

Active Learning at Byhaveskolen, Denmark

An evaluation study of the Visual Communications Class' concerning the 2015/2016 group of school-starters
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The following paper evaluates a pilot-project that Byhaveskolen, Denmark launched beginning of the school year 2015/2016 towards a small group of students in the *Group School Starters* (GSS¹) and *Visual Communication Class* (VCC²) team. The paper will seek to answer this problem definition:

How do we succeed in creating and initiating development for students with a slow pace of learning and a very uneven profile, and how do we ensure their profile to become smoother?

1. Introduction

In the school year of 2015/2016, a small group was established across the GSS and VCC with the purpose of using *Active Learning* as a method, to enhance student development and to make their development profile more even. Furthermore, it was agreed that the learning environment which VCC offers with an intense focus on Visual Communication in particular would benefit the students' linguistic development. Three of the students moved into VCC from GSS; one from 0-grade and two from first grade. One of the students was already in VCC.

We expected that the students would develop positively due to the intense sign-supported environment and the Active Learning method. Additionally, we anticipated that one student, potentially two, would develop so much that they would be able to follow the regular classes (fourth to sixth grade) after finishing their third school year.

1.1. The Framework for Active Learning in Visual Communication Class

Active Learning is goal-oriented education for students with a very slow rate of learning and a functional level of a child less than four years of age.

The method is based on a very detailed assessment using the *Functional Schedule* as this group of students are so complicated that it is a necessity to capture specific and highly detailed knowledge on all learning points in order to identify the right development profile for an individual student and thus tailor a bespoke education program around this given subject. Each student holds his/her own individual program, including a plan of progression and evaluation as well as grounds for new goals of learning.

All staff included the VCC project has completed a course in Active Learning level 1 before the start of the project and level two with the workshop (supervision) by November 2015.

The school's Active Learning resource manager, Mrs. Pamela Christensen received a plan to spend eight hours 'in-class' and additionally two hours a week as a counselor, to support and inspire other members of staff.

¹ GSS: Group School Starters: Students grade 0-3 grouped together not by grade but by intellectual level and capabilities.

² VCC: Visual Communications Class, a specific class focused on teaching through visual communications methods.

1.2. Project Background

The purpose of Active Learning and the use of the Function Schedule was to create as solid a foundation as possible to design an individual learning program for the 4 students.

In order to achieve this, it was necessary to know as much as possible about what the individual student had already learned, as well as to carry out an assessment of the student's zone for closest development in the areas that form the basis for the student's cognitive as well as personal and emotional development.

All four students in the newly formed GSS in VCC were assessed according to the Function Schedule in April 2015 by the resource manager in collaboration with the teachers who were to work directly with the students.

All four students had a very uneven profile. Additionally, all four students would benefit from intense use of Visual communication and sign-supported exercises for Danish class.

For many students, it appears that there is a big difference between the level of application in different areas. Any progress or lack of progress in one area will affect the development and learning in all other areas. Often, there can be a large discrepancy between the levels of development achieved in different areas. This discrepancy should be taken into account when designing the individual learning program so that the program contains the right opportunities for acquiring the missing stages of development, thereby gradually creating a more even level of development in the different areas.

Through Active Learning, we hoped that the students' development profile became more even, so that a more regular education could be initiated in the long term.

We also hoped that the method would create greater satisfaction with the student, as he/she would experience fewer failures, which often can slow down learning. We expected to be able to see this through the Functional Schedule regarding the emotional development.

2. Methodology

The Function Schedule is divided into functional areas, each area is divided into 19 sections, which together cover the area's functions from 0-48 months. Each section's functions are made in three and six month periods.

The Function Schedule is based on standardized tests and results of scientific research, studies and observations. The schedule can be used for any student, regardless of age, who's mentally on a level equivalent to three and a half to four years of age or younger.

For the learning program "*The FIELA Curriculum*" there are 730 suggestions for learning goals and learning environments.

The four students were assessed with the Functional Schedule in April 2015.

