# CITE Research Symposium 2002

6 July, 2002

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### Dissertation Title

\* Implementation of web-based collaborative tool for learning computer programming: A case study

## Problem Identified

- \* Students do not make good use of school's discussion forum for learning.
- \* Many students hand in project by "copying" others' program and teachers are found difficult to justify the working part of the student. Especially when the projects are done by group.

## Problem Identified

- \* Peer support and teacher support are inefficient.
- \* Lack of collaborative tool.

## Purposes of the study

\* The purposes of the study is to explore how to facilitate teaching and learning with the discussion forum of a web-based collaborative tool.

### Theoretical Framework

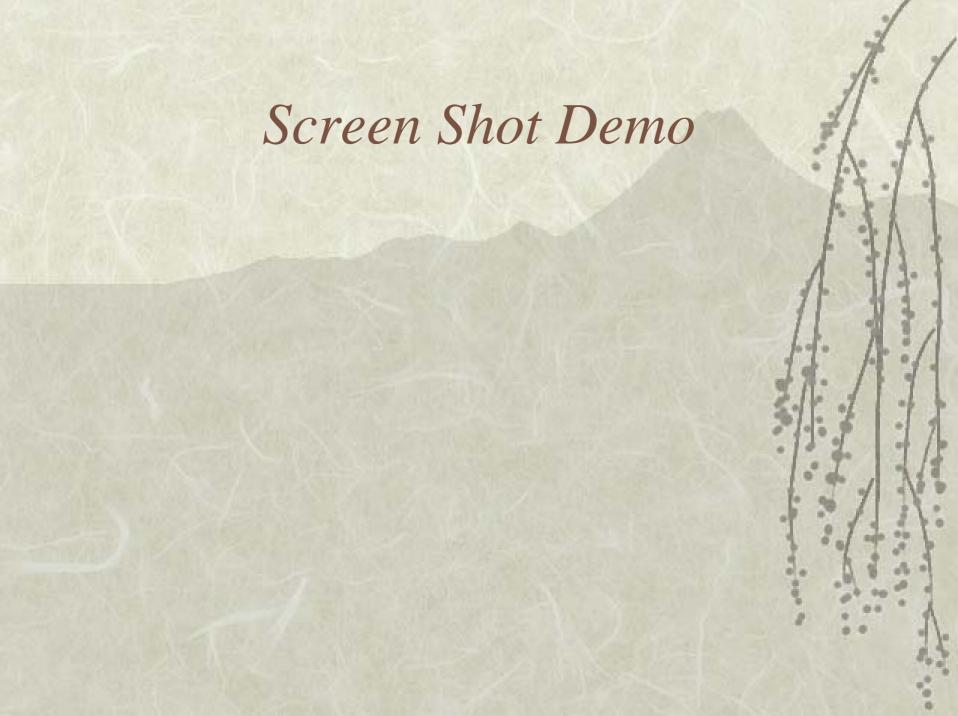
- Collaborative learning
- \* Literature overview
  - The Vygotskian concept of zone of proximal development
  - Essential components for collaborative learning by Johnson and Johnson

## Implementation

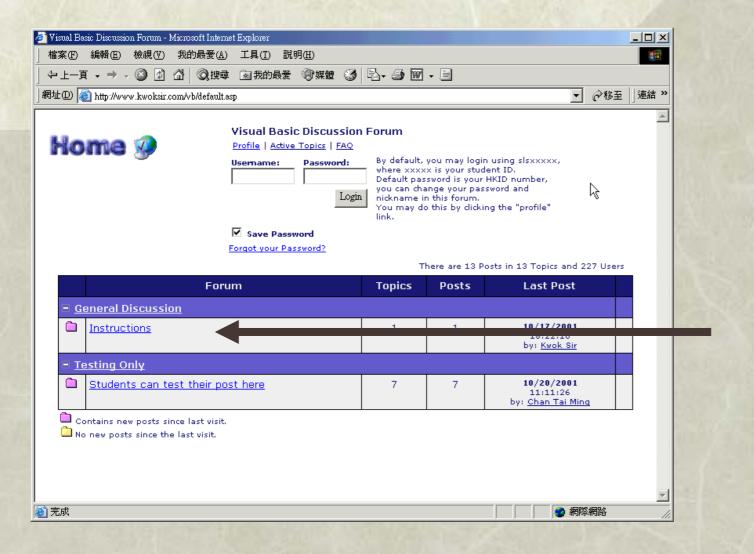
- \* Stage 1: Grouping
- \* Stage 2: Negotiation
- \* Stage 3: Collaboration
- Stage 4: Presentation
- Stage 5: Feedback and further data collection

