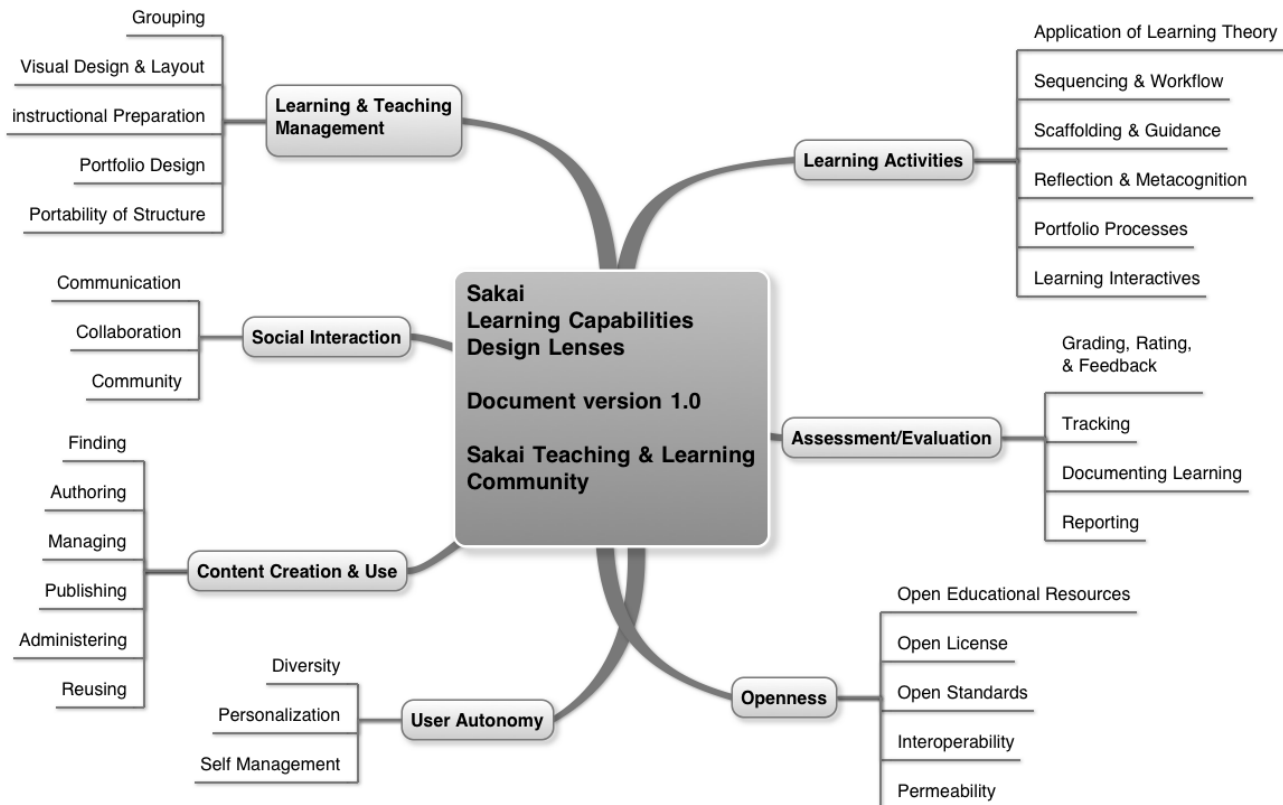


Sakai Learning Capabilities v 1.0



 Short URL to this page: <http://bit.ly/sakai-lenses>

Introductory Statements by the Sakai Teaching and Learning Group

1. The work evolved originally out of discussions at the 2009 Sakai Conference and developed over the past year via conference calls and virtual meetings by the Sakai Teaching & Learning Community.
2. Each Design Lens is not an area of functionality, but rather a perspective from which the entire system should be considered.
3. Facets are defined in general and also in relation to desired outcomes in Sakai. All lenses and facets need to be considered when working on any new functionality in Sakai.
4. The ability to support portfolio workflows is a key driver and a special concern for the new Sakai Open Academic Environment (OAE). In the past, the portfolio tools and processes were separate and siloed within Sakai. The assumption for Sakai OAE is that portfolios will be more integrated, that Sakai OAE will support portfolio processes that exist in Sakai, but that in Sakai OAE these processes will be integrated with other processes. In short, Sakai OAE portfolio goals will be achievable without going to extraordinary lengths or having to access little known procedures. The Teaching and Learning group emphasizes the need for integrated capabilities for the creation of portfolios that include collecting, re-purposing, tagging, organizing, and reflecting upon artifacts of learning from across the entire environment.
5. Provisional personas, user scenarios, manifestos, and user journeys are possible work for the future. The Teaching and Learning Group would like to focus on those deemed most useful by the designers, developers, the product council, and the general community.
6. The Lenses and Facets aim to capture not just what teachers and learners need or want today in terms of learning capabilities but what we as a community believe they will need and want in the future. In a sense, these promote not just traditional uses of the CLE but those more innovative and forward looking uses.

Design Lenses Videos

Watch a short video about how the design lenses came to be and where they can take us.
[Learn about the seven design lenses and their many facets in this video.](#)

Two members of the Sakai Product Council talk about how the design lenses can help shape Sakai OAE:

- [Stephen Marquard](#)
- [Noah Botimer](#)

Informing the Design of Sakai OAE

1. These learning capabilities will inform the design work in the [managed Sakai 3 project](#) that will deliver Sakai OAE v 1.0 by the end of June 2011.

Design Lens: Learning & Teaching Management

