

folkbildning.net

an anthology about “folkbildning” and flexible learning

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# About learning styles and learning environments

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Is it not about time to scrap the classroom and the blackboard as the symbols for schools and studies? Today, with the computer as a pedagogical tool, the student can move around through a multitude of study environments: alone with the computer in the kitchen, in a classroom with friends or in the field with a project group – to mention a few examples. You can, at the same time, use different methodologies and forms of collaborations between participants in the various environments depending on the goal and the character of the course.

Up until now the computer and IT have mostly been developed as a forceful instrument for text-based communication and education. Lately, the text has more and more been complemented with images and sounds via the Internet. However, the development of the medium to a more multi-sensory tool is only one aspect of the online learning of the future. Another, at least as important, problematic issue is how to create good *multiple study forms*, namely, good combinations of closeness and distance, different study environments, ways of working and methods in a course or in a programme. Can the term learning styles in this context function as a pedagogical tool to create working methods that can be adjusted to the different learning styles and preconditions of individuals?

In this study we will look at new models for folkbildning\* (see next page) where we demolish the traditional classroom and instead organise

different learning environments, both physical places and “virtual study rooms”, and where a learning style analysis can function partly as a methodological guide to plan the course, and partly as a method to involve the students in their learning process.

## **Background**

The background to this study are the experiences of my colleagues and myself from a pedagogical development project at Åsa Folk High School, with the project name: “Learning Profile, learning Environment and learning Process” (PMP). The main idea was to test learning styles as pedagogical tools in relation to different learning environments in the “treatment course” hosted by Åsa Folk High School in 2002. We also tried to examine the informal arena, the meaning of everyday life and the local environment as a work environment and as a “textbook” for the studies. A model for learning style analysis was worked out during the course of the project.

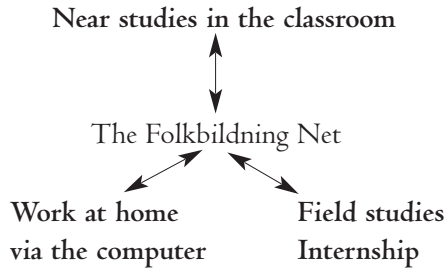
The purpose of the treatment course was to educate “local volunteers in the treatment of disabled persons” – resource persons who could function as mentors and advisors for disabled persons as well as authorities, institutions and companies in treatment issues. The course was part time, a combination of a total of eight weeks of near studies at the school and 26 weeks of distance studies at home. The course was a mixture of three formal learning environments: near studies in the classroom, work at home through the computer and field studies/internship in the local community.

The pedagogical idea was to construct different learning environments and use different types of methodology, which together gave both concrete experiences, reflections about them, theoretical models and the possibility to test them on reality (the idea comes from D.A Kolb’s learning cycle).

Fig. Different learning environments (next page):

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\* About “folkbildning”, see p. 2 for explanation.



*The ordinary environment (family, friends, work, free time etc.)*

So, we then had three different “study rooms” or learning environments that together could give positive values and better learning, among other things, so that both more theoretical and more practical learning styles would fit into the overall picture \*. The Folkbildning Net was used as the technical platform, both for the teacher team’s planning conferences and for the course’s virtual study room.

The combination of different learning environments proved to be a successful model. The one-sided text-based communication via the Internet could be combined with field studies and practical assignments at home, as well as with lectures, discussions, group projects and role plays during the physical meetings.

In the course we tried the learning style concept, and found it to be useful – partly to map the participants’ learning styles, to acknowledge the individual and to form personal and collective strategies, partly as a planning tool for the teacher team, to construct a fruitful entity of nearness, distance, different course elements and methodologies. However, the learning style tests need to be further developed, as tests, and better adjusted to the target groups of folkbildning. \*\* (next page)

As a collective definition of the multitude and the combination of

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\* Inspiration for this three-part learning environment model was an EU project for foreign hospital staff at Åsa folk high school in 2000. In a continuation course, with work related health care Swedish, two weeks near studies are combined with four weeks at a distance, in intervals during a total of 20 weeks, with built-in auscultation at hospitals, which proved to be a very good model that combined theory with practice.

different learning environments and a varied methodology I want to use the term multiple study forms. This definition then stands for flexible combinations of both contents, methodology and learning environments in the same course or programme, i.e. to use the reality around you as a “textbook” and to add practical assignments and field studies locally, during the distance period with text-based communication online. Or to form local study groups in the course that meet in the physical room to work together in a group around a topic.

