

On Two Problems concerning Education in Information-morality

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One year has passed since the information education started in earnest in Japan. From last April to the present, children at junior high school have learned, without confusion, how to use computers in the course called "Technology and Home". While looking at such a scene at school, I occasionally consider what the confusion till then meant.

I surveyed the teachers' attitude toward information education about four years ago. The questionnaire we made up was answered by about 11,000 teachers at elementary schools, junior high schools, high schools and schools for handicapped children all over the country¹⁾. It reveals that a big change has occurred over the last four years.

Teachers' uneasiness

The most impressive change is connected with the uneasiness of teachers about introducing the Internet to schools. At that time, a lot of teachers felt uneasiness.

For instance, about 5% of teachers were not interested in introducing the Internet into the school and 4% or less did not feel it was necessary at all. So the majority of teachers were interested in the introduction of the Internet, but about 40% had the opinion that it was good for the school

[3] What do you think of giving out an e-mail address?

| Items | Frequency | Percentage frequencies |
|--|---------------|------------------------|
| 1. There should be only one address for the school | 4,081 | 38.4% |
| 2. Should be given to everyone. | 706 | 6.6% |
| 3. Should be given to every teacher but should not be given to students | 1,225 | 11.5% |
| 4. Should be given to those who want one | 582 | 5.5% |
| 5. Should be given to those who want one, on condition that they have completed a short training course. | 3,052 | 28.7% |
| 6. Other | 633 | 5.9% |
| No answer | 358 | 3.4% |
| TOTAL | 10,637 | 100.0% |

to have one e-mail address, as the table showed. It seems to us that their opinions were contradictory. But this seems to have reflected the uneasiness most teachers felt before the beginning of information education.

Of course the causes of their uneasiness are various. The teachers who were not accustomed to the use of computer equipment felt uneasy about the long period necessary to acquire the new knowledge and skills, and expert teachers seemed uneasy anticipating that they would be

deprived of more time by having to manage IT equipment because it would be their regular task. They thought if the information education started their lives would be increasingly lacking in composure though little composure could be found in their lives even at that time. This kind of uneasiness appeared here and there in their answers to the questionnaire.

However, a lot of teachers felt more uneasiness about the problems related to information-morality that children in their class would cause; most of the teachers feared for them because they knew from the news about such cases as the violation of copyright and privacy, harmful information, and computer crime, etc. on the Internet. Some thought the introduction of the Internet was equivalent to introducing the troubles into their classroom.

Certainly there remains the possibility that network troubles may occur, no matter what technology such as filtering is used. So teachers' uneasiness would make them inclined to have a control-oriented opinion that "One e-mail address is sufficient at one school", because if there were only one e-mail address, it would be an easy task to prevent the network troubles beforehand. Teachers, in short, reacted to the troubles which school boys and girls would bring about.

| 学校種 | 教員数 (A) | コンピュータを 操作できる教員数 (B) | 割合 (B/A) % |
|------|----------------------|----------------------------|------------------|
| 小学校 | (390,785) 396,258 | (305,993) 335,078 | (78.3) 84.6% |
| 中学校 | (235,332) 235,375 | (187,985) 200,139 | (79.9) 85.0% |
| 高等学校 | (202,728) 200,981 | (169,949) 174,426 | (83.8) 86.8% |
| 盲学校 | (3,234) 3,219 | (2,601) 2,776 | (80.4) 86.2% |
| ろう学校 | (4,623) 4,668 | (3,684) 3,939 | (79.7) 84.4% |
| 養護学校 | (46,462) 47,964 | (33,693) 37,614 | (72.5) 78.4% |
| 小計 | (54,319) 55,851 | (39,978) 44,329 | (73.6) 79.4% |
| 合計 | (883,164) 888,465 | (703,905) 753,972 | (79.7) 84.9% |