The logistical and configuration work required to design and manage a teaching and learning environment as means to set the stage for Learning Activities and to match learning spaces to underlying pedagogical models.
[commentary/suggestions/expansion](#)

Grouping

Process of placing users into specific groups or teams, assigning user specific responsibilities within the group, and connecting groups to specific learning activities and assessment.
[commentary/suggestions/expansion](#)

Visual Design & Layout

Set and manage visual layout, organization, navigation and look and feel of the space and subspaces, selection of capabilities or widgets. In some cases this will be done from scratch and in others through the selection of pre-existing templates. Some institutions may opt to limit level of customization available to instructors.
[commentary/suggestions/expansion](#)

Instructional Preparation

Initial set up and configuration of tools, including what users can do and the circumstances under which they can do it, and addition of top level course information (e.g. syllabus, contact information, etc.). Also, recording of notes and ideas for future delivery of this or related courses.
[commentary/suggestions/expansion](#)

Portfolio Design

Design and provide scaffolding for integrated portfolio workflows to include reflection on learning in relation to standards, personal representation of learning and accomplishments, programmatic and institutional assessment of learning outcomes, and aggregation, analysis, and display of assessment data.
[commentary/suggestions/expansion](#)

Portability of Structure

Ability to import, export, share, remix, and edit design and layout structures (e.g. page templates) both online and offline. Adherence to open-standards will be important to facilitating this facet.
[commentary/suggestions/expansion](#)

Design Lens: Content Creation & Use

The integrated activities associated with creating, using and reusing, and managing content of any type and in any format by any person or group (i.e. collaborative authoring) throughout the entire environment.

[commentary/suggestions/expansion](#)

Finding

Activities associated with searching, identifying, and collecting content.

[commentary/suggestions/expansion](#)

Authoring

Activities associated with creating, embedding, and editing multimedia content.

[commentary/suggestions/expansion](#)

Managing

Activities associated with aggregating, contextualizing, organizing, annotating, tagging (folksonomy) and classifying (taxonomy) of content.

[commentary/suggestions/expansion](#)

Publishing

Activities associated with the sharing of content, both internally and externally, with people.

[commentary/suggestions/expansion](#)

Administering

Activities associated with importing, exporting, archiving, and preserving content.

