

## ACTIVE LEARNING AND PARTICIPATION

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**Abstract.** During the ENTER expert days in Plovdiv on March 4<sup>th</sup> and 5<sup>th</sup> 2013, we focused on the implementation and use of methods for active learning. Activating didactics for cooperative learning are becoming more popular in vocational education across Europe. Active learning is an approach to familiarize a student with his/her own learning process. For a teacher activating didactics means that he or she has to change the role from a teacher-centered facilitator into a guide who facilitates the process during a learning situation. Thus the teacher is no longer only responsible for the topics content, but he or she is a guide who facilitates the student with interactive ways of learning and active methods. Cooperative learning in groups demands dialogical skills from the participants so that they could enlarge their knowledge and skills through exploration in a cooperative way. In active and competence-based learning, students have more responsibility for their progress. Therefore, counseling and evaluating students' performance occupies central role in the learning process. This article examines the use of portfolio as an instrument to show and organize the level of evidence of competences for various types of audience.

**Keywords:** active learning, cooperative learning, dialogical learning, study and career development, portfolio, didactical approach, self-responsible learning

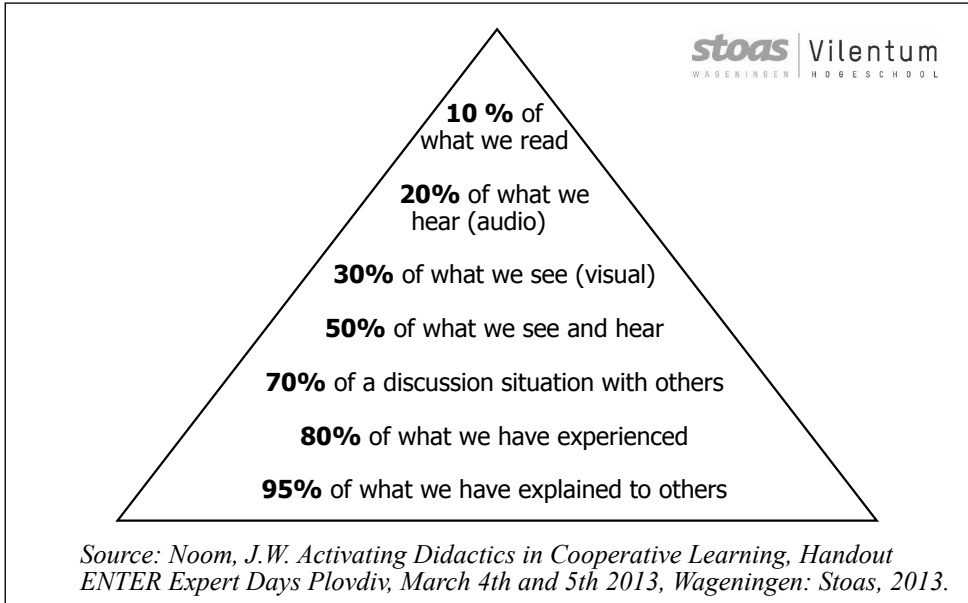
### 1. Activating Didactics in Cooperative Learning

Activating didactics is a teaching method that involves people actively in the learning and work process. Cooperative learning is a way of active and constructive learning. It is required that students work together to achieve common goals (Ebbens, Ettekoven, 2005). Since 1970 there have been many research projects focused on the effect of different ways of learning. The learning pyramid below shows the sustainability of different approaches in learning, based on students who are learning on a vocational level. Of course, to choose a certain learning method teachers need more information about the target group, starting situation and topics. It is very important to incorporate more than one approach in the lessons to keep them attractive and accessible for students with different kinds of multiple intelligences (Gardner).

The learning pyramid shows that 'explaining to others' is one of the most effective ways of learning in vocational education, as well as having an active experience. Simply reading or listening is not too effective as a method because just 10% or 20% of the

knowledge is contained. This could be explained with the fact that reading and listening are more abstract ways of learning, while having practical experience and explaining to others are more closely linked to a situation. Students on a vocational level need to see an applied proof of the material, and a direct connection with a situation.

