



CIVICA CONSORTIUM'S SOLUTIONS FOR JURONG SECONDARY SCHOOL: REDEFINING LEARNING - THE COMMUNITY AND THE WORLD IS OUR CLASSROOM

Members

- G Element Pte Ltd
- HeuLab Pte Ltd
- Learning EDvantage Pte Ltd
- Microsoft Singapore Pte Ltd
- Playware Studios Pte Ltd

The Solution

The Civica-led consortium supports problem-based learning and authentic learning grounded on three key building blocks: Enriching with Interactive Digital Media Contents; Engaging Community Participation and Enabling Adaptive Learning. In a knowledge society, it is important that students develop skills in information and media literacy, knowledge creation, critical and creative thinking skills and deeper meta-cognitive skills. The Civica solution addresses this learning.

Based on a cohesive approach to learning with extensive processes and tools that actively support engagement, collaboration and regular assessment of effectiveness, some of the applications that would be developed include:

- Personality, Behavioural, Cognitive and Humanising (PBCH) tool: This is a learner-profiling tool drawing on data and information from teacher, parent and student inputs to facilitate adaptive learning. It also provides feedback on students' learning progress, cognitive development and humanises the interactions with students. The PBCH tool provides input into the artificial intelligence support for MavenWorld and the student's progress through the Problem-Based Learning – Authentic Learning (PBL-AL) process.

- MavenWorld: In MavenWorld, each student has an avatar (called the Maven), which is tailored by the student to suit his/her style and personality. The Maven will support and personalise the research/learning process, providing an engaging learning environment, which includes virtual friends, advisors and tutors. In the future, the Maven will be able to progress into 3D virtual worlds.
- 3D Virtual Field Trails: These trails anchored in the Taman Jurong community will be developed and used in conjunction with Earth@SG. With these, students can access 3D learning content as well as data from specific geographic information system (GIS) solutions in real time mode using mobile devices, and can create new content on the fly for upload and inclusion into the learning trails.
- Content Classification Engine with Smart Search: This classification and search engine facilitates meta-tagging and formulation of sophisticated search strategies to aid students in their investigative research with a high level of flexibility and control of research and knowledge creation.

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Jurong Secondary School FutureSchool Programme Highlights

Key Focus - Networked Learning Community
Jurong Secondary School (JSS) aims to leverage the powers of technologies, to engage the community actively to provide our students with authentic learning experiences. Our vision as a FutureSchool is that the world and the community is our classroom.

JSS's proposal aims to provide students with authentic learning experiences by engaging the community actively. The objective is to enhance students' development in a broad range of cognitive and affective domains and equip them with the necessary 21st century skills.

Teaching and learning in various subjects will be anchored on JSS's unique brand of problem-based learning, PBL-AL. Besides content knowledge, students learn various life skills, such as critical thinking skills, problem solving skills, and communication skills.

JSS plans to collaborate with industry partners in the development of a unique set of e-PBL tools. Infocomm technology will be deployed to support students' self-directed learning and collaborative learning in a 3D virtual learning environment. An avatar will provide guidance and feedback to the students as they work through the various PBL stages. At the same time, the learning activities of each student will be recorded digitally. An engine with Artificial Intelligence (AI) capacity will then process the data and identify the learning dispositions of the student. This will in turn provide valuable reference for teachers to give constructive feedback to the student.

Recognising media literacy as an important component of 21st century skills, JSS proposes to develop a media literacy curriculum to teach its students the skills to:

- Evaluate sources of information and media products critically;
- Communicate ideas through the appropriate use of a variety of media tools effectively; and
- Make use of technology and information with responsibility and ethics.

Through unique school-based media programmes such as Digital Video Drama and Internet Radio, students' mastery of language concepts and skills are enhanced as students learn to express themselves beyond print material.

JSS proposes to create a network of community of learners. Students will plug into learning communities as part of their learning process, drawing upon the knowledge of researchers and fellow learners from different institutions and organisations around the world. JSS students will work on projects for the creation of a community portal called LifeMaps@Jurong, which is open to the public.

Through projects based on different subjects, students will conduct their own research through fieldwork, using spatial location technologies such as global positioning system (GPS) and GIS, and contribute information to create learning trails on the Jurong community's history, geography, economic development, lifestyle activities and current developments in the portal. Students can also apply their knowledge and skills in media production to create media products as a contribution to the community through the portal.

