

**Vocational Education Teacher
Training for the Implementation of
“Reflection Learning”**

**– A Case Study of a Successful GTZ
Implementation in Serbia, including a
Road Map for Starting Reflection
Learning in Other Countries -**

**Report to
German Technical Cooperation (GTZ-
CRYSTAL)**

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Explanations and Definitions (<i>German expressions in italics</i>) used in Teacher Training in Serbia	
Annual Didactical Planning (<i>Didaktische Jahresplanung</i>)	Interdisciplinary planning done by all the teachers in one vocational class at the beginning of the school year
Case Studies (<i>Fallstudien</i>)	Complex situations in business administration to be tackled by teams of students
Cooperative Reflection Counseling (<i>Kollegiale Praxisberatung</i>)	Counseling approach used for giving feedback to teachers
Economics, Business Administration, Accounting and Office Work (<i>Wirtschaftswissenschaften</i>)	Focus of the training offered in this course using five different modules
Modules	Key areas of teacher training covered in this course
Future Lab (<i>Zukunftswerkstatt</i>)	Teaching method developed by R. Jung to bring out creative potential in people
Key Qualifications (<i>Schlüsselqualifikationen</i>)	New requirements to be met in the labor market such as the ability to think in functional matters, to plan precisely, to anticipate difficulties and to implement solutions that truly respond to problems
Life Skills (<i>Handlungskompetenzen</i>)	Competencies acquired in this course dealing with subject matters, people and one self
Method Manual (<i>Methodenhandreichungen</i>)	An array of practical tips for using reflection-learning methods during this course
MT (Moderator or moderator team)	One or more teachers who organize teacher training
Question-related Methods (<i>fragend-entwickelnder Unterricht</i>)	Teaching method which will focus on methods using questions and answers in cooperation with students
Reflection Learning (<i>Handlungsorientierung</i>)	New approach in vocational education based on whole cycles of learning. "Reflection Learning", as it is used in this report here, refers to learning processes that are relevant for learners, that stress comprehensive and joint planning in groups, and that produce planning strategies that take concrete actions and finally evaluate the results.
Scenario Technique (<i>Szenariomethode</i>)	Teaching method that can deliver pictures of future situations
Self-organization	One of the three pillars of the program apart from teamwork and combining theoretical and practical aspects of teaching
Simulated Enterprise Offices (<i>Lernbüros</i>)	Simulation of work in a wholesaling company
Supervised Trial-run Teaching Situations (<i>Gruppenhospitationsunterrichtsbesuche</i>)	Teaching experiments of teachers in their schools in the presence of teacher trainers and peers
Teacher Functions (<i>Lehrerfunktionen</i>)	These are besides teaching counseling, educating, organizing, inventing and grading
Teaching Observation Sheets (<i>Unterrichts beobachtungsbogen</i>)	Worksheet for taking notes during teaching experiments

Abstract

This case study was written after having worked in Serbia in vocational education teacher training for three assignments spread over almost 12 months. The material for this case study is based on my own training material, training strategy and feed back from the participants as well as on my own observations of the teachers in my workshops.

It outlines my strategy of carrying out teacher training in Serbia, provides the material used in the teacher training and describes the three steps taken in a five week program – a two-week teacher training seminar, followed by two-week trial-run teaching situations in various vocational schools in Serbia and finished off with a one week teacher training seminar for future teacher trainers.

This approach illustrates a comprehensive package of training interventions with the focus being on the implementation of Reflection Learning Practices (RLPs) in schools. Reflection Learning stands for learning processes that identify problem situations that are relevant for learners, stress comprehensive and joint planning in groups and come up with strategies that take physical action and finally evaluate the results.

The case study first focuses on the Serbian experience and then drafts a roadmap for running these kinds of programs in other countries. The case study provides the complete set of training materials used in the five-week training program in the annex.

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“Reflection Learning” – An Experiment with a New Training Approach in Serbia (Executive Summary)

The approach described here in vocational education teacher training for the implementation of reflection learning in Serbia stretched over a period of one year. It was delivered in three steps in a five week program – a two-week teacher training seminar in April 2003, followed by two-week trial-run teaching situations in various vocational schools in Serbia in May 2003 and finished off with a one week teacher training seminar for future teacher trainers in March 2004.

The first workshop was a 10-day training course in a modular approach. The principle of reflection learning was used in a hands-on approach based on many examples from best practices of teachers in vocational schools and delivered through action-oriented methods. The workshop focused in four modules on didactics, methods, communication techniques in class and on grading and making assessments in reflection learning situations.

The teachers came from the 18 pilot schools of the Ministry of Education (MoES)- GTZ project “Reform of the VET-System in Serbia” and had been selected by MoE and the respective school directors based on their own expression of interest.

The second workshop in May 2003 focused on trial-run teaching situations in 9 of the 18 pilot schools of the MoES/GTZ project in Serbia “Reform of the Vocational System in Serbia”, which took the same group of 18 participants into the day-to-day work of “reflection learning” (or in Serbian: “aktivna nastava”) lesson planning in commercial schools in Serbia.

The whole workshop took place over a period of 2 weeks. In the morning of each day of the workshop a different pilot school was visited and one lesson (ranging from economics, business administration, commercial correspondence, accounting to Serbian language) was carried out by two participants. The rest of the group watched the lesson and after that the lesson was discussed with the whole group by reviewing the main principles of planning and carrying out the lesson as well as by looking at lesson alternatives. After each lesson the method of “Cooperative Reflection Counseling” was used for giving feed back to the teachers.

The principle of “reflection learning” was the guiding principle and the teachers in those 9 vocational pilot schools delivered this new way of teaching through action-oriented methods. This 10-day workshop in May apart from the trial-run teaching situations now also dealt with using different kinds of media (such as the Internet, stock market games, business games, films etc.) in different class situations in commercial education.

The third workshop in March 2004 - after the Ministry of Education and Sports (MOES) in Serbia had selected a number of teachers for future teacher trainers – emphasized looking at additional skills for teacher trainers. The focus in this one week workshop was threefold:

- To deepen the understanding of didactics for commercial lesson planning and get to know more didactic planning tools;
- To jointly prepare trial-run teaching situations and carry them out in schools and in micro-teaching (=in the presence of other teacher trainers and not in school) situations;
- To systematically get tools to evaluate, assess and also grade trial-run teaching situations.

The whole five-week approach was developed with a specific focus on active participation of all the participants, and the principle of learning by teaching in so-called “Trial-run Teaching Situations (TRLS)” was a key element in the workshop design.

Detailed training materials in a modular approach were developed and used in the workshop settings. The key in spreading out the approach was to use some of the 18 participants of the workshop group to go back into their schools and “ignite” the interest in Reflection Learning Practices in their specific schools. After each step of the workshop sequence, the participants suggested follow-up steps to be taken to spread out the approach to the participating pilot and other interested schools.

