Personal Learning Environments (PLEs), Social Media, and Self-Regulated Learning: A Natural Formula for Connecting Formal and Informal Learning

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Strategic Integration of Formal and Informal Learning

- Personal Learning Environments
- Social Media
- Self-Regulated Learning

Strategic Integration of Formal and Informal Learning
EDUCAUSE Learning Initiative (ELI) (2009) “seven things you should know about” series defines PLEs as the tools, communities, and services that constitute the individual educational platforms learners use to direct their own learning and pursue educational goals.

PLEs can be perceived as both a technology and a pedagogical approach that is student-designed around each student’s goals or a learning approach.
Self-regulation refers to the degree to which students are able to become metacognitively, motivationally, and behaviorally active participants of their own learning process (Zimmerman, 1989, 2000)

SRL processes or strategies:
- Goal setting
- Self-monitoring
- Self-evaluating
- Use of task strategies (e.g. rehearsing, organizing and transforming)
- Help seeking
- Time planning and management
- Intrinsic interest
Pedagogical Ecology of Learning Environments

Learning Technologies

Learning Theories
Pedagogical Models

Learning Interactions
Social Practices
Pedagogical Ecology of Traditional DE

Broadcast Technologies

Behaviorist Pedagogical Models and Theories: SRR, PI, Information Processing Theory, CAI

Direct Instruction
Isolated Curricular Units
Drill & Practice, Tests
Pedagogical Ecology of Distributed Learning

Internet Based Technologies
Digital Technologies
ICT (Web 1.0)

Constructivism, Distributed Cognition, CoP, Open/Flexible Learning, Knowledge Networks, ALN

Collaboration, Reflection, Articulation, Exploration Social Negotiation
Distributed Learning

How can learning technologies be used to support and promote specific processes of student self-regulated learning such as goal setting, help seeking, and self-monitoring, in online and distributed learning contexts?
Web-Based Pedagogical Tools (WBPT)
Do different categories of WBPT support different processes of self-regulation?

- Do students’ means on the self-regulatory processes ratings (e.g., goal setting and self-monitoring) vary significantly with their use of the different WBPT?

- Did students perceive WBPT useful in scaffolding strategic learning while completing course assignments?


<table>
<thead>
<tr>
<th>WBPT Category</th>
<th>Self-Regulatory Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Tools</td>
<td>Self-monitoring, help seeking</td>
</tr>
<tr>
<td>Collaborative &amp; Communication</td>
<td>Goal setting, help seeking, time</td>
</tr>
<tr>
<td>Tools</td>
<td>management</td>
</tr>
<tr>
<td>Content Creation &amp; Delivery Tools</td>
<td>Self-evaluation, task strategies, goal</td>
</tr>
<tr>
<td></td>
<td>setting</td>
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<tr>
<td>Learning Tools</td>
<td>Task strategies</td>
</tr>
<tr>
<td>Assessment Tools</td>
<td>Task strategies, self-monitoring, self-</td>
</tr>
<tr>
<td></td>
<td>evaluation</td>
</tr>
</tbody>
</table>
How experienced online instructors used WBPT to support student self-regulation in distributed and online courses and whether these instructors deliberately used WBPT to facilitate student self-regulation.

Overall college instructors reported using specific WBPT to support specific processes of self-regulation, however, instructors did not report deliberately using WBPT to support student self-regulation.

Web 2.0 and Social Media Technologies

Pedagogical Ecology of Social Networks

Informal Learning, Mobile Learning, Personal Learning Environments (PLE), Social Learning Environments (SLE)

Blogging, Microblogging, Podcasting, Vodcasting, Social Bookmarking, Social Tagging
Classification of Social Media

- **Communication tools** (e.g., web 2.0 enabled email applications such as Gmail and Google Wave; web conferencing tools such as Adobe Connect; and VOIP applications such as Skype)

- **Experience and resource sharing tools** (e.g., blogs, microblogs, & wikis such as WordPress, Twitter, and PBwiki; media sharing tools such as Flickr, YouTube, Pinterest; social bookmarking tools such as delicious)

- **Social networking sites** (e.g., LinkedIn, FaceBook, Plaxo, Ning)

- **Immersive virtual worlds** (e.g., Second Life, MMORPG, ARG)

- **Cloud Technologies/Web or online office tools** (e.g., Googleapps, Microsoft Office Live)

- **Mobile technologies** (e.g., iPods, iPads, smart phones, e-readers)

• **Integrative Learning Technologies (ILT)**

• A dynamic collection or aggregation of Web tools, software applications, and mobile technologies that integrate technological and pedagogical features and affordances of the Internet and the Web to facilitate the design, development, delivery, and management of online and distributed learning.