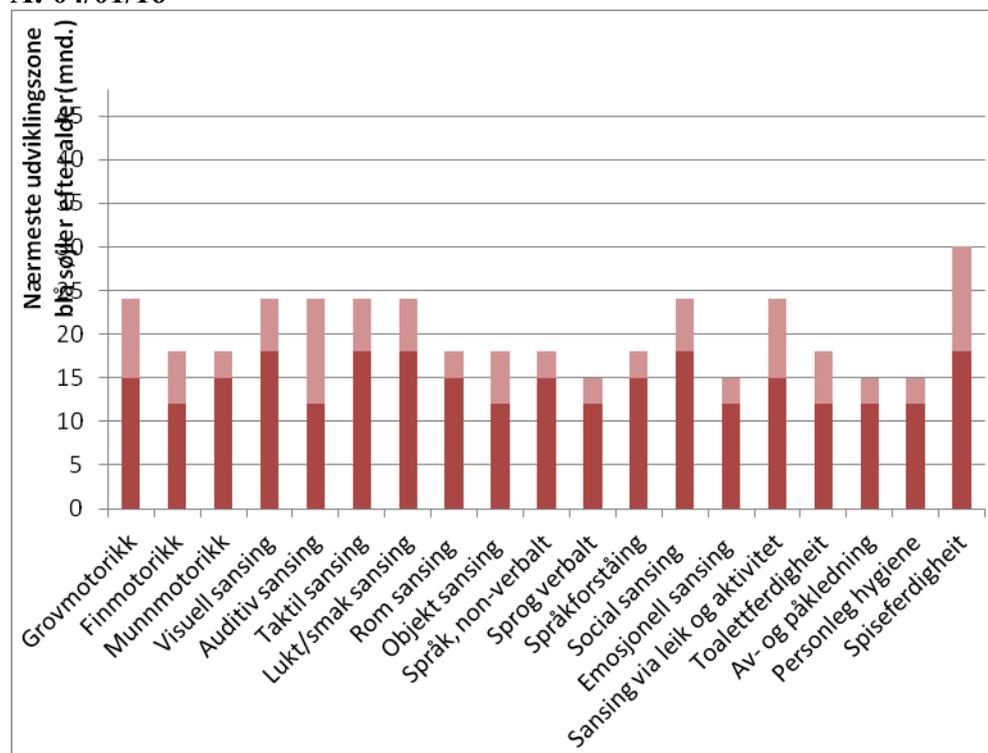
- A: Function level estimated from approx. 12 months closest development zone from 12-24 months.
- B: Function level estimated at approx. 12 months nearest development zone from 9 to 41 months.
- C: Function level estimated at approx. 15-24 months nearest development zone from 24-46 months.
- D: Function level estimated at approx. 15-18. months. nearest development zone from 18-41 months.

Based on the assessment, the learning program, which was estimated to bring optimal influence to the student's development, was designed.

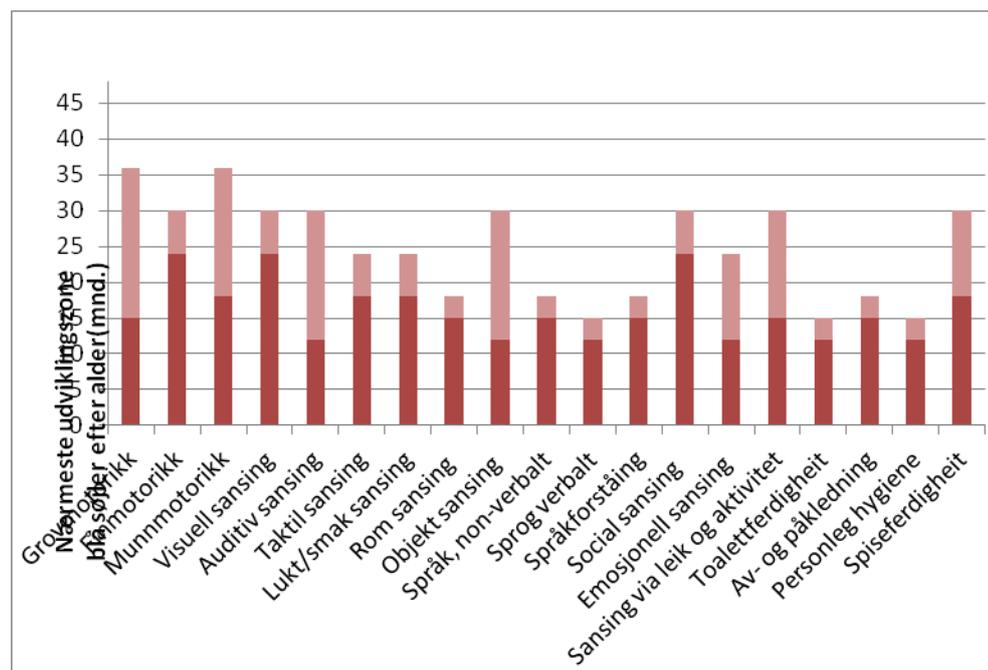
All students were assessed again in April 2016 to evaluate and measure the progression in their development.