Evaluations and workshop appraisals showed very strong appreciation and satisfaction with the approach on the side of the participants. This can also be said by the moderator of this three-pronged workshop strategy when it comes to workshop participation and reflection learning practices in trial-run teaching situations.

However, it should be made clear at this point that teacher training is always an ongoing process and even a stretch of five weeks in teacher training can only be looked upon as an appetizer and making a good start. This is why for the further implementation of this approach in Serbia as well as for trying it out in other countries a roadmap should be followed that takes up some of the learning experiences in Serbia and also emphasizes;

- Preparing teachers and trainers systematically for their jobs in schemes in vocational education and training in schools (in-service) and universities (pre-service),
- Designing new learning environments in vocational education and training that allow for more independence on the side of the learners, flexibility on the side of the program planners and relevance when it comes to curricula and learning materials,
- Make school-based vocational education more practical,
- Setting up national institutes of vocational education and training, and
- Integrating “life-long vocational training” in the institutional framework for vocational education teacher training, and learning in general.

1. Problem Analysis - the Challenge of Reflection Learning in Schools of Vocational Education and Training vis-à-vis a Changing World of Work

Teachers and trainers in vocational education and training do not operate in the vacuum and splendid isolation of our vocational schools. Employers, especially in the last 10-15 years have called time and again for teamwork and improved communication skills in the work place. These are proven factors in labor productivity improvement in companies, so it is only natural that firms have called for them in vocational education and training. It is not the “hard skills” of e.g. memorizing the four components of a good marketing-mix are, but the “soft skills” of developing marketing concepts in a team and defending them against a number of competent fellow students/colleagues. This kind of learning stresses comprehensive learning: planning, carrying-out, monitoring and evaluating. This new style of learning now practiced in industry has impacts on learning in vocational education and certainly also in teacher training for vocational education.

But it is not only the employers that have changed their way of looking at vocational education; it is also our students in vocational colleges who have different expectations when they come to our schools. It used to be that one program in vocational education and training would be enough for a whole lifetime. A little training and retraining could always be done on the job. This has changed dramatically.

Today, new technical as well as commercial and IT-contents come up almost every year, and the need for recurrent training -if not for second or third job careers - is omnipresent. The solution for many vocational students is to learn how to organize themselves and to organize their own vocational learning and look for teams and patterns of self-organization.

To my own surprise as a teacher and trainer with more than 20 years of experience, today's students sometimes come with up with far better solutions than we anticipate. That is not because previous generations of vocational students were not as smart as this one, but because current students in vocational education have discovered the enormous potential of teamwork and individual self-organization, and we as trainers are beginning to think more along those lines, too.

These new insights by employers, students, trainers and also curriculum developers have led to a vast restructuring process in vocational education in general and the issues – relating to teacher training - are:

- Focusing on the relevance of in-service teacher training programs in vocational education for students, employers and teachers themselves;
- Forgetting the spoon-feeding of our own teachers and instead helping teachers to take their own process of learning-and-becoming-teachers into their own hands;
- Combining theoretical and practical aspects of teaching in learning situations that have real-life importance and are fun;
- Making use of team work in teacher training and turning it into a powerful tool for teachers in their vocational schools;

- Developing new “ways of learning” and setting up new "cultures" in grading and testing, since new testing systems should be consistent with new training systems and compatible with training.

The above-mentioned key problems in teacher training will be addressed in this paper by suggesting a new way of “Reflection Learning Practices (RLP)”, and it will be shown in this paper how they have been tackled in the vocational education teacher training programme in Serbia - in what I believe - a very creative and innovative way.

2. What are “Reflection Learning Practices (RLPs)” and why should we Train our Teachers in that way!

“Reflection Learning” is a new approach in vocational education and training which is based on whole cycles of learning. “Reflection Learning” as it is used in this report here refers to learning processes that are relevant for learners, that stress comprehensive and joint planning in groups, and that produce planning strategies that take concrete actions and finally evaluate the results. This "Reflection Learning " cycle has a number of new challenges especially for us as trainers.

Three reasons for using “Reflection Learning” are given here, looking at it from the aspect of the clients of vocational education, the students, from the aspect of who is going to implement it, ourselves, the teachers and taking a demand-driven view, looking at why the employers like it.

Why is Reflection Learning recommended for students?

The only safe prediction that can be made with regards to future job profiles is that they will change. Present professional job know-how gets obsolete in ever shorter periods. The pass-outs of the vocational training programs cannot always immediately come back and join the training system for another half year. So the key aspect is to qualify them to organize their own learning-on-the-job and prepare them for life-long learning. They need to learn technical and vocational contents without too much dependence on a trainer. Since students have to learn how to organize themselves, trainers and teachers must learn how to teach with a minimum of guidance.

Simultaneously with the introduction of new technologies, the labor markets are calling for new “key qualifications”. Subsequently in the past, this has led to a misunderstanding that by taking up the new technical contents (such as e.g. pneumatics, electronics, CAD/CAM or CNC) as training topics in vocational schools, the challenges of the employment system would have been answered by the training system adequately. But soon it had become clear that by focusing on technical issues only without major innovations in the training innovations this would result in “the sale of old wine in new bottles”.

In a way, in lecturing, the student was expected to learn the training essentials under conditions which can be compared to students expected to learn driving a car by continuously remaining in the passenger seat during training!

Reflection learning methods on the other hand do put the student in the driver's seat and the use of innovative methods in training young people is therefore a very crucial point that must be combined with new technical contents.

Why Reflection Learning is recommended for teachers and trainers?

For teachers and trainers working in advanced training with a high pace of innovation it will become more difficult to stay abreast with their students in terms of technical know-how. Recurrent further training for trainers will not solve this dilemma completely, because the learning ability tends to fade with growing age.

Thus, it is more important to keep pace with new developments in didactics and methodology of vocational education and training. Changing his/her role from a lecturer dispensing information to a moderator of team work (holding some of his/her information back) offers the chance that students make technical progress even beyond the technical know-how of the teacher. To the surprise of the trainers who start using this methodology the results of some teams are sometimes much more sophisticated than expected by the trainer. This is due to the mental potential of teams. As in quality circles, the success of the team does not depend mainly on the technical expertise of the trainer.

As long as it was regarded as normal that an engineer or an economist lectured on his technical know-how and that his/her audience just memorized what he/she said and demonstrated, the mastery of methodology meant that the trainer was able to lecture. His/her ability to make students understand was less valued than the high level of technical or economic know-how. In order to generate the broader learning effects of modern vocational education and training, however, the trainer's capabilities in coaching often matters more than his/her technical expertise.

Furthermore, in Reflection Learning, teaching and training are no longer limited to teaching and lecturing only, but other teacher and trainer functions, such as counseling, educating, organizing, grading and innovating become an integral part in each training program for teachers and trainers.

With conventional vocational education and training, for too long, we made our students develop a brain that acts like a computer with a small processor and a huge memory, but what they actually need to succeed in today's world of work (as much as we need in our computers) is a brain with a much bigger processor unit while the memory capabilities could be much smaller!

Why Reflection Learning is wanted by employers?

