



Scientific Virtual Observatories Working for Education?

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The eGY Education and Outreach Program is developing an education portal that connects teachers around the world, in a well-defined way, to the virtual observatories and their data. The serious question is: are these virtual observatories ready or capable of providing quality scientific data for teachers (and students) to use in lessons? What role do efforts such as virtual research environments (e.g. Sakai) play as an intermediary between the teacher and any particular virtual observatory which can be complex, jargon-ridden, acronym-laden, hard to navigate, and just 'different' to another virtual observatory?

An answer to both these questions, interestingly, also provides a valuable resource for virtual observatories themselves. The so-called 'Use-Case' methodology where a user writes down, in a specified level of detail, their use of a virtual observatory including their pre-conditions, knowledge assumptions, etc. is essential in developing interfaces, architectures and choosing technologies for virtual observatories. In short, if a virtual observatory was never asked to serve an educational user (e.g. a teacher), and that need was never articulated, then it is little surprise when a user finds it hard or impossible to use a virtual observatory.

This presentation will give examples of use-cases, how to develop them, how they lead to user requirements, and system design and why semantics and the use of formal methods such as ontologies can all, in a positive way, break down formidable vocabulary barriers and provide educators with useful tools.