

Using Computers to Support Formative Assessment of Assignments

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Assessment

Two major forms

Formative – assessment **for** learning

Summative – assessment **of** learning

Current Computer Assisted Assessment applications

Strong for objective test questions with pre-determined answers and pre-determined feedback

Some success for the summative assessment of essay-type student work and delivery of pre-determined feedback

No success in providing individualised feedback on essay-type student work

Partical support for management tasks around assessment

Our goals

Identify requirements of formative assessment

Develop tools that support these requirements

Focus on essay-type students work in response to open-ended questions

Focus on marker provided feedback that facilitates learning

Requirements – teacher/marker viewpoint

Set up assignment tasks
and assessment criteria

Assess assignments
according to the criteria
(communication between
teachers and markers is
necessary to maintain
quality and consistency)

Improve future teaching
according to knowledge
gained and data collected
from the assessment

Requirements – student viewpoint

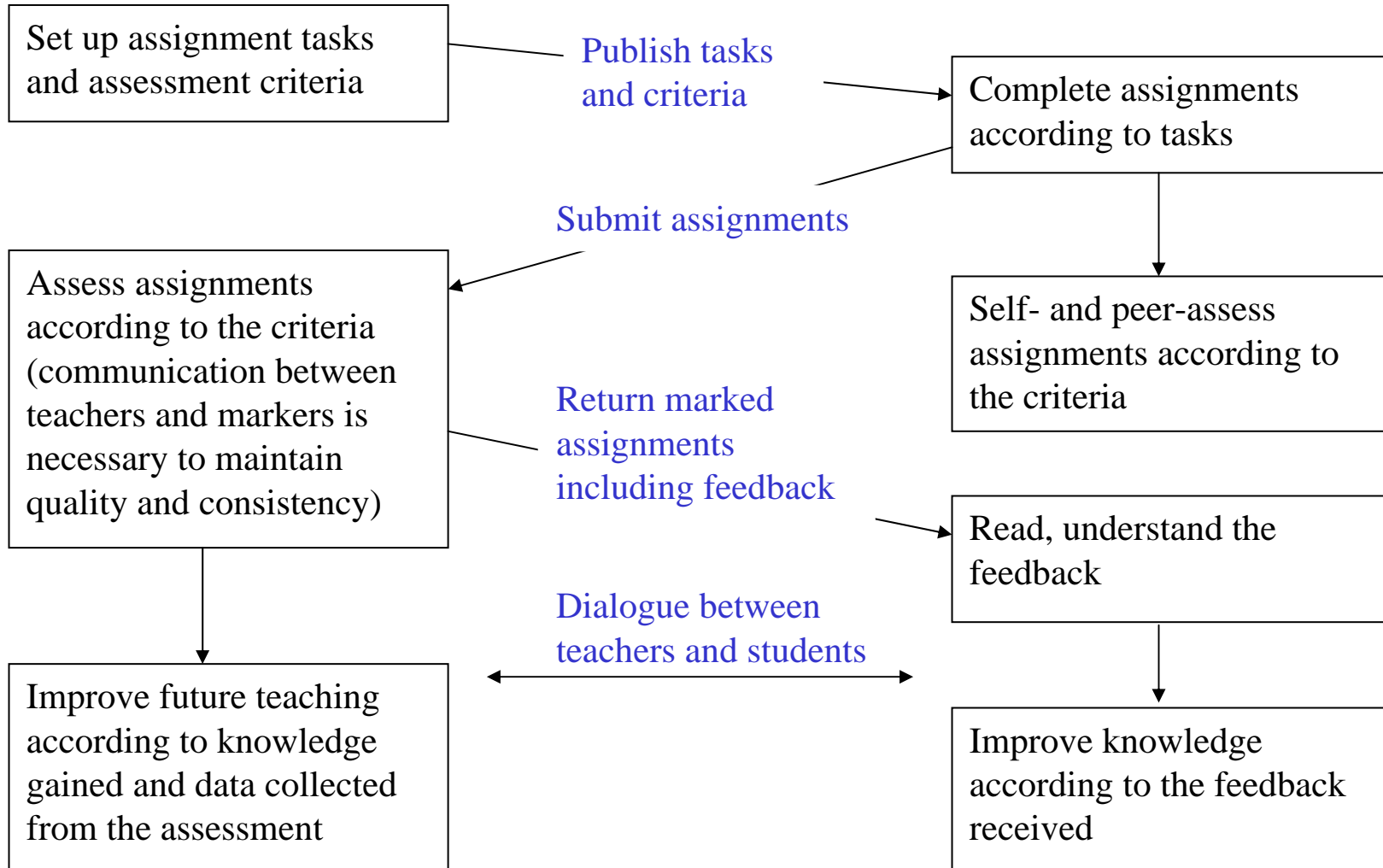
Complete assignments
according to tasks

Self- and peer-assess
assignments according to
the criteria

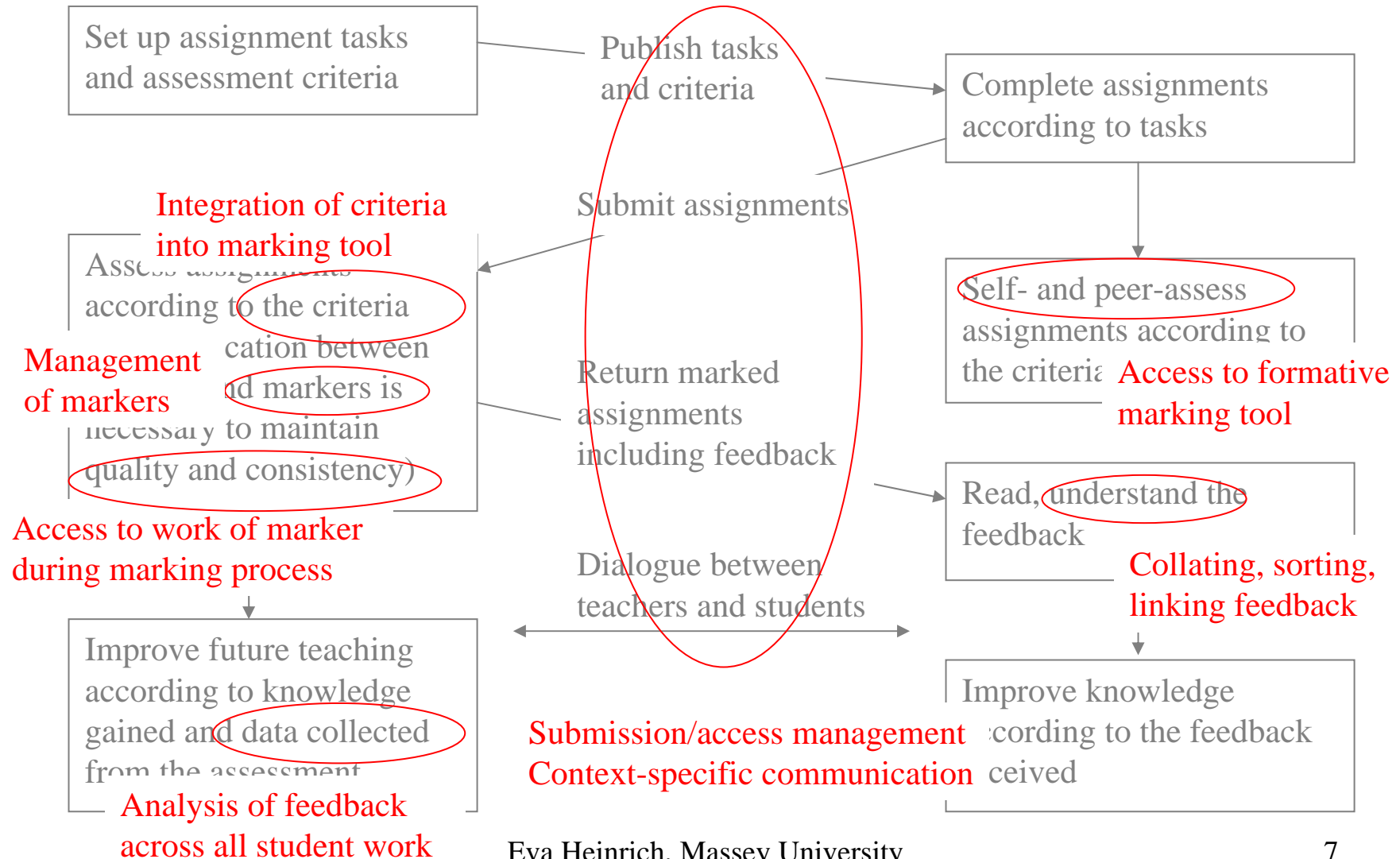
Read, understand the
feedback

Improve knowledge
according to the feedback
received

Requirements – communication



Requirements – opportunities for computer support



Areas for computer support

Management aspects

- Make documents available, submit and retrieve assignments
- Set submission parameters, control access and timing

Marking

- Provide feedback linked to marking criteria

Communication

- Teacher/marker – student, student – student, teacher – marker
- Importance of context specificity

Analysis

- For the student within own assignment
- For the teacher to supervise markers and to learn from the assessment exercise

Offered by widely available tools today?