The learning pyramid doesn't necessary mean that reading, audio or visual ways of learning are out of question, but they require some extra attention so that the transfer of information could be applied in an active method.



**Figure 1:** The Learning Pyramid in Vocational Education

### *1.1. The effect of Activating didactics in cooperative learning (ADCL)*

Why are activating and cooperative approaches of learning so important for organizing our lessons? First of all, students are more independent. They rely less on outside help from teachers and thus are more actively involved in the learning. Instead of being a consumer of information, students change their role into producers of knowledge, together with their classmates and teachers. The second reason is that ADCL takes into account the differences between the pupils in the classroom. In didactical cooperative methods there is room for everybody, for their own strengths and weaknesses. Another important issue is that society calls for independent people who can cooperate well. In companies and everyday life, people should be able to, in a sense, guide themselves, communicate with ease, pay attention to processes in groups, etc. The approach of ADCL motivates pupils and students, because lessons

are divided into different parts with different methods. ADCL allows teachers to enable their students to learn effectively. Scientific research shows that cooperative learning is more effective than traditional learning (see Fig. 1).

### *1.2. Circle of active learning*

A lesson is not a self-contained unit; it has connections with former knowledge, lessons and other educational activities. Similarly, each lesson has a follow-up topic which can be held in different ways. Therefore, the structure of a lesson resembles a circle or a spiral. The completion of one lesson is an important starting point for the next one. ADCL divides lessons into four parts:

- *Orientation phase*: an introduction. Students familiarize themselves with the topics and initial situation, determine the starting level of knowledge on the topic for this lesson.

- *Exploration phase*: getting to work. In an active way students work in small groups on assignments. Central for this phase is that students assume responsibility for the finding and connecting of the right knowledge to complete the assignment. The teacher is only a guide, a counselor or a coach, whose role *is not* to deliver a lecture in front of the class.

- *Evaluation phase*: evaluating the product (content) and process (how did we get the result) of the lesson.

- *Transfer phase*: looking forward with the students. A transition from the topic of the present lesson to a real-life situation. This takes place with the help of questions: Where can you use this knowledge? What are you going to do next week on the job?

### *1.3. Basic principles in active learning*

There are roughly three different styles of teaching: teacher-centered (lecture in front of the class), student-centered (project-based work) and shared. ADCL is a didactical model for implementation of shared leading. In shared organized education both the teacher and the students have their responsibilities for the organization of the lesson. Students can influence the way of learning and are challenged to think about the best approach. While the teacher manages the learning process, determines the criteria, and creates space for elective assignments, students manage the process. ADCL itself is characterized by an intense teacher-student and student-teacher interaction during which the teacher coaches and activates, but does not lecture. As a result, active learning is most effective in small groups between three and five students and in groups with maximum 25 students. In the preparation phase, the teacher has to think carefully about the roles and tasks distributed among the students, as well as the ranking of the groups. Multiple combinations are possible: mixed groups with different levels, groups with a uniform level, etc.

The terms “task” and “role” differ in meaning. Tasks are closely connected to the content and are best described as assignments fulfilled by the group. Roles, on

the other hand, are connected to the process of the lesson. For the teacher alone, it is almost impossible to organize the process for every micro-group; therefore, the teacher has to delegate some responsibilities to the group members. Typical roles are: the time chief; the secretary; the group representative who will presents the results of the assignment; the chief that can ask the teacher questions. Within the framework of activating didactics, it is the group who communicates with the teacher and not the individual. Respectively, by helping the individuals the teacher helps the entire group.

