

An Online Physical Education Lesson Plan Database – Phase 2

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Abstract

An online physical education lesson plan database program has been created and being used in UW-Whitewater. It has and will continue to benefit both pre-service and in-service physical education teachers in K-12. The website has the following features, 1. Search and view lessons, 2. Add New Lessons, 3. Upload files, 4. Security, 5. Site is currently accessible to anywhere in the World, 6. Group and Course Program formation, 7. Recommendation and ranking, etc.

Technical Notes & Accomplishments:

The website includes the following technologies.

- An asp.net web application running on the .NET framework and IIS 5.0.
- MSDE database backend.
- Object-Oriented and event driven server backend.
- Session persistent database connections to increase site speed.
- Session persistent user information.

Features of the HPERC Site Phase 2:

These are the feature for phase 2.

- **Rational database design** – The database backend was replaced with MSDE. The database will have referential integrity checks to ensure data is consistent and useful to users. The design of the database should be transparent to the users. The MSDE database provides better support for multi-user editing of data which will allow the database to scale with more users. The MSDE database also has better backup abilities to help with the maintance of the site. The MSDE database server runs a variety of platforms allowing the database to be moved off the web server if the site needs to scale.
- **Site is written in ASP.NET** – The site was rewritten in asp.net with the Visual Studio .NET RAD IDE which allows easier maintance of the site, integrated debugging, which allows faster development of the site. ASP.NET is object-oriented and event driven development model which allows for the encapsulation of database objects allowing for faster site development. ASP.NET is the latest version and the predecessor of asp which will allow for better support from Microsoft in the future when asp support is canceled by Microsoft.
- **Security** – ASP.NET includes features that allow it to not be vulnerable to cross-site scripting vulnerabilities.
- **Updated database design** – The layout of the database has been changed to reflect new information collected from users, and new lessons plan fields, some lesson plan field were consolidated too. The existing data was grandfathered into the new database design.
- **Ranking of lesson plans** – The ability of users to rank a lesson and have the site calculate the average for a given lesson. The rank affects the order of lessons returned from a search.

- **Grouping of lessons** – When a new lesson is added by a user the lesson is grouped by the user's group membership. This allows for faster searching of lessons by groups. The grouping of lessons is done all transparently without any user interaction.
- **Comments on lesson plans** – The ability of users to leave comments about a lesson. The comments would be visible to all users in the site. Allowing discussion of lesson plans that have been posted to the site.
- **Group/Club information** – Depending on the group that the user has registered for, they will be redirect to a different home page when they log in. Each group would have there own page with a discussion board on it and other information.
- **User info editing page** – The users will be able to update their user profile changing information that has changed like group membership.

These are features to be added in Phase 3:

- **Multiple Teaching/Learning Activities** – Add to the lessons the ability to have an unlimited number of learning activities for one lesson.
- **HTML code review** – A review of all html code will be preformed to ensure that all html code is compatible with the latest standard and compatible on all major browsers.
- **Maintance plan** – A plan to backup the database and site needs to implemented. In case of a server failure the site needs to be able to be restored to its pre-disaster state easily.

Site web hosting platform requirements:

- IIS 5.0 or better web server.
- .Net Framework
- MSDE
- MDAC 2.7 or greater