



Tampere Polytechnic University of Applied Sciences

# TEACHERS' EDUCATION CENTRE

Development Project in Teachers' Education

## Training the Trainer

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## SUMMARY

Training the Trainer -course material in English was developed for an industrial company in Vaasa for its international part-time customer trainers. The reason for this was that the company wanted to improve its courses that had been earlier varying both in their quality and in the results of learning and thus there had been unsatisfied customers in the courses. Also the company plans to create a global network of training centres, so there is a need to be able to standardise the quality and the results of training activities.

We applied qualitative methods for the data gathering in our development project because there were a limited number of participants in the courses so far, and thus applying quantitative methods would not be justified. We decided to use qualitative methods also because we wanted to have rich and reliable data for our work.

We studied established knowledge from literature and from our studies. i.e. our course material, discussions with our teacher, co-students and our project team.

Thus the training material is firstly based on theoretical knowledge about how training should be done and what things one should take into account. The second point is the existing reality in the company's training environment. Material is also strongly based on practice: the training environment in which the actual work is done, the students and their natural way of learning.

After introducing trainers to this material we gathered experiences and feedback. It was quite obvious that already in this phase the material had succeeded. In numbers the effect was quite enormous, ranging rose from 0,75 in the old courses to 4,5 in the new courses. The trainers experienced that they were provided with new tools, had time to plan their courses, the courses were structured and had a clear goal and they received a realistic picture of the preparations and the arrangements.

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## TIIVISTELMÄ

Vaasalaiselle teollisuusyritykselle kehitettiin englanninkielinen kurssimateriaali, minkä avulla kouluttaa kansainvälisiä osa-aikaisia kouluttajia hoitamaan työnsä mahdollisimman hyvin. Syynä tähän hankkeeseen oli se, että yritys halusi kehittää kursejaan ja koulutustoimintaansa, jonka tulokset olivat aiemmin vaihdelleet sekä opetuksen laadun, että oppimistulosten osalta, mikä puolestaan oli johtanut siihen, että osa asiakkaista oli ollut tyytymättömiä järjestettyihin koulutuksiin. Yritys myös suunnittelee perustavansa globaalin koulutuskeskusten verkoston, joten on olemassa selvä tarve sille, että koulutustoiminnan laatua ja toimintaa koulutustilaisuuksissa pystytään standardoimaan.

Kehittämistyön pohjalle tarvittavaa tietoa kentältä hankimme käyttäen laadullisia tutkimusmenetelmiä. Tämä valinta oli perusteltu, koska koulutustoimintaan osallistujia oli tiedonhankinta-aikaan vielä rajallinen määrä, jolloin tilastollisten tutkimusmenetelmien käyttäminen ei olisi ollut perusteltua ja toisaalta myös siksi, että halusimme saada mahdollisimman rikasta ja luotettavaa aineistoa kehittämistyöhömme hyödynnettäväksi.

Tämän ohella tutkimme kirjallisuudesta saatavia tietoja ja käsitteistöä sekä hyödynsimme opiskelustamme kertynyttä kurssimateriaalia. Tämän ohella koostimme ideoita, tietoja ja kokemuksia opettajamme, muiden kurssilaisten ja työryhmämme sisällä käymiemme keskustelujen perusteella.

Laatimamme koulutusmateriaali pohjautuu ensikädessä teoreettiseen tietämykseen siitä, miten koulutustyö tulisi tehdä ja mitä asioita siinä pitäisi ottaa huomioon. Toinen asia mihin työmme pohjautuu, on yrityksen sisäinen ja ulkoinen toimintaympäristö, joka on osaltaan määrittämässä miten koulutustyö juuri tässä yrityksessä pitäisi tehdä. Koulutusmateriaalimme on siten myös vahvasti ankkuroitu käytäntöön: ympäristöön, missä varsinainen koulutustyö tehdään ja opiskelijoihin, heidän taustatietoihinsa ja kokemukseensa sekä heidän luonnolliseen tapaansa oppia.

Sen jälkeen kun kouluttajat oli perehdytetty laatimamme materiaalin käyttämiseen, keräsimme heiltä kokemuksia ja palautetta. Oli selvästi havaittavissa, että kouluttajat olivat saaneet uusia työkaluja käyttöönsä, heillä oli nyt aikaa suunnitella kursejaan, kurseilla oli selkeä rakenne ja tavoite, ja että kouluttajilla oli nyt realistinen kuva tarvittavista valmisteluista ja järjestelyistä.

Kurssipalautteet olivat nousseet vanhojen koulutustilaisuuksien saamasta arvosanasta 0.75, uusien koulutustilaisuuksien arvosanaan 4.5.

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## **1 BACKGROUND FOR DEVELOPMENT PROJECT**

An industrial company ordered from our project group a course material in English for its international part-time customer trainers. The material is being used as the course material for the company's Training the Trainers course. The material should be based on established pedagogical theories, be well documented and practical.

The company wants to improve its courses. The reason for this is a negative feedback it received for its product course in November 2005.

The companies own sales people have criticised the very fluctuating quality of the courses due to the part-time trainers' different pedagogical skills, language skills, training materials and methods. The part-time trainers experience they are unprepared for the task and in need of new solutions in their training sessions.

In the company history training has been a duty of every expert. The task should be done beside their main tasks. Training received a negative reputation because the experts were forced to give trainings they were not prepared for. Often the information that they should train customers came so late that it was practically not possible to be well prepared for the task. No training material existed and every expert had to make his own materials. They did not know if anybody else had done a similar material that could be re-used or slightly modified.

The result was most often MS Power Point presentations that the trainer showed to the audience whether they were interested in the content or not and whether they learned about the subject or not.

