

Statement of Purpose
 This data flow diagram illustrates the how students and teachers would interact in a distributed LMS to carry out the traditional graded assignment workflow.

A frequent use of courseware is to assign work to students, collect that work from students, assess the work and release the grades to students. In most courseware systems, this is all done in one tool. The Assignment tool (or the assignment and gradebook tools) "live" in a course. The design of courseware is mainly to facilitate the instructor's ability to manage the course.

An alternative approach would be to distribute the various transactions between two systems, the courseware system and a learner centered platform.

The student would receive a message in their "inbox" with the assignment instructions, learning outcomes and rubric for the assignment.

The student would then do the work, saving their "drafts" in their own system and eventually sending back a response to the assignment with their work attached. Note that a copy is sent to the instructor, with the original content still on the student system.

The teacher would receive the student work in her "inbox" and (assuming that there is to be no formative feedback) evaluate the work against the rubric and release the grades back to all of the students.

Assumptions
 There is a lot of duplicated data in a system like this which may end up causing issues for storage. However, this does allow each learner to retain a record of all of the assignments, work and assessment data that occurred in their classes... forever if they wish to. Similarly, this frees the institution from maintaining the course indefinitely "just in case" students need access to their data.

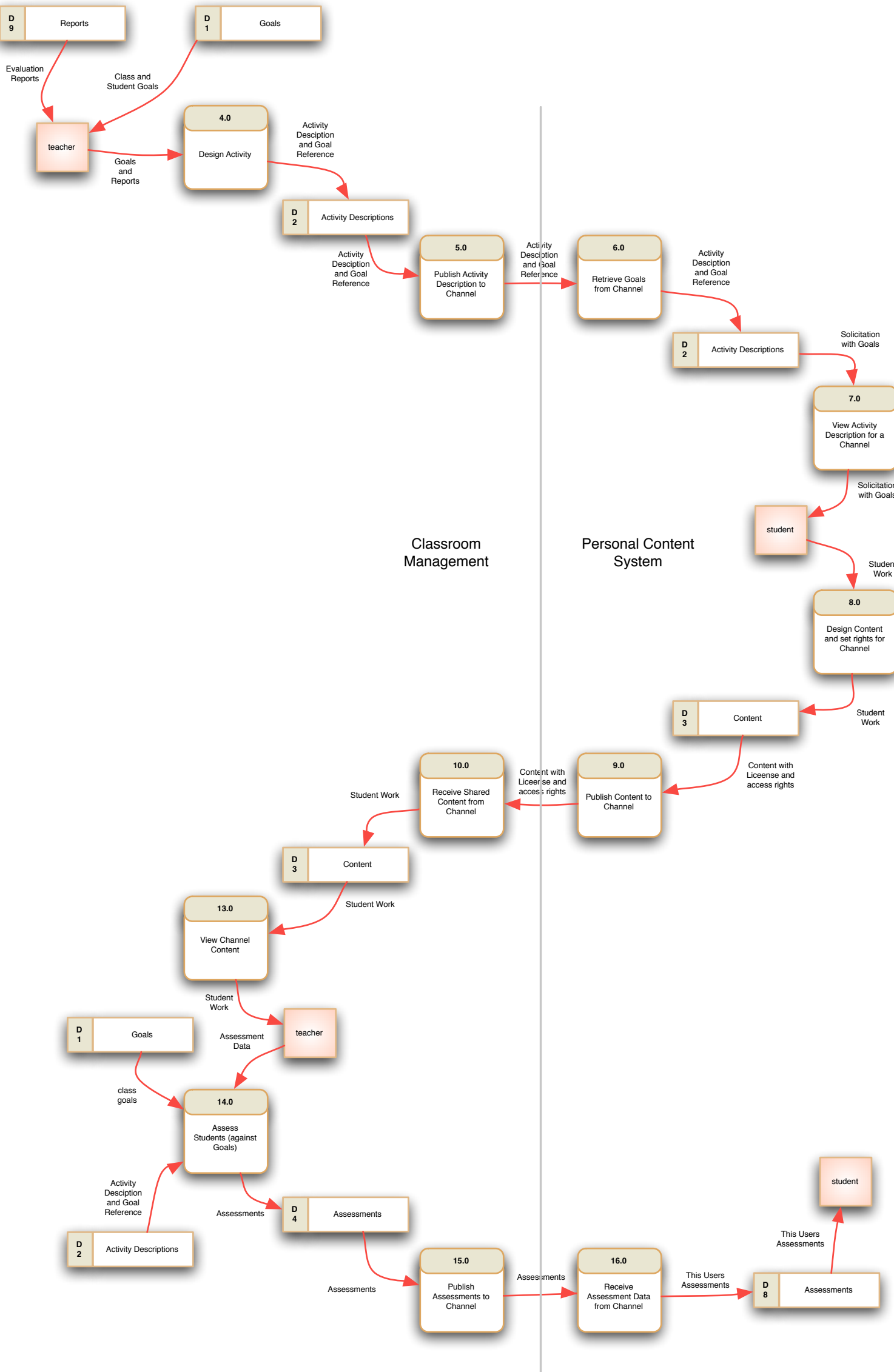
An important assumption is that a system that can engage in this sort of messaging becomes standardized, allowing students to remix and reuse their content in multiple classes at multiple institutions.

Data Flow Diagram for LMS with Personal Content Tool and Class Content Tool

SyrCLE: An experimental approach to courseware and portfolios

Interaction Style 1: Graded/Rated Assignment

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Data Stores

D1 - Goals

Each record includes:

- a channel identifier
- a learning outcome
- a reference to a parent goal (if applicable)

D2 - Activity Descriptions

Each record includes:

- reference to an interaction style (assignment, discussion, peer review, etc)
- a channel identifier
- reference to any learning outcomes that apply (if any)
- an activity description
- a reference to a rubric (if any)

D3 - Content - This is a repository of content for use by the tool

Each record would contain:

- Dublin Core metadata
- reference to channel identifiers that apply
- reference to activity descriptions for display management
- permissions (shared content or not) and license information

D4 - Assessments

Each record would contain:

- reference to goal info if applicable
- the rubric used if any
- reference to the content and student assessed
- reference to a channel identifier
- Dublin Core metadata (who rated whom? when?)

D5 - Reports

A snapshot summary of the class's assessment data