

The Use of ICT Tools in a Cross-Curricular Approach to Learning

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Cross-Curricular Learning

- Cross-curricular learning provides a meaningful way in which students can use knowledge learned in one context as a knowledge base in other contexts in and out of school (Collins, Brown, & Newman, 1989).
- Cross-curricular learning uses knowledge from different disciplines or subject matters to explore an issue or solve a problem that is relevant to students' real life.
 - Problem is well-connected to their life
 - Ownership and motivation to learn

Cross-Curricular Learning

- It is learning that seeks to develop awareness and understanding of the connections and differences among subject-matter areas and disciplines in terms of the content they include as well as their particular ways of working and thinking.
- Proponents of cross-curricular learning argue that integrated curricula may help to prepare students for the challenging and multifaceted work environment of the 21st century and may facilitate the development of problem-solving and critical thinking skills.

Project-Based Learning

- Project-based learning provides an ideal pedagogical approach for implementing learning activities that are cross-curricular and student-centered (Bellanca & Brandt, 2010).
- Students discover the meaning of what they learn by collaborating to solve complex, real-world problems.
- The emphasis is not on learning facts from a book, or developing skills in isolation, but on how to apply the facts to solve a problem.

Project-Based Learning

■ A learning project:

- Starts with a real-world question or problem that does not have one correct answer.
- The problem or question is directly related to the school curriculum, so learning the content becomes important in solving the problem.
- It includes a variety of activities over an extended period of time.
- It involves task allocation and integration.
- It requires collaboration and coordination among students, teachers, and possibly community members.
- Students direct their learning while the teacher acts as a facilitator.
- Culminates in a product or presentation that requires students to communicate their results to an audience.
- It involves uses of technology that extend students' capacity for research, analysis, and collaboration.

Technology for Project-Based Learning

- A plethora of technology tools can be used to support project-based learning, such as for example:
 - course management and learning management systems (e.g., Blackboard),
 - web page authoring software (e.g., Dreamweaver),
 - multimedia software (e.g., Authorware, Powerpoint),
 - a wide range of productivity software applications (e.g., Word, Excel, Access, etc),
 - tools for synchronous communication (e.g., MSN Instant Messenger, Skype), and
 - various Web 2.0 tools (e.g., blogs, wikis).

Technology for Project-Based Learning

- In the remaining of this talk, I will discuss the affordances of three innovative computer-supported systems that have been specifically developed to support project-based learning:
 - Edmodo,
 - ThinkQuest, and,
 - Project Foundry

Technology for Project-Based Learning

- These systems incorporate a variety of tools for supporting and enabling:
 - Synchronous and asynchronous communication among group members.
 - Teaching
 - specifications, requirements, tasks, learning content, as these are specified by the teacher/s so that students know exactly what is expected from them.
 - Project operations – planning and tracking necessary steps taken toward the completion of the project.
 - Composition – collecting, organizing and integrating intermediary results toward the final product.
 - Shared workspace
 - team members can archive, access, and assess each others' work.

Edmodo (http://www.edmodo.com/)

The image shows a screenshot of the Edmodo website as viewed in a Windows Internet Explorer browser. The browser's title bar reads "Edmodo | Secure Social Learning Network for Teachers and Students - Windows Internet Explorer". The address bar shows the URL "http://www.edmodo.com/?language=en". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The search bar contains the Google logo and a search button. The browser's status bar at the bottom shows "Done" and "Internet".

The Edmodo website itself has a blue header with the "edmodo" logo in a white speech bubble. Below the logo is a login section with two input fields: "Username or Email" and "Password", a "Forgot?" link, and a "Login" button. Below the login section is a "Sign up now. It's Free!" section with three buttons: "I'm a Teacher", "I'm a Student", and "Parent Sign Up (requires Parent Code)". The website is decorated with a collage of photos of students and teachers. At the bottom, there are links for "Blog", "Schools & Districts", "Mobile", and "Help". The footer contains the text "Edmodo ©2011 | About | Jobs | Contact | Press | Terms | Privacy" and flags for the United States, Spain, and Brazil.

EdModo

Basic

- Teacher Sign Up
- Student Sign Up
- Parent Accounts
- Training Resources

Groups

- Create a Group
- Manage Your Groups
- Small Groups
- Co-Teaching

Posts

- Send and Reply to Posts
- Search and Filter Posts
- Manage Posts (Edit, tag, etc.)

Library

Calendar (upcoming events)

EdModo

Assignments & Quizzes

- Post & Grade Assignments
- Create a Quiz
- Grade a Quiz
- Gradebook

Profiles

- Teacher Profile
- Student Profile
- Student Badges

Communities & Connections

- Connect with Teachers
- Join Communities

Mobile Apps

- Mobile website



Training resources

Professional Development Training

- A variety of resources to help organizations host training sessions on EdModo and expand their professional development offerings.

Manage a group

- Rename a group.
- Set a member to read-only status.
- Archive the group.
- Delete the group.
- Delete a member from a group.
- Award a member a badge.
- Retrieve the parent code for a member.
- View the members' profile or grades.