Employers have realized that the nature of technical know-how for solving enterprise problems has changed:

- The ability to think in functional contexts now matters more than knowing vast amounts of isolated details,
- Systematic and analytic approaches towards new problems are more appreciated than experience with old patterns, and
- Precise planning and anticipated trouble-shooting has become more important than quick trial and error actions when the problem occurs.

The lecturing of information (“spoon feeding”) in connection with testing the memorizing ability (“pseudo applications”) produces an employee who is poorly prepared to meet the present job requirements in modern sectors of industry and the whole service sector offering maintenance and repair.

The new kind of training in both schools and enterprises originates from the way quality circles operate in industry. The transfer to the field of training was boosted and promoted by employers who were no longer satisfied with the human training product which the conventional training system offered to them. In other words: the changing labor market requirements forced the training system to follow. And, this is not only true for Germany, where these new approaches have been developed, but also makes a lot of sense in development projects, where reforms in vocational education and training are tackled, for example in Serbia.

3. A Case Study of a Successful Implementation of Reflection Learning

3.1. The Setting of Vocational Education in Serbia

In Serbia, after the political transformation in October 2000, the main problem in vocational education and training seemed to be the transition from vocational education and training into the labor market, indicating enormous demand-supply mismatches. On the one hand there was irrelevant vocational education and training providing school leavers only with insufficient skills and competencies, and on the other hand there was the labor market, with its precise demands, skill requirements and competencies. Both systems seemed to exist parallel to each other and were not trying to match these different expectations.

Directly related to the problem there was evidence that vocational education and training in Serbia was not demand-oriented enough and that it was also too theoretical, which can be seen in the more than 500 professional profiles in the country and also in vocational curricula of all kinds.

The qualification of teachers and trainers in vocational education and training in Serbia with respect to methods, content and technology is outdated and developments of the last 10 years, for example in Europe, have not yet been incorporated in Serbia. Pre-service teacher training as a means to prepare future teachers for the variety of tasks in vocational education does not exist in Serbia.

On the other hand, there is a high demand for qualified people in the private sector as well as in public administration, who will be able to actively participate in the transformation process and who will possibly be helpful in starting new businesses in Serbia's transitional economy as well as supportive in improving the competency level of the country's labor force in the field of administration.

The German Technical Cooperation (GTZ) is currently working very closely with the Serbian Ministry of Education and Sports (MoES) in the reform of vocational education and training by:

- supporting MoES in restructuring VET in Serbia,
- gearing VET programs in selected regions towards growth sectors with employment potential and
- enabling selected institutions to develop demand-oriented programs in commercial education and qualifying teaching staff and trainers.

These initiatives cover the development of closer linkages with enterprises in services, the bank and the wholesaling sector. National and regional bodies that equally focus on the relevance of the supporting ambience for vocational education and training have been started.

So far, in particular, commercial apprenticeship programs, curriculum development following the DACUM (Developing a Curriculum) approach, and teacher training programs oriented to the introduction of reflection learning methods have been started and 18 pilot schools all over the country have been selected to implement the first wave of these reforms.

The teacher training component provided the basis for this case study of a successful implementation of Reflection Learning practices. For this specific teacher training programme 18 teachers from the 18 pilot schools had been selected for this workshop. They came with a variety of special subjects such as economics, business administration, accounting, mathematics, business law, commercial correspondence and Serbian language, which they taught in their own schools.

3.2. Description of the Approach Taken in Serbia

The vocational education teacher program in Serbia as described here lasted four weeks in two blocks of two weeks each (one in April and one in May 2003).

The first two-week block covered work in a seminar on the first four modules. The second two-week block dealt with the fifth module and with trial-run teaching situations carried out by 2-3 teachers and group observation by the rest of the teachers and took us all over Serbia to 9 different cities in 10 days.

The five modules were:

- Module 1: How Do I Define My Own Didactic Concept in Business Administration and Economics?
 Module 2: Selecting Methods that Fit Me!
 Module 3: Professional Communication – How Do I Implement This in Class?
 Module 4: Making Assessments and Judgments as a Teacher, Promoting Students and Supporting Colleagues
 Module 5: Media – Useful Implementation of Learning Devices in Commercial Education

Each of the five modules covered 10 units of 90 minutes (4 units of 90 minutes a day) and spread over a period of 2 ½ days, so that the first 4 modules could be offered in the first two weeks of the seminar. For a more detailed list of the modules see Annex 1: Module Work. There was a big “group homework assignment” after the completion of the first two weeks, which was the preparation of the trial-run teaching situations within the setting of the second two-week training programme.

The fifth module was offered in the afternoons of the second block with the school visits, the trial-run teaching situations and the subsequent discussions taking place in the mornings in different schools all over the country.

Table 1: Organization of Teacher Training

Days/Weeks	Week I	Week II	Week III	Week IV
Monday morning	Module I, Unit 1 and 2	Module 3, Unit 1 and 2	School A: School visit, trial-run teaching situations and discussion	School F: School visit, trial-run teaching situations and discussion
Monday afternoon	Module 1, Unit 3 and 4	Module 3, Unit 3 and 4	Module 5, Unit 1	Module 5, Unit 6
Tuesday morning	Module 1, Unit 5 and 6	Module 3, Unit 5 and 6	School B: School visit, trial-run teaching situations and discussion	School G: School visit, trial-run teaching situations and discussion
Tuesday afternoon	Module 1, Unit 7 and 8	Module 3, Unit 7 and 8	Module 5, Unit 2	Module 5, Unit 7
Wednesday morning	Module 1, Unit 9 and 10	Module 3, Unit 9 and 10	School C: School visit, trial-run teaching situations and discussion	School H: School visit, trial-run teaching situations and discussion
Wednesday afternoon	Module 2, Unit 1 and 2	Module 4, Unit 1 and 2	Module 5, Unit 3	Module 5, Unit 8
Thursday morning	Module 2, Unit 3 and 4	Module 4, Unit 3 and 4	School D: School visit,	School I: School visit,

Thursday afternoon	Module 2, Unit 5 and 6	Module 4, Unit 5 and 6	trial-run teaching situations and discussion Module 5, Unit 4	trial-run teaching situations and discussion Module 5, Unit 9
Friday morning	Module 2, Unit 7 and 8	Module 4, Unit 7 and 8	School E: School visit, trial-run teaching situations and discussion	School J: School visit, trial-run teaching situations and discussion
Friday afternoon	Module 2, Unit 9 and 10	Module 4, Unit 9 and 10	Module 5, Unit 5	Module 5, Unit 10

The five modules were structured according the following line of thinking:

Module 1: How Do I Define My Own Didactic Concept in Business Administration and Economics?

Training work in didactics in Serbia put the teachers into the situation of students and encouraged them to develop lessons that are age and school career appropriate. For example, the "Economic Principle" as a subject was presented differently in an apprenticeship class for future wholesalers clerks in Serbia than in a class for full-time commercial college students.

