

Title: Teacher quality: Key to success?

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1. Abstract

In 1998 started the "Deltaplusproject"; a project that involves 54 primary schools with more than 70% pupils with a foreign background in the inner city of Rotterdam (Westerbeek & Lacor, 2003).

The project is financed by the local government of Rotterdam in cooperation with the involved school boards and is carried out by the CED-Groep.

Goal of the project is to improve pupil results in the basic skills reading (technical and comprehensive), arithmetic/mathematics and social competences.

The focus in the project is on teacher-skills and more specific on the use of data to guide the educational process. The underlying assumption in the evaluation model is that better teachers produce better teaching results.

After ten years we can show whether that assumption was valid, how we influenced teacher behavior and which factors were also important for good teaching results.

Pupil results improve and improved teacher instruction behavior is the most important factor that influenced this result. Besides that, other factors like school board, management and stability prove to be of big importance.

2. Method description and account for used methods

2. 1 Introduction

In 1998 started the "Deltaplus project". Deltaplus is a project that involves 54 primary schools with more than 70% pupils with a foreign background in the inner-city of Rotterdam.

The denomination of the school boards vary from public to religious ones (e.g. roman catholic, Islamic).

Overall objective of the project

"Improvement of basic skills in multi cultural schools in Rotterdam".

Specific objectives

Enduring quality-improvement of education

Better pupil results in Dutch language, mathematics/ arithmetic and social competence.

Basic assumptions

When we thought out the project model we used the following basic assumptions as a guideline (Westerbeek, K. en Wolfgram, P., 2003):

- Intensive professional counselling of teachers' instruction behaviour in the classroom is effective
- Effective innovations last long and are systematic
- Intensive counselling of the internal counselling structure, including the frequent evaluation of pupil results is effective
- Effective education is supported by the use of good materials, adjusted to the pupil population of the school
- Adjustment to the specific school conditions is necessary to guarantee readiness to innovation

These assumptions have many consequences and not in the least financial ones. Especially the first two mean that a substantial financial contribution is necessary. We were blessed by a visionary local government and local school boards who also emphasised on educational quality in the inner cities and who were willing to give the project a long term solid financial basis.

The assumptions helped us to set up the project and made the project to what it is now.

General information about the project

In 1998 we started with 2 pilot schools and from 1999 each year a cohort of approximately 15 schools started until we reached the maximum of 60 participants. During the years some schools stopped and so we had in 2008 fifty-four primary schools participating in the project.

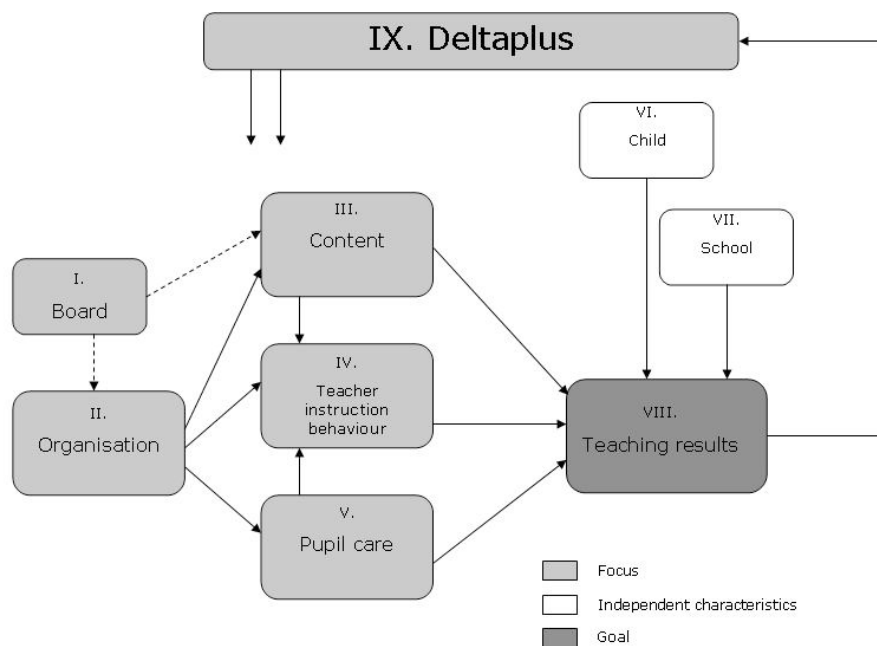
The duration of the project in each school is 10 years; two years working on innovative condition and then eight years intensive professional counselling in the groups.

