

Intranets: A Tool for Modern Middle Schools

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Presentation available:

<http://www.taconic-learning.net/presentations/intranets.htm>

<http://www.taconic-learning.net/presentations/intranethandout.pdf>

Most middle schools have a computer network of one sort or another installed. With different network operating systems (both server and client) and different collections of cables arranged in different topologies installed either during construction or during a retrofit projects, the specifics of the network vary. Despite the diversity, the systems are very likely to provide the capacity necessary to operate an Intranet within the building.

What is an Intranet?

An Intranet is a collection of world wide web-like content available only on a local area network. For the purposes of this presentations, a LAN can be defined the computers connected together within a school building. The important distinction between an Intranet and the Internet is that an Intranet is available only to those who are using a computer directly connected to the network that stores the Intranet content; users cannot connect to an Intranet from the outside. For users, Intranet resources are identical to World Wide Web resources: pages load in web browsers and Intranet pages can even link to web pages.

Why do we want to use an Intranet?

An Intranet can be thought of as a playground within which students can develop technology-rich communication skills, but because the potential audience is limited and because the LAN upon which the content is published is under the close control of adults, the playground is safe. Because bandwidth does not limit the content that can be delivered and because LAN storage space can be more available than web server space (for schools that lease web server space)

- Celebrate what we do
 - Pictures and other media showing the unique and meaningful activities that characterize middle school education can be made available for students, parents, teachers, administrators and visitors to schools through an Intranet. Imagine a frequently changing picture of students “in-action” on the home page whenever someone launches a web browser in your school.

- Store portfolio artifacts
 - In those middle schools where students create portfolios, especially electronic portfolios, the problem of managing collections of artifacts is always real. Using an Intranet, students can easily take responsibility for maintaining those collections.
- Advertise performances
 - In the same way school communities can celebrate achievements using Intranets, communities can advertise upcoming events to all computer users.
- Schedule resources
 - Sharing limited resources (e.g. computer rooms, projectors, multi-purpose rooms) is another recurring problem in middle schools. Those responsible for scheduling those resources can use Intranets to both publish schedules (anyone can check to see if the resource is available) and accept scheduling requests.
- Request supplies
 - Using forms on Intranet pages, teachers can request those supplies always guarded and unavailable after the budget is frozen and the supplies are exhausted. (e.g. dry erase markers).
- Team to UA communication
 - A perennial problem in middle schools is communication between team and UA teachers. Using an Intranet, messages can be posted and read at any time.
- Be the center piece of a middle school computer science curriculum.
 - An Intranet can provide an authentic context in which middle school students can develop necessary technology skills.

What are the essential components of an Intranet?

There is certain capacity that is necessary for developing an operational Intranet; this capacity is available on those networks that use modern desktop operating systems where users have access to modern office suites. (For our purposes, a system can be considered “modern” if the operating system is Windows ’98 or better or Macintosh system 7.5 or better.)

Network connections. With the increasing use of wireless networking in schools, computers are not as obviously connected to networks as previously. To access Intranet resources, users must work on computers connected to the network where the Intranet files are stored; those who use wireless technologies must use network access points rather than routers and are encouraged to use protect their wireless nodes to minimize the risk of unauthorized access.

Modern operating systems are designed to facilitate computers communicating with each other. Even simple peer-to-peer networking (in which the desktop operating system provides both server and client software) provides sufficient capability for Intranets. Network operating systems (e.g. Windows NT) can provide additional capabilities to the Intranet authors, but (as with any system) the more complex the system, the greater the maintenance costs (in time, energy, expertise, and money).

Shared Directories. The fundamental difference between directories (folders) used to store regular files and those used to store Intranet files is that Intranet directories are shared (the administrator of the network or the owner of the files has marked the files as shared, thus making the directories visible to users exploring the Intranet). Access rights on the shared directories should be set so that all network users can read the directories, but only those charged with creating and posting Intranet content have write access to those directories.

Web Authoring Software. Just as Internet authors have a variety of software titles from which to choose the software used to create content, Intranet authors have many titles from which to choose. Many factors influence the choice: the experience of those who will be developing content, the capacity of the systems to be used for content development, and price are all important. Fortunately, even those with no experience and no budget can find web authoring software that can be used by those capable of creating documents on word processors and who have no budget.

In addition to technology capacity (a network, some software, and some skill), a necessary aspect of Intranet development is planning and policy development. All schools have policy regarding various aspects of Intranet development, but an Intranet provides the opportunity to involve students in planning and policy decisions that may be unavailable to the public Internet site for the school.

Planning. Prior to beginning an Intranet project, a structure or organization for the Intranet must be planned. Unplanned sites (either Intranet or Internet) tend to become as confusing for the creators as they are confusing for the visitors. Most planners use a hierarchical organizational chart to organize the Intranet and use the chart as a tool for planning which pages link to others and to plan which pages will use similar templates or themes.

Acceptable Use Policy. Just as schools and other organizations follow acceptable use policies to regulate the content and links made available on their web sites (and for other uses of technology), groups responsible for developing Intranets should adopt and follow an Acceptable Use Policy. Because the Intranet will be a function of the school, its use must adhere to the school's AUP, but the Intranet also provides a unique opportunity for students to participate in creating an AUP written by and for students' peers.

The AUP should address standards that will be followed when creating pages, including rules about using students' images and students' work, and it will identify individuals responsible for updating and maintaining defined sections of the Intranet.

Contact the presenter:

Gary L. Ackerman has been teaching science, math, and computers in Vermont schools for the past 17 years. For most of that time, he has worked with middle school students (in a variety of settings), and despite being primarily a high school teacher in his current position, he continues to work with middle schoolers on electronic personal development collections and he serves as a TA for middle school students. Gary is also active in teacher education, serving on the adjunct faculty of the College of St. Joseph in Vermont and serving as an adjunct instructor for the University of Vermont. In addition, Gary has served on the faculties of various summer institutes, including the Vermont Middle Grades Institute, the Learning and Teaching in Grades 5-9 Institute, and the Rutland Region Education Alliance Capstone Institute. Among his current endeavors are active work as a graduate student and organizing the West Rutland School Young People's Technology Congress to be held in the spring of 2005.

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