### **The emperor’s new clothes?**

So, how new is our reasoning about learning styles within folkbildning? Well, as a theoretical definition it is new, but as a pedagogical and “multi-sensory” methodological praxis it is hardly revolutionary. Certainly these theoretical terms have not been used, nor have learning style tests, however, a varied methodology and different working methods have been used, which are deceptively similar to the recommendations given by learning style tutors<sup>\*\*\*</sup>. Thus, both folkbildare and learning style tutors connect to the “progressive school direction” within pedagogy (Dewey, Freire etc). One difference however, is that the learning style tutors prefer to individualise the pedagogical solutions, while the folkbildare has a more collective approach where the meeting and the dialogue are in the centre.<sup>\*\*\*\*</sup>

And when it is time to go beyond the walls of the classroom and use reality, the good folkbildare has then for a long time used the reality outside academia and the classrooms as a “textbook”; especially in themat-

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\*\* The learning style models that have been used as inspiration is partly the Brain Books concept: Dunn & Dunn, Prashnig, Lena Boström, partly Kolb and Honey/Mumford learning cycles concept. See the list of references where a selection of the literature can be found.

\*\*\* See i.e. “Metoder för alla stilar”: Boström/Gidlund/Öhlund, Brain Books 2000 (folder), se also Rita Dunn: “Nu fattar jag!” 2001, which advocates “different ways to work with learning” p. 61ff

\*\*\*\* Howard Gardner, known for his nine “intelligences”, reasons in his book “Den bildade människan”, Brain Books, 2000, confusedly similar to a folkbildare with his reasoning about thematic projects and classic schooling.

ic work and projects. Assignments and local field studies have always been regarded as important parts of the studies.

### **Learning environments and arenas**

Carl Holmberg has developed a model where he talks about formal and informal arenas for learning.\* “Arena” means the locations and physical rooms where the learning takes place. “Formal” means that the school plans, organises and directs the learning. Near studies at the school are one formal arena, distance studies at home is another. “Informal arena” means the everyday life and the local environment around the individual, where the school normally does not interfere in or regulates the learning. A large part of the individual’s learning takes place informally, outside the control and the supervising eye of the school: in the family, in discussions with friends and acquaintances, in the work life, and today not least through mass media. Many young people and adults probably spend more time in front of the television than in formal education. If we proceed from broad and lifelong learning, you learn where you live, then the “spontaneous” learning in this arena obviously is very important for the outcome of the ordinary education.

In these arenas, there can be three different forms of interaction or communication: cognitive, emotional and administrative/social. The cognitive is about the actual knowledge cultivation – to form knowledge from information and assignments. The emotional is about the social climate, the sense of security in the class and with the study form. The administrative is about the study conditions: time and work plans, information, deadlines for assignments, conditions for examination, student economy etc.

In this study we prefer to use the term learning environments instead of arenas and these learning environments can naturally be both formally directed/organised by the school or informal. In flexible learning we need to be prepared to use all the various learning environments that

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\* Carl Holmberg: “Kolla kapitelnamnet i gamla översättningen”, is found in the first edition of the anthology: folkbildning.net, “You learn where you live – a challenge to the classroom”, 2001, See also: På Distans, SOU 1998:83.

are offered in society. We can for example use libraries, workplaces and learning centres, with or without computers, as physical meeting places during the distance periods and we can use the local society as a place for field studies, both during the near periods at the school and during the distance periods.

### **The local environment as a “textbook”**

Since such a large part of a person’s time is spent in their local vicinity it is interesting to look at how the school can “expand the classroom” and put out assignments, study visits and practical exercises in the local environment during the distance periods. There is an extraordinary lack of imagination when it comes to using the local environment during the distance periods. Instead, people get stuck by the computer and with more or less artificial examples in the textbooks or the pre-fabricated educational programmes online. At the same time the reality in the local society is very real, and it gives great opportunities for expanding the classroom and for using the reality both as a “study place” and as a “textbook”.\*

In most subjects it is easy to give practical assignments that can be carried out at home, e.g. study visits and interviews with staff/politically responsible persons at a municipal institution or administration in social studies. In natural sciences the technology and the nature around us is a grateful field of experiments for practical assignments (i.e. Investigate how the water gets in and out of your house! Where does it come from? Where does the drain lead? The quality of the water? Environmental aspects?). The participants can use different sources of information and can then write a report, and compare and discuss around their local investigations online. Thus the writing of reports and practical Swedish also automatically become topics for practice.

