

LONGSIGHT



Achieving Best Practices in Learning and Teaching:
Sakai and the Seven Principles

SAKAI AND THE SEVEN PRINCIPLES

A quarter-century has passed since Chickering and Gamson (1987) gathered a task force of prominent higher-education researchers and published the watershed article *The Seven Principles for Good Practice in Undergraduate Education*. During that time, hundreds of thousands of copies of the *Principles* and various assessment tools have been printed, numerous adaptations have appeared in research literature and the popular press, and institutions have applied them to improve teaching, build new programs, and understand organizational complexities (Chickering & Gamson, 1999).

Today, as we move beyond basic quantitative analyses of online learning, the 50 years of research behind the *Seven Principles* provides a **foundation for developing and sustaining best practices in web-based learning and teaching in higher education** (Bangert, 2004; Graham et al., 2001; Hutchins, 2003; Twigg, 2003).

HOW SAKAI INTEGRATES THE SEVEN PRINCIPLES

As a comprehensive platform for learning and instruction, the Sakai collaborative learning environment extends the learning management system beyond the traditional boundaries of content organization and rote assessment. By combining Sakai's suite of tools for **collaboration, engagement, and differentiation**, instructors can create course and project sites fully customized for each topic and group of learners—and achieve every one of *The Seven Principles for Good Practice in Undergraduate Education*.

COLLABORATION

| Principle for Good Practice | Sakai Solutions |
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| <p>1. Encourage student-faculty contact. Student motivation and learning outcomes improve when instructors demonstrate interest in students' success. Faculty who are accessible, supportive, and communicate clearly and consistently establish learning communities in which students feel secure and encouraged, resulting in higher levels of achievement, increased persistence, and satisfaction (Bangert, 2004; Chickering & Erhmann, 1996; Twigg, 2003; Young & Shaw, 1999).</p> | <ul style="list-style-type: none">• Messages Tool: Provides one-to-one, group-based, and course-wide messaging with email notifications. Maintain all course-related communications in a single place, within the context of the course itself.• Chat: Multi-room synchronous text chat for online gatherings, help sessions, study groups, and just-in-time collaboration.• Announcements: Generate course-wide and group announcements with email delivery, scheduled release, and notifications on every student's personal workspace.• Meetings Tool: Integrates with the BigBlueButton web conferencing tool for face-to-face meetings, collaboration, and presentation.• Blogs: Individual student blogs with permission controls give students a place to share experiences in a personal space.• Roster Tool: Provides faculty with brief information on students enrolled in their courses, including student photos to support face-to-face discussion. |

2. Develop reciprocity and cooperation among students.

Well-designed courses enhance higher-order thinking and depth of understanding when students contribute to a substantive class discourse. Students construct knowledge through social interactions that include sharing and responding to ideas, collaborative problem solving, and peer accountability (Bangert, 2004; Pahl, 2003; Twigg, 2003).

- **Dynamic Grouping Tools:** Sakai supports a wide range of approaches to grouping members of a course—instructors AND students. Groups can be generated automatically—based on course sections or other data from your SIS—and via manual and random assignment. Users may belong to multiple groups simultaneously to support the evolution of group work and changes in membership throughout the term.

- **Discussion Forums:** Fully threaded discussion forums with a range of moderation and grading tools provide students with opportunities to share and evaluate ideas in an open and transparent community space. Sakai's Forums tool integrates with the Lessons tool, supporting a seamless transition from course content into discourse about the subject matter.

- **Assignments:** The Assignments tool has the ability to incorporate group assignments and student peer review of assignments to promote collaboration and teambuilding activities.

- **Wikis:** Encourage team problem solving and the collaborative development of new knowledge through full-featured group-authored wikis.

- **Student Content in Lessons:** The Lessons tool supports the ability to add student pages within the course content, with the ability for other members of the class to comment on the content and engage in gradable peer review activities.

- **E-portfolios:** One of Sakai's best-known features provides a flexible environment for students to share their work and to receive feedback from peers.

- **Student-built Project Sites:** Fully functional sites dedicated to the work of small groups. Includes all the tools available in Course Sites for collaborative writing, private and shared resource folders, presentations, blogs, and event calendars.