The industrial company wants to change its training culture and ordered the Training the Trainers course material as one of the tools used for this aim. The company has once earlier arranged a course in this subject for its part-time trainers without any good material.

## 1.1 The objectives of development Project

The industrial company aims to build training centres in other countries, i.e. a global trainer's network, standard course modules and materials that supports the trainers in its subsidiaries. The Training the Trainer course is being offered first in Finland, but the company has also customers in many countries abroad, and it needs to train these trainers to advice and educate customers to use its products properly and efficiently.

In order to meet this demand the company has to use many trainers to do this work. Thus our task is to provide material by which the trainers that do this job can be trained to do their tasks properly. Now the precise task of our team is to prepare material: **how to instruct the trainers so that they could do their work properly?**

The basic work is done to fit the Scandinavian countries due to a similar culture and atmosphere. It should be remembered that when applied in other cultures this material should be localised.

## 1.2 Methodology for field work

Our team had two meetings where we considered, discussed and evaluated various methodologies that we could use in this particular development and research setting. Our problem was how to make sure that we will get reliable, valid and rich data?

We concluded that normal research approach, i.e. methods that would use statistical testing of hypotheses would not be usable because there would not be so many participants or observations if you like, that we could have been able to compute even statistical basics.

Secondly, our interest for data was raised from practical needs, so also the data had to come directly from practise and represent customers and trainer's opinions, experiences, conceptions and evaluations from the existing reality.

The development of trainer's already existing operations and practises that they use needs to have a good and rich data on which we can trust and thus base a successful

development work in our project. So, it seems to be justified to look at qualitative research and data gathering methods.

According to Hirsjärvi, Remes & Sajavaara (1997, 165) qualitative research approach fits quite perfectly to our needs since it builds on following principles:

1. Research should include as many aspects as possible and the research data will be gathered in real life situations.
2. Human is the main instrument of data gathering.
3. Inductive analysis will be preferred, researcher aims to discover unexpected matters. Starting point is not existing theory or testing hypotheses, but rather multifaceted and detailed examination.
4. The use of qualitative methods in data gathering, i.e. interviews, observations, discussions.
5. Data will not be gathered by sampling, but rather by the real need for information.
6. Research plan is organic and it will find its form during the research, and the research should be carried out with flexibility and plans can be changed by the context or circumstances.
7. Cases are understood as unique and data should be researched according to that principle.

If there is only a small amount of observation units, then there is a good reason to stay in qualitative methods (Alasuutari 1995, 214). Also this is the case with our development work. There is a limited number of trainers and customers who are involved with the training work and thus to be included to our work. So it is possible to have personal contact with nearly all of them, and also to get the answers directly from them than to gather data by sampling. The company in our development work used earlier questionnaires to gather feed back from its training, but there were nearly none questions concerning the content of the training. Of course we will use the information that is restored to these questionnaires to the extent that it gives us valid information and thus helps us to understand and interpret.

Qualitative research helps us to understand the research object (for example Company or customer) and to explain its behaviour or the reasons behind its decisions (Heikkilä 2002, 16). The company's formerly used questionnaires don't give us this kind of information, so we must adapt qualitative methods. For our development work to be successful we need to get as close as possible to valid data.

### **1.3 Evaluation**

Formative Evaluation is a bit more complex than summative evaluation. It is done with a small group of people to "test run" various aspects of instructional materials. For example, you might ask a friend to look over your web pages to see if they are graphically pleasing, if there are errors you've missed, if it has navigational problems. It's like having someone look over your shoulder during the development phase to help you catch things that you miss, but a fresh set of eye might not. At times, you might need to have this help from a target audience. For example, if you're designing learning materials for third graders, you should have a third grader as part of your Formative Evaluation. (Evaluation.)

Summative evaluation provides information on the product's efficacy (its ability to do what it was designed to do). For example, did the learners learn what they were supposed to learn after using the instructional module. In a sense, it lets the learner know "how they did", but more importantly, by looking at how the learner's did, it helps you know whether the product teaches what it is supposed to teach.

Summative evaluation is typically quantitative, using numeric scores or letter grades to assess learner achievement. (Evaluation.)



## 2 KNOWLEDGE BASE FOR THE DEVELOPMENT PROJECT

### 2.1 Constructivism

There are many conceptions from how a human being learns. Engeström (1994) divides these concepts into four categories:

1. human learns by reacting into stimulus in a certain manner, learning is weakly conscious
2. human learns by imitating after teacher has shown model how to do a certain thing or task
3. try-mistake learning, learner knows the task and the goal, but the principle by which the problem could be solved is unknown
4. In the highest level of learning the learner is conscious and oriented to his/hers learning. Learner forms already in the beginning a picture of the whole that is to be learned.

There are also two different strategies in learning: surface-strategy and deep learning-strategy Engeström (1994). The surface-strategy is strongly related to the three first levels and the deep learning-strategy is related to the last category.

The target group or learners of our case company are adults. This means that most of them have long working experience thus they also have a quite large pre-existing knowledge of the subject, have good educational basis and also up to date information of the latest advancements in their fields of expertise.

In this kind of situation it is not justified to try to use any of those three first categories. We recommend that the fourth category should be used. Learners should be provided with information that they can use.

The prevailing social constructive conception of learning is encouraging teaching that is flexible and uses actively learners own strengths, so the learner will be responsible for his/hers own learning process (Eloranta 1996, 178). Also experimental learning (Kolb 1984) has been found out to improve the results of

learning, because the learner can reflect the substance of teaching to his/hers own experiences.

**Some principles in constructivism are:**

- new knowledge is learned by using formerly learned knowledge
- social interaction has a important role in learning interpretation and understanding is done by many different ways and in this situation good interaction helps to create a shared understanding
- understanding is emphasised in learning
- learning is dependent on situation
- learning needs to have shared responsibility and social support (Kero, Leskinen, Mielonen, Piha, Vehkomäki 2004, 48).