Co-Teaching

- A teacher can easily share an Edmodo group with another teacher by giving them co-teacher access.
- With co-teacher access, the other teacher(s) can help grade assignments, monitor discussions, and manage members.

Library

- The Edmodo Library allows teachers to store and manage documents in a wide range of file formats, with the ability to access these files anywhere and share them with group members or peers.

Student Badges

- Badges enable teachers to provide recognition to students for their achievements.
- Teachers can choose to award a student with an Edmodo created badge, or create their own custom badges.

Connect with Teachers

- Teachers can build their individual professional learning communities by networking and making new connections through EdModo.

Join Communities

- Edmodo offers a number of communities teachers can join based upon their subject area interests.
- These communities are a great place to ask questions, get advice, exchange ideas and share resources.

Mobile website

- Edmodo offers a mobile website that is available via any Internet enabled mobile device at m.edmodo.com.
- From the mobile website, one can:
 - Read and reply to posts
 - Post notes to your groups
 - View your notifications
 - Join groups

ThinkQuest

(<http://www.thinkquest.org/en/>)

The image shows a screenshot of a web browser displaying the ThinkQuest website. The browser's address bar shows the URL <http://www.thinkquest.org/en/>. The website header features the Oracle ThinkQuest Education Foundation logo and a login section with fields for Username and Password, and a Log In button. Below the header is a navigation menu with links for Home, Projects, Competition, Library, and Help. The main content area is divided into three columns: Projects, Competition, and Library. The Projects column includes the text "ThinkQuest is a complete learning environment for primary and secondary schools." and "Think with us and unleash your creativity!". The Competition column features a "Congratulations 2011 Competition Winners!" message with a star award icon. The Library column promotes connecting to the award-winning ThinkQuest Library. The browser's taskbar at the bottom shows the Windows Start button, several open applications, and the system clock displaying 7:41 pm.

ThinkQuest : Think.com, Oracle Education Foundation, Projects | Competition | Library - Windows...

http://www.thinkquest.org/en/

File Edit View Favorites Tools Help

Google Search More >> Sign In

ThinkQuest : Think.com, Oracle Education F...

ORACLE ThinkQuest
EDUCATION FOUNDATION

Username Password Log In
Trouble Logging In?

Projects Competition Library Help

ThinkQuest is a complete learning environment for primary and secondary schools.

Think with us and unleash your creativity!

Congratulations 2011 Competition Winners!

ThinkQuest Projects
Visit our online learning community to integrate

ThinkQuest Competition
Register Now!

ThinkQuest Library
Connect to the award-winning ThinkQuest Library, a rich

Done Internet 100% 7:41 pm

ThinkQuest

- The Oracle Education foundation developed ThinkQuest, an online secured learning platform, to extend the benefits of project-based learning to classrooms globally.
- A learning environment for primary and secondary schools.
- Student safety is paramount, thus ThinkQuest is a protected environment available only to teachers and students at accredited schools.

ThinkQuest

- Having confidence that ThinkQuest is a space for interactions between REAL teachers and students, schools can allow their students to communicate openly and globally.
- It is available free of charge .
- It currently supports over 622,000 students and teachers in 69 countries.

Components of ThinkQuest

- Shared online space
 - Allows the design and development of learning projects that can include an essential question or problem directly related to the curriculum.
 - Publishing and collaboration tools for:
 - Co-authoring content
 - Conducting online discussions
 - Sharing multimedia artifacts, such as photos, charts, and presentations.

Components of ThinkQuest

- A global community of teachers and students to draw from for cross-cultural collaboration opportunities.
- A global competition that challenges students to solve problems using their critical thinking, communication, and technology skills.
- A library of past student projects that can be used as references in future projects.
- A professional development program which trains teachers how to integrate project-based learning into their curriculum.

Project Foundry

(<http://www.projectfoundry.org/>)

- Unlike the other two systems, Project Foundry is not free (about 15 dollars per student for each year).
- It is a web-based platform for teachers and students.
- It helps teachers and students to manage the project-based learning process, and to keep track of the performance of individual group members and the outcomes of a project.

Project Foundry

- Students can:
 - Propose projects
 - Write in their journals
 - **Take self-assessments**
 - **Build a portfolio**
 - **Assess their work using rubrics proposed by the system**
 - Send messages
- Teachers can:
 - Initiate teacher projects
 - Reply to messages
 - Comment on reflections
 - Establish learning plans

Project Foundry

- During the project-based learning process, other key participants (i.e., mentors, parents) can be involved to:
 - Follow the problem-solving process
 - View student progress
 - Comment on proposals
 - Assess the end results

Concluding remarks

- The three systems share commonalities in that they aim with similar tools to effectively scaffold the collaborative project-based learning process.
- Two are free of charge, while Project Foundry has a fee.
- EdModo is completely open for use worldwide.
- ThinkQuest works only with accredited schools in each country.
- Project Foundry places more emphasis on the development of work skills important for the 21st century economy, and thus students are often asked to take self-assessments and use rubrics provided by the system for evaluating the quality of their work.
 - A focus on performance assessment
 - The system can also prepare special reports to show how each group of students performed

Thank you!

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- Questions are welcome!