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Project SUCCESS

Strategic Use of Computers in Constructing Effective Studies

Chen Ai Yen

The importance of information technology (IT) in modern life and for **lifelong** self-regulated and team learning is generally recognised among educators in the world. Project SUCCESS is one of the first such research and development projects in education in Singapore. It is an inquiry into the use of IT and social-**constructivist** notions of learning, and authentic activities and assessment in improving students' academic and social learning in collaboration with the Kent Ridge Digital Labs (**KRD**L) and three schools in Singapore (Bendemeer, Bukit Panjang and Monk's Hill) and one in Hong Kong (King's College) from 1996-2000.

Sample and procedure

The initial study focused on integrating **IT** tools into language studies among a class of Normal Technical students. In the main studies, about 80 mixed ability Secondary 2 and Secondary 3 students participated in two web-based interdisciplinary project work studies in *SpaceALIVE II* and *CommonTown™*. The participants experienced five phases

of learning in teams of about 10. The phases were: 1) Goal **setting**, planning and preparation, 2) intra-group collaboration on and off-line, 3) inter-group collaboration on and off-line, 4) Knowledge consolidation and Web page construction, 5) presentation and reporting to live audience and in print. About 20 teachers and their 4 principals were actively involved in **guiding** the students.

Results

Participants in Project SUCCESS have inquired into how social constructivist **principles**, situated learning practices and **IT tools** and systems can be integrated with the school curricula focussing on language **skills** and science concepts. Teachers and students have joined educational researchers in action learning and in knowledge-building in natural and IT environments. Through solving common problems in interdisciplinary projects, all have gained **practical** experience in decision making, in **using** IT tools and systems for retrieving and organizing information, in inquiring into and solving

real life problems and creating web-based interdisciplinary projects in collaborative groups.

The **students** have learned to use IT tools and systems to research into eight topics on scientific and current problems and created face-to-face and online action learning circles and web pages. They have developed their collaborative knowledge building **skills and** problem solving skills on topics such as aroma therapy, acid rain, future home and natural paint; technopreneurship: e-Education, e-Commerce and Lifestyle: Health and Environment, and Fashion and Entertainment

The experience has taught us the important role of teachers and the school leaders in **providing training and** management

support for the students to effectively collaborate in solving problems within natural group and two IT integrated learning environments. The operation of a total conducive environment will enable students also to imbibe values such as accountability, patience, perseverance, cooperation and tolerance, as well as the spirit of inquiry. The findings have great significance for teacher education as we learn what are the **best practices** undergirded by activity, constructivist, and **socio-constructivist** theories for the development of **collaborative** team problem solving skills and values in a seamless IT-enhanced learning environment.

Assisted by Daniel Ang, Victor Chen , David Hung and Looi Chee Kit