**A constructivist teacher:**

- understands the subject and the skills it needs that he is teaching
- understands and supports the different learning styles of his students
- knows the theoretical substance of learning and teaching processes so that he is able to continually improve his plans of teaching and reflect his own actions and thus be able to direct his own and students attention towards goals
- understands the meaning of social interaction
- masters the skills of social interaction (Kero et. al. 2004, 48).

When world around us is more and more rapidly changing and thus the substance that we have learned transforms to inadequate, then the skills of learning come even more important. One must have skills that help him to learn in any given situation and substance (Kero et. al. 2004, 49). In this respect the learning that is done in work settings and teaching done by real work life experts has a great advantage from applying these principles.

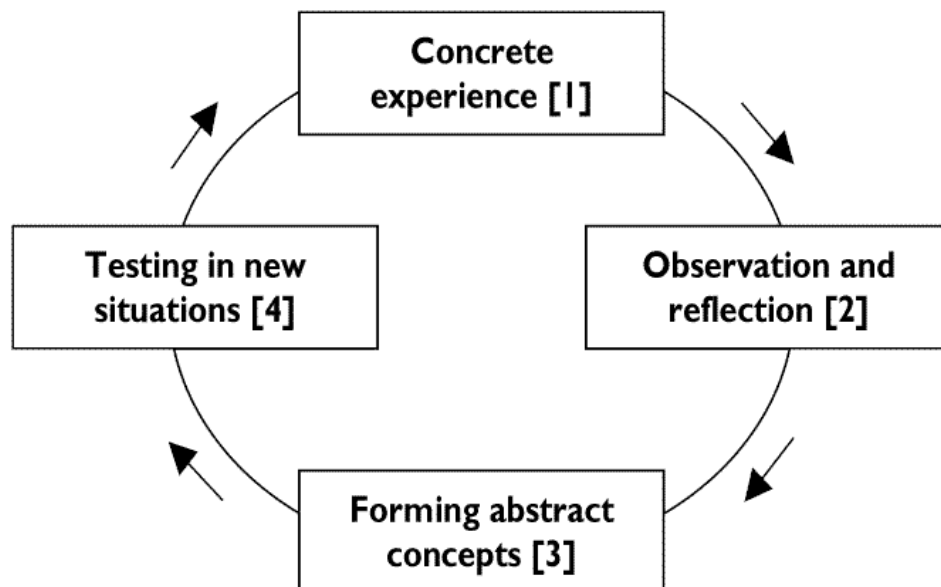
Feedback is also an important part of learning. It gives the student possibilities to interpret and make assessments from his skills and make judgements about his own solutions. This process is very important because it fosters learning. (Rauste-von Wright & von Wright 1997.)

We apply constructivism because the students are adults with working experience. The theory fits the demand that the adult students have when coming to courses their employer has sent them to.

## 2.2 David A. Kolb's experiential learning theory

While searching an appropriate learning theory for our purposes we took into use David A. Kolb's theory of Experiential Learning. His model bases on his wide experience of adult learning. He is interested in the nature of individual and social change, experiential learning, career development and executive and professional education.

This model is made up of four elements: concrete experience, observation and reflection, the formation of abstract concepts and testing in new situations.



Picture 1. Kolb's cycle of experiential learning. (Kolb's learning cycle 1996.)

According to Kolb learning can begin at any one of these four points and it continues step by step as a spiral. A concrete experience is the basis for observation

and reflection. The learning process often begins with a person carrying out a particular action and then seeing the effect of the action in situation. The second step is to understand these effects in the particular situation so that if the same action was taken again in the same situation it would be possible to expect what would follow from the action. The third step is to understand the general principle under which the particular situation happens. An adult or educator who has learnt in this way may well have various models of acting in different situations. (Kolb 1984, 21–22.)

### **2.3 Brain Based Learning**

You have different types of memory based on how long you want to retain a fact or recollection. Short-term memory is just like it sounds: it operates on the short term, usually a couple of hours or less. You use short-term memory when remembering a shopping list, cramming for a test or trying to remember a series of numbers. Long-term memory operates for periods longer than several hours and can last a lifetime. It lets you learn from experience and learn new, more complex concepts based on what you already know. (Arms, Karen and Pamela A. Camp. 1995.)

Scientists think that when you memorise something, the memory is stored in your cortex (the outer, wavy part of your brain) as a new and unique set of nerve-cell connections. The nerve cells of a particular memory work as a unit – when one fires, they all fire. At first the connections between a memory's nerve cells are weak. But each time you recall a memory, the connections between nerve cells strengthen. Thus, the connections between nerve cells are stronger in long-term memory than in short-term memory. Additional genetic and chemical changes in nerve cells help cement the long-term memory in place. (Arms, Karen and Pamela A. Camp. 1995.)

The human brain takes more than 20 years to fully mature. Thus, the teenage years represent the final stages of brain development in which many adult functions are in place, yet others are not. A teenager can communicate efficiently, forge connections between ideas, pay attention for extended periods of time, regulate his or her thoughts, think in the abstract, and distinguish right from wrong. Even so, the teenage brain is far from mature. Neurons in the frontal lobes, which help regulate

emotion, self-control, impulse and judgment, are not fully myelinated. (Myelin is the fatty insulation that surrounds nerve cells allowing them to transmit impulses.) The temporal lobes, which also regulate emotional maturity, are still developing and myelinating. And the cerebral cortex, which controls intelligence, consciousness and self-awareness, isn't fully mature until an individual reaches his or her twenties. It is this mix of abilities and inabilities that creates that special person — the teenager. (Arms, Karen and Pamela A. Camp. 1995, 55.)