3. Analysis

A: 04/01/16



A. 01.04.16



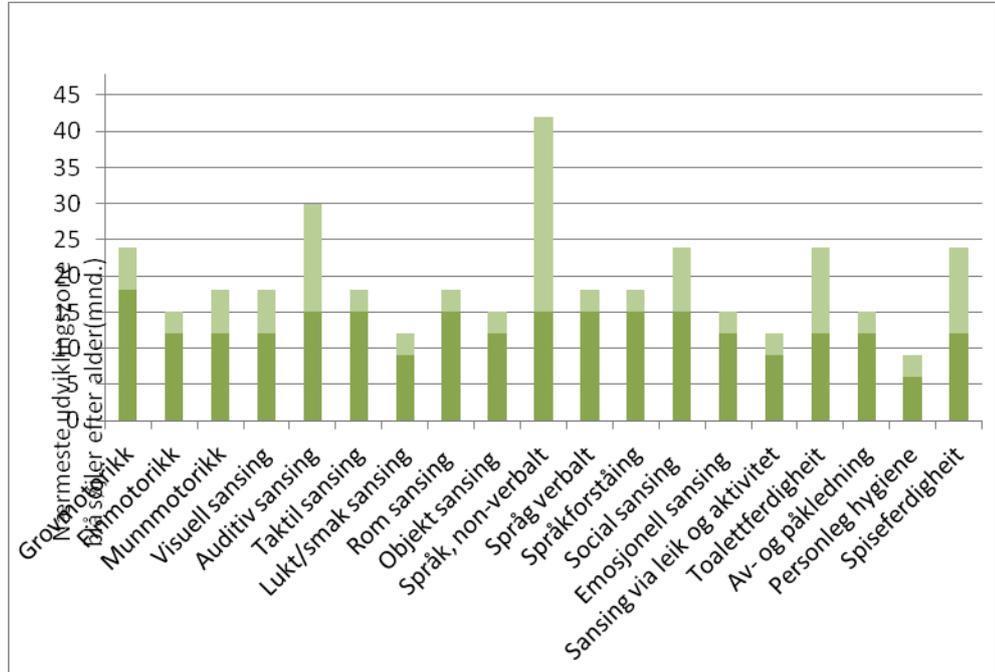
- April 2015: Function level estimated from approx. 12 months closest development zone

from 12-24 months.

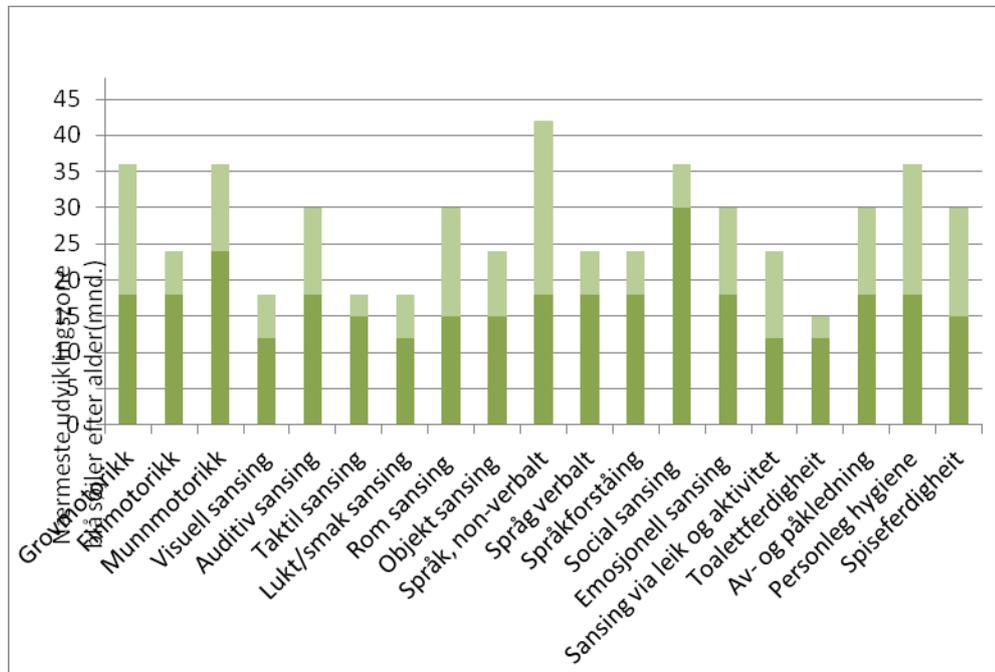
- April 2016: Functional level estimated from approx. 12 months closest development zone from 12 to 36 months.