It is not stranger than when you, in an ordinary classroom teaching situation give out home assignments to be completed at the kitchen table or in the vicinity of the students’ home. But IT gives us new forceful

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\* Arvidsson, Johan and Fahlgren, Sune, (editors) “Kunskap utan väggar – perspektiv och metoder för fältstudier i grupp”, Studentlitteratur, 2002.

tools to further expand the school's "territory" and to use the participants' reality at home.

One disadvantage with home assignments during the distance periods can be that the participants often are alone locally and might lack support from friends and tutors. A possible solution is that the school tries to collaborate with another school, library or person in the vicinity that can act as a mentor or as support at home. Local learning centres are excellent solutions in this context.

However, we must raise a warning finger to the risk of "colonising" too much of the participant's everyday life. It can easily be viewed as an undue encroachment on a person's private sphere and personal integrity.

### **The home and the local environment as a workplace?**

The workplace at home and in the local environment is often an overlooked factor in the distance studies when it comes to creating a good physical and mental work environment. The students are assumed to organise a good work environment on their own, and the freedom in time and place is presumed to be connected to a strong study discipline and ability to plan, which we all know is not always the case. On the contrary, preconditions and study experiences can vary a lot and as educational organisers we cannot close our eyes to this. The problems with time optimists, little presence online, overdue assignments and backlogs are classic distance study problems, every distance tutor knows this.

The informal support structure at home is an important factor for successful distance studies. This is true both for the financial and the material conditions, such as a personal workplace, access to a good computer with relevant equipment, time, study discipline and mental support. How do family, friends and colleagues view the studies? Is there a helping or a hindering mental attitude at home? What can we, as tutors, do about that?

In the treatment course we conducted a questionnaire about approaches and attitudes to the studies and about preferences in the physical work environment, as a complement to the learning style analysis. The questions about work environment dealt with the access to a private workplace, furniture, available technology, peace to study, work time

and mental support from family and friends in the local environment etc. The questionnaire was answered online and was then worked on in dialogues with everyone individually and then with the whole class together. We had a good discussion about the conditions of working at home, both the physical and the mental. Was the home environment and the informal arena a helpful or a hindering structure?

On the question of what was most disturbing in the local environment, the answers were of this kind: “I could not close the door”, “the family/children did not respect the time at the computer as work time”, “difficult to organise regular work times”, “other studies and commissions of trust took up all my time”. Both family and organisational life competed in this way for the participants’ time and quite often the studies lost.

In conversations with the participants we discussed this and we tried to give good advice and tips on how to tackle this problem. For example, the participant could discuss the home study situation with his or her family, he or she could learn to close the door to the study room, reserve the computer at home at certain times, make an individual time plan with “sacred” working hours, use computers and workplaces at a nearby library or learning centre etc.

The very different conditions of the workplace at home and the informal support structure for different people and social classes will probably be a great stumbling block and the class divide for flexible learning in the future. There is a risk that the social divide will widen between those who have and those who do not have financial and social resources and mental support from home.

One compensation for these unjust conditions is the development of local learning centres as support for distance studies locally (see the chapter about *The study workshop as a learning environment*, p. 195).

### **We learn through all parts of ourselves!**

Crucial for successful studies is naturally always the individual’s willpower, involvement, motivation and perseverance. If the student, at the same time, can also use his or her strongest learning styles the preconditions for successful studies are good.

The common ground for all learning style models is that individuals and groups learn, solve problems and transform information into knowledge differently. Learning is presumed to be basically multi-sensory and we ought to use all our sensibilities and expressive abilities in the learning process and take advantage of the multitude of methods and ways of working, in order to give everyone a fair chance to use his or her strongest inputs to the studies. We need to consider that the knowledge process is important, but also the attitudes towards studies and what social configurations and physical environments that are preferred by the individual for his or her studies. There is an abundance of learning style models and tests, but in this article we will limit ourselves to Kolb's learning cycle, on the one hand, and on the other hand, the Dunn/Prashnig/Boström-model.\*

### **Kolb's learning cycle**

One well-known learning style model is Kolb's "learning cycle", a simple model for the learning process, partly about how the individual collects information, partly about how this information is worked on. He describes the learning as a learning process in four stages, which also stands for four different ways of learning that we have different preferences or aptitudes for.