Another thing that separates teens from younger children and adults is sleep schedules. Left on their own, teens will stay up late and sleep in. Recently, researchers have discovered the reason for this pattern, which they call sleep phase delay. It's the brain. Deep in the brain lies a structure called the pineal gland. The gland secretes a hormone called melatonin, which has been correlated with sleeping and waking patterns. As melatonin levels rise, sleepiness sets in. The brain makes melatonin all night, but as morning approaches, it ceases. Studies have shown that in teenagers, melatonin secretion sets in later at night than it does in younger children or adults. It also ceases later in the morning, making it hard for adolescents to wake up. In essence teens struggle to stay awake in morning classes because their brains think it's still nighttime. (Arms, Karen and Pamela A. Camp. 1995, 57.)

Arne Maltén (2002, 7) talk about different types of brain based learning. He says that under the 1900th have “new” pedagogic model of education. He talks about Piaget, Freud and Erik H. Eriksson and models of teaching designed by for example Bruner, Dewey, Freinet, Montessori and Steiner (Waldorfpedagogic's father). In middle of the 1900th are this talk about pedagogic, teamwork, education by project and problem based education. Maltén describes that brain based learning can stimulate the learning effect and the brains development.

Bruner talk about a process he called “generative learning”. The process of learning is characteristic of three aspects – information, transformation and evacuation. Information is when you are meeting and confronting with that you had learned before.

Jensen (1997, 48) means that there are three factors that affect learning

1. It has to be relevant; in the brain the model is created.
2. It has to be feelings. When a student reacts emotional, the brain is sorting and the brain can see what it is important.
3. It has to be a model, like to do a puzzle.

Jensen stress that learning is confused, when we learn out of the school. He means that we can use adults experience instead of traditional education. With adults' own experience, by newsletters, by Internet, by video, by television, by library, by friends and workmates can we see that adults learn better than traditional education? When the information reaches our brain, the information has to be worked. Textbooks and teaching aids are traditional analytic, but the students have a holistic thinking (Dunn & Dunn 1999). That means the learning complicates. Few of the adults can prepare the information analytic and holistic, but for other adults the brain can prepare the information in the left part of the brain (analytic 28 %) or in the right part of the brain (holistic 55 %). Most of the children have a holistic thinking, adult have more an analytic thinking.

Learning can be defined formally as the act, process, or experience of gaining knowledge or skills. In contrast, memory can define the capacity of storing, retrieving, and acting on that knowledge. Learning helps us move from novices to experts and allow us to gain new knowledge and abilities.

Learning strengthens the brain by building new pathways and increasing connections that we can rely on when we want to learn more. Definitions that are more complex add words such as comprehension and mastery through experience or study.

Physiologically, learning is the formation of *cell assemblies* and *phase sequences*. Children learn by building these assemblies and sequences. Adults spend more time making new arrangements than forming new sequences. Our experience and background allow us to learn new concepts.

At the neurological level, any established knowledge (from experience and background) appears to be made up of exceedingly intricate arrangements of cell

materials, electrical charges, and chemical elements. Learning requires energy; re-learning and un-learning requires even more. We must access higher brain functions to generate the much-needed energy and unbind the old. (Adultlearning.)

## **2.4 Motivation for adults to learn**

A variety of sources provide us with a body of fairly reliable knowledge about adult learning. This knowledge might be divided into three basic divisions: things we know about adult learners and their motivation, things we know about designing curriculum for adults, and things we know about working with adults in the classroom. (Zemke, R. & S., 1984.)

Adults seek out learning experiences in order to cope with specific life-changing events: e.g. marriage, divorce, a new job, a promotion, being fired, retiring, losing a loved one, moving to a new city. The more life change events an adult encounters, the more likely he or she is to seek out learning opportunities. Just as stress increases as life-change events accumulate, the motivation to cope with change through engagement in a learning experience increases. The learning experiences adults seek out on their own are directly related – at least in their perception – to the life-change events that triggered the seeking. Adults are generally willing to engage in learning experiences before, after, or even during the actual life change event. Once convinced that the change is a certainty, adults will engage in any learning that promises to help them cope with the transition. Adults who are motivated to seek out a learning experience do so primarily because they have a use for the knowledge or skill being sought. Learning is a means to an end, not an end in itself. Increasing or maintaining one's sense of self-esteem and pleasure are strong secondary motivators for engaging in learning experiences. (Zemke, R. & S., 1984.)

Adult learners tend to be less interested in, and enthralled by, survey courses. They tend to prefer single concept, single-theory courses that focus heavily on the application of the concept to relevant problems. This tendency increases with age. Adults need to be able to integrate new ideas with what they already know if they are going to keep and use the new information. Information that conflicts sharply with what is already held to be true, and thus forces a re-evaluation of the old

material, is integrated more slowly. Information that has little "conceptual overlap" with what is already known is acquired slowly. Fast-paced, complex or unusual learning tasks interfere with the learning of the concepts or data they are intended to teach or illustrate. Adults tend to compensate for being slower in some psychomotor learning tasks by being more accurate and making fewer trial-and-error ventures. Adults tend to take errors personally and are more likely to let them affect self-esteem. Therefore, they tend to apply tried-and-true solutions and take fewer risks. The curriculum designer must know whether the concepts or ideas will be in concert or in conflict with the learner. Some instruction must be designed to effect a change in belief and value systems. Programs need to be designed to accept viewpoints from people in different life stages and with different value "sets." A concept needs to be "anchored" or explained from more than one value set and appeal to more than one developmental life stage. Adults prefer self-directed and self-designed learning projects over group-learning experiences led by a professional, they select more than one medium for learning, and they desire to control pace and start/stop time. Nonhuman media such as books, programmed instruction and television have become popular with adults in recent years. Regardless of media, straightforward how-to is the preferred content orientation. Adults cite a need for application and how-to information as the primary motivation for beginning a learning project. Self-direction does not mean isolation. Studies of self-directed learning indicate that self-directed projects involve an average of 10 other people as resources, guides, encouragers and the like. But even for the self-professed, self-directed learner, lectures and short seminars get positive ratings, especially when these events give the learner face-to-face, one-to-one access to an expert. (Zemke, R. & S., 1984.)