In the training programme, curricular content in Serbia was always translated into lesson topics that strongly interested and stimulated the particular students: For example, which lesson topic is more likely to motivate learning: "The Equilibrium Price in Quantitative Theory"? Or "The Price Does it – We are Setting a Sale Price for our own Students' Newspaper" - after the students have been through planning, designing, advertising for and preparing the lay-out of their own newspaper in previous lessons in economics and business administration!

Questions that teachers in this session had to address were:

- How do students learn and what needs to be done to support this?
- What is the general vocational and educational mandate of my school?
- Where may the students have been exposed to specific contents before this lesson (e.g. teaching marketing implies thinking about - before the lesson - where the students have been exposed to it already and then finding good examples accordingly)
- What is the relevance of this specific topic for my students in their future? For example, when I teach the contract of sale, how does this relate to my students in apprenticeship classes or full-time students who have never had work experience?
- How can I make content very concrete and tangible? What should the examples look like and how do I structure the lesson so that my students are motivated?

- What maybe a teacher's (also hidden) agenda in defining content, for example in economic policies such as the comparison of economic systems in Serbia ?

The development of the didactical concept of each trainer was an essential part in the training workshop and received a very high importance. In a way, all the other later essentials have a supporting function for this one.

Module 2: Selecting Methods That Fit Me!

The objective of this essential was to build up methodological competencies in teachers by presenting different kinds of methods that can be used in teaching in commercial schools.

In doing this teachers are viewed as moderators in learning processes for self-organized team work and the teacher's job as a coach is to make sure that permanent communication takes place among the participants.

The Serbian teachers perceived the content of this field of learning "methods" as an experienced work form, in other words saw methods in their training program as carried out by their teacher trainer. This is considered particularly important, because methods are believed to be used better after having seen them in operation first before attempting to use them in one's own setting.

In particular, the teachers worked on what is considered the basic repertoire in teaching in vocational education:

- Phasing a lesson;
- Using group and partner work in a class comfortably;
- Motivating different groups of learners;
- Preparing different kinds of learning arrangements;
- Steering class activity;
- Offering patterns of learning; and
- Reflecting and debating together with vocational students.

They were also exposed to increasingly sophisticated methods such as case studies, projects, and moderation cycles.

Module 3: Professional Communication – How Do I Implement This in Class?

Studies in Europe show that it is still the case in vocational schools that 60-80% of all the words said come from the teachers rather than from the students. It is no wonder then that some students graduate with communication deficiencies.¹

¹ Of course, communication skills are also dependent on many other things, such as class and educational level of parents.

Therefore, also in this course in Serbia it was regarded as very important that teachers reassess their own communication competencies and come to a professionalization of their communication skills in the light of the above. Reflection and diagnosis competencies of teachers were also supported in this essential.

The objectives in this essential were to

- Learn to be able to take a role in discussions;
- Structure the tasks;
- Listen actively and carefully;
- Divide into groups and design meaningful tasks for each group;
- Provide and receive feedback; and
- Summarize results in groups.

When referring to professional communication, it is always better done than talked about. This is why communication exercises were also offered here in a variety of situations. In this essential, teachers were also increasingly exposed to more process oriented communication methods such as, for example, working comfortably with the tool of a future lab.

Module 4: Making Assessments and Judgments as a Teacher

Every one of us has had the experience in school of how painful it could be when we felt that our teacher did not grade us correctly! This is why particular emphasis is placed on dealing with making judgments and assessments as a teacher in Reflection Learning.

In this essential the Serbian teachers learned how to put together written tests and check achievements in

- Learning;
- Methodical; and
- Social competencies.

In this essential structured help was also given to them as to how to

- Set up tests covering the same topics for different age groups;
- Cover all the competencies laid out in the previous lessons;
- Deal with the aspect of turning competency achievements into “gradable” tasks;
- Return tests with a maximum of “learning” to all the students in the class.

However, it is not only the grading for Reflection Learning that they learn: at least as important seems to be learning how to support and promote those students who have not done so well. Special emphasis is given to ways to deal with under performers in vocational classes and how to get them back into the “main stream” of learning.

In other words, teachers in Serbia learn how to put together written tests, grade them and return them to their class following certain guidelines. They also learned how to develop alternative grading procedures, for example when it comes to making assessments about group or project work. And they developed criteria on how to assess and judge reflection learning of their students, using qualitative criteria in measuring different competencies.

They learned about typical misjudgments of vocational teachers, and they learned how to prepare written reports about students and how to defend them in grading conferences in their schools.

Module 5: Media – More Than Just Learning Devices

In the training course the use of media in commercial schools is derived from their usefulness and necessity for learning with vocational students. Media are considered useful and necessary, when the following criteria are met:

- Media are tools in a process of getting students to learn better;
- Media are no means in itself;
- Media can be used to shape the problem analysis in a lesson;
- Media can be used to better visualize solutions and show transfer of competencies gained in the lessons; but also
- Good media usage alone never makes good teachers!

In principle, media should be selected or prepared by the trainees themselves (if possible). The content of this essential is *how* and *when?* to use media such as blackboards, overhead projectors, information sheets, school books, flip charts, even the Internet and others. Using media is considered to be part of our job and every teacher should be comfortable using his repertoire of them.

In the second part of the teacher training program video was used in school to tape case study teaching situations and discuss them afterwards vis-à-vis the following video usage criteria for trial-run teaching situations, such as:

- Organizing recognizable phases in teaching;
- Setting up learning arrangements for the students;
- Communicating with students;
- Using different strategies to make students participate;
- Promoting competencies in teaching situation;
- Dealing with disruptions in class;
- Relating with the students (such as appreciation and understanding).

3.3. Lessons Learnt

Looking back as a moderator of this training workshop, I would like to point out the following few things.

First, it was striking to see how important the first module –didactical analysis - was for all the participants and how we always kept coming back to it in the whole training program like a red thread.

Secondly, most of the used teaching methods were new to the participants and therefore created a lot of interest, especially after seeing them being used in the seminar itself. The question of how the methods could be used in the Serbian vocational schools was always answered with a lot of examples given by the participants. A kind of an “eye-opener” in this respect (for the participants as well as for me) was the use of the future lab method in structuring future teacher training program for teachers in commercial education in Serbia. This phase showed how much (hidden) creativity there was and how well those teachers active and present in this seminar knew what kind of activities needed to be taken .

Thirdly, assessment of reflection learning techniques was covered in the fourth module and many practical examples were given. However, it became clear in the coursework of that module and it was also mentioned late in the participants’ evaluation that much more of assessment techniques were needed in future teacher training for the implementation of Reflection Learning.

In the trial-run teaching situations of the third and the fourth week, the quality of the lessons presented was generally good. Many lessons seen had already all the dimensions of reflection learning processes in them. It was particularly interesting to see the students enjoy their own teachers’ new approaches in practice and as a result their (maybe higher) motivation to learn, because simply they (the students) were so much more involved in their own and learning process. This has been pointed out to me by a number of interviews, which I conducted with students after the trial-run teaching situations.