In the first year each school is assessed thoroughly on all the aspects of the evaluation model. This assessment results into a project plan in which all the necessary interventions are described. This project plan results in a working

plan per year which specifically lines out the goals, indicators, activities and involved persons of that year. This plan is also the guideline for an annual evaluation.

The project is financed by the local government of Rotterdam and the school boards of the participating schools; each pays 50% of the costs which is in total per school per year € 35.112,-. With that money we are able to set up a multidisciplinary approach which means that experts in the field of Dutch language, mathematics, social competences, school organisation and pupil care work together in doing the best intervention possible for a specific school. Further on we can monitor the project and develop new materials if necessary. The involvement of management and school team has a lot of attention to create commitment. That means that for instance the project plan and the working plans are discussed with management and school teams before they get their final form. Above that we also involve the school board in the evaluation process by having an annual “triangle talk” in which we evaluate the project year with a board representative, school management and project leader.

The focus in the project is on teacher-skills and on the use of data to guide the educational process. The underlying assumption in the evaluation model is that better teachers produce better teaching results.



VI. Child characteristics en VII. School characteristics are no interventions of Deltaplus

As already mentioned before, the main effort is made to improve teacher instruction behaviour. We do that by intensive professional counselling in the classroom. Next to that we support schools to improve the contents, improve their pupil care system and improve their school organisation. In each school the focus of activities will differ depending on the specific school situation.

2.2 Interventions

We describe in the model above the different areas of intervention. One could say that the factors “organisation”, “content” and “pupil care” are conditional for instruction behaviour in the classroom. When we started the project we assumed that it would be possible to get these factors in order in the first two years of the project. This appeared to be a too optimistic estimate, all the three factors needed interventions in the third year and further due to changes in the school team, newly published methods etc.

The influence of school boards on the performance of teachers is of course an indirect one. In most cases this influence works through the management of the school. During the whole period of the project there is a close involvement from school boards with the project.

In the next paragraphs you'll find a description of the different interventions per factor.

School organisation

- Coaching and consultation of the management of the school: in many schools we coach and advise the management on many different subjects. Sometimes the emphasis lies on the team management, sometimes the own performance, sometimes support in making policy plans.
- Communication: communication is often a field in which much can be improved. We support schools to put up a communication structure or we train a team in professional communication with each other, children or parents.
- Quality policy: to sustain the results over the years it is necessary to implement a quality system. As a basis we use the EFQM model.
- Personnel policy: setting up a proper cycle of talks with personnel so that the development of competences of each teacher is guaranteed.
- Staff model: schools growing bigger need an other structure to realize a policy cycle that involves all parties

Pupil care

- Implementation of (parts of) a pupil monitoring system
- Support of the internal counsellor to take the right measures after analysis of test results: on a pupil level, but also on group level and school level.
- Coaching in guiding teachers; since our assumption is that teachers are the main factor in reaching results we spend a lot of time in teaching the internal counsellors to look with the same eyes as our advisers do.
- Analysis of the results in the pupil monitoring system on a long term school level (in cooperation with school management)

Content

- Support in making choices for a new program: we help schools to make the best choice in their situation out of all the materials available
- Implementation of new programs: if a school has bought a new program we support them to carry out this program in the most effective way
- Support in choosing additional materials: when a school uses a somewhat older program we can help them choose additional materials so they can still give good education.
- Development of (additional) materials in the case that there are no suitable programs available (e.g. regarding vocabulary development, reading comprehension, social competences)

Teacher instruction behaviour

- Class room consultations in which the teacher gets feed back on his instruction behaviour.
- Progress discussions in which the results (and the progress in results) of the group are discussed with the teacher.
- Support of the teacher in preparing lessons.

Board

Each year we plan “triangle talks” with a representative of the school board, the management of the school and the project leader.

