

EU-MAIL October 2004, Norway.

## Individualization / Differentiation in heterogeneous groups.

It's obvious for me that it's impossible to equal individualization with learning. Individualization must be related to intend purposes in general and goals in different subjects.

The observations and interview are collected during a short period. Definitions of central concepts were not established before data collection. Instruments (interviews and observations) were not scientifically constructed. The study should be described as a pilot study, which nevertheless gives some results worth considering for the future.

Note! The teachers observed have developed their teaching probably in spite of strong school traditions. What will happen if/when the preparation to teacher (teacher education) will stronger emphasize individualization practically as well as theoretically?

I have used two abbreviations.

E: Empirical findings. Which is what I have observed or answers I have got in interviews.

C: My own comments.

The left column (with some exceptions) contains a heading which describes "What" can be individualized and the right column with contents from observations and interviews.

### Physical aspects

With a rich environment with a lot of material and space there is more alternatives (what material to work with, with which subject, sources to find "facts", work alone or in smaller groups, at different workplace etc.). If this will lead to individualized learning among the pupils is however connected to many other aspects.

Working place	Adjustable tables in height, possibility for the pupil to adjust the angle of the surface of the desk.
Working place	Possibility to work with a big area/surface when it's necessary. (E: Pupils that are allowed to take their books and other material to arranged spots in the classroom or to another room for example the library). (C: This is depending on if the pupils are allowed to take responsibility, allowed to move freely in the classroom or to the library.)
Classroom equipment	Alternative sources as internet, encyclopaedias etc. are provided in the classroom.
Classroom books	There are to some extent books at different "levels" for pupils with different knowledge.
Rooms for pupils with severe mental disabilities	Some rooms were not furnished as classrooms. Instead for desks there were bath tube (for massage), white sense rooms etc.
Equipment for pupils with mental retardation and communication disorders.	There were computer based learning programs, cards etc. for alternative communication in the part of the school where there were pupils with profound mental retardation.

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Limitations of equipment	As there were not enough with material for an experiment in a classroom, this leads to reduced opportunities to physically interact with the material as the groups were large. (C: More material would lead to more pupils being involved with the experiment...).
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### Educational arrangement

#### Personal commitment

One aspect which probably is crucial is the teacher's pedagogical perspective (concerning perspective on knowledge, learning, humans, society etc.). The commitment for individualizing instruction is a necessary prerequisite. The extract beneath shows how one teacher discusses issues related to individualization and also shows his concern about this.

The observations of lessons with the teacher however reveal that a personal commitment is not enough. The teacher says that good relations with each pupil are necessary, that social relations are the most important factor. The large class makes this difficult according to the observation. There was a lack of interaction partly due to the large class (30 pupils) which was heterogeneous. The lesson was also short. It's of course probable that extended observations would give other results.

<p>Extracts from an interview with one individual teacher. The teacher is chosen as he clearly shows his personal ambitions and commitment to individualize.</p> <p>I have written this in a way to read it "easily" as I hope (narratively...?)</p>	<p>Personal knowledge about the pupils is according to this teacher the most important thing. The teacher emphasise good relations with each pupil. A lot of work has been done to (a school "camp" included).</p> <p>All pupils behave in a nice manner (the teacher has almost no negative experiences concerning pupils behaviour from his long career. The pupil's behaviour depends on the teacher's leader style according to the teacher, and the social relations are the most important factor.</p> <p>The teacher is available one extra hour every day for pupils that want some kind of help (This is not a system at the school. The teacher is the only one who gives this opportunity to his pupils and he gets no payment for this). The teachers do this to give all pupils good (individual) opportunities to learn. It's important that the pupils dare to do things wrong.</p> <p>The teacher has changed his way of teaching/instruct. He says that several years standing in front of the class by the black board finally made him question his own way of working. He felt a lack of individual interaction with each pupil. A weekly working plan together with individualised given goals and "work load" have been improved the work according to the teacher. The changes of teaching pattern were partly based on a visit to a demonstration school. Another crucial "base" for the changes was the cooperation with the teachers in the teacher team (The team consists of 4 teachers that have their teaching "common" in some classes).</p> <p>The pupils that show good or excellent results are problematic to support according to the teacher. The teacher has made clear for the pupils that they can all work at their own pace. The result</p>
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	<p>have been that several pupils who finish grade 10 already have done the mathematics that usually is done during the first year in the upper secondary school / gymnasium grade 11.</p> <p>The weekly plan is reachable on the net (for the pupils and their parents).</p> <p>There's a lack of resources and the classes are too big. This results in exhaustion.</p>
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### Planning of work and evaluation

Instruction/teaching which gives possibilities for pupils to make their own decisions.  
 Instruction/teaching which gives possibilities for teachers to give tasks in different ways and on different levels. (This can of course be done in other ways as well...).