[commentary/suggestions/expansion](#)

Reusing

Activities associated with reusing content for the same function as well as re-purposing content, including remixing multimedia content, to create something entirely new. In this context, authors should have the ability to determine if and how their content is reused.

[commentary/suggestions/expansion](#)

Design Lens: Social Interaction

Interactions between and among peers, subject matter experts, and others that contribute to learning, creation, or understanding and a sense of belonging and group identity.

[commentary/suggestions/expansion](#)

Communication

The transmission of information to a person or group; often a "a two-way process in which there is an exchange and progression of thoughts, feelings or ideas." (Wikipedia contributors. "Communication." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 2 Jun. 2010. Web. 4 Jun. 2010). Person to person and person to group information sharing and discussions.

[commentary/suggestions/expansion](#)

Collaboration

"A recursive process where two or more people or organizations work together toward an intersection of common goals — for example, an intellectual endeavor that is creative in nature — by sharing knowledge, learning and building consensus." (Wikipedia contributors. "Collaboration." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 4 Jun. 2010. Web. 4 Jun. 2010.)

[commentary/suggestions/expansion](#)

Community

Connecting with other users and groups with common interests, goals, etc. in ways that cultivate a sense of belonging, common ownership and responsibility, and/or group identity. (see draft Manifesto by John Gosney for additional information)

[commentary/suggestions/expansion](#)

Design Lens: Learning Activities

The assembly and synthesis of content, guidance, interaction, and assessment tasks into cohesive learning experiences, for individuals or groups of learners, as means to meet specific learning outcomes. Ideally, this work is based on established learning theory and/or design methodology.

[commentary/suggestions/expansion](#)

Application of Learning Theory

Ability to design cohesive learning experiences following established instructional theories, as well as more experimental approaches. The system should be flexible enough to allow institutions, departments, individuals to provide users with specific prompts and processes for adhering to specific theories and approaches.

[commentary/suggestions/expansion](#)

Sequencing & Workflow

Sequencing is the intentional arrangement of resources, tasks and activities, guidance and prompts, support and facilitation, as means to meet specific learning outcomes. The workflow defines the relationships and dependencies between and among the elements and participants in the activity.

[commentary/suggestions/expansion](#)

Scaffolding & Guidance

Instructional scaffolding is the provision of sufficient structure and guidance to promote learning of concepts and skills. Guidance is information or advice that helps the learner easily understand what is expected of them while engaged in a task or activity.

(Adapted from Wikipedia contributors. "Instructional scaffolding." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 12 May. 2010. Web. 2 Jun. 2010.)

[commentary/suggestions/expansion](#)

Reflection & Metacognition

Reflection is an introspective process for observing, recording and synthesizing the insights gained by completing a cohesive learning experience and should be encouraged at any time and place throughout the system. Metacognition, which is often the outcome of reflection, is more generally the awareness and understanding of one's thinking, learning and knowledge and the cognitive processes behind them.

[commentary/suggestions/expansion](#)

Portfolio Processes

Via workflow or framework, portfolio processes guide users through documenting and reflecting on learning in relation to standards; creating individual or group portfolio presentations from institutional templates with predetermined content; and/or designing their own portfolio presentation from user choice of content, navigation, and style.

[commentary/suggestions/expansion](#)

Learning Interactives

Integrate the use of highly interactive learning objects or applications (e.g. analysis & visualization; exercises & solutions; simulations, roleplays & games) to enhance understanding and support diverse learning styles.

[commentary/suggestions/expansion](#)

Design Lens: Assessment / Evaluation

The process of documenting (usually in measurable terms) knowledge, skills, attitudes and beliefs. Assessment/evaluation can focus on the individual learner, the learning community (class, workshop, or other organized group of learners), the institution, or the educational system as a whole. (Adapted from: Wikipedia contributors. "Assessment." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 26 May. 2010. Web. 2 Jun. 2010.)