From 2015 to be able to meet 6 areas in the 15th months there has been a development, thus A. scoring with approx. 15 areas from 15 months 16 to 19 months 12 to 24 months 9 to 30 months and 2 to 36 months. Thus, the entire base level has been raised.

B: 04/01/15



B. 01.04.16

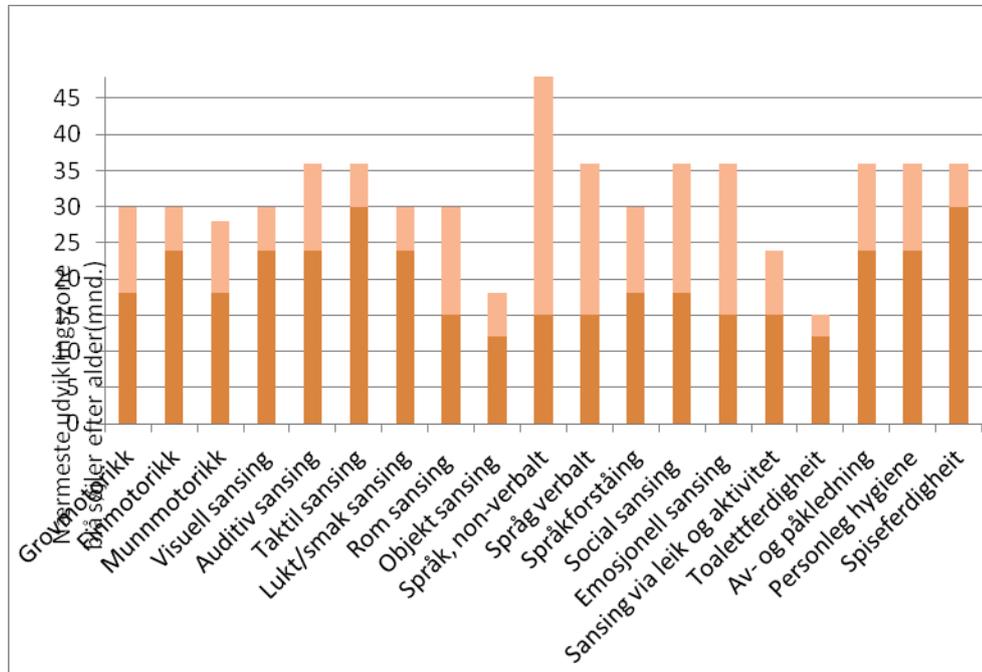


- April 2015: Function level estimated from approx. 12 months closest development zone from 9-41 months.
- April 2016: Functional level estimated from approx. 15 months closest development zone

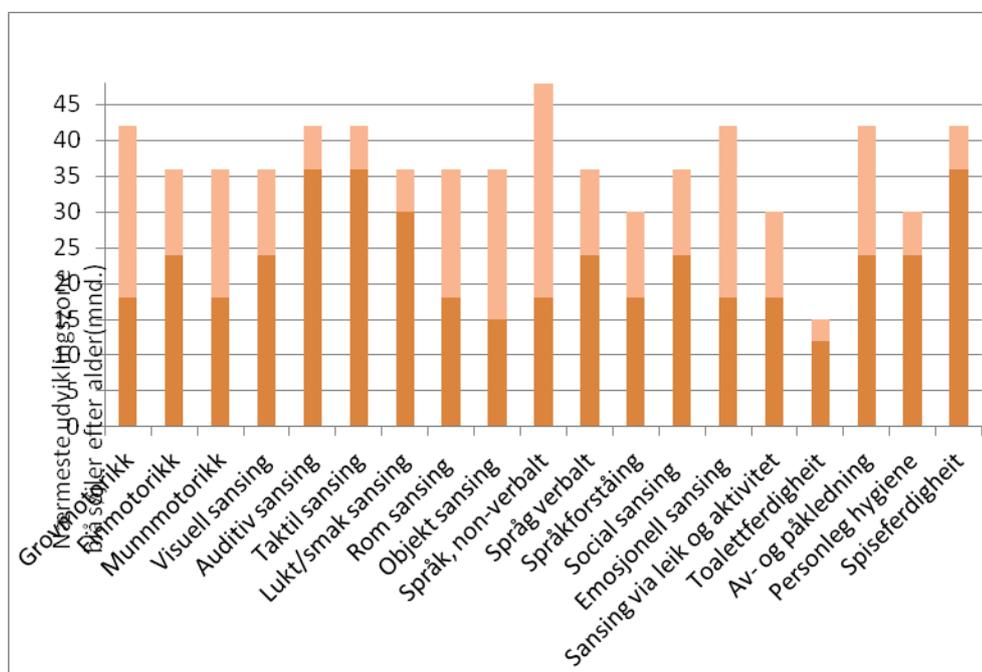
from 15 to 41 months.