The first dimension stands for two different, but complementing, ways of collecting information (a vertical arrow in the figure):

1. Concrete experience, your personal experiences.
2. Abstract thinking, logic, theorising.

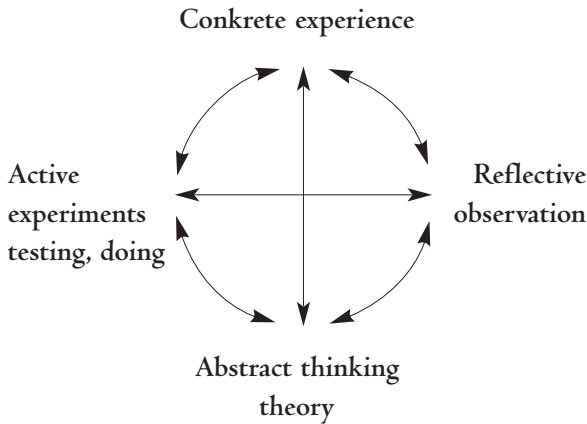
But the individual also works on turning the information into knowledge differently (horizontal arrow):

3. Reflective observation, watch, listen.
4. Active experimenting, testing

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\* Another popular model that is widespread but that we do not touch upon here, is H. Gardner's nine intelligence. Among other things, it has been used by the Swedish Municipal Workers' Union (Forum Lärrum) and by Lernia.

Fig. Kolb's learning cycle:



The individual interchanges all the time between personal experiences, digesting and reflecting on the experiences, thinking/analysing/theorising and testing/experimenting to see if the theory/analysis is valid. All this in turn, gives new experiences, new reflections in a continuous learning process.

At the same time, most individuals have a preference for their individual input, their own "security zone", where you command the methodology and feel comfortable. Someone wants to start with concrete experiences to then reflect on them; others prefer to start with a more theoretical book with various abstract reasoning about theories and models, and then test their theory on reality etc.

Kolb has constructed a verbal learning style test to estimate every individual's combination of these four learning styles. He also wants to see a connection between learning style and personal competence in a learning organisation – he is an organisational psychologist. Notice that we have simplified the model and do not use Kolb's original terminology, see J. Arwidsson.\*

Kolb's model has been criticised for having a too individualistic view

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\* Johan Arwidsson has, in two papers, critically gone through Kolb's theory and its usefulness in pedagogical contexts: "Lärstilar för folkhögskolelärare", compendium, and "Handleda erfarenhetslärande", unpublished paper, 2002.

on learning. Learning and learning processes are naturally always individual, but they are also collective and the individual's learning process is always inserted in a social context and in a collective learning process.

### A “method compass”?

In the treatment course we used the learning cycle as a “method compass” for the planning of the course and the learning process. By involving the students in a learning style analysis, which led to an opportunity to revise and adjust the course continuously, it also turned into a practical exercise about participant influences and democracy.

The point to be made with the learning style analysis is that individuals have different gateways to their studies and therefore want to start the learning process differently – at the same time everyone ought to widen their abilities, test things that they are not used to, as well as learn to use a wider spectrum of working methods. Everybody should have a chance to proceed from their security zone, from the working methods that they feel they are in command of. At the same time, we, as tutors, must dare to challenge the students to take the leap into the growth zone, so they dare to throw themselves into the unknown and test new methods in order to grow as individuals, otherwise there will not be any genuine knowledge growth. A varied methodology creates a more multifaceted learning; a phenomenon is highlighted from various perspectives and hopefully we will then get a more complete and versatile picture of the phenomenon.

Fig. Method map:

Concrete experiences	Reflective observation	Abstract thinking theories, models	Active experimenting testing
Experience-based, practical exercises, practical cases, study visits, role plays, concrete stories, creative exercises	Lectures, observations, demonstrations, study visits, interviews, report writing	Lectures, texts, analysing exercises, problem solving, theoretical discussions	Experiments, testing, exercises, role plays, training, individual investigations

The participants' background, with regard to experiences of the relevant subject, is also important in order to choose the right "gateway" to the studies. The more unknown a phenomenon or a subject is for the student, the more important are the concrete experiences, the visual conceptions and the active investigative methodology. However, if the subject is well known and the participants have individual experiences from it, the studies can start with more verbal reasoning around the personal experiences, which can then be directly confronted with theoretical reasoning.\*

### **Other learning style models**

Other types of learning style models that have inspired us, in our work environment questionnaire among others, are the Prashnig/Dunn/Boström-models. They do not only deal with the cognitive side of learning styles, as in the Kolb model, but also with the emotional, such as attitudes and approaches to the studies, the social environment and finally also the physical work environment. Therefore the term working styles is sometimes used instead of the term learning styles. It is a conscious contextual focus on the individual's study situation, which can be interesting when we connect different cognitive learning styles to the workplace at home and the local environment in the distance studies.

