative Engineering
Global Project Courses

Offering SNOWBALLS as an open tool (plan)

Increased Lecture Courses in English with a Bilingual T&L Support

Globalised campus

Development of global literacy

Japanese Students
- Global literacy
- Engineering basics in English

International students
- Japanese basics
- Global TA training

Teaching staff
- Global edu. methods
- Bilingual edu. methods

Adm. Staff
- International affairs
- Basic bus. English

Tech. Staff
- International affairs
- Laboratory work

*SNOWBALLS = Self Navigation Web-Based Literacy Learning System