## Collection of data

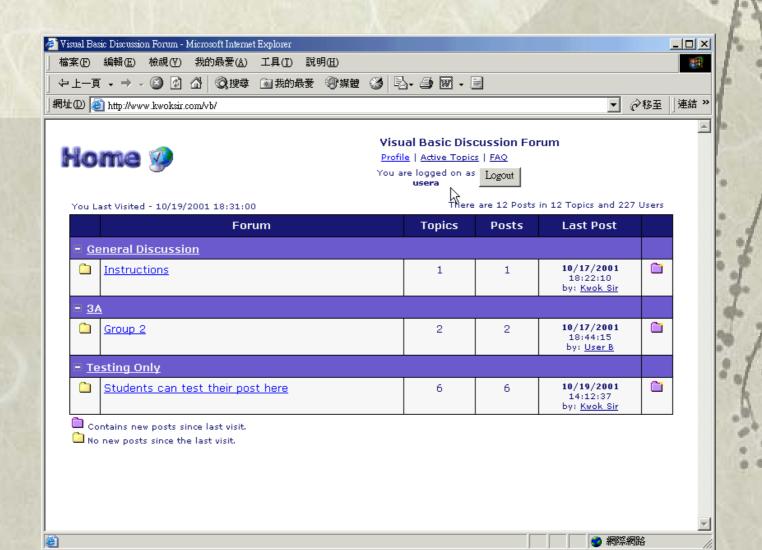
- \* Quantitatively:
  - Usage statistics
- \* Qualitatively:
  - Questionnaires
  - Interviews
  - Comment in the forum
  - Researcher's observations