Different factors in evaluating the individual's preferences in the Prashnig's/Dunn's/Boström's models:

🧠 Cognitive: different abilities of the senses (to see, hear, touch, do) and the right and the left halves of the brain (holistic and sequential thinkers), which deals with the cognitive learning style.

💖 Emotional factors: the motivation for the studies, the perseverance and the sense of responsibility and demand for steering or for independence in the studies.

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\* Kaufman, G (1980), "Imagery, language and cognition", Bergen, Bergen universitetsförlag, which is referred to in Maltén A, Lärarkompetens, p. 174.

☛ Social factors: Do you like to work alone, in pairs, in a group or with only the help of the teacher/expert.

☛ The environment at the workplace: desirable conditions as for background noise/music, light, temperature and furniture.

☛ Other physical factors: access to food and drink during the studies, the need for movement, and the time of the day when you prefer to work.

The models are, to a large extent, based on popular theories from modern brain research and there is a tendency to emphasise the importance of heredity and to downplay the role of the environment, which is quite controversial. The tests are based on self-perceptions and self-perception is certainly strongly dependent on which schooling tradition you have been brought up in and socialised in.

### **To map learning styles and learning environments**

In the treatment course, we extracted, from the literature, inspiration for a simple learning style test with the help of cards with images and text, and this test was carried out during a physical meeting. The participants could choose which senses and forms of expressions they preferred if they wanted to learn something new and difficult. The exercises emanate from which senses and forms of expressions we prefer to use when we want to learn something new and difficult: to see images and read texts, to listen to others, to converse and discuss, to do and construct with your hands or to be physically active.

The participants got to choose which card(s) they preferred the most when they were about to learn something new and difficult. The six cards, which were enlarged to an A3-format, were put up in a ring on the blackboard and the participants marked with post-it notes where they had their preferences. In that way we got a picture of the profile of the entire class, which then became the starting point for a discussion about ways of working and methodology.

We also tried Kolb's and Honey/Mumford's test forms with quite a good result. Those tests are verbal with quite a difficult academic language, which might not be good to use on people with little education

or on immigrants. However, it measures some deeper dimensions of the cognitive learning process than the cards do. The participants got to mark their learning style, their position, in Kolb's model with four fields, and after that we had a discussion about the class profiles and what we could change in the course structure.

Notice that we normally would have been satisfied with one test, but since the course was a project we could afford to do more tests.

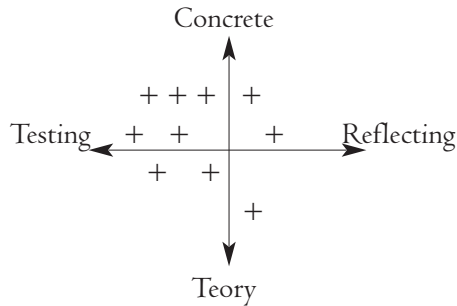
The results of the tests were noted in a questionnaire about learning styles and learning environments, which also included questions about approaches and attitudes towards the studies and preferences as for the physical work environment at the school and at home. The questionnaire was answered online and then functioned as a base for a personal plan of action that was formulated together with the teachers. This was then followed up with on one hand a teacher team meeting, on the other hand a class meeting, in order to evaluate and find out the consequences of the learning style analysis for the course's choice of working methods.

### **Pedagogical consequences?**

The tests showed that a majority of the participants in the treatment course had a chiefly concrete and experimenting learning style, some a more reflective one and some others yet a certain inclination to the theoretical and testing learning style. Many preferred concrete experiences, to listen, to discuss and to test, as their strong entrance points in their studies, namely "learning by doing". A couple of the participants preferred lectures and reading, but they also had a lot of organisational experiences as well as experiences from academic studies. This is probably quite a typical profile for a class with many people with little schooling, with little or no academic background or other experiences of studies from before (next page).

