Search4STEM ™: A proposal for a "one stop" information system for

Science, Technology, Engineering, Mathematics

Despite the urgency to improve STEM education because of its critical role in the future of the states' and national economy, there is no infrastructure/system for connecting people/effective programs and materials or providing key information about STEM for teachers, educational leaders, businesses and other stakeholders.

In fact, tens of millions of dollars are appropriated every year for STEM initiatives throughout the nation and yet, the many STEM data warehouses, inventories and other resource lists are disconnected, disparate and difficult to use, much less find. There should be a single site where any interested parties can access information about all programs, projects, products, initiatives, collaborations and services in STEM education, preK through 20.

We are developing an interactive, searchable "one stop app store" and knowledge exchange to coordinate available STEM resources and bring them to end-users to support PK-20 teaching and learning to improve STEM education outcomes. Inclusion in the portal will be determined by a set of educational criteria. The system, which is in prototype stage, will contextualize the content. Users will not have to hunt to find out how the resources can be used, how they link to standards, etc.

The following functionality and attributes for this "one stop application" STEM portal/ clearinghouse are:

1. Single user interface
2. Easy personalized access
3. Capacity for networking
4. A suite of publishing tools
5. Contextualized resources
6. High quality STEM content organized by comprehensive yet clear criteria
7. Personalized searching capacity
8. On-demand access
9. Trusted sources
10. Sustainable design
11. Alignment with standards
12. Easy to use

The added value is that the system:
1. is organized with and for stakeholders
2. has capacity for contributed content
3. will have regularly updated information
4. will be in regular communication to maintain engagement and currency

The time is now and urgent action is needed. The next most important step is to secure support and funding. For support, we are seeking partnerships with national organizations, e.g. CCSSO; governmental agencies, e.g in MA, the Instructional Technology Division of the Executive Office of Administration and Finance; the Office of the Lieutenant Governor; educational agencies, e.g. in MA the Massachusetts Departments of Elementary and Secondary Education; and the Department of Higher Education as well as foundations, universities and other interested parties both on the national and state level.

We have already discussed the project and been told that the project will fill a need and has value, from the following educational and business professional organizations: MASCD, MASS, MassCUE and CELT, and Google. We are in the development stage and will test in Massachusetts. When the system is proven successful, we will make it available nationwide by states.

Such an endeavor, as we envision it, has not been undertaken before. We expect that the site will be continuously evolving as new information is added and as tools change. In addition, because we intend to leverage existing sites, sources and people we will not to "reinvent the wheel."