注) 上段 () 書きは、前年度の数値を表す。

According to the investigation at the end of last year by MEXT (Ministry of Education, Culture, Sports, Science and Technology) 97.2% of elementary schools (75.8% in the previous year), 99.2% of junior high schools (89.3% in the previous year), and 99.1% of high schools (90.6% in the previous year) and as a whole 97.9% of schools including those for handicapped children etc. were connected with the Internet. As for the teachers, 59.4% at elementary schools

However, such uneasiness is hardly found now after four years. Of course, there are many things which have supported this change in the teachers' attitudes. The use of funds e.g. to establish many IT devices at school and train teachers in IT knowledge and skills, etc. was useful in wiping out their uneasiness. The statistics show us how great this change in the last few years has been.

(50.7% in the previous year), 41.5% at junior high schools (36.0% in the previous year), 34.4% at high schools (31.5% in the previous year) and as a whole 47.4% of teachers all over the country are assumed to have acquired the ability to teach with IT as the means of promoting information education.

In this way educational informatization at present is supported by the various official policies for IT education and the funds for them and, needless to say, the effort of teachers etc.

But there are of course matters in question too. They seemed to imply a defect which was difficult to understand from the viewpoint of an outsider like me.

In what follows I want to refer to two problems related to the defect that I have experienced in information-morality education for the last several years. It seems important to correct such problems in order to promote the “future” information education.

Definition of information-morality (problem 1)

The social attention to “information-morality” began with the National Standard of Curricula in 1989. This word has been used in some national committees commissioned by MEXT but its social spread depends on the fact that the National Standard adopted the word “Information morality” as one of its key words.

So a lot of people, including me, thought this word strange about four years ago though it seems now to be established in the vocabulary of Japanese. As the mass media took it up, it was gradually accepted into Japanese society, but its meaning was not always so clear. Indeed when I asked anyone about what it means, I received different and various answers, e.g. that it was a rule which applied when digital information was exchanged or that it was a netiquette (the etiquette necessary in the electronic network) and so on.

To tell the truth, information-morality has a definition, though this is not generally known. Such a definition was given in the comments about the National Standard of Curricula on the subject “information” at high school, which stated that “we regard information-morality as ‘the idea and attitude which is the foundation to do proper activities in the information society’”.

This definition seems a little incomprehensible, but its aim is clear, because this definition is supplemented with the following sentences: “The promotion of information-morality means not only learning such rules for dealing with situations as ‘you should not do that’ but also fostering the idea and attitude needed to understand the meaning of those rules correctly and to act correctly even in new situations”. In a word, the main aim of information-morality does not lie in learning various rules whose model is the law, but in promoting a morality which is, so to

speak, the ground of rules.

This aspect is important because the direction of the information education in Japan is indicated there. No other country has worked out the policy of information education like that. However, we can find a problem there too. It was in March, 2000 that this definition was given. So it appeared 16 months after the word “information morality” was used in the National Standard of Curricula. Therefore, most of teachers do not know this definition. Furthermore this was hardly referred to in textbooks for junior high schools or for high schools.

It is not argued that there is a problem only from the academic viewpoint. Certainly, it is not academically permitted for the definition of an important technical term to be given so much later. But I will overlook this respect. It matters whether teachers know the definition, because they are persons in charge of teaching information-morality to children. It doesn't seem that they were informed of the definition after it was given in the above-mentioned comments. It is not too much to say that the definition would be in vain if schoolteachers knew nothing about it.

Naturally enough the government in itself does not teach anything directly. Bureaucrats involved in drafting educational policies do not teach anything either. Needless to say, it is teachers who teach schoolboys and girls. It seems clear that a system in which necessary information is not transmitted to the persons needing it has some defects in itself.

Information distribution (problem 2)

What is described above concerns the theme of information distribution. This is extremely important for information education. Up to now, I have often participated in designing the content and the manual for information-morality education. And I have been made to realize many times how important the information distribution is.

I was engaged in the research, commissioned by MEXT, on information-morality education in CEC (Center for Educational Computing) in 2000. This is the task of making the book “Guidance on information-morality for the use of the Internet”²⁾.