In the ‘exploration phase,’ students work on a task or an assignment independently or in small groups. It is important that they are aware of the learning goal or the aim of the assignment/task and the respective requirements: type of assignment, evaluation criteria, methods to be used, time for completion of the assignment/task, roles within the group, types of support provided by the teacher in the course of students’ work.

| Key concepts                                                                                                                                                       | Class-management                                                                                                      | Teacher =<br>Accompanist / Coach                                                                                                                          | Choice Methods                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Positive interdependence<br>Individual accountability<br>Direct interaction<br>Social skills<br>Attention to the group process                                     | Orderly classification / organisation<br>Group<br>group size<br>(Collaborative) rules in the group<br>Tasks and roles | A good preparation<br>Giving instruction and task requirements<br>Accompany the learning process<br>Leading evaluation and conversation about the results | Variation in methods<br>Relation objective and method<br>Target group<br>Group size<br>Teacher skills<br>Educational style: teacher centered, student centered or shared? |
| <p><i>Source: Noom, J.W. Activating Didactics in Cooperative Learning, Handout ENTER Expert Days Plovdiv, March 4th and 5th 2013, Wageningen: Stoas, 2013.</i></p> |                                                                                                                       |                                                                                                                                                           |                                                                                                                                                                           |

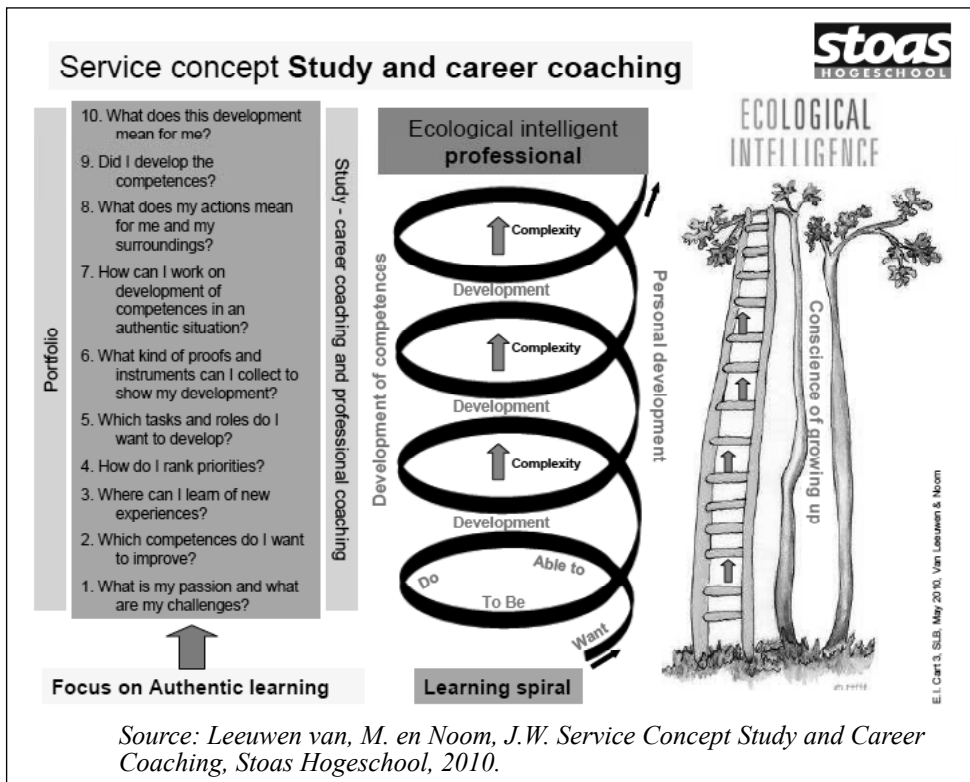
**Figure 2:** Basic Principles in ADCL

## 2. Study and Career Counseling

In competence-based learning students are the owners of their study career. It is up to them to think about the path they will take to the knowledge, to choose the work practices, to challenge themselves, etc. As a result, we put an emphasis on the benefits of study and career development. The latter allow students to construct their own route in their studies and subsequent career. In a questionnaire and conversation at the Stoas Vilentum University of Applied Sciences, we analyzed students’ and coaches’ opinion about the effects of designing a development plan. According to the results, students have low motivation to write a development plan because they consider it ineffective. In response to this outcome, we suggest that students and coaches support the method with effective conversations on

ambition, passion and drive. In that case the development plan is no longer a goal in itself but an instrument.