ENGAGEMENT

| Principle for Good Practice | Sakai Solutions |
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| <p>3. Utilize active learning techniques. The highest quality learning occurs when content and activities prompt students to interact directly and deeply with new concepts. In the active learning approach, instructors move students from a passive, note-taking role into that of explorer and scholar. Content goes from text and lecture to interactive multimedia, simulations, and rich media that puts content in an authentic context. Activities provide formative feedback, opportunities for reflection, and relate to students' prior knowledge and experience. Student teams present projects focused on class issues relevant to them. Learning becomes a part of living and occurs both inside and outside the classroom (Chickering & Gamson, 1987; Graham et al., 2001; Pahl, 2003; Twigg, 2003).</p> | <ul style="list-style-type: none">• Universal WYSIWYG Rich Content Authoring: Every tool supports rich text authoring. Sakai makes it easy to embed images, video, simulations, equations and digital manipulatives in pages, assignments, assessments, and even discussion forums.• Lessons: The Lessons tool allows instructors to embed images, audio, video, links to other Sakai tools (e.g. Forums, Assignments, Tests & Quizzes), and external LTI tools right within the flow of the course content. Flexible learning modules authoring allows for the use of a variety of content types that appeal to many different learning styles and engage students in authentic and active learning.• Support for Mobile Devices: Enable anytime, anywhere, anyhow access to all of your course's tools and content. Our students are mobile; their learning should be, too.• SMS Messaging: The SMS feature supports outgoing text messages via the client's SMPP service provider gateway.• Collaborative Authoring and Assessment: Sakai's advanced permission system allows students to engage their peers in many ways, such as forums, peer review, collaborative editing, and more. Shared resource folders, wikis, e-portfolios, and dedicated project sites support community knowledge-building for research teams and graduate students. |

3. Utilize active learning techniques, continued.

- **Engage Students in Real Time:** Native support for synchronous chat rooms and web conferencing keeps students engaged in the discourse.
- **Native Support for Web Content:** Podcasts, newsfeeds, and entire sites can be embedded directly into a Sakai course, with each available as a separate tool.
- **Integrate Student-authored Content:** Many of Sakai's content tools allow the instructor to grant authoring privileges to students, who can then contribute unique content, resources, and activities for display in the course site.
- **Social Media:** Sakai's Profile tool provides a Facebook-like environment that is limited to the institutional Sakai community, so that students can connect with others at your institution, post a status, edit the details of the profile, upload a photo and more. The profile also controls privacy settings throughout Sakai and includes the option to integrate directly with a Twitter account. Integration with other services such as Facebook, LinkedIn and Skype is also possible via links displayed in the Profile's Social Networking section.

4. Provide prompt feedback.

The effectiveness of feedback on students' work is maximized when provided immediately and in detail. Generating meaningful and comprehensive feedback in a timely manner amplifies the relevance of that feedback and the likelihood the instructor can make an immediate impact on student understanding (Graham et al., 2001; Kulger & DeNisi, 1996; MacKinnon & Aylward, 1999; Twigg, 2003).

- **Immediate and Detailed Assessment Feedback:** Sakai tests and quizzes can provide students with detailed feedback down to the question level, with options to permit multiple attempts, release feedback at specified times during or after each attempt, and embed rich media into targeted responses.
- **Detailed Time-Sensitive Assignment Feedback:** Provide students with a detailed assessment by annotating their work in-line or via file attachments. Release grades individually or in bulk when you're finished grading and provide additional submission windows to individual students or the entire class. Respond privately to submissions in the Drop Box, or contribute and grade the discourse in Forums.
- **Just-in-time Formative Assessment:** Using the Lessons tool, directly embed diagnostics into course materials to give students self-check gateways prior to releasing additional content. Content may be conditionally released based on groups, dates, completion of items, or gradebook criteria.
- **Schedule Reminders:** Provide proactive support for students by scheduling reminders with the Announcements, Schedule and Messages tools.
- **Support for Student Response Systems:** Built-in support for student response systems, or "clickers" means learners stay in Sakai, and instructors have a single place to access learner data.
- **Rubric and Plagiarism Integration:** The Sakai Assignments tool integrates directly with third party tools for rubric creation and grading as well as plagiarism detection services.
- **Confirmations for Peace of Mind:** Students receive visual indicators that materials are properly and completely submitted and electronic confirmations for critical submissions.
- **Gradebook:** The Sakai Gradebook is the central repository for graded activities in each course and provides students with a comprehensive location to view their scores and progress in the course. The Gradebook provides a broad range of options for grading scales, categorizing and weighting activities, extra credit, releasing/hiding gradebook items, importing and exporting grades, private commenting, and more.