[commentary/suggestions/expansion](#)

Grading, Rating, Feedback

Information that helps the learner or group gauge the quality of their work. Feedback can be provided by an instructor, student, mentor, advisor, external evaluator, peer, a software application, etc., can be formative or summative, and can take many forms: grades, score or rating, completed rubric, written comments, editors markup, audio or video comments, model answer, automated response to computer input, etc. (see draft Manifesto by John Norman - <http://collab.sakaiproject.org/pipermail/pedagogy/2009-October/000203.html>)

[commentary/suggestions/expansion](#)

Tracking

The process of monitoring the activity, status, progress, or performance of an individual or group over time.

[commentary/suggestions/expansion](#)

Documenting Learning

The thoughtful collection of work product that may include formal assessments, completed assignments, collaborative learning work, creative output, portfolios, reflection, and other types of evidence or artifacts. This work may be assessed against rubrics, guidelines, course requirements, national standards, and/or school expectations.

[commentary/suggestions/expansion](#)

Reporting

Extraction and integration of information at any level of complexity from any type of recorded assessment data. Assessment processes call for the ability to query assessment data to track student progress individually and in groups through statistical analysis of evaluation data and sampling of representative learning artifacts.

[commentary/suggestions/expansion](#)

Design Lens: User Autonomy

Autonomy encourages diverse users to own their virtual identity by ensuring their ability to set preferences, make choices, determine how their data is used, and direct their own learning.

[commentary/suggestions/expansion](#)

Diversity

Recognizing the complex needs of users in terms of language, culture, technical expertise, and disability, the environment is flexible enough to meet a broad range of teaching and learning needs. Users can access functionality and data off line in order to work when not connected to the system.

[commentary/suggestions/expansion](#)

Personalization

Users can make their own choices about how to use the software. Users can set preferences for access to and use of content and services.

[commentary/suggestions/expansion](#)

Self Management

Users own their own data and have the right to determine how it is used in their current and lifelong learning. Users can aggregate and see at a glance data they care about, tasks they must do, and notifications from across the system into one or more centralized locations.

[commentary/suggestions/expansion](#)

Design Lens: Openness

A philosophy (with supporting practices, licensing models, and technology standards) that embraces the free use and distribution of creative works, data, information, and software without legal, technological or social restriction. The main principles are:

1. Free and open access to the material
2. Freedom to redistribute the material
3. Freedom to reuse the material
4. No restriction of the above based on who someone is (e.g. their nationality) or their field of endeavour (e.g. commercial or non-commercial)

(Adapted from "About Us." Open Knowledge Foundation. Open Knowledge Foundation, n.d. Web. 2 Jun 2010.)
[commentary/suggestions/expansion](#)

Open Educational Resources

"Educational materials and resources offered freely and openly at no fee for anyone to use and under some licenses to re-mix, improve and redistribute." (Wikipedia contributors. "Open educational resources." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 7 May. 2010. Web. 2 Jun. 2010.)
[commentary/suggestions/expansion](#)

Open License

A license that "grants permission to access, re-use and redistribute a work with few or no restrictions"; for example, Creative Commons, Free Art License, GNU Free Documentation License, etc. ("Guide to Open Licensing." Open Definition. Open Knowledge Foundation, n.d. Web. 2 Jun 2010.)
[commentary/suggestions/expansion](#)

Open Standards


"Standards made available to the general public and developed (or approved) and maintained via a collaborative and consensus driven process. 'Open Standards' facilitate interoperability and data exchange among different products or services and are intended for widespread adoption. (Wikipedia contributors. "Open Standard." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 29 May. 2010. Web. 2 Jun. 2010.)
[commentary/suggestions/expansion](#)

Interoperability

Capability of different systems to exchange data via a common set of exchange formats, to read and write the same file formats, and to use the same protocols. (Adapted from Wikipedia contributors. "Interoperability." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 26 May. 2010. Web. 2 Jun. 2010.)
[commentary/suggestions/expansion](#)

Permeability

Consideration for opportunities to share other teaching resources, and make one's own available for sharing, in the immediate context of a single class as well as beyond.
[commentary/suggestions/expansion](#)

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