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Cases: Elementary school Panta Rhei Beverwijk and Emmaschool Rijnsburg

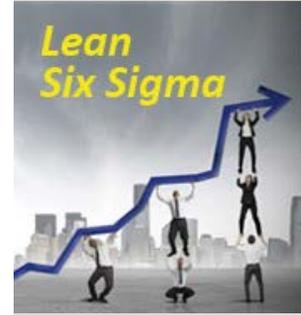
## Lean at a primary school, can I?

By Dr Jaap van Ede, chief Procesverbeteren.nl, 27-10-2014

Children in primary schools, working on group missions and individual goals, such as fewer mistakes in a dictation. Is that a good idea? Is it still fun in the classroom and process improvement graphs that are emerging? Such Lean tools can indeed normally only see in manufacturing or in service organizations with adults as a customer! Nonetheless, some schools report remarkable success with Lean. The children are challenged at their own level, and they understand what is expected of them. But you must be careful that his aim not overshoot. A primary school classroom is not a factory, learn social skills is as important as learning directly measurable things. At an elementary school Lean seems appropriate to improve real pain points, such as undersized Cito scores, especially in the upper classes.



### Lean advice



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Improve Signs and dates walls in the classroom, and students working on personal and group goals! And all this is not a university or secondary education, but in an elementary school. This idea appears from Dr. Jay Marino, general manager of a large school in the United States. If you are a teacher or a teacher in a primary school, ask yourself then consider the following question: "My students know what they need to learn and why, and how it can help itself?" If the answer is no, then read on!



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Part of a so-called "data wall" in elementary school Panta Rhei. Just as a business class has a mission, and even a specific and measurable improvement target: better reading comprehension!

### Data-driven

Marino propagates his method in the Netherlands, including through giving masterclasses. The basis of this "data-driven education" shows the use of a number of [Lean principles](#).

It is not so much to improve the flow, where you might think at first. Children in primary school would mean that lets you acquire them as much knowledge in the shortest possible time and with the least 'waste', think of school trips and staging of musicals. Fortunately, this is not Marino's implementation of Lean, I would say. Indeed, it is intended that the children not only learn to read and count, but they also develop social skills.

### Waste

Having said this, there is sometimes indeed a question of wasting time and energy. Ask yourself every school activity but sometimes wonder whether that adds value in terms of knowledge or social and community development, and if not, whether the children find it fun at least. The answer is no, then the activity is not useful. Workpieces made by the parents, or the obligation to make full of a quota to include, for example lessons in this category. There is a lot of [bureaucracy](#) and red tape, which leaves less and less time to devote to the primary process: teaching. Finally, it is noticeable that there is often endless discussion about new forms of education, such as repeated subtraction rather than tail parts. Here I would like to advocate the scientific approach that is also prevalent in Lean: hypothesis formulation, testing in practice, and finally check that the new situation is better. If any change is based on thorough research (*evidence-based*), then you know for sure that a new teaching method is better than what you did before.

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### Kaizen

Jay Marino especially applies the [Kaizen principle](#) of Lean Post: Continuous improvement in small steps towards a desired goal. In a primary school classroom, this may be, for example, that there are on average less than five errors are made in a dictation, or that the class is able to make a certain number of plus-minus sums in half an hour. Are the goal can actually of all, provided that only "smart" is: specific, measurable, acceptable (read: the children stand out for yourself!), realistic and timely. What you frequent measurement is itself reality is the adage.



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The teaching staff of primary school Pantarhei brainstorm about the factors that determine the image of the school

**Mission**

The Lean principle of *alignment* is also in Marino's method: you do not improve random but works in steps towards a higher goal. Business in line with the mission of the school receive end, the highest priority. It is crucial for this purpose having a *shared vision* : everyone involved, from school board to the students, working towards a vision of the future which is widely accepted. The school board shall previously make a school plan, this is the mission of one A4 page. That mission is being translated into an annual plan, which divide then the teachers in a team meeting again in year visions for the classes 1 t / m 8. Finally, the children's turn: The teacher or master explains to them that things can be better and why is needed. Hereafter asked what the children find them, so that they "co-owner" are the problem. Then set goals with them are formulated. It is important that the children standing behind it, they can do so for example, put their signatures on a poster. In this way children become actively involved in the improvement process in question: they undergo no longer passive education, but know the purpose and take a bit of responsibility in itself in order to achieve that. The master or teacher would thereby be seen as 'facilitator'. Completely new is the idea. There are, after all, have long school types where the child to a certain extent may take control. Take for instance the Montessori education, which this year celebrates its centenary. It is the motto "help the child to do it themselves." **Portfolio** The Montessori education today is more committed than before, when 'afrekenmomenten' were taboo. Now the performance of the children are monitored by the Cito system. In the scheme of Jay Marino is however much more frequent talk of feedback based on data. The group's goals are translated by him into individual goals for each child. If a class wants to make on average less mistakes in a dictation, then everyone has to contribute. For someone who was good at spelling the bar is thereby higher.

Progress is then followed at the individual level in a personal portfolio folder. Therein each student takes in what the claims are, for example, think of a graph of the number of spelling errors versus time. The 'score' of the group is monitored through data plates on the wall of the classroom.



