## 論文の内容の要旨

論文題目 A Study on a Method of Presenting Information with Relative Values toward Improving Motivation in a Learning Environment

(教育環境におけるモティベーション向上のための相対的価値を利用した 情報呈示方法に関する研究)

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(本文) Many contents for e-learning have developed these days because of a spread of broad-band networks. With the advantage that they enable learners to study anytime and anywhere owing to the spread of mobile devices and cellular phones, e-learning has become more widespread. On the other hand, students must choose only a part required for the module they are working on.

Moreover, e-learning contents can be sent to learners according to their study records. However, the contents are usually chosen only according to a test result, and an answering process involving the learner is not utilized.

For solving these issues, a content-generation system that offers adaptive contents for each learner has been developed. Furthermore, we have developed a system which includes an assessment function that utilizes a learner's process of answering questions.

Moreover, in many cases, it is very difficult for learners to keep learning by using contents for e-learning with motivation. In order to keep motivation for learning, contents or learning courses including a module for keeping learner's motivation must be developed. For developing such contents or learning courses, we have planned analyzing relationship between contents and motivation, and developing a model based on the analyzed result. In this paper, an experiment has been executed in order to observe a possibility that a relative change of value would have an influence on the brain when the relative change occurs, and to observe whether there are differences between when the value is supraliminal and when the value is subliminal in activity of the brain. By this experiment, we have found that the same part of the brain associated to the value has been activated by both the supraliminal and subliminal values. From this result, we have suggested that even when human beings watch subliminal signals and can't have conviction that they could get a value, motivation has got higher as the same as a situation that they have conviction for getting a value.