Same features very widely available yet lack of efficient return of marked assignments and no support for marking process

Management aspects

Make documents available, submit and retrieve assignments
Set submission parameters, control access and timing

Marking

Provide feedback linked to marking criteria

Not really

Communication

Teacher/marker – student, student – student, teacher – marker

Importance of context specificity

Plenty of general communication tools yet neither assignment context-specific nor geared towards marking process

Analysis

For the student within own assignment

For the teacher to supervise markers and to learn from the assessment exercise

Not really

Tools used in our architecture

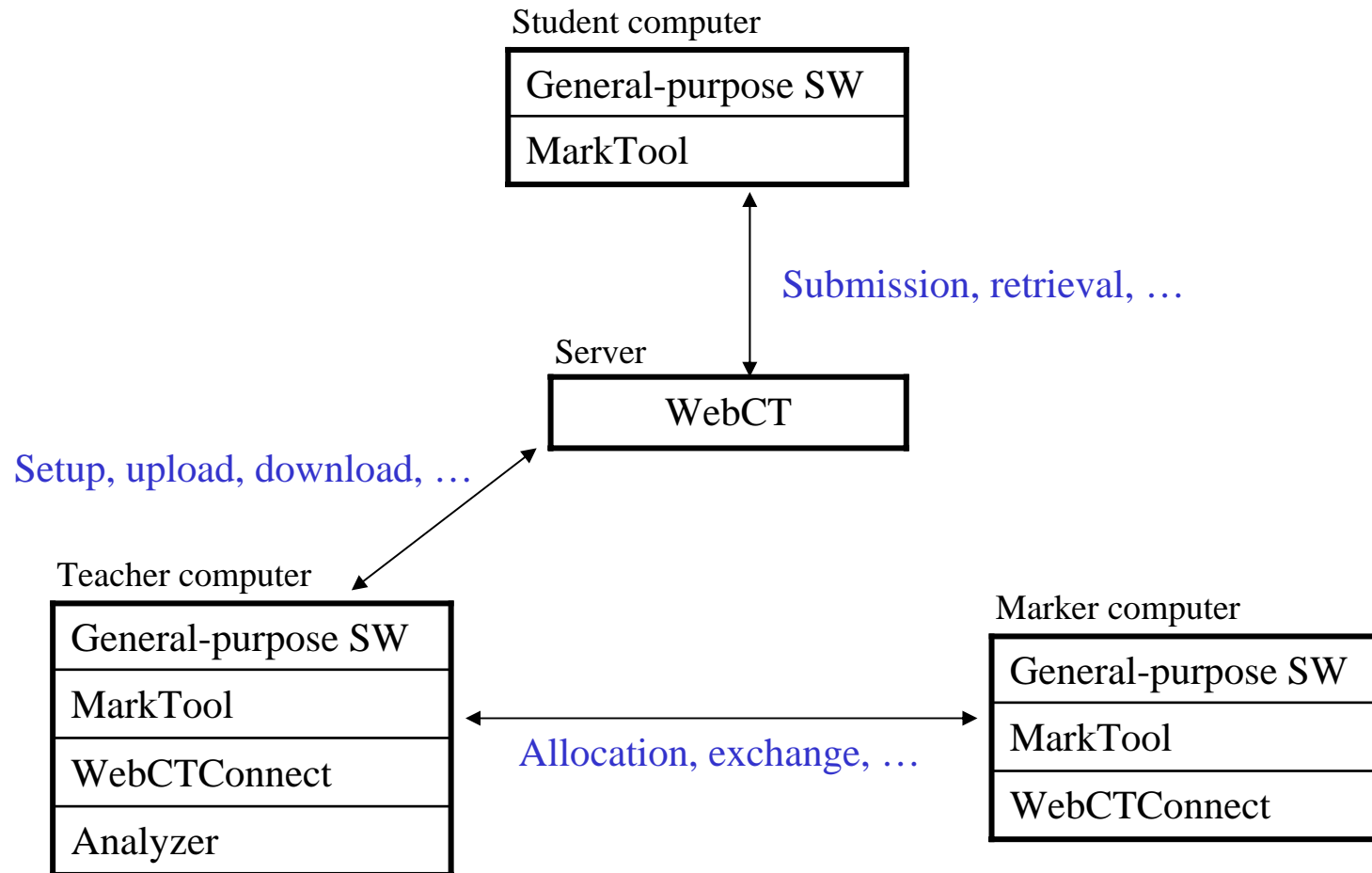
Widely available

General-purpose SW	Word processing, drawing, spreadsheet, ...
WebCT	Assignment submission parameters Submission and secure storage Student access point

Our implementations

MarkTool	Formative feedback, marking criteria Assistance in analysing feedback per assignment, ...
WebCTConnect	More efficient implementation of some of the WebCT features Management of marking process, allocation to markers, assignment status Assignment exchange with markers
Analyzer	Class-wide analysis of marking

Our architecture



Further information, research papers and software downloads

<http://www-ist.massey.ac.nz/MarkTool/>