The coordinators have developed a model to create a more effective development plan with flexible format, as well as a simple schedule to bring together some aspects and steps in development. In the course of group consultations, supervision and individual coaching conversations, students and coaches discover the professional passion and ambition of the individual student. A professional development steps on student's interests, passions and ambitions to determine the contents and work practice periods that are most suitable for him/her. Authentic learning is so a centrally situated issue. The student passes through a cycle of steps, usually more than once, and is able to see the development of a professional level of competencies. Over time the complexity of student's control of competences increases: spiral learning. This 'service concept' for students and coaches makes coaching more effective. It can be used both on generic and specifically substantive level. Students appreciate the cycle of questions and the focus on passions and ambition in the choice of work or career.



**Figure 3:** Service Concept Personal Development Plan

## 2.1. Study and career coaching

Conversations between a coach and a student make up an important part of the study and career coaching. Reflection conversations invite students to reflect on their learning experiences and look forward to the upcoming semester, period or level. Students work individually on their portfolios and personal development plans. The portfolio and written development plan serve as an input for reflection and development conversations between the student and the coach. Research at our institute has concluded that writing a development plan could be more effective when we speak more on the main aims of designing a development plan and bring it further in interrelation with other parts of the curriculum and personal development of the student. Writing alone is not enough, one should talk about it. The written document is the input to a conversation during which the real output is produced.

With the method of group intervision students have a chance to ask each other about details and make their plans more effective and specific. While a student makes just one development plan during his/her study, the document is one and ‘under construction.’ The student can update this plan at any point in time, add new actions and aims, and move reached results. Some life-long aspects like ‘handling my perfectionism’ may be permanent part of the plan (see Fig. 3).

### Steps for designing a concrete plan for operation

| compe-<br>tency                                                                         | Translation of<br>competencies.<br>What does it<br>mean? Which<br>tasks and<br>roles?                  | Strengths / Weakness<br>analyses                                                               |                                                 | Learning<br>objects                                      | Action plan                                                                                                                                                                                                                                                                |                                                                                                                                 |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
|                                                                                         |                                                                                                        | Strengths                                                                                      | Weakness<br>(to improve)                        |                                                          | Activities                                                                                                                                                                                                                                                                 | Evaluation                                                                                                                      |
| Example:<br>Giving a<br>practical<br>instruc-<br>tion in the<br>land-<br>based<br>area. | Example: pres-<br>entation skills,<br>didactical model<br>for instruction,<br>land-based<br>knowledge. | Entertain-<br>ing for a<br>real public<br>(because I<br>am an<br>actor in<br>my free<br>time). | I forget the<br>time when<br>I enjoy<br>myself. | How can<br>I manage<br>the time<br>during my<br>lessons? | Every week<br>I will make a<br>micro schedule<br>for my biology<br>lessons. I will<br>prepare my<br>lessons carefully<br>in a format and<br>weekly I will<br>follow the didac-<br>tical lectures.<br>During lessons<br>I put my watch<br>on the table, so<br>I can see it. | I ask my<br>coach on<br>the job<br>every Mon-<br>day after<br>the lessons<br>I lectured<br>for feedback<br>and feed<br>forward. |

### 3. Portfolio

To make the professional development of a student visible, we often use a portfolio as an instrument. The term *portfolio* is a hype nowadays, so it is important to clarify its key characteristics and use. A portfolio is a folder constructed by a student or an employee to share and prove the level of evidence with somebody (tutors, teachers, managers, coaches, etc.). A candidate can add different documents to proof and show to others (such as certificates, degrees, evidence of graduations, videos, feedback, etc.). In an educational context, the portfolio could be compared to the collection of best works put together by an art painter to present his/her talent to the public. A portfolio is also a folder with a selection of products; yet, never a compilation of everything one has done. Therefore, a clear framework with competences, skills or knowledge is needed before the portfolio is assembled.