This is a guidance which explains various cases where children are involved in the troubles in the Internet and illustrates some models for the lesson of information-morality in order to wipe out the uneasiness of teachers in charge of information education. This guidance was completed with great pains by the teachers who give advanced lessons in information education, the members of organizations or enterprises supporting teachers and the researchers studying information-morality from all over the country. It was sent to every board of

education and every educational center in every village, every city and every prefecture in spring 2001.

However, when I visited National Center for Teachers' Development as a lecturer in the summer of this year, I had an unexpected experience. When I talked about "Guidance" to supervisors of school education in charge of information education who came together from various educational centers throughout the country, I heard that a lot of supervisors had never seen it. What was sent to centers to which they belong did not reach those who take charge of information education.

In the same year the plan of making the CD-ROM-based "Guidance" was mapped out. So we spent more than half a year to realize this plan and "Training material for teaching information-morality" was completed³⁾. Though the main purpose at first was to digitalize "Guidance", the plan was revised in order to make "Training material" easier to use. After all, it included animations to explain key problems and simulations for virtual experience.



Training material for teaching information-morality

Because "Training material" was recorded on CD-ROM, it was possible to make a large number of copies, so that it was sent not only to all boards of education and all educational centers, but also to all elementary schools, all junior high schools, all high schools and all schools for handicapped children all over the country.

But this material was not necessarily transmitted to many teachers who needed it in the same way as "Guidance". I occasionally get an e-mail from an unfamiliar teacher who asks me how to obtain it.

We can regard these two publications as the most excellent ones for information -morality education now but these do not reach the hands of the persons in charge of information education who have the greatest need of them. They must be left, it might be said, on a shelf or on a desk somewhere.

It seemed that I glanced at a part of the reasons why educational informatization in this country was delayed. When it is necessary to correct the delay in educational informatization, the present system disturbs many efforts to do so. Educational informatization which should aim at the promotion of information distribution is obstructed by the present system which suffers from organizational fatigue.

Human environment

We can understand, for the reasons mentioned above, that the system which promotes information distribution among persons is the most important to advance information education as well as information-morality education. What is called the system here does not mean anything complicated. It means the mechanism whereby the necessary thing is transmitted to the person in need of it, and especially the will or attitude of persons who promote the operation of this mechanism.

It is certain that the informational infrastructure such as the equipment and facilities is indispensable for educational informatization. But we need other things as important as or even more important than them. If there are any defects in the system mentioned above, the informational infrastructure means the same as nothing. As to educational informatization the metaphorical words "light and shadow" are often used, and so we should say that the "light aspect of informatization" can't be achieved only by the informational infrastructure.

For instance, the educational informatization in Singapore is at least five years ahead of that in our country. And the key to success there lies in the human environment rather than the information infrastructure. To advance information education, MOE (Ministry of Education in Singapore) thoroughly educated teachers in the necessary will and attitude. As a result, the plan that teachers should educate with IT in 30% of classes in all subjects can almost be achieved in Singapore. In Japan it is the target in fiscal 2005 to teach somehow with IT in all subjects.

"Light and shadow" in informatization are not the attributes belonging to informatization in itself. Whether it becomes "light" or "shadow" depends on the will and attitude of persons concerned in informatization. The more possibility of "light" in informatization we pursue, the more aspects of "light" appear. The same applies to "shadow". Though an indifferent will and

attitude would increase the aspects of “shadow”, it is impossible for them to expand the aspects of “light”. We should not forget that the aspects of “light” are brought about and supported by such a human environment.

And what is more, we should note that the above-mentioned situation is not peculiar to information education or information-morality education or indeed even to education in itself. We can find the problem of the human environment everywhere.

Notes:

- 1) <http://www.fine.lett.hiroshima-u.ac.jp/enquete/index.html>
- 2) <http://www.cec.or.jp/books/index.html>
- 3) Cf. <http://sweb.nctd.go.jp/kyouzai/index.htm>