The meaning of this discussion is to evaluate the results in the passed school year and talk about the plans for the future. It helps all the involved parties to keep a focus on the project goals and it gives a possibility to address all the stake holders on their responsibilities. Because the talks are already a tradition there is developed a relation of trust which means that parties can address each other all year through if necessary.

3. Results till 2006-2007

School organisation

The school organisation needs to be well regulated. Every year the advisors fill in a check form for their schools to determine the state of art.

In 2006-2007 75% of the schools reached the criteria of 80% positive answers. Still not all the schools have reached the ultimate goal, but there's made a big progress over the years.

Pupil care

Not only the school organization needs to be regulated, also pupil care.

For this part of the project the advisors need also to fill in a check form. The results of the form pupil care show us that over 80% of the schools have reached the criteria of 80% positive answers.

Content

After ten years all the participating schools use modern teaching materials. This is a very important issue in the project. Suitable programs and materials make it possible for the advisors to take a good look at the teachers' instruction behaviour.

Teacher instruction behaviour

Most of the class room consultations are monitored. Therefore the advisors have to fill in an observation form of the "Management Instruction Scale" (Veenman, S. et al, 1990) to assess the teachers' instruction behaviour.

The result of this part of the project is that the teachers who received support for one year are showing progress. Their average scores at the beginning of the year are lower than at the end of the year.

Each year we see that the teachers who have had the most class consultations also make the biggest progress.

Board

It seems that the role of the board is considerably important for the better results of a school. When a school board doesn't interfere with the project within its schools, the results are less good.

Boards who monitor school results and talk about those results regularly with the management of the school reach better results.

Teaching results

Each school that participates exports his test database to our organisation so we are able to follow the development of the results.

We collect data for the following subjects:

- spelling
- vocabulary development
- reading (decoding)
- reading comprehension
- arithmetic/ mathematics

These results are, for the advisors working in the school, leading for their interventions and we teach schools to use this information to improve their educational practice.

All the test scores are converted to a standard score; as a result of which it's possible to compare all the results.

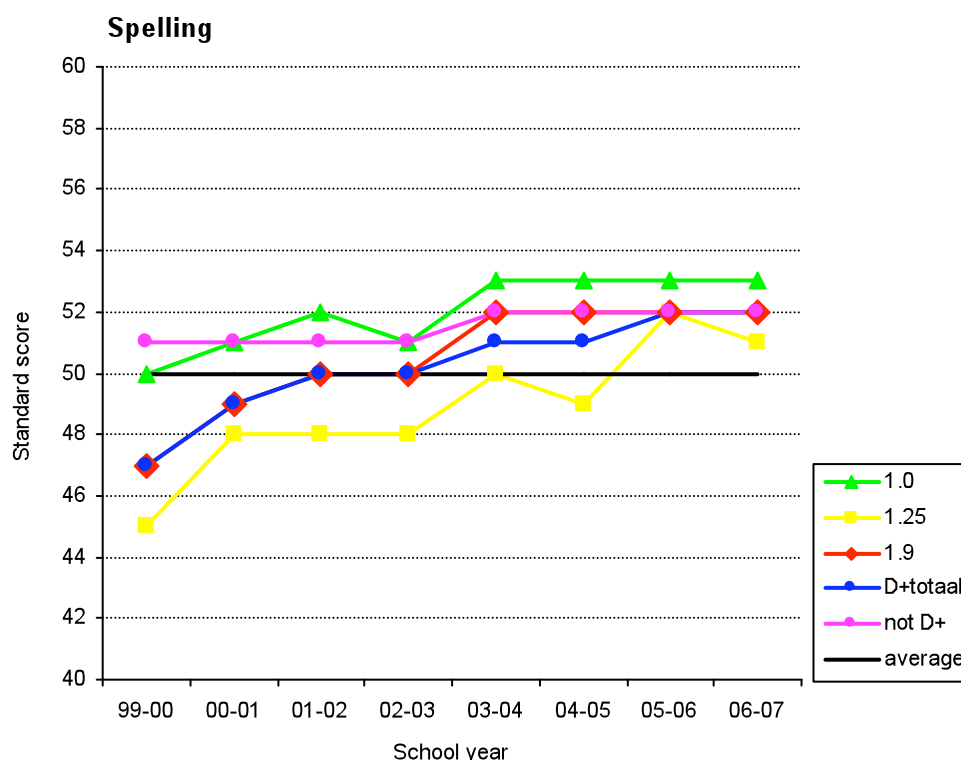
A few remarks are necessary to explain the graphics.