5. Emphasize adequate time-on-task and opportunities for practice.

Mastery fundamentally requires time for focused engagement. Repeated practice with embedded assessment along with the strategic and data-driven use of class time promotes mastery. Instructors can timetable courses and extend learning time beyond class time to encourage students to plan proactively. Providing asynchronous digital access to resources generates valuable data for faculty on how and when students access content and activities (Graham et al., 2001; Moallem, 2007; Pahl, 2003; Wellman & Marcinkiewicz, 2004; Twigg, 2003).

- **Powerful Calendar Options:** Multiple tools contribute to a detailed course calendar supporting custom event types and priorities. Each student's personalized calendar aggregates events across all course and project sites, providing a single point of reference for planning and time management.

- **Monitor Student Usage and Activity:** Identify at-risk students through rapid analysis of site participation using the Statistics tool. Track long-term usage patterns to discover where successful students spend the most time, and then share these strategies with the class. The User Activity tool provides an at-a-glance summary of the class activity, access dates, and site visits, as well as the ability to drill-down and view detailed event information for each individual user.

- **Reassess Learning on an Individual Basis:** Embedded, randomized assessments provide students multiple opportunities to test their knowledge on their time and terms. Instructors can re-release assessments to specific groups and reopen assignment submission windows for individual learners. Conditional release of content allows the creation of branching activities and individualized learning pathways.

- **Synchronized Syllabus:** Post a flexible, multipart syllabus that can be based on chronology as well as topic.

DIFFERENTIATION

| Principle for Good Practice | Sakai Solutions |
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| <p>6. Communicate high expectations. Learning outcomes improve when faculty actively demonstrate high expectations. Modeling desired performance and providing exemplars of challenging assignments serve as indicators to students, setting clear targets for success and growth. Accountability among students and publicly acknowledging student achievement reinforces these goals and creates a community of learners (Graham et al., 2001; Pahl, 2003).</p> | <ul style="list-style-type: none">• Set the Stage: Sakai's Syllabus tool provides a consistent source of organization for the course, Linking Lessons directly to Sakai tools and activities allows students to move seamlessly between the big picture and daily tasks.• Engage Outside Stakeholders: Sakai's flexible structure allows instructors to invite other users, on- and off-campus, to participate in a course or project, interact with students, and bring real-world authenticity to the discourse.• Model Desired Performance: Forums, assignments, tests, and quizzes provide dedicated space for instructors to post exemplars, provide targeted guidance, and model correct responses.• Maintain Contact Seamlessly: Sakai's communication tools insinuate these expectations into the students' lives regularly through announcements, emails, calendar entries, text messages and more. Users may subscribe to notifications for new posts and content.• Create and Evaluate Complex Work: When students compile artifacts in an e-portfolio, instructors can leverage built-in rubrics and comments to provide detailed and meaningful feedback in both qualitative and quantitative formats.• Continue Improving: Sakai's content import tools mean faculty can continue to reuse entire courses between terms, encouraging incremental and documented improvements in content and pedagogy. |

7. Respect diverse talents and ways of learning.

Extensive research on learning modalities and multiple intelligences have provided significant insight into how faculty can differentiate learning and instruction to improve outcomes. Instructors address these broad audiences by encouraging students to select and pursue projects on relevant topics, providing multiple and adaptive pathways to success, covering topics through multiple representations, facilitating meaningful class discourse, and responding to data on individual learners (Graham et al., 2001; Moallem, 2007; Pahl, 2003; Twigg, 2003).

- **Authoring without Restrictions:** The flexible Sakai framework is media agnostic, accommodating textual, symbolic, visual, and auditory content types.

- **Learn about the Learners:** Sakai's survey tools can be used to administer pre-course assessments of learning styles and preferences to define groups and plan intervention strategies.

- **Support Choice and Unique Pathways:** Using the Lessons tool, students can access a range of structured, sequenced multimodal content and resources all organized around a single topic or concept. Students can use the resources most useful to them, and take formative assessments with feedback guiding learners back to specific content when they miss a big idea. Using e-portfolios for summative assessment allows students to select specific artifacts that best represent their unique experience of the course.

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