Overall workload.	<p>The overall workload was differentiated by the teacher who gave additional tasks in mathematics for fast learners.</p> <p>(E: There were pupils who loudly expressed that they felt stressed because of the weekly workload.)</p> <p>(C: The differentiation offered by the teacher (only in mathematics) was apparently not sufficient. The teacher did listen, though, and had a discussion with the pupils about this dilemma. The pupils can decide how much of the weekly workload that will be done at school, says the teacher.</p> <p>Differentiating the overall workload for each pupil can be improved – if it is desired... ).</p>
Individual planning of work	<p>Each pupil can decide when to work with a certain task during the week. The pupil can also decide, to some extent, how much of the workload that will be in the home work.</p> <p>(E: The pupils in one classroom worked with the following subjects and tasks at the same time: Mathematics – division with “natural figures”, exercises with algorithms; KRL (Religion) – Ethical topics taken from some poetry in a book, read and answer written questions; Natural Science – read about water, answer written questions; Norwegian (first language) Read and learn about the different languages used in Norway (Bokmål, Nynorsk, Samiska) read and remember/memorize; English – A chapter called the planet Saturn, learning how to use Who, Which, When, Where etc.) with some exercises in the textbook. Some pupils planned/replanned the work schedule for the week.</p> <p>(C: This work allows pupils to work with different tasks. To make this possible the tasks often means working with facts, “to do the tasks to be finished”. The role of the teacher is very important. Will the teacher challenge the pupils thinking? Where this education (with weekly plans) the pupils had almost no interaction with each other. This way of working will benefit/increase the pupils ability to take responsibility, take decisions, work independently. Some of the pupils will need more guidance than others. Pupils working fast can get free afternoons without homework or make extra tasks (often at a higher level and</p>

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	usually in mathematics according to the weekly plans structure/content we have seen).
Individual work planning and evaluation together with the teacher.	<p>(E: The teacher reads the suggestions the pupils have written down (on a document) for their planned homework. If the teacher gives his approval he signs the document (one for each pupil). The teacher says (during the lesson) that he evaluates every individual weekly plan together with each pupil on Thursdays.)</p> <p>(C: The pupils have some possibilities to influence the school work while sharing the responsibility for the work with the teacher).</p>
Individual evaluation.	<p>Weekly evaluations of every pupil in the class.</p> <p>(E: The teacher says that the weekly tests (on Fridays) show if a pupil doesn't progress as intended. The pupil might be told to repeat some parts. The teacher tries to have an individual dialogue to each pupil on Thursdays to make it possible to prevent that the pupils get things wrong. If so is the case there is an hour reserved on Thursdays to deal with this. This affects the homework that shall be done to next the day ( to Friday when the tests are).</p> <p>(C: These talks to every pupil seem to strengthen the teachers knowledge about every pupil, not only academically and might be something that improves social relations.).</p>
Differentiating homework	<p>Pupils receives different amount of homework and homework tasks with difficult degree of difficulty.</p> <p>(E: According to the teacher, a pupil describes as getting less homework since the teacher knows that the pupil gets no support at home).</p> <p>(C: This reduction of homework in a context where homework is an essential part of school job leads to a reduced amount of work compared to the peers who get support at home. The pupil also gets easier tasks due to this situation. The differentiation of homework might, of course, be negative if the teacher/teachers don't compensate the pupil).</p>
Individualized help for homework.	<p>The pupils were offered help with their homework.</p> <p>(E: One teacher offered the pupils to work with their homework at school instead of bringing them home. This help were planned three days a week between 14.00-15.00.)</p> <p>(C: This solution help pupils who can't get help at home and give an extra alternative for everyone. Other pupils help each other via internet and sms according to the interviews).</p>
Choosing what to work with – pupils choice.	<p>(E: Working with A-plan. Pupils choice what to work with. The "result" is that most of the pupils work in pairs with an English dialogue. The large classroom makes possible to create a "small class" within the class for pupils who are described as having learning difficulties. They work with a special teacher. Some pupils use cd and earphones to do exercises.)</p> <p>(C: The physical outfit and two teachers makes it possible to work</p>

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	with different tasks at the same time. Some kind of segregated integration within the classroom... This arrangement does not seem to enhance motivation among the pupils working with the special teacher according to an interview with pupils).
Accommodated tests	E: Accommodated tests and test procedures are used according to teachers. The pupils may listen if they can't read (dyslexia), receive more time if necessary and may use a computer.

### Individual work with A-plan (W-plan = Working plan).

Aspects observed that show some issues connected to the work with A-plans.

