

Government of Japan's First MOOC - "Data Science"

 Innovation image

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Organisation: Statistics Bureau, Japan Ministry of Internal Affairs and Communications (MIC)

Country: Japan

Level of government: Central government

Sector: Education, General public services

Type: Digital

Launched in: 2014

Overall development time: 1 year(s)

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Description

In March 2015, the Statistics Bureau of the Ministry of Internal Affairs and Communications launched an open lecture course called “Data science for working adults: Entry level” online as a self-learning support course that anyone could take, at anytime.

This was part of an effort to foster human resources with high skills in “data science” who could take charge of future economic growth. This turned out to be the very first MOOC course offered by the Japanese government.

The purpose of this innovation is to nurture working adults to solve problems with data analysis at the front-lines of their businesses. Its aim is to foster a more “data science” skilled human resources in order to strengthen the power of Japan to compete in the international market, and to accelerate its speed of economic growth. Courses for advanced learners are scheduled to be launched during FY2015.

Why the innovation was developed

- As a response to a problem: the idea of opening online learning courses on data science and statistical analysis came up as a solution for the lack of human resources skilled in “data science”.
 - The development of ICTs made the innovation possible by providing the basis for various MOOC projects such as “data science.”
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Objectives

Develop staff capacity, Improve access, Improve effectiveness, Support economic growth

- The purpose of this innovation is to foster human resources with high skills in “data science” nationwide.
 - In order to boost the Japanese economy and its business activities in the age of ICT and the information economy, it is essential to nurture a data-literate population as well as to facilitate the usage of open data.
 - These set the conditions for strengthening the power of Japan to compete in the international market and accelerate its pace of economic growth in a data-driven economy and society.
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Main beneficiaries

General population

- General public: the number of those registered for the data science online course launched in March 2015 was approximately 15000.

Results

Effectiveness

- Approximately fifteen-thousand students have registered for the MOOC course to date.
- 17 percent of those registered have already completed the course with a 60 percent mark or more in the final exam.

Development

Design

Staffers of the Statistics Bureau came up with the original idea of opening online courses in “data science” and made a proposal within the bureau, which gained the approval of the managers and Director-General of the bureau who gave the final “go” for the project.

Testing

- No trial methods were used to test the innovation.
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Implementation

Tools used:

- MOOC platform
- Smartphone

Resources used:

- Number of staffers: five
 - Budget: approximately JPY 10 million
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Challenges and solutions

- Challenge: setting the appropriate levels of courses was a challenge.
 - Solution: the Statistics Bureau conducted a survey of questionnaires to the registered self-learning students of the online-course.
 - Based on the results of the survey, the bureau made adjustments and improved the content of the courses to meet the appropriate levels of learning needed.
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Partnerships

Universities and research institutions

Academics and Research Bodies

The collaboration with academics, research institutions, and other public sector institutions in arranging the course materials and delivering the courses helped the innovation team enrich the content of the courses.

Lessons Learned

Lessons Learned

- The importance to foster human resources skilled in the basics of data science.
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Conditions for success

- Human resources and budgets.
- The idea for the innovation originally came from a staffer in the ministry. After internal discussion in the bureau, it was taken up by the bureau management as an organisational project.
- Personal value and motivation for new challenges are necessary, frank discussion and flexible decision-making in the organisation is also important.