The public interest (newspapers, radio, TV and local politicians) was there wherever we showed up with our “teacher training on the road”. However the downside of that is that the public expectations in Serbia might have expected too much too quickly. Teacher training is not something that gives instant results in 2x2 weeks. It may change attitudes and might send teachers on their own learning curve, but this of course was only a first “appetizer” and sustainable structures of teacher training will still have to be set up later.

3.4. Results from the Participants’ Evaluation

Participants’ evaluations were made after each two-week course. In general, both courses were very much appreciated by the participants. According to the participants’ evaluation, the following things were said about the first course:

- very comprehensive modular approach;
- commercial contents chosen were very appropriate for VET teachers in Serbia;
- chosen methods were interesting and their application became always immediately visible;
- 100 % active teaching;

- learning to learn and teach in a different way;
- useful and applicable for teaching in VET schools in Serbia;
- completely new;
- realization of reflection learning is absolutely possible in Serbia;
- perfect also in teaching Serbian language, literature and foreign languages;
- constant feedback to our school work: Can you use it in your teaching process?
- worth trying!

The second leg of the four-week programme was as appreciated as the first one. By being put in trial-run teaching situations, participants remarked that they

- Gained significant experience on how reflection learning can be implemented in vocational schools;
- Approved of tailor-made seminar structure to the current state of vocational education in Serbia;
- Were able to experiment with reflection learning techniques in schools;
- Reached an interesting public by drawing lots of attention to reflection learning experiments in schools;
- Needed curriculum changes for better integration of reflection learning;
- Gained confidence to work as a change agent in their own schools;
- Wanted much more of the same.

3.5. Spreading out the Approach – Working with the Trainers

The key in spreading out the approach was to use some of the 18 participants of the workshop group to go back into their schools and ignite the interest in Reflection Learning. After the first training program in Serbia, the workshop group - in a participatory planning exercise - suggested the following next steps to be taken to spread out the approach to the participating pilot schools, which were then carried out immediately:

- Information of other teachers about reflection learning methods in 18 pilot schools through teachers' conferences;
- Plan group school visits, practical teaching sessions and seminars in May 2003 for the same participants in 9 selected pilot schools;
- Translate relevant German literature on reflection learning;
- Carry out similar seminars – with the workshop participants being the moderators at their own schools - for other teachers from pilot schools;
- Select multipliers for training of teacher seminars (ToT);
- Organise ToT seminars;
- Provide insight on German teacher training through a study visit to Germany;
- Organise e-mail chat rounds for multipliers for exchange of ideas.

The second workshop in May 2003 was followed by these steps that the participants agreed upon:

- Plan a sequence of one-day workshops to be held in September and October at the pilot schools to be held by those teachers that will be selected by MoE;
- Draft articles for the monthly journal of MoE on selected issues of reflection learning and reflection learning principles, to be done by selected participants from this workshop and supported by GTZ;
- Select multipliers for training of trainer seminars (ToT) ;
- Organise ToT seminars with those moderators selected by MoE, carried out by Michael Axmann;
- Think about a handbook for “reflection learning” lesson planning, (to be done jointly among Michael Axmann and moderators by the end of the year).

3.6. Making the Approach Sustainable – Organizing Training of Trainers (ToT) Workshops

In the following months most of the initiatives mentioned in 3.5. were pursued and the idea of introducing reflection learning practices in vocational schools got more and more popular also at the level of the implementing schools and the Serbian translation of reflection learning “Aktivna nastava” became a household word and much discussed issue in Serbian vocational schools.

In a third step (after the first two initial workshops in 2003) the Ministry of Education and Sports (MOES) in Serbia selected a number of teachers who had undergone training in the previous workshops to now turn them into teacher trainers. In March 2004, these future teacher trainers got a further training workshop, in which they were prepared for their new tasks.

The focus in this one week workshop was threefold:

- To deepen the understanding of didactics for commercial lesson planning and get to know more didactic planning tools;
- To jointly prepare trial-run teaching situations and carry them out in schools and in micro-teaching (=in the presence of other teacher trainers and not in school) situations;
- To systematically get tools to evaluate, assess and also grade trial-run teaching situations.

More training for the future teacher trainers will have to come and the MOES is currently thinking about ways and means to turn this into a long-lasting new initiative. It will be interesting to see, how the Serbian government will maintain reflection learning practices in its vocational schools in the future and which mechanisms it will set up to meet this goal. One positive side effect will certainly be coming from the currently planned National Institute for Vocational Education and Training, which is intended to have one department entirely focusing on in-service teacher training.

4. Defining a Road Map for Starting Reflection Learning elsewhere – it will work!

At this point some readers might say, this works in Serbia and it also did in Germany, but there is no guarantee that it might work elsewhere. There is a number of reasons that it might work anywhere, but there are also a few prerequisites that need to be observed before running teacher training programs in reflection learning.

4.1.Organizing Reflection Learning with Teachers – a Joint Effort

On the following pages a set of recommendations will be given that might serve as guidelines for setting up similar programs in vocational education and training elsewhere. However, they would have to be further analyzed and specified for each individual country pursuing them.

- I. Prepare teachers and trainers better for their jobs, by:
 - ✓ Setting up pre- and in-service teacher facilities for future teachers in vocational education and training,
 - ✓ Helping teachers and trainers to take their own process of learning-and becoming-teachers into their own hands,
 - ✓ Combining theoretical and practical aspects of teaching in learning situations that have real-life and real-work importance,
 - ✓ Emphasizing a legal and didactical framework in teacher training and the joint role of vocational schools, vocational education teacher training institutes and enterprises in teacher and training of trainers, and
 - ✓ Making frequent internships and/or initial apprenticeships in enterprises mandatory for vocational school teachers.

This could be done by using new and innovative approaches in teacher and instructor training in vocational education and training and should also be supported by strengthening the school management of vocational schools and colleges in countries interested in making those changes. It should always be supported both on the university level (pre-service teacher training) and the school level (in-service training) and it should be kept in mind that this usually does not show immediate results.

- II. Design new learning environments in vocational education and training that allow for more independence on the side of the learners, flexibility on the side of the program planners and relevance when it comes to curricula and learning materials, by:
 - ✓ Qualifying students in vocational education and training to organize their own learning-on-the-job,
 - ✓ Designing flexible and short cycles of training schemes that directly respond to training needs,
 - ✓ Seriously shifting the role of the teachers and trainers away from lecturing towards coaching, and

- ✓ Trying to make curriculum development and the design of learning materials a joint process between ministries, training institutes, vocational schools and associations of enterprises.

This could be done by putting out vocational students more in the “driver’s seat” of their own learning e.g. when it comes to dealing with complex tasks such as designing marketing concepts or planning routines for CNC machines. Vocational education and training has been for too long of a time been like teaching our students how to drive without ever putting them in the car. This is clearly a whole rethinking process of what vocational education and training should be all about and it does not happen over night.

