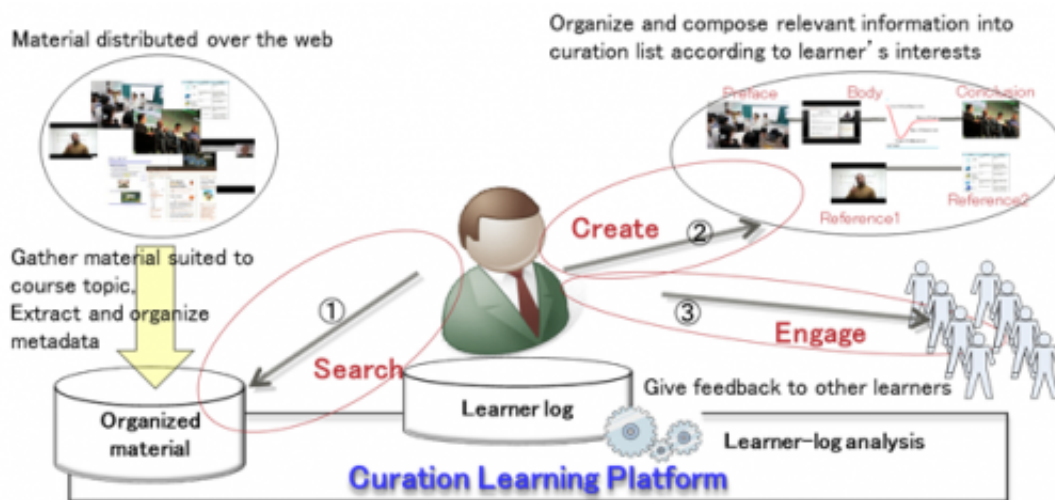


# Fujitsu develops new curation learning method and accompanying support platform

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Platform supporting curation learning.

Fujitsu Laboratories announced the development of a curation learning method and an accompanying support platform, which will cultivate the skills needed in an information-driven society for effective communication using ICT and critical thinking.

With this method, people learn through repeating a cycle of "searching," "creating," and "engaging," with the aim of not only acquiring information but transforming information into knowledge. Fujitsu Laboratories of America has been working to increase the accuracy of the underlying technology and to apply it to large-scale online [learning](#)

systems at universities and corporations

Details of this method are being presented at the 2014 TechKnowledge Conference of the American Society for Training and Development, opening January 22 in Las Vegas.

## **Background**

Major trends that are changing education in the 21st century are open education, which uses the Internet to overcome barriers of time and place, and an approach to education that is centered on the learner. Both of these trends have received considerable interest in North America. Fujitsu Laboratories of America seeks to spark creativity and innovation by using ICT to cultivate 21st-century skills such as critical thinking, communication, collaboration, and information-literacy. Since 2011, the company has conducted research in the field of education to realize its vision of creating a human-centric intelligent society.

## **Technological Issues**

Together with the Massachusetts Institute of Technology, the company conducted a study of science, technology, engineering and mathematics (STEM) education at the elementary- and middle-school levels, and as part of that study conducted interviews and surveys in the US focusing mainly on educators and school administrators. The results clearly showed the importance of professional development for teachers for improving their instructional skills in elementary- and middle-school education, not only in the US but around the world. Likewise in Japan, critical thinking centered on STEM education has become an educational goal, along with other advanced learning skills. However, the platforms that should integrate with and support these 21st-century skills do not exist yet.

## About the Technology

Building on its joint research results with MIT, Fujitsu Laboratories of America developed a curation learning support platform (Fig.1), which enables online learners to efficiently find the knowledge they need for self-directed study based on their own interests. Together with this, the platform enables learners to curate their own thoughts and opinions, and to then share their curations with other learners, thus enabling interactive learning. When educators use this platform, learners become active participants in the learning process, and they develop the abilities needed for critical thinking, communication, information literacy, and other 21st-century skills, both inside and outside the classroom.

Key features of the platform are as follows.

- Customized search: By efficiently collecting material only relevant to instructional purposes, only material useful to learners is searchable.
- Curated search results: In addition to search results from the web, learners can search for curated results, for enriched-value material.
- Curations produced from multiple information sources: Social media, blog entries, video, and photos can all be added to a curation list, a cluster of content along a curated topic, and learners can combine them with their own thoughts and opinions to generate curations.
- Group collaboration: Multiple learners can work together to create a curation for a single topic.
- Visualization of learned knowledge: Learners can grasp what knowledge is being acquired by analyzing summaries and visualizing topics learned at the keyword level.
- Learning community: The platform can introduce learners to other learners with similar interests based on their learning logs,

supporting the formation of a learning community.

## Results

Curation learning is expected to improve the following skills.

- Search: the ability to recognize the value and significance of data, the ability to understand concepts from multiple domains, the ability to sort and abstract (finding themes and topics) data, analysis, [critical thinking](#), design thinking, and problem solving.
- Create: The ability to understand other cultures, the ability to learn based on searched information, creativity.
- Engage: The ability to communicate, collaborate, and solve problems

Trials were conducted using the platform from 2012 through 2013 in the University of California, Berkeley's tutoring program for student athletes, and in curation learning for a class at a public university in California. The results showed that web-based materials were combined and reused, curations were easy to generate for educational materials that focused on individual needs of learners, and students collaborated to create curations that, compared with previous methods, resulted in higher-quality instructional materials produced more quickly. Sharing curations sparked lively communications among learners, and learners were more motivated doing the curation-learning assignments than conventional assignments.

Fujitsu Laboratories of America is also testing curation learning in its internal operations. The results and interest generated by these curation-learning experiments will be presented at the 2014 TechKnowledge Conference of the American Society for Training and Development, the world's largest organization focused on human-resource development and organizational development.

Fujitsu Laboratories of America plans to develop and implement a technology for analyzing the behavior of [learners](#), using data gathered from the use of the platform in these experiments. In the future, companies and universities that are Fujitsu customers will be able to take advantage of this technology in a massive online educational system.

Provided by Fujitsu

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