Development of Web-based Supporting BBS about Educational Practice for Math Teachers in Junior High Schools

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Abstract
This study was suggested that it was effective as support of educational practice and of the novice teacher to interchange daily educational practice of teachers by using computer network. Then, development of the Web-based BBS system for math teachers at junior high schools in Kobe was considered. The results of this study was mentioned about the interaction of the teachers in trial research and trial system which are a prototype of the web-based system, and the problem of a system.

1 Introduction
In the junior high school in Japan, the government guidelines for teaching with a legal basis are revised, and the education which cherishes "the literacy of daily life" is practiced. On the other hand, the number of time to apply to each subject is reduced with the contents, and devices, such as an assembly of class, are called for for the teacher.

Moreover, in Japan, the number of classes of each school decreases under the influence of a decrease in the birthrate, and the number of teachers also cannot but decrease in connection with it. Although the subject charge system is taken in the junior high school, when becoming one subject with one-person arrangement for some schools, even if he wants to consult about the assembly of the above-mentioned class etc., the teacher who becomes an adviser may not be in near uniquely. Thus, I hear that an adviser is not in near and the shallow teacher of experience including a novice is considered to worry.

A dialog with the others through computer network carries out "Moral Support" by the mentality of the teacher of first duties, and Merseth (1991) is taken as having made the isolated feeling which comes from service mitigate. However, it is supposed that there was no effect in the support in respect of [such as the educational technique] technology. Unlike present, by using a low-speed modem at research ten years ago, and can consider that it was use of the network by mail or the simple electronic bulletin board (BBS). Moreover, in Levin's and others (1994) "Teaching Teleapprenticeships", and Schlag's and others (1997) "TAPPED IN", it is supporting that a teacher grows by making teachers' interaction into a resource, and there is an aim which realizes the interaction of the teachers as preparation for a teacher growing on a network.

Thus, by interchanging educational practice of a teacher using a computer network, when supporting the shallow teacher of experience, it considered that the above-mentioned problem would also go to solution, and it tried construction of the system.

In this study, a trial research, teachers' interaction, a problem of a system generated within the system set temporarily after that, etc. used as the preceding paragraph story are mentioned.

2 Trial Research
In advance of construction of a system, the network availability at junior high school in Kobe. Mathematics teacher who uses a system, and the degree of expectation to a network were investigated.

- A period of investigation: July, 2001
- The method of investigation: A method of questionnaire

Research subjects: 263 persons
Questionnaire recovery rate: 87.4%
The following suggestion was obtained from the result of this investigation.

1. An introduction of software which can be used in lessons using a network is expected. (Fig. 1)

2. The shallow teacher of experience has many teachers who expect the support and the exchange of educational practice on network. (Fig. 2)

Then, based on this result, the trial system was formed on Web and the support and the exchange between the teachers on network were tried.

![Fig. 3 Situation of BBS use](image)

3 Trial and investigation by the trial system

BBS was prepared on Web, and it tried as a trial system, and investigated how exchange of educational practice of a teacher was performed.

- Trial system employment period : December, 2001 - March, 2002
- A period of investigation : March, 2002
- Research subjects : 65 persons
- Questionnaire recovery rate : 78.3%

From the result of this investigation, it considered as follows.

![Fig. 4 System of teacher support](image)

(1) The teacher who referred to BBS or wrote in BBS remained in 16% of the whole. (Fig. 3)

(2) There are many requests which mount material, such as not only BBS but teaching materials and a teaching plan. However, there are few teachers who think that the support and the exchange of educational practice by the network is with only few effect. (Fig. 4)

(3) In order to make the exchange by BBS active, the teacher thinks that it is necessary to reply to telling existence of BBS widely or an interrogative question. Moreover, the situation of this exchange and support was exhibited on the Internet, and, as for whether the opinion of directions other than a teacher is searched for, or it is made teachers' support exchange using intranet, opinions were divided. (Fig. 5)

4 Directivity of Future Research

In a trial system, teachers' communication did not progress, so that it considered, since it was mounting of only BBS. However, as subsequent investigation also became clear, there are not few teachers who expect the support and the exchange of educational practice by the network whether to be effective. Based on the above, the fruit time of a lesson of a teacher in the first place is dedicated to an movie file as a plan of future research, and enabling it to refer to on Web as a database etc. strives for substantial contents including teaching materials or a teaching plan. It can reply to a trouble and consultation of a shallow teacher of the experience to the second, the interaction on educational practice is occurred also to other teachers, and promotion of communications, such as BBS by which practice of a teacher is accumulated, is aimed at. And I want to study construction so that it may become the web-based system which can perform the support for educational practice, and exchange as a whole.

References