The learning environment must be physically and psychologically comfortable; long lectures, periods of interminable sitting and the absence of practice opportunities rate high on the irritation scale. Adults have something real to lose in a classroom situation. Self-esteem and ego are on the line when they are asked to risk trying a new behaviour in front of peers and cohorts. Bad experiences in traditional education, feelings on authority and the preoccupation with events outside the classroom affect in-class experience. Adults have expectations, and it is critical to take time early on to clarify and articulate all expectations before getting into content. The instructor can assume responsibility only for his or her own



expectations, not for those of students. Adults bring a great deal of life experience into the classroom, an invaluable asset to be acknowledged, tapped and used. Adults can learn well -and much - from dialogue with respected peers. Instructors who have a tendency to hold forth rather than facilitate can hold that tendency in check--or compensate for it--by concentrating on the use of open-ended questions to draw out relevant student knowledge and experience. New knowledge has to be integrated with previous knowledge; students must actively participate in the learning experience. The learner is dependent on the instructor for confirming feedback on skill practice; the instructor is dependent on the learner for feedback about curriculum and in-class performance. The key to the instructor role is control. The instructor must balance the presentation of new material, debate and discussion, sharing of relevant student experiences, and the clock. Ironically, it seems that instructors are best able to establish control when they risk giving it up. When they shelve egos and stifle the tendency to be threatened by challenge to plans and methods, they gain the kind of facilitative control needed to effect adult learning. The instructor has to protect minority opinion, keep disagreements civil and unheated, make connections between various opinions and ideas, and keep reminding the group of the variety of potential solutions to the problem. The instructor is less advocate than orchestrator. (Zemke, R. & S., 1984.)

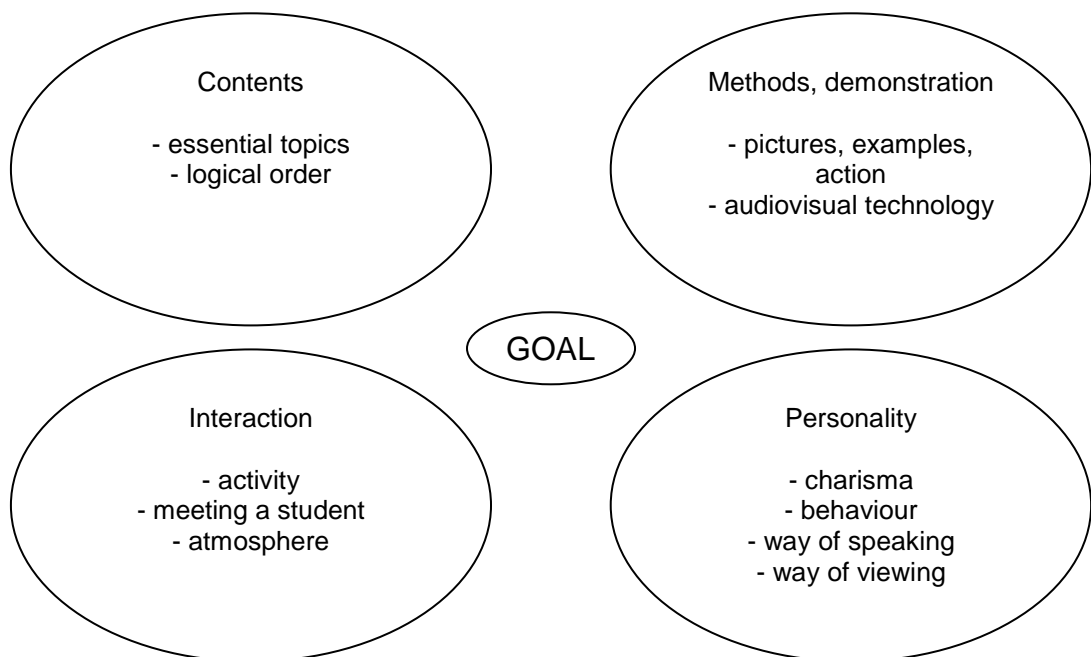
Integration of new knowledge and skill requires transition time and focused effort on application. Learning and teaching theories function better as resources than as a Rosetta stone. A skill-training task can draw much from the behavioural approach, for example, while personal growth-centred subjects seem to draw gainfully from humanistic concepts. An eclectic, rather than a single theory-based approach to developing strategies and procedures, is recommended for matching instruction to learning tasks.

The next five years will eclipse the last fifty in terms of hard data production on adult learning. For the present, we must recognise that adults want their learning to be problem-oriented, personalised and accepting of their need for self-direction and personal responsibility. (Zemke, R. & S., 1984.)

## 2.5 Communication

As a trainer or teacher it is important that you before making your presentation think the form and the way of performing it. According to Repo & Nuutinen (2003, 143) to reach your goal as a teacher you should pay attention to few elements while planning your programme.

All things mentioned in a picture of the elements of speaking presentation are effecting in a speaking situation. You should be well prepared when beginning the lesson. Most awful beginning of the presentation is if you are indifferent. Always remember good manners: say hello to audience and act correctly.



Picture 2. The elements of speaking presentation. (Repo & Nuutinen 2003, 143.)