To get the best overall picture it is important to follow the blue line, which represents all the results of the children in the participating Deltaplus schools and the pink line which represents all the children in the other Rotterdam schools.

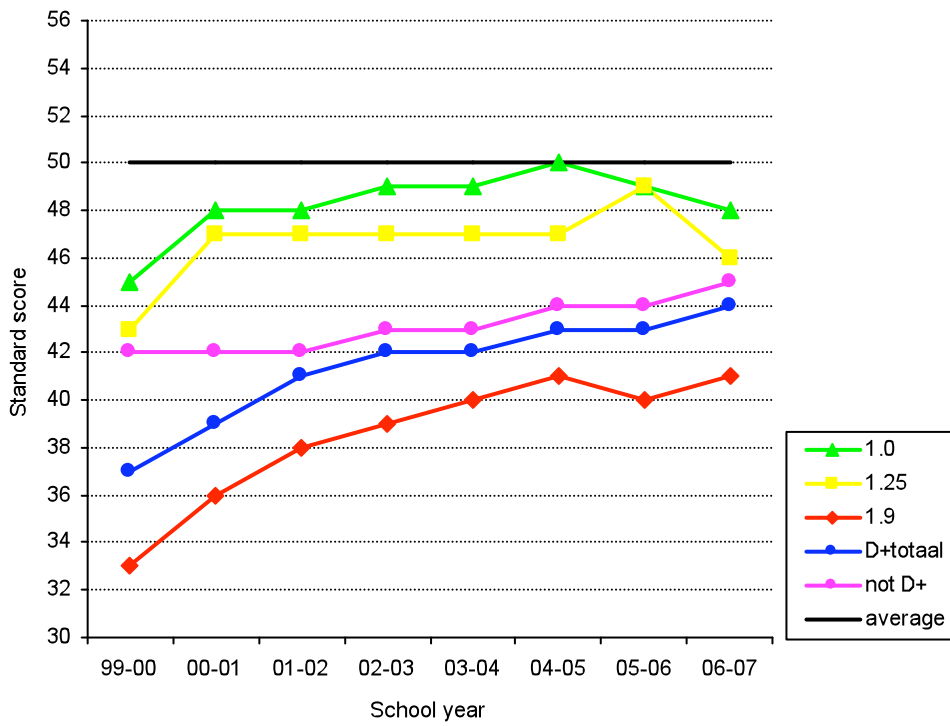
The green line represent Deltaplus children with parents with higher education, the yellow represent delta plus children with Dutch parents with lower education and the red line represent the Deltaplus children with a foreign background and parents with lower education.

The black line in each graphic represents the overall mean of 50. Most of the standard scores (2/3) lies between 40 and 60. A standard score lower than 40 is extremely low, a score above 60 is extremely high.