From achieving 19 areas in 2015, in 12 months there's also been a huge development for B who scores around 19 areas in 15 months. 18 in 18 months. 15 in 24 months. 10 in 30 months and 5 in 36 months and 1 in 41 months). Thus, again the entire base level was raised.

C. 01.04.15



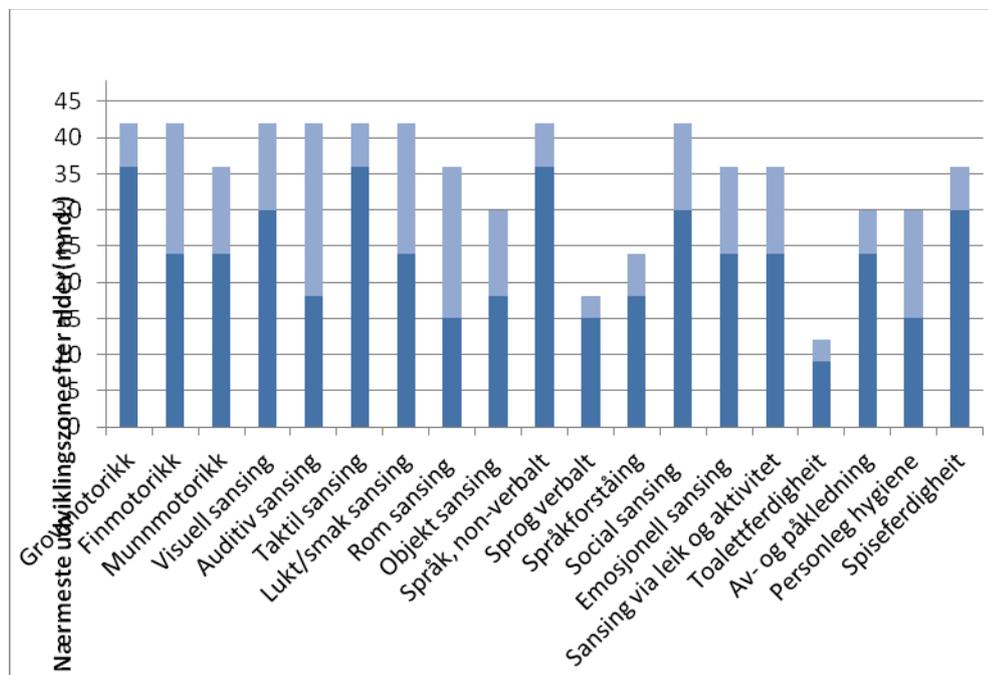
C. 01.04.16



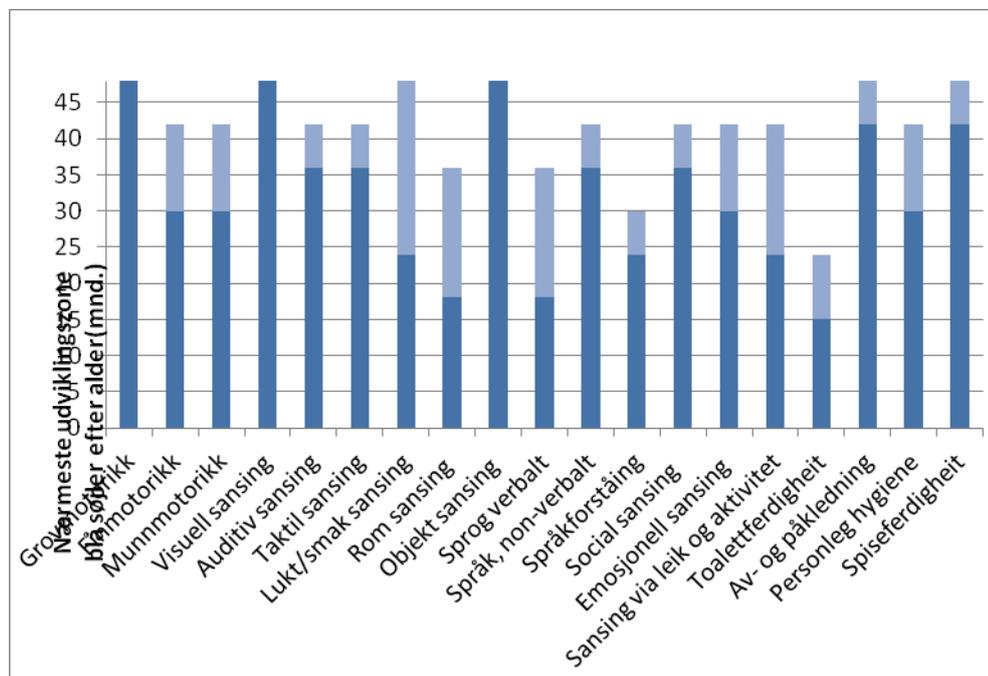
- April 2015: Function level estimated from approx. 15-24 months closest development zone from 21-46 months.
- April 2016: Functional level estimated from approx. 15-30 months closest development zone from 24-46 months.

From achieving 19 in 15 months there's also been a huge development for C who scores 18 in 30 months. (against 16-30 months) 15 in 36 months (compared to 9 in 36 months). 7 in 41 months and 1 in 46 months (compared to 1)).

D. 01.04.15



D. 01.04.16



- April 2015: Function level estimated from approx. 12-24 months closest development zone from 19-44 months.
- April 2016: Functional level estimated from approx. 24-30 months closest development zone from 30-46 months.

From achieving 18 areas in 15 months in 2015 there's also been a significant development for D who scores 19 in 24 months. (compared to 17-24 months) 18 in 30 months (compared to 16 in 30 months). 17 in 35 months (compared to 13) and 15 in 41 months (compared to 8) and 6 in 46. Once again the base level was raised as there's a significant progress in all areas.

Through Active Learning, we hoped that the students' development profile became more even, so that a more regular education could be initiated in the long term.

We also hoped that the method would create greater satisfaction with the student, as they would not as often experience failures, which can slow down learning.

Did it happen?

Yes, for all four students the bottom level was significantly raised. C and D got a more even learning profile. D managed to be included in the regular education program for swimming and sports. Within the next year of school, D. will also participate in in the regular education for music and visual arts.

In the emotional and social area, A and B improved:

A: Emotional from 15-24 months, social from 24-30 months.

B: emotional from 15-30 months, social from 24-36 months.

C and D moved only on the emotional area:

C: from 36 - 41 months and

D: from 36 - 41 months.

What was put in motion?

Example on A.

The assessment called for observations of what the pupils did and were interested in.

A: "is occupied by turning activities to compare sound, shape, surface and taste. This will be a prerequisite for adopting terms. A. is practicing at imitating and mirroring the activities of other pupils. A. practices walking to and from objects and activities and plays hide-and-seek (spatial relations), A. wants to perform simple ordinary everyday activities."

The nearest development zone of A stretches from 12 – 24 months, the verbal area, non-verbal, visual and haptic-tactile perception

Perception is the strongest side of A. This means that A. must continue working with things relating to object- and sound perception, as well as fine motor skills and perception through playing activities.

Focal areas will be:

- *Learning to use tools alone to achieve better space understanding and ability to play constructively.*
- *Working with putting in and pouring out to better understand volume and learn about the relations between items – including understanding of terms.*

- *Examining and experimenting with many different objects. This will increase the self-confidence of A and strengthen the emotional development.*
- *Experiment with using the voice in different ways, including receiving relevant answers on verbal requests.*
- *Working with several day-to-day tasks alone.*
- *Continuing the work with gross motor activities to increase the coordination of arm and muscle power.*
- *Experimenting with 'knock-activities', which will increase the attentiveness to the effect of own actions. This will essentially influence the development of the spoken language (auditory comparison)*

Example D:

Here as well the function level was covered and described, where after teaching proposals were provided, according to the nearest development zone.