III. Make school-based vocational education more like general education in many ways, by:

- ✓ Making the content in vocational schools more general,
- ✓ Ensuring that young people learn how to solve problems, work in teams, be enterprising and creative through the way they are taught,
- ✓ Introducing more soft skills such as languages and communication skills,
- ✓ Providing sufficiently wide skills,
- ✓ Ensuring that young people get direct opportunities to learn about the nature of the economy and the world of work, and altogether
- ✓ Making vocational education and training (VET) tracks less of a dead end.

This could be done for example - such as in Serbia – by working with Simulating Enterprise Offices, SEOs in vocational education and training. These SEOs are simulation processes where students are guided through a process of actually setting up small businesses and developing products and services.

IV. Set up national institutes of vocational education and training for better:

- ✓ Adapting the vocational education and training system to the needs of the knowledge society,
- ✓ Supporting efforts to the transparency and employability of VET,
- ✓ Updating initial and continuing vocational training e.g. by developing new vocational qualifications,
- ✓ Developing scenarios for future development of vocational education and training, and
- ✓ Conducting vocational training research with a view to identifying correlations between technological and labor market developments.

This could be done for example by looking at organizational structures and task descriptions of similar national institutes. One could also make cross comparisons of recently established institutes of vocational education and training for example in certain transition countries such as Hungary and Slovenia and look at their institutional set up and draw lessons for other countries in the region interested in setting up similar cases.

- V. Integrate “lifelong vocational learning” in the institutional framework for vocational education and training, by:
- ✓ Emphasizing “learning to learn” skills in vocational education and training,
 - ✓ Focusing on team work capabilities,
 - ✓ Mobilizing resources for making lifelong learning opportunities more widely available,
 - ✓ Ensuring collaboration among a wide range of partners and stakeholders,
 - ✓ Developing policies for the recognition of all forms of lifelong learning, including informal and distance learning, and
 - ✓ Designing guidance and counseling for lifelong learning.

This could be done by looking at some national systems in vocational education and training that take these reform initiative into consideration. Some countries currently working on this include Germany, Austria, Switzerland, Denmark, the Netherlands, and Australia.

If and how this can be integrated in schemes of vocational education and training and skills development also in developing and transition countries to become “bridges to further and life-long learning” will have to be seen in individual planning processes in countries willing to experiment with this.

4.2. Trial-run Teaching Situations and Counseling

One of the keys to successful in-service teacher training on the teaching level are Trial-run Teaching Situations (TRTS). Without them no teacher training is true and my hypothesis is that no changes will happen at all, unless TRTS are applied. This is why they are mentioned separately here as a “key ingredient” for successful implementation of reflection learning.

TRTS can be done in a number of different setting. In Serbia they were carried out by groups of 2-3 teachers and were held at their own schools in the presence of the directors of the schools, interested teachers from that school and other schools, and in the presence of the teacher training group.

The important thing is that they are always “teaching experiments”, where the teachers had the right to show where they are at in their development of reflection learning processes and yes, they had the right to make mistakes.

TRTS in Serbia followed certain rules. Setting up and following up on these rules is also highly recommended for other country settings. The teachers, prior to the teaching situation, hand out a written preparation to all the participants. Different ways of written preparations for TRTS exist. The preparations are in writing and must always include some remarks about the specific class, the objectives of the lessons, didactical and methodological explanations for that specific lessons and literature used.

Observing participants should watch carefully and take notes for the following discussions of the trial-run teaching situations. Taking notes can either be done individually or using a format for recording trial-run teaching observations, which is attached as Annex 2.

When correctly practiced, trial-run teaching situations give invaluable quality feedback to teachers that will enhance their learning and give orientation to their improvements as vocational teachers.

My experience in Serbia showed that TRTS lost some of their "exam character" due to this frequency and varied settings, and hence teachers in the course of the two-week programme became more relaxed about them and looked at them more as learning opportunities.

This is positive, because the real learning takes place in the counseling situations after the case-study teaching situations! Up to this point the teachers have planned and carried out a lesson and now they are open to feedback. Feedback can be given in many different forms and it can also be done in different settings. It is of utmost importance that – in the course of this counseling process - the teacher gets into the position that she/he comes to realize alone what to do differently next time. Once again, if only giving advice here is practiced (instead of counseling!), then teachers will only accept this advice for the duration of the TRTS and will not change habits.

If, on the other hand, the teachers feel comfortable in these peer situations, then they may themselves come up with their own observations, like: "The students were so passive in participating. Do you think that could relate to my planning things too much, instead of involving them in the planning process more?" These kinds of questions occurred more and more in the course of the teacher training programme in Serbia and more so in the last week after the group found out that this kind of counseling was good for all of them.

If this is the conclusion of a talk at the end of TRTS, the teachers have learned indeed much more than by having received tons of advice by more experienced teachers of what to do better in this or that situation!

4.3. Evaluation Mechanisms by Teacher Trainers - Continuous Improvements

In this chapter, some monitoring and evaluation mechanisms will be described that can be done to improve and assess the quality of teacher training, some of which have been done in Serbia. In a way they can also be seen as a way of quality control, rounding off a whole package of teacher training..

“Jour fixe”

The “jour fixe” is a regular meeting of all the teacher trainers and a way of giving feedback among the teacher trainers and providing a forum for ongoing work.

For example, half-day meetings could have the function of critically monitoring the ongoing training cycle and providing a forum for discussion. For each jour fixe, 4-6 teacher trainers can sign on as responsible moderators; they are in charge of clarifying the agenda with their colleagues, moderating and documenting outcomes. Meetings could focus on, e.g.:

- Implementing new legal framework for teacher training into daily work;
- Identifying training needs for teacher trainers; and
- Developing identical criteria for good lesson planning and implementation.

Further Training Programs for the Teacher Trainers

Training programs could focus on e.g.:

- Learning how to do improve “Cooperative Reflection Counseling”;
- Working with new media (Internet, Multi-media);
- Developing special learning promotion programs for weaker students;
- Using scenario techniques and future labs comfortably;
- Identifying “creative ways” to release organizational duties in schools

These training programs could take place outside the schools, and outside experts help. They take place a minimum of once or twice a year and last a weekend or a couple of workdays.

Preparing New Teacher Trainers

Assuming that there would be something like a career path in becoming a teacher trainer, these people would usually need training in order to be equipped to carry out all the tasks of a teacher trainer competently.

A typical preparatory training for new teacher trainers, for example, could consist of 4-6 hour sessions each, for example in:

- Developing criteria for a “good” teacher trainer;
- Discussing and implementing counseling situations after trial-run teaching situations;
- Dealing with feedback;
- Accompanying written theses by junior teachers;
- Writing final reports for our teachers; and
- Assessing in an exam situations

Evaluations by Teacher Trainers and Students

This evaluation can always be done on a voluntary basis by teachers who have been through the program. Teachers should describe their points of view, their experiences

and their suggestions for future changes of the program. I personally consider participants feedback as a way of continuously improving teacher training courses. This is way I asked two of my teachers to give one. A flashback by two former trainers in my work in Serbia is given in Annex 4. The same could be done with students who ‘experience” their teachers, when they come back form teacher training and are sometimes surprised to see what the training has done to them and how it will affect their new learning situation!