For the empirical part we gathered the best ideas from our communication studies i.e. the lectures of Jussi Alhorinne (2006) and the discussions under lectures and from the materials that we have used during the studies, like Repo & Nuutinen (2003) and Rauste-von Wright & von Wright (1997). We discussed various ideas that could be used in this respect.

We conclude that one should pay attention to following matters or ideas:

- Opening of the event
- Logical progress when examining the issue
- Moving on from one issue to another
- Expressions and methods when changing over
- Targeting the audience when giving the presentation
- Including the audience in the presentation
- Considering the time limit, narrowing the subject enough
- Illustration of the issues
- Methods of illustration
- Verbal illustration
- Way of presentation
  - Look
  - Appearance
  - Use of voice, audibility, pronunciation
  - Use of language, vocabulary
- Preparation
- Clarity of course material
- Clarification of the goals
- Sticking to the goals
- Contact
- Breaks
- Vitality
- Sectioning, rhythm
- Use of different methods
- Use of body and space
- Activation and participation
- Functioning of the room and techniques
- Thinking about and respecting the group
- Wrapping up the event.

## **2.6 Creating a good learning environment**

We gathered the best practices from Repo & Nuutinen (2003) and Rauste-von Wright & von Wright (1997) and made a trainers check-up list for the actual work in the class room setting. (Appendix 1)

When beginning a new course, check that you have a logical course and lesson plan. Ask yourself if you need experts to answer deeper questions. Check that all equipment works (computer, PowerPoint files, video, films, video projector and overhead).

In the beginning of the course, create an impression that they are expected and that everything is ready for them. Make brief personal teacher and student introductions Present the day's program and if needed the week's program too. Remember this is what the company promises the course participants. Ask the students what especially interests them. Write those things on the flap board. Remember during the course to be democratic by giving equally attention to everyone. Spend time on all subjects, not on your or anyone else's favorite subject. Vary the teaching methods, use surprises and use different methods. Draw pictures, use samples, stories, cases, humor. Write their questions on the flap board: find answers later. Don't allow disturbing discussions, irony, bad jokes or malicious comments.

### **3 FIELD STUDY**

#### **3.1 Observations, interviews and course feedback**

We observed and gathered information by **interviewing** the part-time trainers and some of the companies' personnel participating in the courses, participating in **courses** as observers and by reading the **feedback** formulas collected in the courses.

We made 27 interviews, 40 observations (Appendix 2 and 3) and collected feedback formulas from the industrial company's product training courses (Appendix 4). There were three feedback forms from the product training course that were analysed before the train the trainers course and five feedback forms half a year after the course (Appendix 5).

**In the interviews** we used open questions to let the part-time trainers and the participants freely speak. When putting the part-time trainers' answers together we found out they experienced they had a lot of responsibility but not much support and did do the training work according to what seemed to be working. This meant that every course was very different. The result depended on the trainers motivation, how much time he had and on what he guessed was the participants needs. They were all interested and wanted to do a good job. They welcomed the development of the Training the Trainers course and had a great need to discuss and plan training issues during the course. Customer training is an important task in their opinion and said it affects the image and the brand of the company. They felt it is an important service and said it is important for them to have similar concepts, similar ways of working and a similar structure in their materials. The companies own people criticised the very fluctuating quality of the courses due to the part-time trainers' different pedagogical skills, language skills, training materials and methods.

**During the courses** we observed the following things:

- They were all different depending on the trainer.
- They were Power Point centred lectures.

- Auditorium methods and tools were used although there were only four participants.
- The trainer and the students did not discuss a lot although there were experienced specialists from different technical fields as participants.
- It was unclear whether the course had started or not and whether the course already had finished. People were late and there were not regular breaks.
- Sometimes there were lots of material and sometimes only one paper. The material consisted of OH films, PowerPoint files, paper copies, black board drawings and manuals.
- There were two main methods: Lectures or discussions.
- The tables and the chairs were like in an auditorium.
- There were no planned exercises.
- Their communication methods and skills were very different.

(Appendix 3)

**The Feedback formulas** from the product trainings in November 2005 shows that the average amount of points were 0,75 of five (Appendix 5). The result was too low and did not go together with the high quality standard that the company had on its other services and products.

### **3.2 Findings and conclusions for trainer's manual**

From the sources mentioned above we saw that the courses were generally not well planned, there was a constant lack of time, there were very different and unclear expectations among all participants, a lack of motivation, no course or lecture plans, very few methods were used, the part-time trainers had no forum where they could discuss and build a common view of the training and develop their courses.

We decided to include all these needs in the material and to make exercises that activated the participants and gave them time to reflect and to develop their own course materials and methods. A desired result from the course is that the participants themselves should get an experience of a different way of training on the course.

## 4 TRAINING THE TRAINER

We chose five different areas that we covered in the course material which were:

1. Principles of adult learning. We considered it important for the trainers to discover how adults learn new things. What happens in the brains of an adult while learning and how is new information stored in the long term memory of an adult? Learning is a personal experience and we considered it therefore necessary for the trainers to understand the significance of the learners' preferred learning styles. Learning is also a social activity and depending on the roles, expectations and interpretation of the social situation. Therefore we considered it important to reflect with the trainers on how they can create an environment that motivates and enables adults to learn. As a theoretical summary for the pedagogical part we chose Kolb's learning cycle. We created exercises for all the above mentioned goals.

2. Designing training courses. In designing a course there is a need to conduct a needs analysis. The analysis should lead to written measurable, observable, outcome-oriented training objectives. We considered it important for the trainers to learn how to develop lesson plans that support learning in their courses. We did exercises for this goal.