The majority's obvious preference for a practical and concrete learning style in the treatment course was not without its problems, regarding the fact that the participants ought to learn to skim through large texts and to theorise around their experiences. Most of the participants were already good at the practical/concrete level and had a lot of personal

Fig. An example of a class' learning profile:



experiences, but they had a difficult time trying to generalise and to theorise around the reality that they knew so well. Some of the participants also showed some form of resistance to spending time and energy on theories and more difficult texts. It was safer and more rewarding for their personal self-esteem to move around on secure ground (they preferred to stay in the security zone). The teachers also found it difficult to face the participants regarding this issue, and the participants felt that the teachers' demands and ambitions were set too high.

During the evaluation of the learning style tests, the course discussed how to solve this dilemma. One suggestion was to start with very concrete assignments – study visits, practical cases, interviews, literature locally during the distance periods – followed by a reflecting conversation in a group and more theorising conclusions, with the teacher as a moderator during the physical meetings. A comprehensive lecture that reinforces the theoretical texts, online or during the physical meetings, could at some point complement the process.

Another suggestion was to differentiate the methodology according to the learning styles, that the participants on a particular topic or issue that was common to the whole group, could choose different resources and working methods. Thereafter the participants could report (individually or in a group) and contribute with different pieces and angles of perspective to the common topic. The final work would then be car-

ried out together, in the whole class, with the course leader as a moderator.

There were suggestions to work with “model cases”, that is, practical cases that were followed up during a longer period of time, in the same way as when working with model companies in business and entrepreneurial courses. Model cases can be used during longer periods and can be looked upon from different topics and angles of perspective.

The participants experienced the learning style analysis as something positive; they got to think about their strengths and weaknesses and through conversations got to, both individually and in the whole group, reflect of and influence the working methods in the course. That was school democracy hands-on.

It cannot be emphasised enough that the focus of the learning style analysis should not be on the tests and the questionnaires but primarily on the dialogue around them, with the participants both individually and collectively, and within the teacher team. The tests are based on self-perceptions, which might include several faults. It is thus important that the teacher team also make their own judgement of the participants' strengths and weaknesses, emanating from their observations in the classroom and online. The collective observations of the teacher team, plus the test and the questionnaire and the follow up dialogue, will then create a more just and correct picture of the learning profile of the participants and of the entire class.

The choice of tests must obviously be adjusted to the nature of the course and the target group. Strangely enough, many tests are primarily verbal, despite the multi-sensory message. There is space to formulate and to test even more variations of multi-sensory tests and exercises, which can be better incorporated in the folkbildning tradition of working with both the hand, the mind and the senses.

So, how shall the lessons from these different learning style analyses be put into practical pedagogy? Is an extreme individualisation of the pedagogy necessary to accommodate the individual's different preferences?

Should each and everyone sit and work with their adjusted methodology? Hardly!

The great dividing line when it comes to the consequences for the teaching and the choice of methodology, seems to be between those who have an active/practical learning style and those who have a more theoretical/reflective learning style.\* Therefore we can come quite far by working with a more flexible and varied methodology for the entire class. The individualisation is more for specific individuals who during certain times might have special needs for support, a different structure and working method, in order not to drop out. Besides that, it is important to vary between individual work and collective work to create a thorough learning process.

### Some preliminary conclusions

1. Learning style analyses are a possible method if mapping and analysing the learning profile of the participants and the class as a whole – in order to be able to adjust, together with the participants, the working methods during the course.
2. Kolb's learning cycle can be especially useful as a more long-term planning tool, as a simple method compass, to revise existing and form future course structures with good combinations of nearness and distance, with different learning environments and working methods.
3. The informal arena and the local environment are in many subjects potential "study places" and "textbooks" to better balance theories and the written word with concrete experiences and "learning by doing".
4. From a mapping of the work environment/work conditions in the participants' different learning environments, especially their homes,

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\* Dunn, Rita: "Nu fattar jag!", 2001, who speaks about different pedagogical packages. Knutson, R: "Sagan om bokhyllan Billy – en fråga om lärtilar" can be found in the anthology "Perspektiv på distansutbildning", C. Holmberg/A, Westerdahl, SSVN, Norrköping, 2001.

we can also think about possible support structures for different participants in their local environment during the distance periods (time and peace to study, available technology, social/mental support etc).

5. The dialogue and the discussions around learning environments and learning styles become a hands-on way to practise participant influences and to involve the participants in their personal learning processes and those of the class as a whole.