



Learning from Students: Continuous Improvement in International Collaboration

Mary Last, St. Edwards University (USA)

Martha Hause, Open University (UK)

Mats Daniels, Uppsala University (Sweden)

Mark Woodroffe, Open University (UK)



A Truism

You can please some of the students
all of the time,
you can please all of the students
some of the time,
but
you can never please
all of the students
all of the time.



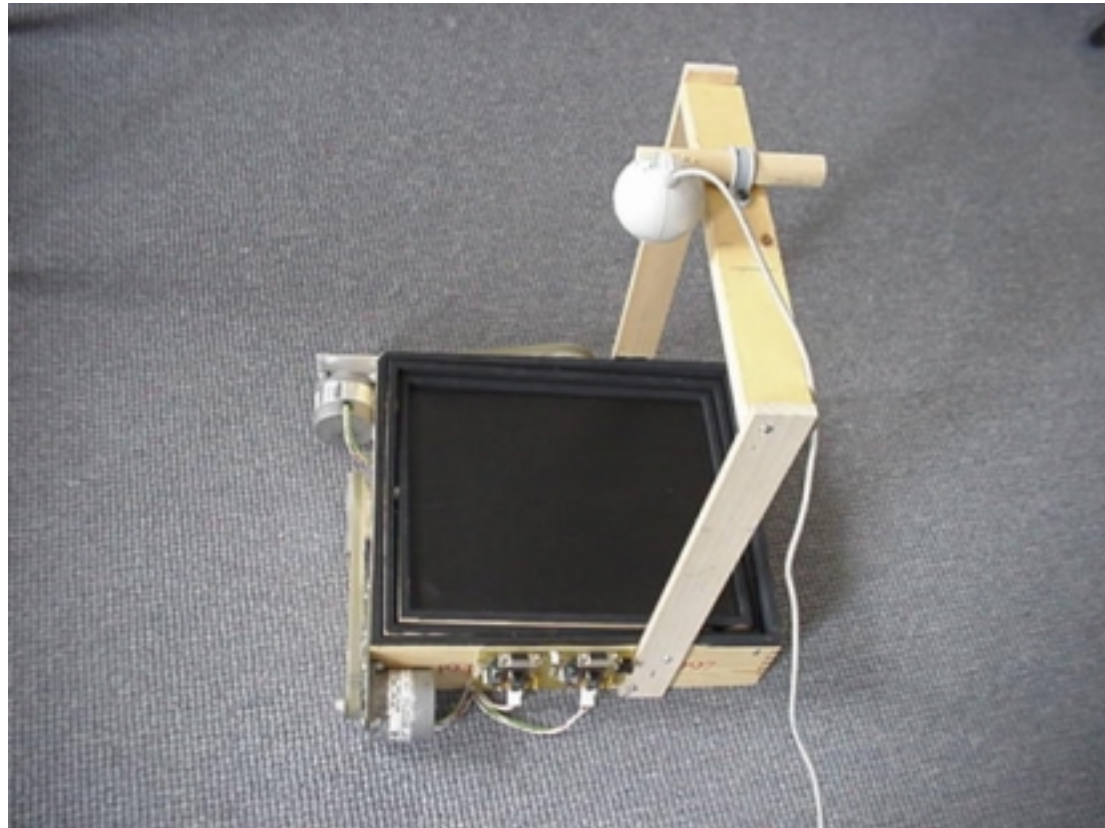
Runestone Project Goals

- Introduce international collaboration in undergraduate CS education in a way that has value for all participants
- Identify effective support structures for remote international collaboration
 - Communication
 - Project management
 - Technology use



Brio Project

- Same project performed by all teams
- Same project performed all four years





Participant Information

	1998	1999	2000	2001
Students	8	42	93	86
Teams	1	* 7	* 16	* 15
Teachers	1	2	2	2

* Teams of 5-6 students



Project Information

	1998	1999	2000	2001
Predefined Milestones	No	No	Yes	Yes
Code	Original	Original	Original/ Re-use	Enhance
Gantt chart	No	No	No	Yes



Course Independent Factors

- Distance
- Time
- Environment
 - Country of origin
 - University
 - Software development



Lessons Learned

- Technical
 - Communication media
- Team
 - Openness of communication
 - Frequency of communication
- Cultural
 - Humor
 - Language
 - Internet

Role of Cultural Context

- Exchange program between GVSU and UU
- Exchange students at UU from other countries
- UU instructor from Australia
- Countries of origin for participants in 2000



China	India	Nepal	S Africa	Vietnam
France	Iran	Russia	Sweden	
Germany	Japan	Singapore	US	



Student Response to Runestone

- 2000
 - 62% recommended Runestone
 - “Yes, this is a global world and community. To work with people around the world will be more a part of computer science.”
- 2001
 - 77% recommended Runestone
 - “HELL YES! I think that was the biggest thing I learned in this course was how to work with other people in other places. I think that experience was very beneficial and I believe that is a great way to teach and learn.”



Another Truism

*When you become a teacher,
by your students you'll be taught¹*

¹Rodger's and Hammerstein's *The King and I*

Acknowledgements



Swedish Council for Renewal of
Undergraduate Education

The GVSU students
The Uppsala students

<http://www.docs.uu.se/docs/runestone/>