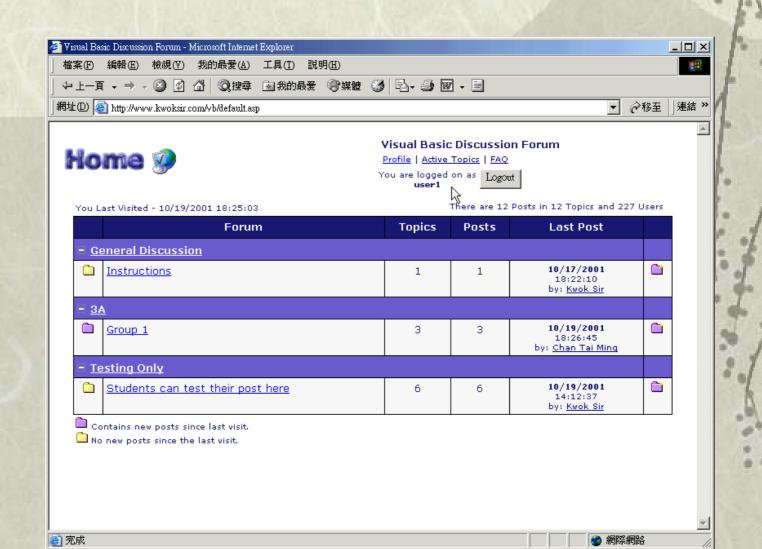
#### General Discussion



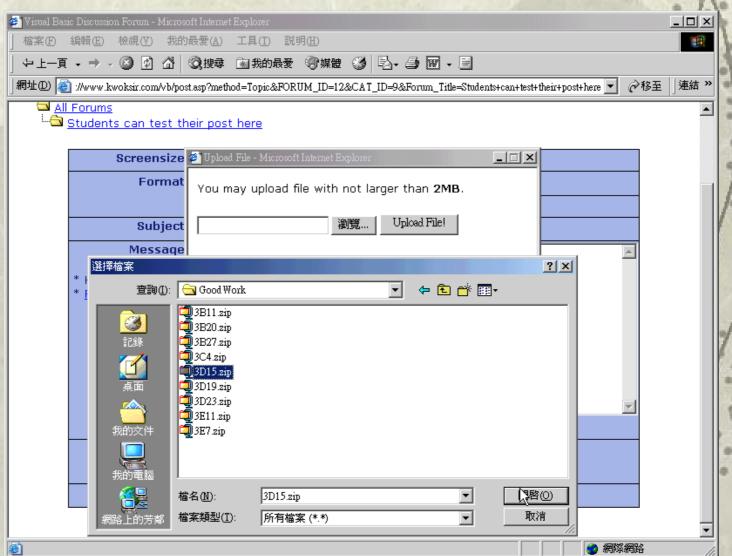
#### Private Discussion



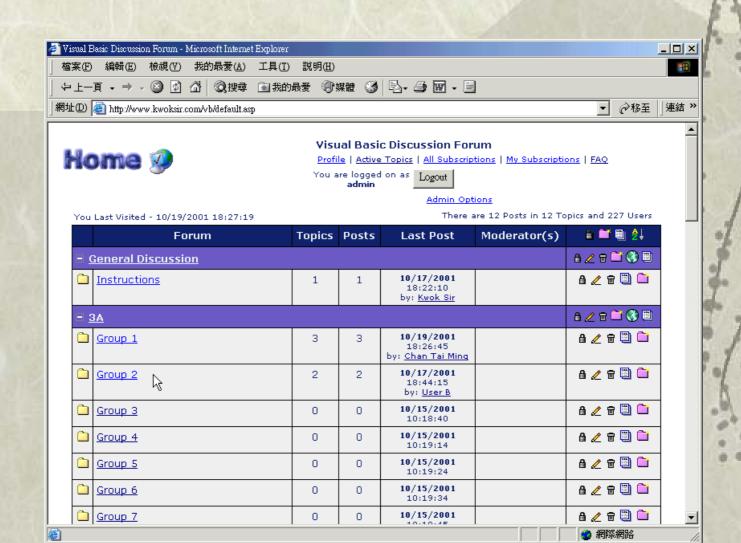
#### Private Discussion



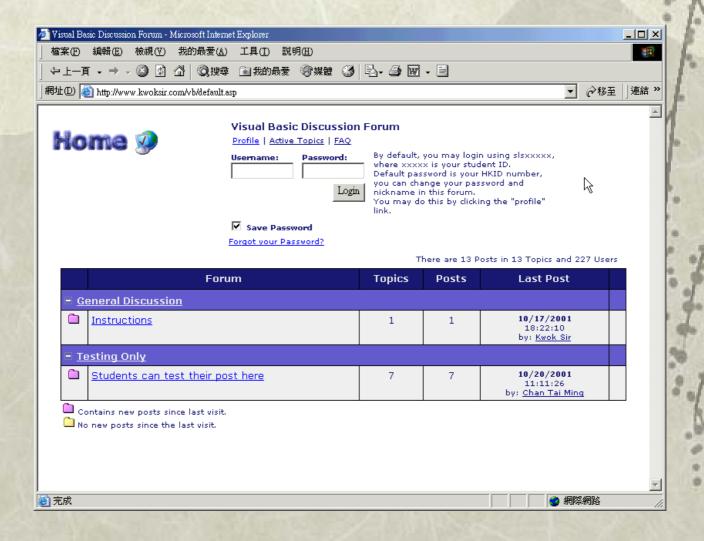
## File upload feature



## Administration features



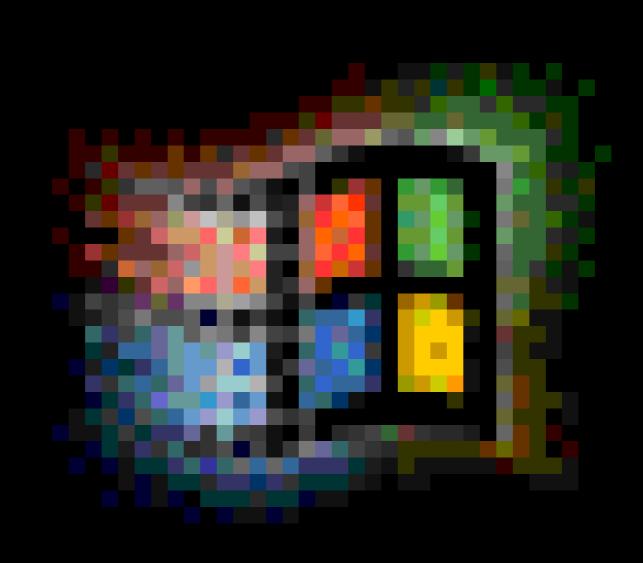
#### Live Demo





#### http://www.kwoksir.com/vb





## Findings

- \* Task work and team work leadership
- \* File sharing feature is essential
- Assessment and participation
- \* Issue concerning computer programming
- \* Effective ways of facilitating teaching & learning activity with collaborative platform

## Findings

- Collaborative platform is not useful to every activity conducted in the study
- \* The platform helps students with low learning attitude a little
- \* Large work load for teachers