Annex 1: The Five Modules of the Teacher Training Course

Module 1: How Do I Define My Own Didactic Concept in Business Administration and Economics?

1. Introduction of Participants and Expectation Check
2. Presentation of Course Work and Literature and Development of Criteria for Good Lessons
3. Developing Topics in Our Lessons
4. Lesson Preparations under a Perspective
5. What is a “Didactical Analysis” in Economics?
6. Didactical Work in Concrete Learning Situations
7. Competencies and Qualifications – Where are the Differences?
8. Structural Analysis for Lessons and Developing Guidelines for Observing Lessons
9. Micro-Teaching: MT Carries Out a Model Lesson in Marketing
10. Group Analysis and Discussion about the Micro-Teaching Experience

Module 2: Selecting Methods that Fit Me?

1. Gathering Methods for Lessons and Presentation of a Specific Case Study
2. Case Study “Industrial Enterprises in Competition”
3. Contd.
4. Contd.
5. Discussion about the Case Study and its Usage in Schools
6. Didactical Annual Planning and the Implications on Methods
7. Introduction into Simulated Enterprise Offices
8. Planning of an Enterprise Visit with a School Class
9. Working in a Simulation (Part 1): Working with Fictional and Real Enterprises
10. Working in a Simulation (Part 2): Division of Tasks in Simulated Enterprise Offices

Module 3: Professional Communication – How Do I Implement This in Class?

1. Professional Communication – What is that?
2. A 5-phase model of communication ability and its first Phase: “Developing rules for our daily work in commercial classes!”
3. Second Phase with an Info-Market-Place introducing the four main departments of a whole sale company
4. Third Phase with Station Briefing for the Management of a Model Enterprise
5. Argument Stations in Enlarging the Product Range of a Model Enterprise
6. Short presentation of more complex communication models and introduction into a Future Lab with the Topic: Teacher Training in Serbia
7. First Phase of the Future Lab: The Critique Phase
8. Second Phase of the Future Lab: The Phantasy and Utopian Phase
9. Third Phase of the Future Lab: The Realisation Phase

10. Discussion of Transfer Potential of these Experiences into our Schools

Module 4: Making Assessments and Judgments as a Teacher, Promoting Students and Supporting Colleagues

1. Analysis of formal curricula for the Assessment of Achievements in Commercial Education
2. Development of Assessment Criteria for Crediting Reflection Learning
3. We develop Class Testes in Reflection Learning!
4. and Return them to our Class!
5. Assessment of Oral Contributions in Reflection Learning
6. Assessing Group Work
7. Self-assessment by Students – is that possible at all?
8. Cooperative Reflection Counseling Part 1: Problem in Teacher Training Using Group Synergies
9. Cooperative Reflection Counseling, Part 2: Carrying out a Cooperative Reflection Counseling Session with the Group Participants
10. Assignment of Trial-run Teaching Situations and Explanation of “Homework” for the second two-week workshop

Module 5: Media – Useful Implementation of Learning Devices in Commercial Education

1. Overhead projector, Black Board and other Media in Commercial Education
2. Preparation of a Strategic Game in Economics (POLIS) using Videos and Production Forms
3. Didactical Annual Planning after POLIS
4. Varieties of Working with School Books in Economics
5. Using Films in Classes of Business Administration
6. The Personal Computer in Vocational Education
7. Commercial Correspondence and the Internet
8. Dealing with Students’ Expectations and Media
9. Working with a Stock Market Game in Commercial Education
10. Preparation of a Stock Market Game in Serbia

Annex 2: Form for Recording Trial-run Teaching Observations

Trial-run Teaching Situation Observations with Ms./Mr.	
On	Lesson
In	Topic
Class	

1 Planning the Lesson

Class Situation

Didactic Decisions

- Selection of Content
 - Reduction
 - Setting priorities
- Objectives
 - Interdisciplinary
 - Competency-based
 - Oriented towards real life and employment
 - Educational

Process Planning

Intended Students' Independence

Articulation

Work Forms

Media and materials

Learning Success Control

Innovative Potential

**Conclusion for Planning Competency:
Didactic Competency**

2. Implementing the Lesson (Content)

Recognizable Phases

Independent planning of students

Shaping out objectives

Independent carrying out by students

- Appropriate level for students
- Content correctness
- Setting priorities
- Oriented towards real life and employment

Independent assessment by students

Learning Success Control

<p>Conclusion for Implementation Competency (Content):</p>

2. Implementing the Lesson (Methods and Communication)

Learning Arrangement
(Training, Lecture, Project)

Social Class Activity
(Group, Individual, or
Partner Work)

Didactic Function (Exercise,
Transfer, Application, Control etc.)

Patterns of Learning

Communication Competency

- Communication structure
- Clarity and Style
- Modulation

- Division of communication between students and teacher

Media and material usage

Student Participation and means to make students participate

Conclusion for Implementation Competency (Methods And Communication):

3. Teacher Activity

General Behavior/Activities
(Security, Calmness etc)

Promotion of

- Self-orientation
- Methodical competency
- Learning competency
- Social competency
- Morale
- Communication competency

Activities in disruptions

Educational competency

Relation with the students

- Appreciation
- Understanding
- Emotions

**Conclusion for Teacher's Activities:
Pedagogical and social competencies**

Annex 3: “Cooperative Reflection Counseling” (*Kollegiale Praxisberatung*) – Discussing Trial-run teaching Situations Using Group Synergies

In the Serbian teacher training experience Cooperative Reflection Counseling was structured in six phases plus an agreement both at the beginning and at the end. The agreement at the beginning set the tone for the counseling and identified seating arrangements, promised total discretion and agreed on the moderators.

In phase 1, the trial-run teaching group always has the first shot at looking back at the lesson and explain the thoughts the group had prior to starting the lesson, what went as planned, what went well and what not so well.

In phase 2, the audience responded. In this phase only positive feed-back was allowed.

In phase 3 the trial-run teaching group seeking counseling got other feedback from the rest of the group. The participants could give all kinds of feedback and they could also refer to more formal remarks about didactical and methodological issues that they might have written down during the lesson, e.g. also on their observation sheet (Annex 2). It was very important in Serbia that the trial-run teaching groups got plenty of chance to respond especially to the more critical remarks.

Phase 4 raised other perspectives and multiple meanings that resulted from the problem layout. The participants came in with sentences like: In your position I would ...; I make the hypothesis that ...; I have a wild thought ...etc.

It was important in this phase that everything went and nothing was forbidden!

In phase 5 the whole team developed alternatives. Helpful were sentences like “I as the teacher, ... student, ... teacher trainer, ... director, ... mother, ... chamber of commerce representative would do ...”. The group was supposed to come up with a lot of alternatives and new patterns. The trial-run teaching group should then pick out what suited them best and also gave a feedback to the group.

