

## Changing classroom environment and culture - Case study

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The contribution continues the research presented in (Kubínová, Mareš & Novotná, 2000). It focuses on the analysis of concrete situations in two classes taught in different ways by different teachers in the past but taught by one teacher at present. The differences in students' behaviour, teacher's approaches and results achieved by students are diagnosed. It is shown that even if the teacher who wants to implement the change from instructive to constructive teaching, is sufficiently qualified, has long-term experiences with constructive teaching strategies and has no obvious external obstacles for implementing their plans, has to be open-minded and respect students and their prior experience.

When studying questions related to using constructivist approach to teaching (mathematics) we use variety of methods: longitudinal evaluation of teaching effectiveness by comparison of periodic testing of parallel classes, direct observation of the milieu of the classroom and analysis of teaching strategies, the teachers accounts of their own classroom experience, analysis of audio/video recordings of lessons and children's written work. In the school year 2000-2001 we face a singular opportunity. One of the authors teaches mathematics in two parallel classes of the ninth grade (students are age 14). In one class she has been teaching for five years and using constructivist teaching methods (the SC type class in Kubínová, Mareš & Novotná, 2000). She has never taught the other class before. It is well known that previous teachers taught in an instrumental way.

Our research is in accordance with the ideas about powerful learning environments from (De Corte, 2000). "... the teacher becomes a 'privileged' member of the knowledge-building community, who creates an intellectually stimulating climate, models learning and problem-solving activities, asks provoking questions, provides support to learners through coaching and guidance, and fosters students' agency over and responsibility for their own learning." From our experiments it is clear that the teacher's role is crucial, the teacher has to understand and respect the situation in each individual group of students, it is not possible to transmit the methods and forms of work which were successful with one group of students to another without any modifications, however it is possible to use experiences gained with one group of students to organise work in another group.

### References

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