New Research

- **Social media** can facilitate the creation of **PLEs** that help learners aggregate and share the results of learning achievements, participate in collective knowledge generation, and manage their own meaning making.

- **PLEs** can serve as platforms for both integrating formal and informal learning and fostering **self-regulated learning** in higher education contexts.

- **PLEs** empower students to take charge of their own learning prompting them to select tools and resources to create, organize and package learning content to learn effectively and efficiently.

- **PLEs** are inherently **self-directed** placing the responsibility for organizing learning on the individual.

- **PLEs** listed in the **2011 Horizon Report** as an **emerging technology** that is likely to have a large impact on teaching and learning within education around the globe and a time-to-adoption of four to five years.
Valjataga et al. (2011) examined college students’ perceptions of the pedagogical affordances of social media in supporting the development of PLEs

- Students were given the freedom to select social media tools to create personal and distributed learning spaces (PLEs and DLEs) to facilitate individual and collaborative learning tasks in an educational technology course

- The results revealed that students’ perceptions of the affordances of PLEs and DLEs dynamically changed as they navigated the course landscape of social media tools

- Students should be encouraged to develop skills and confidence in the selection, application, and use of social media tools for personalized learning

- New pedagogical models and approaches are needed to enhance students’ abilities to organize and customize their own learning environments and advance their self-direction and self-awareness in a PLE.
Students need support, guidance, and pedagogical interventions to make the best possible use of social media to support their learning goals.

Students must acquire and apply a set of personal knowledge management (PKM) skills, defined as “the act of managing one’s personal knowledge through technologies”.

PLEs require the development and application of self-regulated learning skills because PLEs are built bottom-up starting with personal goals, information management, and individual knowledge construction, and progressing to socially mediated knowledge and networked learning (Dabbagh & Reo, 2011a; Turker & Zingel, 2008).
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Strategic Integration of Formal and Informal Learning
intimate**
(0.5m)

personal**
(1.2m)

social**
(3.0m)
<table>
<thead>
<tr>
<th>Tools</th>
<th>Levels of Use</th>
<th>(Level 1) Private Information Management</th>
<th>(Level 2) Basic Interaction or Sharing</th>
<th>(Level 3) Social Networking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weblog</td>
<td></td>
<td>• Use as private online journal</td>
<td>• Enable comments, Trackback, RSS feeds</td>
<td>• Dynamic access to related/recommended content</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Add blog to RSS aggregation services – e.g., Technorati</td>
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<tr>
<td>Wiki</td>
<td></td>
<td>• Use as private content management space</td>
<td>• Password protected collaborative editing &amp; commenting</td>
<td>• Public collaborative editing &amp; commenting</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>• Enable users view history/recent changes</td>
</tr>
<tr>
<td>RSS Reader (Bloglines)</td>
<td></td>
<td>• Private news/ media feed archive</td>
<td>• Enable personal archive sharing</td>
<td>• Access social filtering features to network with like-minded tool members or discover content via recommendations</td>
</tr>
<tr>
<td>Social Bookmarking (del.icio.us)</td>
<td></td>
<td>• Private bookmark archive</td>
<td>• Personal and collective tagging</td>
<td>• Create/join user networks to access other people’s links</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>• Use group tags; subscribe to tags</td>
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<tr>
<td>Social Media (Flickr, YouTube)</td>
<td></td>
<td>• Set-up private media archive or channel (consume only)</td>
<td>• Create/add media content and apply Creative Commons licenses</td>
<td>• Create/join public user groups or channels</td>
</tr>
<tr>
<td>Social Networking sites (Facebook)</td>
<td></td>
<td>• Privacy controls available but public access the default</td>
<td>• Add contacts, friends, etc.</td>
<td>• Enable a range of conversation/ chat, comment, discussion management services (e.g., wall graffiti)</td>
</tr>
</tbody>
</table>
Zimmerman’s (2000, 2008) Three-Phase Model of Self-Regulated Learning
Level 1: Personal Information Management