3. Training strategies and techniques. We considered it important for the trainers to learn the skills to select the appropriate training medium and materials for their courses. We made therefore an exercise where they choose methods, test them and evaluate different teaching methods. We also made exercises for how to open and close a course, a lesson or a new activity during a lesson.

4. Platform skills. We made lecture and materials exercises where the trainers learned to employ and evaluate effective public speaking skills. We wanted to give them confidence and enthusiasm and also to develop their own natural style.

5. Evaluating learning. The training organisation of the company wants to be a learning organisation. They are therefore very eager to make use of the different kinds of feedback they receive through many channels. One of the most important

channels is the direct course feedback. It is therefore important for the trainers to understand the different levels of evaluation and to make use of the feedback to improve future training.

## **5 CONCLUSIONS**

### **Results**

The product trainers participated in the **Training the Trainer** course. The participants experienced they were provided with new tools, had time to plan their courses, the courses were structured and had a clear goal and they received a realistic picture of the preparations and the arrangements. The course lasted two days.

The desired result of the company was to improve its product training. This was measured in a practical way by the feedback formulas in august 2006 and by participation in one of the courses.

The **product training** was earlier a 4.5 days theoretical series of lectures and was now a 3 days course with versatile methods like lectures, exercises, discussions, experiences and discussions. The trainer used new methods he had learned and had experienced in the Training the Trainers course.

We compared the “can you recommend this course” question in the new feedback formulas (August 2006) with the old ones (November 2005) and saw a major change in the numbers. Of five possible points the average was 4. The result had been improved by 3 points (Appendix 5).

### **Project Conclusion**

We found the project interesting with a good end result. The positive changes were not only a result of the Training the Trainers course. There were many positive changes and new resources available in the industrial company during this period of



10 months. The materials we made supported the change process within the company.

### **Future plans**

In the future applications of this material, it is important to notice the cultural differences of the participants and to deepen the trainers understanding and mastering of pedagogical knowledge. We found out that even a primary level of pedagogical knowledge was effective when applied to real training settings.

In the future research of this subject, it would be useful to narrow the focus of the research subject and by that be able to go deeper into the chosen area. Areas that could be useful to study further are communication, interaction and observing cultural differences.

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## APPENDIX 1

### Trainers Check list

#### Before the course

- Check that the course material has been prepared and is according to the company's standard
- Check that you have a logical course and lesson plan
- Check that the day's program has been made and has been approved by Training center
- Make sure the training assistant gets the material min 2 days before
- Ask yourself if you need experts to answer deeper questions
- Check that the coffee, lunch and evening activities have been arranged
- Check that the room is clean and tidy
- Check that the students' desk arrangement (U, C, :: or ||||) supports learning and dialogue
- Check that all equipment works (computer, ppt files, video, films, video projector and overhead)
- Check that all material, manuals, pens and papers are in place, and that the pens are working
- Remember that the manuals are the company's property!
- Be well prepared. Make a clear lesson plan that includes the teaching methods you are going to use
- Practice the pronunciation of difficult English words before the course
- The trainers clothes and hair should be modern, neat and clean
- Always use the company's professional sales behavior

#### Start the course

- Be in the room in good time before the students arrive
- Make the participants feel welcome; greet them with a smile and shake hands
- Create an impression that they are expected and that everything is ready for them
- Check that the volume of your voice is right (don't just assume it)
- Check your visible teaching area
- Make brief personal teacher and student introductions
- Make student name cards to put on the desks

- Present the day's program and if needed the week's program too. Remember this is what the company promises the course participants.
- Don't discuss anything that does not support learning the subject in hand.

Cont.

- Ask the students what especially interests them. Write those things on the flap board.
- Check if there is an evening program
- Is a time monitor needed?

### Under the course

- Is everybody with you? Do you have eye contact? Do you get feedback on your body language?
- Be democratic by giving equally attention to everyone
- Spend time on all subjects, not on your or anyone else's favorite subject
- Don't turn your back on the participants
- Use PowerPoint slides **only** when necessary
- Assume everybody can read. **Never** read what students can read for themselves
- Vary the teaching methods, use surprises, use different methods
- Walk. Get the students to walk and move. Demos in other rooms?
- Use the demo stands and equipment at the company
- Tell the students the page numbers and name of each manual you refer to
- Have students use the Company manuals as much as possible
- If new terms are used, define them first!
- Allow short pauses after presenting new information
- Draw pictures; use samples; stories; cases; humor
- Make the students active: facilitate and teach.
- Give time for exercises, when 80% have done them, continue
- Create dialogue situations in the classroom between students
- Write their questions on the flap board: find answers later.
- Follow the time schedule: keep the breaks and pauses
- Don't assume people understand unless they prove it. Check it up.
- Don't allow disturbing discussions, irony, bad jokes or malicious comments

**End the course**

- Has the course promise been kept? Questions answered?
- Before you give the certificates: fill in feedback documents
- Give course certificates
- Tell participants that the course is finished
- Tell students what classroom and file material they can have and what they cannot. Offer them to buy material.
- Dismiss the students by shaking hands and saying goodbye.
- Stay in the classroom until all the students have left

**After the course**

- Go through the feedback documents
- Clean the room and make sure the equipment is working
- Inform the assistant if anything is broken
- Have a short discussion with the training manager
- Give yourself a break!

