

# Opportunities in Learning from Marked Student Work

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## Learning Resources and Activities

### Learning resources stored in web-based repositories

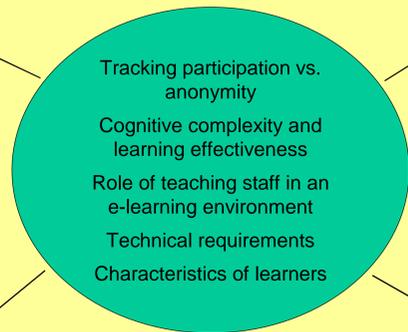
Task specifications	Assignment, test or exam specifications that require freely formulated answers
Marking scheme	The criteria used for assessing the student work and for grouping the feedback
Samples submissions	Carefully selected samples of student work to show a range of correct and incorrect solution attempts
Markers' feedback	Feedback on student work with emphasis on the formative feedback in support of learning

### Activities that can be combined to learning processes

Doing the task	Attempting a solution is an important active learning step
Viewing sample solutions	Effective learning method, especially for novices; encourages reflection on own work
Viewing feedback to solutions	Access to good formative feedback facilitates deep-level learning
Self- and peer-assessment	Requires students to clarify their understanding in order to formulate constructive feedback; encourages reflection on own work
Commenting on peer-marking	Focused and efficient discussions
Working on the marking scheme	Meta-level analysis that requires and builds deep level of understanding
Setting a new task	A very challenging yet very rewarding task

## Factors in Designing Learning Processes

Student anonymity	Considerations
Totally anonymous	Students feel freer to criticize, but care less about consequences of their comments Students are less motivated to participate
Semi-anonymous	Teaching staff know real identities but students participate under pseudonym
Identified	Positive if a feeling of community is established, otherwise lack of confidence might hinder participation



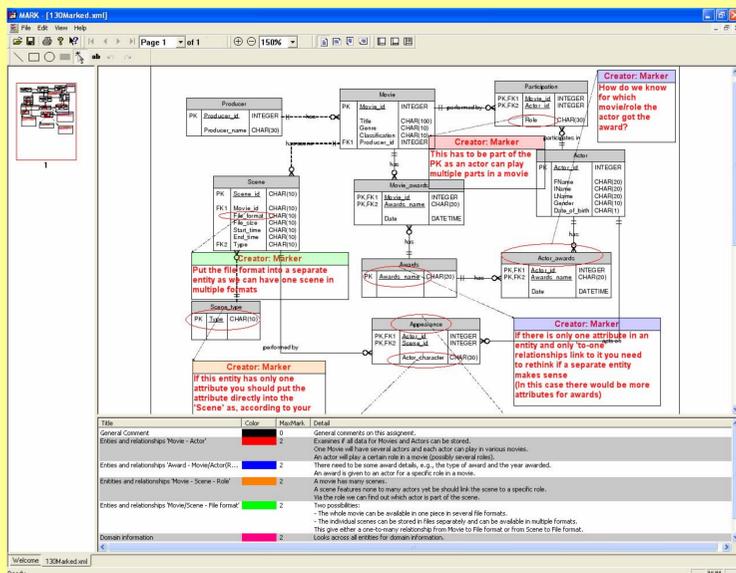
Cognitive Complexity	Learning Activities	Learning Effectiveness
easier	View example solutions for a task	lower
	View solutions with formative feedback	
	Do task	
	Self-assessment	
	Peer-assessment	
	Comment on marking by peers	
	Comment on the marking scheme	
	Create a new marking scheme	
	Set a new task	
more difficult		higher

Roles of teaching staff	Tasks
Learning designer	Choose learning process
Course controller	Select learning resources Setup incentive schemes to attract student interest
Manager	Provide timely access to resources Control student access rights
Facilitator	Monitor discussions regarding content and language Provide feedback

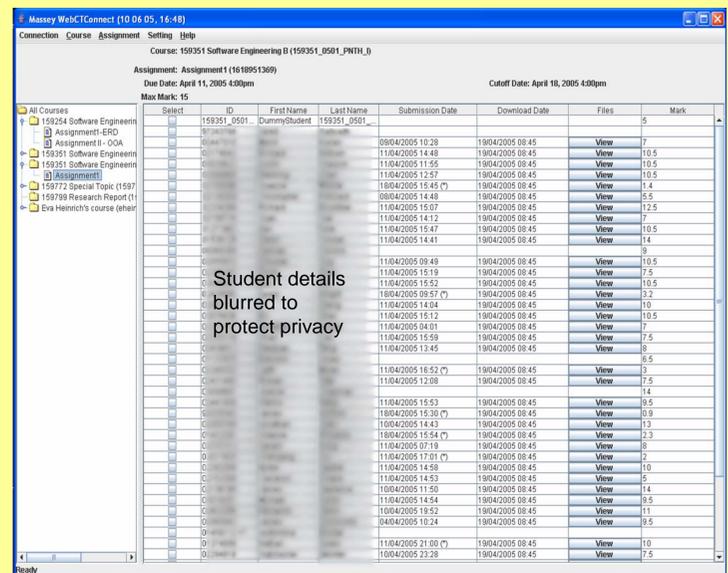
Learning activities	Technical requirements	
	Supporting teachers	Supporting learners
View example solutions with or without marking comments	Select and upload the example solution files and the marking comments to server	Download and display the files
Do task	Upload task file, marking scheme file and set up due time	Download and display the files, use suitable software to do the task, submit the solution files
Self-assessment	Make marking scheme available	Download and display the files
Peer-assessment	Make marking scheme available and allocate peer's work to students	Download and display peer's work Use an annotation tool to add comments and submit the marking comments
Comment on marking by peers	Allocate peer's marking to students	Download and display peer's marking data Use an annotation tool to add comments and submit the discussion data
Discuss marking scheme	Upload instructions, marking scheme file	Download and display the files Use an annotation tool to add comments and submit the comments
Create new marking scheme	Upload instructions	Download and display the files and submit the new scheme
Set new task	Upload instructions	Download and display the files and submit the new task

Learning activities	Related learning styles
View example solutions, view marking comments	Sensing, inductive learners
Do a task	Intuitive, deductive learners
Self- or peer-assessment	Reflective learners
Discuss marking by peers or discuss marking scheme	Active learners
Make new marking scheme, set tasks	Intuitive, deductive and reflective learners

## Supporting Systems



MarkTool application for formative marking in an electronic environment



Student details blurred to protect privacy

WebCTConnect application for management of assignments

## Future directions

Development of a multi-dimensional framework for learning from formative assessment  
 Dimensions set around factors like cognitive complexity, learning effectiveness, learner characteristics and role of the teaching staff  
 Consideration of issues around student skill levels, commitment and motivation,  
 Considerations around workloads for staff, management of the processes involved and supporting tools

Application of the IMS Learning Design Specification to assessment-related learning designs  
 IMS-LDS allows formulating learning designs in a generic way so they can be applied and reused in a variety of learning contexts, instantiated with a variety of learning content  
 Division of tasks according to areas of expertise: instructional designers develop assessment-related learning designs; individual instructors select most appropriate designs and instantiate these with concrete learning content