- **Lowest level of social interactivity**
- The focus is on *managing private information* for personal productivity or e-learning tasks such as online bookmarks, multimedia archives, and personal journals and writing.
- Students *do not* activate any of the social sharing or networking features the tools provide.
- Students *do not* have an observable presence on the “grid.”
- Students may *pull in* other people’s content but the goal or purpose is *not to share* self-generated content with others.
- Usage at this level involves a *passive or personal use* of systems preferences and features.
- Instructors should encourage students to use social media such as blogs and wikis to create a PLE that enables them to engage in self-regulated learning processes of Zimmerman’s *forethought phase* such as goal setting and planning.
- The goal at this level is to guide students to create a *personal or private learning space* by self-generating content and managing this content for personal productivity or organizational e-learning tasks such as creating online bookmarks, media resources, and personal journals and calendars.
The focus is on communication, social interaction, and collaboration

Students activate the social sharing and networking features of the tool

Students are using social media to foster informal learning communities surrounding the course topics thereby extending the PLE from a personal learning space to a social learning space

Social and collaborative activities engage students in the self-regulation processes of self-monitoring and help seeking prompting students to identify strategies needed to perform more formal learning tasks

This level of social media use in a PLE aligns with the performance phase of Zimmerman’s model
Level 3: Information Aggregation and Management

- Students use social media to synthesize and aggregate information from level 1 and level 2 in order to reflect on their overall learning experience.
- Social media activities allow students to take greater control of their PLE, customizing it and personalizing it around their learning goals.
- This level of social media use in a PLE aligns with the final phase of Zimmerman’s model, self-reflection.
- Evaluation or self-reflection is then used by the student to influence the forethought phase of subsequent efforts.
### (Level 1)
**Personal information management**

- **Blogs**
  - Instructor encourages students to use a blog as a private journal to set learning goals and plan for course assignments and tasks.

- **Wikis**
  - Instructor encourages students to use a wiki as a personal space for content organization and management.

- **Google Calendar**
  - Instructor encourages students to use Google Calendar for personal planning.

- **YouTube or Flickr**
  - Instructor encourages students to use Flickr or YouTube to set up a personal media archive related to course content.

### (Level 2)
**Social interaction and collaboration**

- **Blogs**
  - Instructor encourages students to enable the blog comment feature to allow for instructor and peer feedback enabling basic interaction and sharing.

- **Wikis**
  - Instructor encourages students to enable the wiki’s collaborative editing and commenting features for feedback.

- **Google Calendar**
  - Instructor encourages students to enable the calendar sharing features to allow feedback and collaboration to complete course tasks.

- **YouTube or Flickr**
  - Instructor encourages students to enable the sharing feature of the media archive and join similar media archives created by peers.

### (Level 3)
**Information aggregation and management**

- **Blogs**
  - Instructor demonstrates how to configure a blog to pull in additional content and how to add the blog to RSS aggregation services.

- **Wikis**
  - Instructor demonstrates how to view a wiki’s history to promote student self-evaluation of their learning across time.

- **Google Calendar**
  - Instructor demonstrates how to archive personal and group calendars to promote student self-evaluation regarding time planning and management.

- **YouTube or Flickr**
  - Instructor demonstrates how to aggregate media from several media archives to refine their personal archive.

### Social Networking Sites
- Instructor encourages students to create an academic and career profile on LinkedIn.

### Social Bookmarking
- Instructor encourages students to use a social bookmarking tool (e.g., Delicious) to organize course content.

- Instructor encourages students to connect to online communities related to their professional goals.

- Instructor encourages students to collaborate with other classmates and create a shared list of bookmarks related to a specific learning topic or project.

- Instructor asks students to engage in self-reflection with the goal to restructure their profile and social presence.

- Instructor asks students to self-reflect on their personal and group bookmarks to enhance the desired learning outcome.
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Q&A

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