In phase 6 the group decided what was good for them in that situation and which alternative were to be taken over in their future repertoire for reflection learning teaching. In Serbia, we found out that a role-play trying out these new habits at the end of this phase was good for exercising new patterns before going out into school routine again.

The final agreement was always helpful for the teaching team, because a certain degree of commitment was made. A sentence like “I am going to try it out and I will let you know next time!” was good when it was wrapped into questions like:

- Who does this with whom?
- What exactly do I want to do?
- How do I want to do it?
- When and where will I do it?

Annex 4: Flash Backs

Looking Back and Looking Ahead, Danica Koncar, Kula Commercial School, Serbia

I was one of 18 participants in the 4-week seminar „Reflection Learning – Didactics and Methods“ which took place in two legs, one in Kikinda, Serbia from March 1-13, 2003 and the second one in 9 different cities in Serbia from May 12 –23, 2003. Michael Axmann was our teacher trainer.

My previous work experience as a teacher can also be summarized in two phases: after visiting the Faculty of Economics in Belgrade and working in departments of accounting and controlling in my country, I started my job as a teacher in a commercial school, where I have been teaching different subjects such as accounting, business administration and economics.

Being a teacher for me has always meant to be more than just being a lecturer. During the seminar in Kikinda I got some practical advice on how to implement this more directly. The main question that we addressed in Kikinda was how to carry out reflection learning processes and make it meaningful to the students and to us.

The main thing we learnt in the four weeks was how to actively “ignite” the learning in our students and how to support it in teams with other teachers and with other subject matters.

We were exposed to quite a number of new teaching methods which were shown in different settings for a variety of topics and group working forms. In Kikinda, for the first time I heard out about essentials in being a teacher in commercial education and also about involving different subjects and covering not only our own narrow view of being a subject teacher. We had lots of interesting discussions about Reflection Learning and it turned out that the majority of the group was willing to experiment with Reflection Learning. In the first part of the seminar we also looked at ways of grading our students in Reflection Learning processes.

The second part of the training was particularly interesting, but also quite stressful. In a way, the last 2 weeks were a continuation of the first part, where we all had to actually teach specific lessons in our own schools with the rest of the group sitting in the class. The trial-run teaching situations

took place in 9 different cities all over Serbia and were, in a way, an exam situation for all of us.

The lessons had been prepared by previously formed groups of 2 or three teachers who had chosen their favorite class situation in their own schools and their own topic. The teaching situations were followed by the rest of us. After each trial-run teaching situation we came together for a group counseling situation in which the teacher trainer and a moderator chosen from among ourselves together with the rest of us pointed out the positive things as well as those things that could still be improved.

This after-lesson-analysis gave each of the participants the opportunity to learn more about the different aspects of planning, carrying out and evaluating lessons in schools. Competent planning was proven by taking into consideration the very conditions of each class, setting appropriate objectives, reflecting on didactical issues, using appropriate methods, bringing in media that would correspond to the lesson plan and finally choosing work and social forms of interacting in class that were suitable to the students with a focus on bringing out their (the students') creative potential.

*Each new day added a new aspect. At the end of the four-week training program every participant had got started thinking about changing their view of teaching commercial subjects towards **encouraging our own students in problem solving and helping them in their own way of finding solutions for real-life and real-work problems.***

It was a pleasure working in this seminar with our teacher trainer and with my colleagues. Part of the wonderful working atmosphere was taken home into our own schools when in my own school I invited a number of my colleagues to three trial-run teaching situations, after which we had very interesting discussions on how to make Reflection Learning the standard way of teaching and working in our schools.

SIX MONTHS LATER . . . Ćurčić Dragana, Secodary school of Economics and Trade, Bečej, participant of the seminar Reflection-learning, Didactics and Methods

The school year 2003/2004 is in the progress and I have been analysing every single minute of my class as I have never done before.

Have I motivated my students for their assignments?

Are the examples I have been using suitable for their age?

Have I attained the aim of the class?

I often wander if I learned enough during the seminars. I think I did, at least for the beginning.

Do I need more 'theoretical knowledge' besides my experience? Perhaps I do, since these things cannot be separated!

My school is among 18 schools which participated in the pilot programme 'business administrator'. This programme was supported by the Ministry of Education and Sport, as well as GTZ, the German Technical Cooperation, an organization for technical collaboration. A series of seminars were organized for the teachers of these schools. I attended the seminar managed by Mr. Michael Axmann.

The seminar consisted of 2 parts.

1st. part: April 1st – April 13th, 2003. 'Theoretical part' which definitely was not long-winded presentation.

2nd. part: May 12th – 23th, 2003. A visit to 9 schools in which we gave lectures we prepared in advance.

The participants of the seminar were mostly professors of vocational, economic subjects.

Being a professor in mathematics and not being accustomed to the exact content of the seminar, I was worried whether I would be able to fit in since it was not 'my field'.

The aim of the theoretical part of the seminar was achieving the desired results through work. Each workday was divided into 4 parts, each lasted 90 minutes. In the first 15 minutes of each part we listened to the introductory part of the lecturer. He would set a particular problem, then at least one method referring to the work with students, and the remaining part was for us. We experienced things which we did not expect. Noone told us how to activate students – we were activated ourselves.

We were divided into groups trying to work out the solution of a particular problem. We realized that it was easier to work in groups or at least, in pairs although in our schools we were taught to work individually. All the time I expected evaluation of our work and further instructions (such as 'try something else', 'it is better if you', 'perhaps you should'). In the first couple of days I thought that our work was not graded because we were not accustomed to a new situation, but later I realized that we were not supposed to be graded at all. The point is that we have to find a solution ourselves, to estimate what is good and what is bad in our work, to find a way to active teaching.

That is why I found the second part of the seminar well-organized and interesting. It was a sort of checking of what we had learned. Once again, we were divided into pairs, according to our interests. We were given several weeks to prepare a class and to perform it in front of the students. As we had expected, it turned out to be the most difficult!

Where should we start from? Although I have had a lot of experience in teaching, I had problems in choosing the appropriate topic and adopting it to knowledge and abilities of the students. After the class everything seemed to be much easier. We had 9 classes in 9 towns. Each class was analysed. I think I learned most in the second part of the seminar. First of all, I learned to listen to the others, to hear about their impressions of the classes.

Although the participants of the seminar were not familiar with the content of my class (because of the subject I teach), they were able to follow my teaching. The same thing happened to me during their classes. There were a lot of suggestions how to improve a class, to approach a new working method or a topic. There were some objections too, but they were well-intended. No one expected to give a perfect class. We are aware that in Germany one has to study two more years after they graduate in order to become a professor.

I would also like to mention the problem of grading and modular teaching. I sometimes still have difficulties with the first one, but we did not discuss this problem in details since we ran out of time. Modular teaching is not regulated by law in our country. However, I think it is a very important prerequisite for successful implementation and application of active teaching.