

Jonathan Semplar, Superintendent Search4STEM User Case

Jonathan is the Superintendent of Schools in a suburban community outside a major Eastern city. There are two secondary and five elementary schools in the district. It is fairly affluent, with approximately 90% of students going on to some form of higher education. The students tend to fall into two major population groups: white and Asian. Because the town is near high tech companies, many residents have moved there to work in that industry. And yet many parents do not encourage their children to study STEM (at least the technology and engineering portions) because they do not see the need. Their sons and daughters will be lawyers and economists and they have computers at home.

The High School considers itself a comprehensive high school and so offers four years of science and mathematics (required for graduation) as well as CAD and computer graphics, but no engineering. Technology as a learning and teaching tool is also used by all the other disciplines extensively. Although there is a technical vocational high school which students are able to attend, very few choose that option. Students can bring their own devices to school and access the school network. For those who do not own a wireless computing device, the school provides one that students can take off campus.

Jonathan has been involved in the STEM movement in the state and is currently thinking about several issues:

1. he would like to develop a strategy for digital content
2. he would like to figure out how to extend the 1 to 1 (or BYOT) arrangement to include the new devices: smart phones, pads, netbooks etc.
3. and finally he wants to bring engineering to the middle and high school.

It is the third which he feels requires immediate addressing. He knows of a two programs but wonders whether there are others and thinks he should do due diligence before deciding what to promote. There is no inventory in the state department of education. He knows he cannot simply mandate this program. He will need to consider the budget, professional development, equipment requirements, etc. He is in a local control state where the School Committee is very active and the business complex feels it has a stake in what happens in the schools

He calls the ED of state Superintendents' association and learns that there is a recently launched initiative called 'Search4STEM' where one can find personalized and contextualized information about STEM programs. He gathers the Instructional Technology Director, the Informational Technology Director and the principals together to explore this new resource.

The portal opens with a welcoming screen which describes how to use the system. A page then appears which requests personal/professional information about Jonathan which will inform and tailor any search in the future. It asks for a description of his role, his academic background and why he is interested in STEM.

The query asks for what he is exploring at this time...There are many elements he can check off: Grade levels for the intervention, STEM subject(s), Description of elements (for example, whether the program is hands-on, project based, teacher centered, only web based, hybrid, etc.), Contact Information, Evaluation Information, Cost and testimony from previous users. Videos of STEM professionals describing their careers and preparation are also available.

The team discusses the relevant criteria and up come three engineering programs (one in a nearby state)

which meet those conditions and which are not the ones they already know about. The team decides that since the number is so small they will contact all and ask further questions, which they have identified.

When they have all the information, the team members will meet again to make a determination and develop the implementation strategy. The Superintendent will inform the School Committee.