#### 3.1. Functions and grouping of portfolios

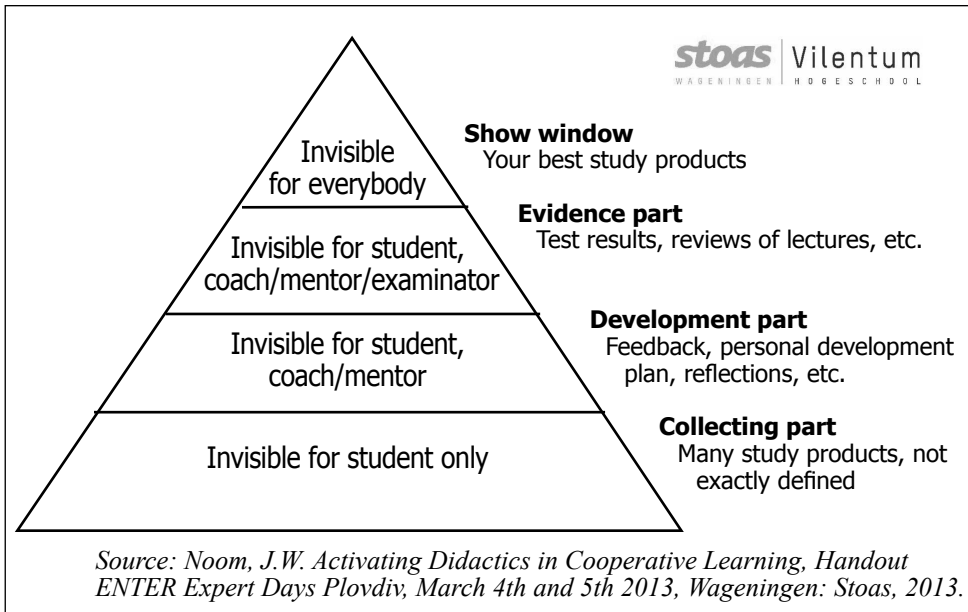
A portfolio may have the following functions:

- To show professional experience and demonstrate what can be delivered in professional terms. This kind of portfolio, nowadays typical for the process of finding a job, is often asked for by a job selection committee.
- To proof accomplishments before examiners at a school or an university;
- To illustrate and share professional development during a study course;
- To collect and systematize reports, articles and other learning products during an educational course.

In global terms, there are four kinds of portfolios: show portfolio; portfolio of evidence/proof; development portfolio; collecting portfolio. Some kinds have a function of judging/measuring, others have more of a development function. However, when we use a portfolio as an instrument in our daily life, we choose one of these functions as leading for the design of the portfolio. For example, when we have to proof our professional development to job managers we create a portfolio with a development part and probably a show part. Inside we can show transcripts or certificates from trainings, study courses, a professional development plan, etc. When we have to proof a set of competences or skills, we opt for an evidence portfolio with test results, reviews on products/reports, and articles. Regardless of the specific type, however, the maxim “Quality over quantity” remains true. After all, a huge folder with paper is much less powerful than a set of well-chosen documents whose content is concise and accessible.