Individualized learning.	Working with A-plan. / "lonely work" (E: There is not much of communication between the pupils during the lessons. Their seats are parted. Even when they eat (in the classroom) they still sit apart. The pupils say that they can concentrate better and finish their workload contrary to when they were sitting together.) (C: This arrangement seems to be due to disciplinary causes rather than educational to enhance learning.).
Differentiation of teaching.	(E: The pupils learning were highly guided by the textbooks and the workbooks. There were very few instructions with the whole class gathered). (C: This way of teaching puts heavily demands of the quality of the books. The books used were apparently not good enough as many of the pupils solved tasks they did not understand. Many instructions in the books were also difficult for the pupils to understand. That was my impression as I talked to pupils during the lessons.).

### Instruction

Instruction given by different teachers (teachers, special teachers and also assistants etc.) make it possible for pupils to receive instructions in a variety of ways.

Different "helpers"	In some classes there were more than one teacher helping or instructing the pupils. (E: Pupils said during interview that when they get problem in the classroom they turn to one of the adults. There were two teachers and one assistant present during the observation). (C: The adults give help in different ways, for example give answers, give hints, put further questions to the pupils, describing something that is a parallel to the problem, reminding of what has happened before etc. The different ways of helping is probably connected to different kinds of perspective of learning?)
Necessary prerequisites among staff.	The need of extra resources in mixed ability classes. (E: The teacher emphasizes the importance to have special teacher/coordinator and assistants in such a heterogeneous class as his. According to the pupils they find the instruction much

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	better when a teacher explain than an assistant.).
Way of instruction wanted	(E: Pupils said during interview that they learned more if they were given hints but no solutions. “want to learn by themselves”.)

### **Collaboration.**

Pupils collaborating (helping each other) give possibilities for individualized learning.

Individual work and collaboration.	(E: The pupils are allowed to help each other as long as they do this quietly. There are no restrictions to move inside the classroom.) (C: The classes work with group tasks and projects some of the work time. Then the interactions between pupils are more important according to the teacher.)
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### **Motivation.**

An individualization of teaching/instruction probably affects pupils motivation for learning.

Enhancing motivation by individualisation.	(E: one pupil emphasize that the possibility to decide over a part of the weeks work increases his motivation). (C: The pupil were in a school situation where some of the work were decided entirely by the teacher and some of the time by the pupils. The pupil wanted both forms to be used during the weeks. The pupil also considers it to be easier to learn when the teacher explains).
Enhancing motivation by variation.	E: Interview with pupils: The way they work in school with different kind of work during lessons individually with week plans, in collaboration with others, with instructions from the teachers etc is described as motivating. The variation in itself is emphasized (they say) as important.

### **Social relations.**

The work with A-plans (weekly working plans) gives possibilities for teachers to have extended interactions with each pupil. More interaction gives more knowledge about the pupils in the class. This is a common description made during the interviews with the teachers.

Differentiation in meeting pupils – personal relations.	10.15 A girl comes to the lesson. She wasn't present during the former classroom. The teacher asks the girl: “how was the riding”... The dialogue shows that the girl has been riding a horse. The teacher signs a paper that the pupil brought with her. They talk (“friendly”) for some minutes and the other pupils return
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	from the break and they start working.
Differentiation in meeting pupils – personal relations.	<p>(E: The teacher says the social relations/contact between him and the pupils are much better with this way of working compared to the more traditional way he used to work. He talks much more individually with each pupil and is not “bound” to the blackboard as he used to be.</p> <p>When he finds it necessary (as he says) he instructs the whole class as in this example: 10.05 the teacher calls for attention. He has noticed a common problem among the pupils (278 c in the math. Book.). The instruction which is accomplished while asking for solutions from one of the pupils is fast. Several pupils do not seem to get involved in the mathematical progress with the interaction between the teacher and the pupil. It seems as if they try though (everybody is silent and their attention seem to be directed to the teacher, the blackboard and the pupil). The solution is gradually written down on the blackboard by the teacher, one kind of solution is proposed by the teacher. (~ one “right” answer about how to solve the problem).</p> <p>(C: This described situation could have been a departure for a discussion about how to solve the problem. Some of the pupils however were not working with mathematics and must have had difficulties to suddenly think about mathematical problem solving. For some other pupils the mathematical problem and solution offered seemed to be too difficult according to their body language. The instruction offered by the teacher, <u>were not</u> during the session when he has normally instruction in Mathematics., see Visit – Observ – sheet- Oberg School JMA 041011).</p>
Attention from the teacher. Being in a good circle or not...	The attention and interaction between teacher and pupils were sometimes unevenly “distributed”. There were pupils who did not receive any attention (verbally or nonverbally) from the teacher and pupils who received a lot attention during a lesson. (see Visit-Observ-sheet Risum JMA 041013).
Differentiation in meeting pupils – personal relations.	(E: The class room atmosphere has changed to the better concerning the relations between teachers and pupils. The new way of teaching gives more opportunities for these relations to develop. Most of the pupils are also better prepared live in the society when they have been in this kind of education according to the teacher. The teacher says however that she is pessimistic about pupils with low capacities who can’t deal with written language and computers. It’s obvious according to the teacher that “the more able” get much more from this kind of education than from more traditional forms of teaching.)
Social security	<p>(E: Some pupils said they were afraid of asking “stupid” questions. They chose not to ask instead of seeming stupid when other pupils listen.)</p> <p>(C: This highlights the need for the teacher to create a friendly</p>