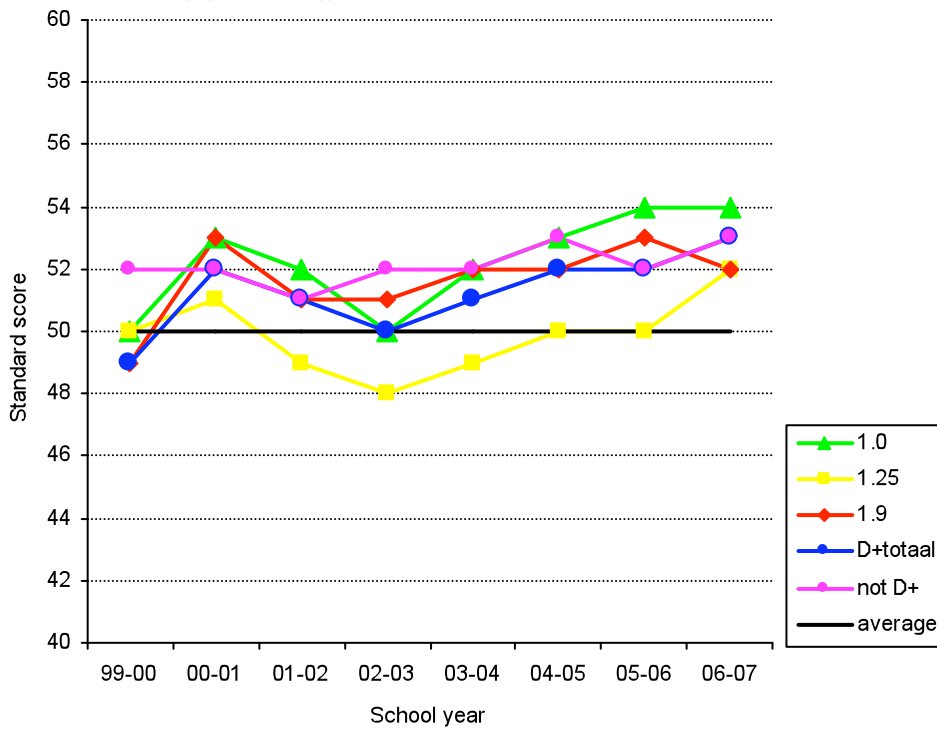
Now, we like to present the mean results for the 5 subjects mentioned over 8 years of Deltaplus (Lacor, 2007).

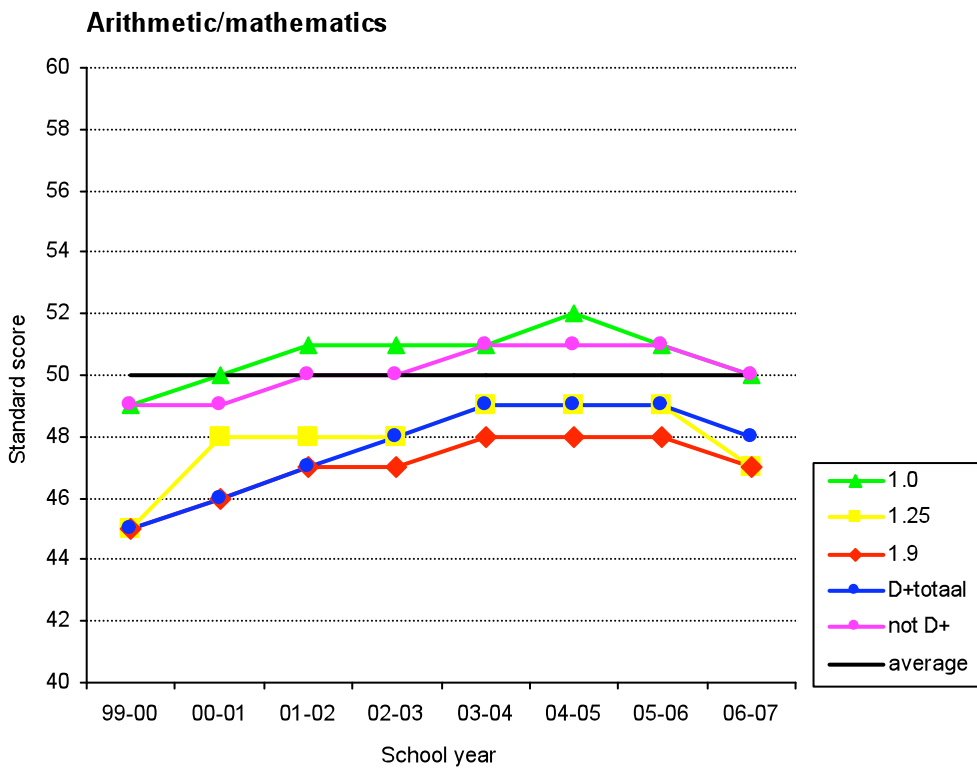
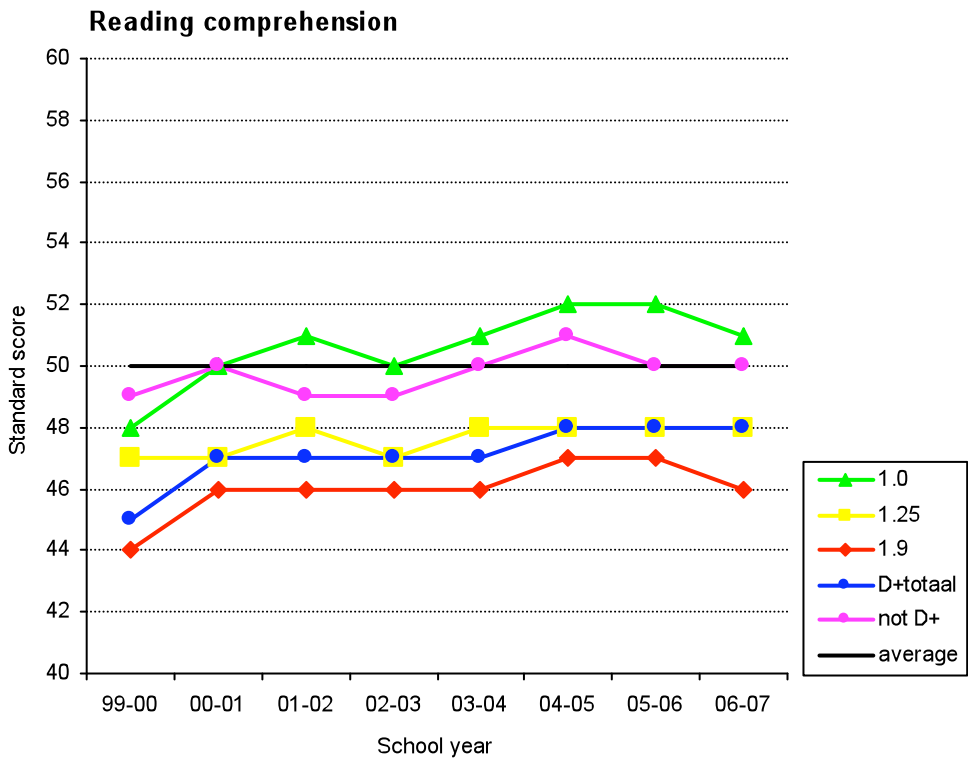


