

REPORT OF WORKING GROUP 6.: THE IMPACT OF TECHNOLOGICAL DEVELOPMENTS ON TEACHER EDUCATION AND TRAINING, INITIAL AND IN-SERVICE.

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Commission 6 had as its duty to study the impact of new technologies on teacher training.

I will give this report in two parts, first a quick summary of the papers, then a summary of practical points and suggestions in relation to teacher training.

Three papers were presented that approached the problem from widely different angles.

The paper by Mr. and Mrs. Elias, from the University of Lisbon in Portugal, identified technology, not as a discipline in itself, but as an extension of science in all branches, thus making it mandatory for all teachers to get acquainted with it. They have stressed especially the importance of using new technologies in recognizing and analyzing reachable, observable phenomena from our daily experience, tying them with social and moral values. They have reported on a experiment in teacher training showing that integration of the learning experience in real life situations leads to better results.

The paper by Mr. Prince, of the universities of Reims and Paris V in France, was meant as a more thorough critique of pedagogy in its relation to new technologies. He feels that technologies promise a degree of efficiency and productivity that cannot always be proven scientifically. His discussion was therefore more geared towards the epistemological implications of our theme, pleading for a more critical and careful approach of new technologies in education.

Mr. Döbrich, of the German Institute for International Educational Research, discussed the rise of new technologies at the very moment when political and academic decisions are being taken to limit the appointment of new teachers in Germany, where about 170 000 qualified teachers will be unemployed by 1990. Mr.

Döbrich notes, however, that this policy is part of a swing of the pendulum, and that the drastic reduction of new teachers will only lead to a new drastic shortage of teachers, precisely at a time when teachers are so badly needed to introduce the new technologies.

The three papers thus included valuable and interesting perspectives for the discussion. I should note that ten speakers were scheduled for this Commission on teacher training, but that seven of them did not show up. This, however, can probably be explained: M. Döbrich, in his paper, had indicated that teacher trainers positions are not very secure at our universities and that they tend to be taken away by other faculties. The seven speakers, all teacher trainers, who did not show up were probably the living proof of that situation. Happily there were three left.

Now as to the practical items and suggestions in connection with new technologies and teacher training.

Representatives from Belgium, Egypt, France, Germany, Portugal, the United Kingdom; the United States, reported on the situation in their respective countries. The same central items were common to them all, namely:

- a course on new technologies is or should be part of the teacher training curriculum. This course, however, should not be geared towards very limited applications or specialized technological know-how: rather, such a course should encompass
 - an introduction to the vast variety of new technologies, including didactic instruments, audio-visual equipment and computers.
 - the application of problem-solving techniques
 - the application of didactic criteria for efficiency
 - an introduction to the resources, so that teachers know where to turn to for information and evaluation.

It was the opinion of the commission that such a course should be offered by someone who has a large and up-to-date view on new technologies, not by a mathematician or technologist who would not be able to broaden the horizon and view the technologies from an educational angle.

In this connection, the commission felt that all those responsible for teacher training should be involved with new technologies, rather than leaving this to one expert.

However, an expert should be present to advice on ongoing developments and on problems of compatibility and suitability.

- Educationalists should worry about the pedagogical training of the many people involved with teaching about new technologies, especially in the industry, where specialists are constantly involved in training people to work with new technologies. Some didactic input in such training would be most welcome.
- New technologies can be used effectively in the training of teachers, among others in video-observations, in computerized interaction-analysis, and others.

Consequently I shall reflect selectively on what I have read and heard this week in the light of the analysis provided and in terms

- New technologies should solve problems, not introduce new ones into education.

Since Guy Neave referred to cycles of societal change in his paper and since J. Cerych listed some of the lessons to be learned

- Teachers and educators are not video-makers, filmers or programmers: these things belong to other professions in their own right. But teachers and educators need to learn to communicate with those professionals, to express their wishes, to formulate suggestions and demands.

The commission also expressed a deep concern for new technologies that would only profit the educational system in the the rich and industrialized nations, and not in the Developing Countries. Therefore it seems advisable that producers of new educational technologies pay special attention to the optimisation of simple and affordable tools, rather than to spectacular but expensive products. Special attention should also be geared towards the use of new technologies that would enhance the improve conditions in the Third World. These need to be introduced in teacher training programs in such countries, so as to disseminate vital knowledge to the people concerned.

- The commission finally expressed the obvious statement that the quality of education does not depend on new technologies, but on deeper, human factors. The quality of the teacher as such and of the educational system is of foremost importance to success.

To close, may I just mention that Commission 6 was a highly interactive group, with lots of questions, comments and ideas that certainly contributed to excellent working-conditions. In that sense, the theme of the new technologies has provided for old human atmosphere.