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atmosphere especially among insecure pupils.)

### **Differentiation due to special needs.**

In inclusive education which is an important goal for most countries (UN, Salamanca declaration) there is naturally a heterogeneous mix of pupils to consider. Norway does not have parallel school systems (for pupils with and without mental retardation) but noticeably different levels of inclusion in their schools.

Differentiation according to pupils needs 1. Pupil with severe mental retardation.	Uneven distribution of resources and instruction. The classes are very heterogeneous. Two pupils have mental retardation for example. The teaching and the resources is adjusted to these prerequisites. (E: One of the pupils in the class has a severe mental retardation according to the teacher. The teacher says that this pupil usually work in the small room that is in direct connection to the classroom. The pupil participates in the beginning of the day, at breaks, during lunch, at school journeys and occasionally in some activities in the classroom. The pupil also has regular activities that the other pupils do not have (swimming for example, as during the day when we were visiting). (C: Norway has a school system with an ambition since the beginning of the eighties to have inclusive schools (institutions and special schools were closed and schools are supported from special pedagogical competence centres with their course activities.). The ambition to have inclusive schools was apparent during the school visit. The education is (due to definition) not “fully inclusive” (if it is possible). There were also other pupils with mental retardation at the school with more severe physical disabilities as well as mental retardation. According to the special teacher/coordinator are a few of the pupils so fragile so the classes will have to come to visit these pupils instead (they are most of the times not conscious enough to participate in social interaction, can't eat by themselves, need a lot of medical care etc.).
Differentiation according to pupils needs 2. Pupil with minor mental retardation.	Uneven distribution of resources and instruction. (E: From the interview and observations; The special teacher/coordinator has 8 hours a week to accommodate the material for another pupil who, according to the teacher, has severe difficulties to learn. This pupil has a schedule that is somewhat different from the other pupils for some of the lessons during the week. The pupil has practical work during Wednesdays (combination of practical mathematic and cooking/bakery) together with some other pupils in the school. The peer situation for the pupil is not easy in the class according to the teacher who says that the pupil seeks contact with younger pupils in the school.). (C:
Differentiation	Uneven distribution of resources and instruction.

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according to pupils needs 3. Pupil with another first language.	One pupil receives extra resources and support as the pupil has another first language than Norwegian. The pupil receive additional 4 hours a week to strengthen the Norwegian language and 2 hours a week to strengthen the first language).
Support system for special needs.	IOP works with support and with early intervention for children in special needs. IOP is an external organisation which distributes resources. These resources are emphasized as essential for individualization.

### National curriculum

Interviews clearly show awareness among teachers about teaching on each pupil's level.

National steering of the schools / Ideology	<p>(E: The special coordinator/teacher describes thoroughly the transition from a highly divided school system to a school system aiming toward inclusion. The curriculum (läroplanen) was thoroughly dealt with and had a clear vision that the school should be the meeting point for <u>all</u> children. Lot of resources were reserved and used for in-service.).</p> <p>(C: The teachers we met talked positively about inclusion and seemed fully aware of the ideology behind the heterogeneous groups they worked with and the juridical base « Law ; to succeed on their level ».</p> <p>Some of them were worried of new signals from the political leading party and the economy in the communities that according to the teachers were much worse than the described wealthy national economy. Due to the bad economic situation in the schools it is much more difficult to work towards inclusion nowadays. The special coordinator/teacher says there's a fight about money/resources that is devastating for inclusion).</p>
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### Some other notions...

	<p>There is one teacher at one school (Öberg) who wants to develop instruction/teaching in some of the observed classes where they use A-plan (Working plan). Instruction/teaching based on "the pupil as a researcher" is therefore under development. The emphasis on knowledge and facts in the books will then decrease and other knowledge sources (internet, interviews, study visits etc.) will be used more frequently according to the teacher. Depending on how this is done there will probably be a possibility to further increase individualization.</p>
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