Vocabulary development



Reading (decoding)





In all the graphics you can see the Deltaplus children came closer to non-Deltaplus children but still they're not on the same level. You can also see that best progress is made in the domain of spelling. Vocabulary development is especially difficult for the so-called 1.9-pupils. Comprehensive reading and arithmetic's/ mathematics are more difficult domains to make progress than spelling. In these domains Dutch language skills are very important. For both domains is that the case in the upper grades of the primary school.

Social competences

Unfortunately we can't present pupil results regarding the domain social competences because of the fact that there wasn't an instrument regarding this domain available at the start of the project.

During the first years of the project there was a small scale experiment (Hoogenkamp, M., Joosten, F. & Voorst van Beest, K. van, 2001) with some schools to develop an approach for this difficult domain. The experiment resulted among others in a method for teaching social competences (Voorst van Beest, K. van & Bokkum, M. van, 2003) and a validated observation list for social competences (Joosten F., 2003).

After finishing the experiment (Lacor, E. 2003) the other schools in the Deltaplus project started to implement gradually methods for teaching social competences and systematic observation of social competences of the pupils. In the last evaluation report (Lacor, 2008) we saw that 66% of the participating schools now monitor the development of children in this domain.

Further we could report that in 82% of the schools a part of their policy plan handles about clear guide lines regarding the education of social competences. In ten years there has been made big progress, because when we started in 1998 there weren't many school that had a systematic approach for this domain.

Deltaplus

The school managements are quite satisfied: their average project score is 3.7 (the scale is from 1 to 5).

Before the school year starts every school determines their specific goals for the coming year. In 2006-2007, the schools have reached more than 80% of the goals.

4. Discussion

The underlying assumption in the evaluation model is that better teachers produce better teaching results. In the following paragraphs we discuss whether this assumption is valid and which other factors influence pupil results.

Teacher instruction behaviour

We are very curious if the pupil results are better in schools where teachers have made big progress with teacher instruction behaviour.

Until now it's not yet statistical proven but there are some remarks to be made about this subject.

