

BAYREUTH CONFERENCE

Workshop-Report: Implementing and expanding a reference centre

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Abstract of the workshop "Implementing and expanding a Reference Centre"

In Fibonacci the Reference Centres are responsible for professional development of teachers, material support, adapting material to the existing curriculum, community involvement and evaluation. The workshop starts with three introductory talks:

- i) The requirements and problems that might occur when implementing a reference centre
- ii) How Pollen changed the confidence and attitudes of primary teachers towards teaching science
- iii) How a material centre can service a large number of schools.

In the workshop participants will also discuss the problems they have in implementing a reference centre and try to find ideas to solve them.

At the beginning *Prof. Dr. Petra Skiebe-Corrette* introduced the topic by focussing on the problems that might probably occur by implementing or expanding a reference centre. Four main aspects were pronounced: Professional Development, Material support, Community Involvement, and Evaluation. Referring to the last point *Phil Hingley* presented the results of the Pollen evaluation "*Pollen primary teachers' changing confidence and attitudes over two years Pollen*". As a best-practice example for material support *Ida Guldager* gave the presentation "*Servicing a large number of schools from centrally organized material centre*".

After sharing this knowledge the participants were assigned to in four groups at random: 1) Professional Development; 2) Material Support; 3) Community Involvement; 4) Evaluation

Every member of a group interviewed members of different groups about problems and possible solutions according to her/his subject. After the interview phase the members of each group came together to discuss their collected data and ideas. In addition each group create a poster summarising the collected problems and their possible solutions.

Results of the different working Groups:

Group 1: Professional Development

One of the biggest problems of professional development is time.

How much training and support is needed and do the school authorities support the teachers visiting the professional training sessions? Most of the teachers are afraid of change (e.g. the way they teach) and of new contents. Are professional training courses enough or should teachers be coached after visiting them in their class rooms?

One solution could be more community support, for e.g. by universities or special training centres. Indispensable is the support from education authorities like the Ministry of Education.

Group 2: Material Support

Commercial material needs to be adapted. But the disadvantage is that there will be no support.

The disadvantage when using material from school authority, is the limited chance to change the material

To develop new material is a hard and time-consuming process, which needs experienced persons.

Using every day materials allows allow the pupils to create own problem-oriented experiments, but forces the teacher to go shopping or collecting these materials.

Group 3: Community Involvement

To involve the community it is important to know, who is the stake holder concerning your aim and who should be asked.

Industry is a difficult partner. Due to time-limitations it is not easy to arrange extra-curricular activities.

An internet portal with information and details about the school activities (e.g. in classes, on excursions) will give potential supporter an idea, what they could offer.

Using problems of everyday life in classes makes it is easier to find a place for extra-curricular activities.

A good way to involve parents is to arrange "IBSME summer camps".

A flexible curriculum (just guidelines) would allow more excursions.

Group 4: Evaluation

The problem is that there are too many ways to evaluate and too many topics one can focus on. What should be evaluated? Which method should be chosen? In what period should the evaluation been done? Should it be an institutional or a national evaluation?

Before starting an evaluation the aims should be set and a consulting an expert is helpful.