The function level of D is estimated at 18 – 24 months:

"D is interested in activities such as biking, swinging, jumping, running etc.

Can immerse into own games. Happy to play next to the other kids, but also interacts for shorter periods. D loves getting dirty in mud or use food or paint to do so. Wants to experiment with using a knife to cut food... imitating and mirroring the activities of other kids.

Practices the verbal language to express wants and needs. Also, practices making words and actions connect for others in terms of expressions and emotions. Visual communication"

..... D can become angry and insulted, ...becomes sad or completely passive / helpless, when D wants to do a task alone and others help or address him too much. D is willing to listen and has the ability to follow instructions and requests. D can lose interest and often likes to leave an unfinished task if it proves too time consuming or tough."

Based on the assessment a learning proposal was created covering the area from 6 – 48 months. The nearest developmental zone of D:

The strongest area of D was the language, gross motor and haptic-tactile perceptions.

A focus on the following areas was estimated to strengthen the broad personal learning and development of D.

- *Working with fine motor activities alone*
- *Comparing shapes and colors through experimenting with volumes, including easier adoption of terms (full, empty, big, heavy, color, shapes...)*

- *Experimenting with using the voice in different ways, including getting relevant answers on verbal requests.*
- *Having time to examine and discover new ways of conducting actions and thereby learning to solve problems alone.*
- *Working with spatial relations and activities which promotes the ability to play constructively*
- *Having the opportunity to pick the activity when working at the desk*
- *Continuing to work with gross motor activities*
- *Continue with imitating the activities of others, as it promotes the psycho – social development.*

How?

The subjects were divided into Danish (language), math attention, art, music, physical education and nature and science.

Example of a subject and leaning goal for D. (math attention)

Learning goal:

Can develop the ability to build, create and construct through the use of different materials and techniques, including time and space navigation skills.

Example:

- *Sort terms*
- *Sort shapes and colors*
- *Experiment with volumes, filling sand in cups, bottles etc.*
- *Counting and determining numbers in everyday-life (e.g. when setting the table, syllables in names, how many are present, who are missing, count ball exercises in hand motor skills, count the amount of exercises in movement etc.)*
- *Repeat and describe shapes and patterns*
- *Work determined with terms like in front of, behind, big, small etc.*

Indications of learning:

D can sort (according to terms) cup / plate, stones / leafs etc.

D can experiment with volumes

D can navigate space and find the way around the school, recognize know routes

D can understand terms like big, small, up, down

4. Conclusion

To promote learning with three pupils in pre-school and 1st grade respectively, who in principle were to progress to 1st and 2nd grade respectively, we chose instead to place them in VCC in a small GSS³. In this group a pupil already went to VCC.

Visual Communication contributes to socializing, verbal understanding, impressive / expressive language understanding, including basic communication. Likewise, Visual Communication promotes fewer conflicts more initiatives for playing, activities and communication via signs (help, hungry, thirsty, tired, names etc.)

The purpose of greatly introducing Active Learning and Visual Communication was a desire to promote the cognitive, social / personal and emotional development. The nearest development zone was used in the work with each pupil along with any individual considerations.

All four pupils were at a level of 1 – 4 years approximately.

How have we succeeded in initiating a development for pupils with a slow rate of learning and a very uneven profile and how do we even this profile out?

Based on the good results, the strategy for the next school year – the school year 2016 / 2017 – is that Active Learning and Visual Communication is continued taking point-of-departure in the new functioning level of the four pupils. The learning goals are adjusted and adapted.

The bridge-building to the regular classes are continued, in order to test competencies and skills, but with foundation in VCC for pupil D. Furthermore, the bridge-building is a longer-term opportunity in some subjects for pupil C

5. Reflections

Observations and the completion of the Functional Scheme Assessment Summary for the four pupils in pre-school and 1st grade respectively, will create the foundation for a targeted effort the coming school year. We have seen that the assessment in the Functional Scheme Assessment Summary and the Active Learning method can contribute in strengthening the learning and development of the pupils.

Furthermore, experiences have shown us that the Functional Scheme Assessment Summary must be used in pre-school going forward regardless of whether the pupils is in pre-school or is a pre-school student in the GSS.

If the pupils are at a level above age four, the assessment summary will quickly show that other measures are necessary.

³ GSS: Group School Starters: Students grade 0-3 grouped together not by grade but by intellectual level and capabilities.