We see each year a general improvement of teacher behaviour with those teachers who have had intensive counselling. The more visits they get the bigger the improvement is. For the results on the different subjects we measure, we see a constant improvement (Lacor, 2007):

- from 1999 to 2006 for spelling,
- from 1999 to 2007 for vocabulary development
- from 1999 to 2005 for reading (decoding)
- from 1999 to 2005 for reading comprehension
- from 1999 to 2004 for arithmetic/ mathematics

How can we explain the stagnation in progress?

As said before we still make progress with teacher's instruction behaviour each year but it doesn't show in results. In our opinion this can be explained in different ways:

- Not all the teachers in the project (over 2500) get intensive counselling at the same time. In most schools we work with cohorts, first teachers in grade 1, then grade 2 etc.
- teaching relatively simple skills like spelling/ reading (decoding), arithmetic (grade 1 to 4) ask less from a teacher than teaching reading comprehension/ arithmetic (grade 5 to 8) , apparently we reach a good level of teaching for these simple skills quite fast
- there is still no total agreement about the needed skills for teaching reading comprehension, each year this becomes clearer but we are still not there
- results for reading comprehension and higher arithmetic/ mathematic skills are heavily influenced by the Dutch language skills of the pupils
- The tests we use to measure results measure just a small part of all the knowledge and skills pupils learn. It means that if you want to make progress on a project level of this scale, it will need a long term improvement before it shows in the results
- The tests for arithmetic/ mathematics have been changed during the project, both content and criteria. Therefore the results show a decrease for this subject.

As you see there is still much to be explored.

Other important factors:

School boards

Since the start of the project in 1998 we yearly discuss per individual school the results and the progress of the project with a school board member in the so called “triangle talks”.

School boards differ in the way they monitor the project and how they communicate about results with us and their directors. Based on the experience of 10 years it seems that school boards who have a clear focus on results reach better results than school boards who don't do that. This focus transfers to the management of the schools and they transfer this to their teachers.

Management

Although it is difficult to prove this with statistic evidence it looks like the role of school leaders is important in reaching results and sustaining those results over the years.

In schools with strong educational leadership, a focus on results, a combination of pressure and support results improve faster and sustain.

The amount of commitment in the team for the goals to be achieved is very important for the rate of success. School leaders play an important role in that too.

Attention of the management for quality systems is in the long run important to keep results on a high level.

Stability

Stability is a factor which is not integrated in our evaluation model. Nevertheless we can say that stability in team, pupil care system, management as well as in school population contribute to good results in the long run. Of course there are changes in teams all the time, but when some key persons in a grade disappear you often can see a dip in results. The same goes for management and pupil care system. In Holland pupil care systems are led by internal counsellors. These play a very important role in the development of the school and in reaching results. If such an important person disappears isn't it very easy to replace him or her for somebody with the same quality. It often means that it is necessary to start all over again especially where it concerns the counselling of teachers.

Sometimes school populations change in a rather short time due to housing policy effects. When the target group of a school changes very fast it always is very difficult for school teams to adjust to the new requirements. You then see a decrease in results which takes some years to come back on the old level.

The use of measuring results in evaluating processes on a child-, group- and school level.

In most schools pupils are carefully monitored on an individual level. When a school succeeds in monitoring on a group- and school level this has very positive effects on teaching results. Teachers then understand that they are part of a system and that their contribution to the total result is as important as that

of other colleagues. The role of management and school board in this process is an important one.

Materials

All schools in the project use modern and well developed materials. In some cases the project develops additional materials when it is clear that something extra is needed. This is for instance the case with reading comprehension. The development of additional materials was necessary because the available materials are not motivating, not very actual and sometimes not focused on transfer of skills to other subjects. Now there is a web based program (www.nieuwsbegrip.nl) which develops each week new actual texts which are motivating. All the texts are combined with a clear manual for the teacher in which each time the same lesson model is presented. The first results are very hopeful!

5. Conclusion

The question whether teacher skills are important for pupil results can be answered with a full 'YES'.

We see that brilliant teachers succeed in getting results, despite the fact that they work in a school with a low functioning management, a not very focused school board or a bad functioning pupil care system.

The role of the latter three factors becomes important when we try to sustain a high level of results over the years. When there are changes in the teaching staff, schools that have strong educational leaders, focused boards and good pupil care system can easily make replacements in this staff while if this isn't the case you often see a major decrease in results.

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