

On Academic Exchanges

Ways to improve interaction between students and faculty

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Overview

- Analysis of existing exchange systems
 - Positive Student Response
 - Negative Student Response
- TICC (Technology In the Classroom Committee) implemented improvements
 - Wiki
 - Forum
 - Implementation Progress
 - In-class interaction



Exchange Systems

- The School of Mines has experience with two major systems for academic exchange:
 - Blackboard
 - Commercial student-instructor exchange system, includes a forum
 - LON-CAPA
 - Free and Open Source system for student-instructor exchange, includes a per-problem exchange system



What Students Like

- Centralized class management systems
- Easy to use or familiar web interfaces
- Forum interaction with their peers
- Cross-browser compatibility
- Having assignments available on-line
- Free web interaction tools



Things Students Dislike

- Homework given on the computer
- Using VPN software to connect from home
- General dislike of computers (2/109 respondents)



TICC Response

- Make homework assignments available on-line
- Don't force students to submit their work on-line
- Provide a familiar interface for interaction with each other and the faculty
- Use free and Open Source solutions as much as possible



TICC Wiki

- MediaWiki software (used by Wikipedia)
 - Familiar to most students with experience on-line
 - Centralizes course management of assignments and documents
 - Allows students to collaborate
 - LaTeX support allows for easy direct equation input



TICC Forum

- phpBB2 Forum Software
 - Familiar interface, intuitive for first-time users
 - Centralized forum for interaction between students and with the faculty for all classes
 - LaTeX modification allows questions and responses to contain equations
 - Attachment modification allows posting of documents



Implementation Progress

- Campus security concerns have provided a temporary road-block for our implementation
 - System has had some success but inaccessibility has prevented a rich level of interaction
 - Currently discussing possible security precautions to work with campus networking



Improving In-Class Interaction

- Custom student response system
 - How can we use the Tablet PCs to “read our students’ minds”?
- Custom class-room interactivity system
 - Allows lecturer to provide notes to students in an instantaneous fashion
 - Integration with response system allows students to write (rather than type) responses to questions



Conclusion

- By engaging students in on-line resources additional avenues of communication allow improved dialog
- Changes academic setting to better approximate real-world learning

