Development of Educational System to Support Improvement of Cognition to Cultural Difference

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Abstract

The research developed an educational system to improve cross-cultural communication skill needed for promoting international exchange projects. The developed training system as web application to improve cognition to cultural difference utilizing the knowledge of cross-cultural communication studies has featured functions to show the progress of cognition with a spreadsheet and visual objects.

1. The state of international exchange projects

International exchange projects utilizing information technology have made rapid progress since the middle of 1990's. In reality, there are few official reports to show continuous exchange relationships because differences in cultures and systems in practice have contributed to the tendency for many cases to end prematurely. A lack of cross-cultural communication skill is also suggested to improve. (Tanaka 2000) One of the ideal models for international exchange projects called "Spiral model" tried to encourage exchanges which often tend to become stagnated by effectively combining face to face mediated communication, such as home stay programs. (Asakawa 2001) However the model has the difficult problem of financial arrangement for home stay activities. This research aims to develop a training system named "Cultural Range Finder" in the form of web application to support improvement of cognition to cultural difference which is a part of cross-cultural communication skill and encourage international exchange projects through the system.

2. Concept of Cultural Range Finder

The developed system is composed of 20 incidents utilizing the knowledge of a cross-cultural training called Cross-Cultural Dialogues. (Storti 1994) The web application is designed to promote the awareness process of cultural differences embedded into the incidents. They were based on conversations in cross-cultural communication exchanges. The system has functions to evaluate the learning status in each incident with questions according to the five-grade system. Every single data from the evaluation would be stored into a database and showed to learners with graphical interface. (Graph) Relatively few precedent case studies developed this kind of web application to measure cross-cultural communication. One case study developed a program to automatically calculate the result of "National Cultural Differences" researched by Geert Hofstede who is well known to measure cultural difference on the national level. It also shows the result visually with a circular chart. This system is one of pioneering works to develop online cross-cultural training utilizing information technology.
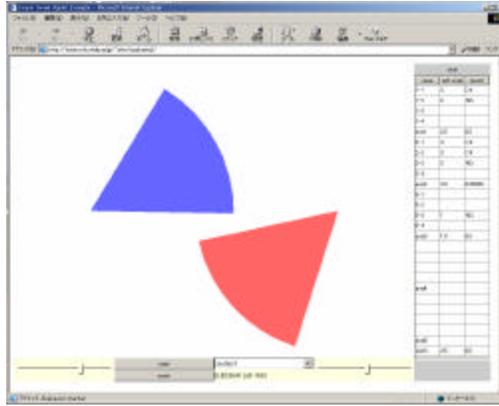
Graph: Cultural Range Finder

3. Digitization and Visualization

This system enabled to indicate numerically how much progressed learners to be aware of cultural differences as compared with existing training programs on a face to face level. It also enabled to show learning progress visually with fan-shaped graphics programmed by JAVA Applet operating together with the digitization. These two features can compare not only the learning progress data of individual learners with each other but also do the personal data with the group one of exchange partners overseas.

4. Effect of the system

The expected effect of this system is that 1. The learners can keep learning while they can check their progress to be aware of cultural differences with the function of specific methods. 2. This system can show cultural differences clearly by the gap between learners and their partners overseas based on the stored numeric data and the fan-shaped graphics and visually motivate learners to progress cross-cultural communication skill for international exchange projects.

5. Result of the experiment

This system has been tested at a middle school, Mie prefecture, Japan in November, 2002 and at high schools, North Carolina, USA in December 2002. At this moment the result is under analysis.

Reference and URL

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(5) **CRF Manual, http://totoro.sfc.wide.ad.jp/~shin/asakawa_crf-e/crfmanual/manual1.html**