**APPENDIX 2**

Course: \_\_\_\_\_

Trainer: \_\_\_\_\_

Observer: \_\_\_\_\_

1=poor 3=ok 5=excellent

- |     |   |           |
|-----|---|-----------|
| 1.  | Opening of the event?   | 1 2 3 4 5 |
| 2.  | Logical progress when examining the issue?  | 1 2 3 4 5 |
| 3.  | Moving on from one issue to another?<br>Expressions and methods when changing over? | 1 2 3 4 5 |
| 4.  | Targeting the audience when giving the presentation?                                | 1 2 3 4 5 |
| 5.  | Including the audience in the presentation?   | 1 2 3 4 5 |
| 6.  | Considering the time limit, narrowing the subject enough?                           | 1 2 3 4 5 |
| 7.  | Illustration of the issues?   | 1 2 3 4 5 |
| 8.  | Methods of illustration? _____  |           |
| 9.  | Verbal illustration? _____  |           |
| 10. | Way of presentation?  |           |
|     | A. Look   | 1 2 3 4 5 |
|     | B. Appearance   | 1 2 3 4 5 |
|     | C. Use of voice, audibility, pronunciation?   | 1 2 3 4 5 |
|     | D. Use of language, vocabulary?   | 1 2 3 4 5 |
| 11. | Preparation?  | 1 2 3 4 5 |
| 12. | Clarity of course material?   | 1 2 3 4 5 |
| 13. | Clarification of the goals?   | 1 2 3 4 5 |

- |     |  |           |
|-----|--|-----------|
| 14. | Sticking to the goals?                   | 1 2 3 4 5 |
| 15. | Contact?                                 | 1 2 3 4 5 |
| 16. | Breaks?                                  | 1 2 3 4 5 |
| 17. | Vitality?                                | 1 2 3 4 5 |
| 18. | Sectioning, rhythm?                      | 1 2 3 4 5 |
| 19. | Use of different methods?                | 1 2 3 4 5 |
| 20. | Use of body and space?                   | 1 2 3 4 5 |
| 21. | Activation and participation?            | 1 2 3 4 5 |
| 22. | Functioning of the room and techniques?  | 1 2 3 4 5 |
| 23. | Thinking about and respecting the group? | 1 2 3 4 5 |
| 24. | Wrapping up the event?                   | 1 2 3 4 5 |

Other

issues: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Ideas to  
improve: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



### APPENDIX 3

#### **Observations between fall 2005 and spring 2006 in the companys internal and external product training classes.**

-Dark room where one person talked while showing power point presentations. Monologue.

-The English was hard to understand since the words were pronounced in a very local way.

-Lecturer was superb, but he placed the students in the role of silent children. I doubt any learning happened. The students learned to admire the superb lecturer. It was definitely not the goal of the course!

-History lecture half an hour of the product training course. Not important nor significant in the lives of the students, who came to learn how to use the devices.

-No logic line, too student oriented. Lecturer was not democratic since he spent 90% of the time with two participants and left the four others to their own.

-Bad start and end of the course. Lecture came late and was not prepared. Bad feeling.

-No coffee breaks. Too long sessions without breaks for reflection.

- They were all different depending on the trainer.

- They were Power Point centered lectures

- Auditorium methods and tools were used although there were only 4 participants

- The trainer and the students did not discuss a lot although there were experienced specialists from different technical fields as participants.

- It was unclear whether the course had started or not and whether the course already had finished. People were late and there were not regular breaks.

- Sometimes there were lots of material and sometimes only one paper. The material consisted of OH films, ppt files, paper copies, black board drawings and manuals.

- There were two main methods: Lectures or discussions.

- The tables and the chairs were like in an auditorium.

- There were no planned exercises

- There communication methods and skills were very different.

## APPENDIX 4

**Course Feedback**

**Name of the course:**.....

**Date:**.....

What is your opinion of the course program, arrangements, instructors and results ?  
Please, choose the alternative, which best corresponds to your opinion.

a) The instruction was ...

Thorough

1.....2.....3.....4.....5

Insufficient

b) The time spent for learning was ...

Too long

OK

Too short

1.....2.....3.....4.....5

c) The instructors were ...

Very good

1.....2.....3.....4.....5

Poor

d) The course was ...

Too theoretical

OK

Too practical

1.....2.....3.....4.....5

e) The information given in the course was ...

New

1.....2.....3.....4.....5

Familiar

f) To my work was significant from the content of the course ...

Almost everything 1.....2.....3.....4.....5 Hardly anything

g) Can you recommend this course ?

Yes 1.....2.....3.....4.....5 No

1) If yes, to whom :

.....

h) The arrangements during the course were ...

Very well 1.....2.....3.....4.....5 Poorly organized.

1.....2.....3.....4.....5

i) In my opinion, the course was ...

Excellent 1.....2.....3.....4.....5 Poor

j) I have working experience from the subject field ..... years.

2) The most interesting subjects in the course :

.....  
.....  
.....

3) Also the following subjects should be included in the course material :

.....  
.....  
.....  
.....

## APPENDIX 5

### Course feedbacks

This is a summary of the feedback the company received from a 4 days product course it arranged for three paying customers in November 2005.

Scale: 1 no 5 yes

Instruction was insufficient	4,5
Time spent for learning was too long	4,5
Instructors were poor	4,5
The course was too theoretical	3,5
The information given was familiar	4
Significant to my work	3
Can you recommend this course	0,5
Arrangements were good	4,5
The course was poor	4,5

It is obvious that the feedback during this course was very bad. According to the expectations of the participants this course was a disaster.

### Course feedbacks

This is a summary of the feedback the company received from a 3 days product course it arranged for 5 paying customers in August 2006.

Scale: 1 no 5 yes

Instruction was insufficient	1
Time spent for learning was too long	1
Instructors were poor	1
The course was too theoretical	2
The information given was familiar	2
Significant to my work	2
Can you recommend this course	4,5
Arrangements were good	4,5
The course was poor	1

In this course we used a new feedback form that also measured learning during the course. The average learning steps were **2 steps forward**. The scale was between 1 =unfamiliar and 5= very familiar

It is obvious that the feedback during this course was very good compared to the same course one year earlier. According to the expectations of the participants this course was a success.