Current labor market requires that we prepare students to work with a portfolio. Students are taught how to select the documents according to the portfolio type. In order to follow students’ development during their studies, we use the structure visualized in Figure 4: **Levels of a Portfolio**. There are four different parts of the portfolio folder: *show window*, *evidence part*, *development part*, *collecting part*. As demonstrated by the figure, they have different size. The *show window* is always the smallest part of a student’s portfolio. Much like

a luxurious design shop, it presents only the most beautiful or best products. In the *evidence part* a student puts reviews on products, test results, etc. Important is that the products include an evaluation from experts. The *development part* contains feedback on functioning, a personal development plan, personal reflections of the owner on his/her development and performance on the job. The *collecting part*, by far the most extensive part of the portfolio, offers unlimited possibilities. Its design reflects the following guiding principle – every portfolio is a living document, a snapshot of a certain moment. This means that a product in the show window could be replaced after some time in the collecting part. Otherwise, a reflection under construction can lead to a beautiful product for a *show window*. At the beginning a test result or a regular progress exam could be placed in the *evidence part*, while later on, when more substantial examinations have been finished, it probably will move to the *collecting part* (see Figure 4).



**Figure 4:** Levels of a Portfolio – Competence-based Learning. Developmental Focussed Education

### 3.2 Examples of input

- In the *show window*: a resume; positive feedback written by a lecturer; great comments in the evaluation reports of learning products; written reports about a topic that the student is proud of.
- In the *evidence part*: copies of final certificates of former educational steps; results of modules; tests.
- In the *development part*: reflections about the past semester; development plan for the coming period; reports with notes from conversations between students and coaches/counselors.
- In the *collecting part* could contain a wide types of products, such as written logs during work practices, study summaries, results of diagnostic tests, etc.

## 4. Dialogical Learning

Dialogue is a powerful tool to understand what actually thinking is, as a process (Factor & Carret, 1991). Yet, not every kind of communication is called dialogue (Bohm, 1996; Isaacs, 1999). There are several studies that connect some important characteristics belonging to a dialogical situation. Firstly, the attitude of every participant has to be philanthropic and all participants have to use interventions that generate dialogue. Unlike other types of communication, in a dialogue common understanding is more important than reaching a consensus. As opposed to debate or discussion where there are “winners” and “losers,” in a dialogue there are only winners. Dialogue is based on equal co-constructivism of understanding; it suggests shared thinking and getting well acquainted with certain subjects and activities (Aarnio & Enqvist, 2001).

Aarnio and Enqvist divide the dialogical competence into four parts. The first one is opening the participants’ state of mind for having a dialogue. Preparing the approach to communicate in dialogue is the second one. The third step is to create a dialogical situation and the last step is to build a general view through a dialogue. To achieve a dialogical attitude in both face-to-face and e-learning environment, participants need meta-skills and self-monitoring competences. In addition to this attitude they need tools and instruments to make a dialogue non-fuzzy, which leads to the creation of a new understanding and knowledge (Aarnio, 2010). Dialogical situations in learning processes also mean letting go of egocentricity and ulterior motives. Communication should be symmetrical, equal and reciprocal. Those involved should be present and aware of their own perceptions and assumptions, thus building upon each other’s contribution. Other characteristics of this process are opening one’s incomplete thinking, expressing oneself clearly (especially in a virtual environment), recognizing key utterances and following carefully the partner’s contribution in a word for word manner. The ability of questioning and inquiring lies at the heart of a productive dialogue.

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## АКТИВНО УЧЕНЕ И УЧАСТИЕ

**Резюме.** По време на ЕНТЕР експертните дни в Пловдив на 4 и 5 март 2013 фокусът бе върху прилагането на методи за активно учене. Нови методи за активация на дидактика за целите на кооперативното учене стават важна част от професионалното обучение в Европа. Активно учене е метод, при който учащият се запознава с уникалните за него самия процеси на учене. Активирането на дидактиката изисква промяна в ролята на учителя – от учител-модератор, който е в центъра на процеса, към водач, който улеснява развитието на учебния процес. Това означава, че учителят има допълнителната отговорност да напътства учащия чрез интерактивни методи. Тъй като кооперативното учене по групи изисква диалогични умения от участниците, те разширяват знанията и уменията си на базата на съвместното изследване на материала в групата. Статията представя предимствата на активното учене и ученето базиращо се на умения, ролята на портфолиото в систематизирането и представянето на наученото.

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