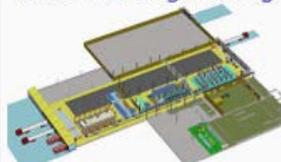
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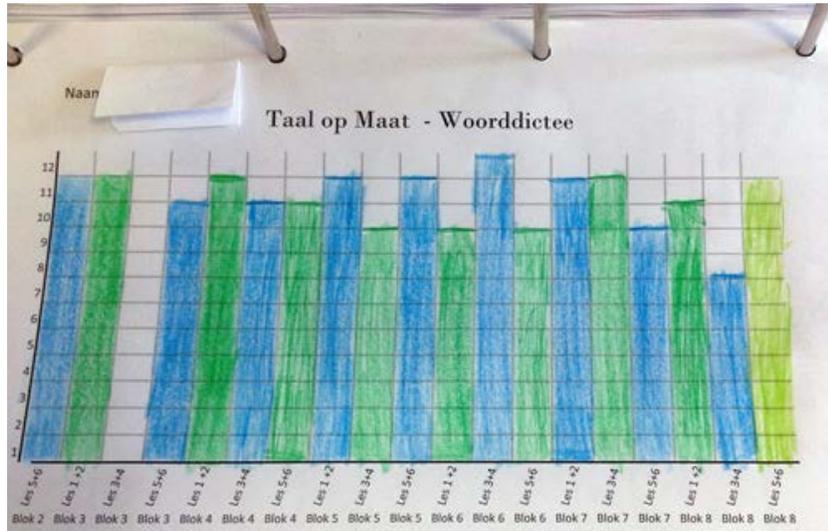
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Children wear over personal goals to the target group of their class. They will adopt their own scores in a portfolio folder

### Controlling

all this seems pretty 'controlling' for a primary school classroom. Is it still fun, you ask involuntarily. I think back to my own school, back almost forty years. That school I felt like a warm bath. On the regular keys after was there when nothing measured, there was a final Cito test. Furthermore, it was above all very cozy, so with the acquisition of social skills was it good. And perhaps that is also the most important because a lack of it gives you more difficult. Our lack of spelling skills, however, was brushed up in no time in the first year in high school. This raises the question: how far should you go with "knowledge is power" at an elementary school? That question is the more pressing because Marino is far, very far. The portfolios of "his" children contain even spinnwebdiagrammen, and its data-signs you see fishbone diagrams to trace problems to their causes. On the other hand, I think there nothing wrong with giving children a little early age from challenge. Had I had such a portfolio, I would probably already at the end of primary school all the d's and t's put in the right place. Now I could go unpunished for hours staring out the window. The strongest piece that I remember it is that I am on the board once the text 't kofschip perceived, and wondering what is it? Then I picked up the lesson again 'but you can also use the past tense of a verb to determine whether the past participle of a d or t ends. "

### Panta Rhei

A little encouragement can not hurt. Furthermore, the model of Marino does not have to be canonized. You can go so far with it if you want. This emerges from an interview with Mieke Alkemade, school manager (director) of primary school Panta Rhei in Beverwijk. Panta Rhei means "everything flows." Regarding Lean, which aims to literally create *flow*, so you could say *Nomen est omen*.

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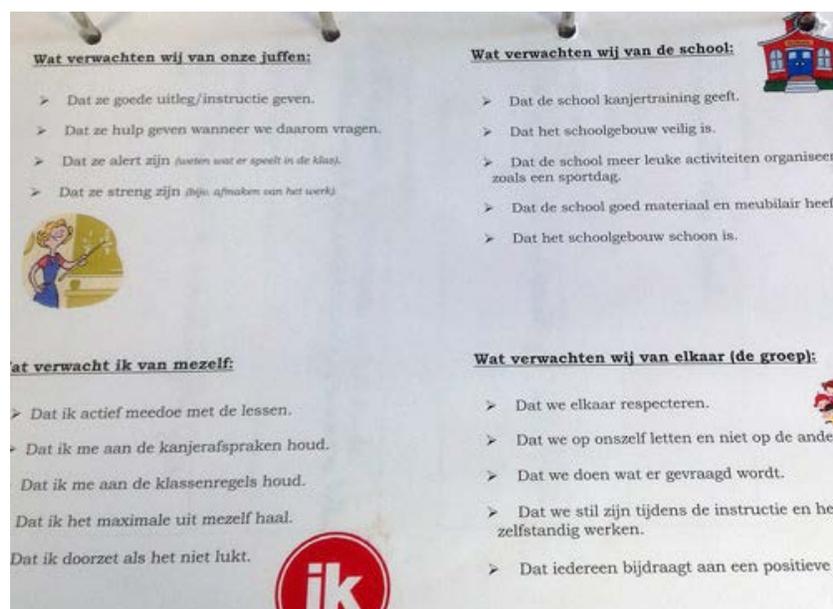
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Primary school Panta Rhei in Beverwijk

Alkemade When her school started thirteen years ago in what was then a neighborhood was under construction, but they knew nothing of Lean. "I had eight years of experience in special education, and only knew that I *development-oriented learning* wanted to apply," says Alkemade. "This means that you not only exercises and tests cause to children, but they also translate the learning into practice. Therefore they have an investigative attitude. For example, we believe around a theme, then we visit several religious houses. Children ask for example to which certain objects serve. " Panta Rhei started in January 2002 with seven students. Then the school grew rapidly. "At the end of that school year we had 25 students, and at the beginning of the year 125. At present there about 700. ' **Structure** Alkemade faced the challenge to lead the rapid growth in the right direction and at the same time make clear the new teachers how *development-oriented learning* are exactly like. "No less than four years in succession was therefore in our school plan that we wanted to capture what business we offer thematically and how we transfer it to another, but it still did not come from. The government establishes a number of headline targets, you have to reach the school. Our way of teaching gives the kids a relatively large amount of freedom, but makes it more difficult to check whether we meet government targets. The lack of a structure therefor. In addition were some Cito scores below par, and that we wanted to do something. " When Alkemade followed a lecture by Jay Marino on continuous improvement in primary schools in 2010, she was impressed. "This method seemed to be exactly what we missed. It would give structure to our educational system, and we would get tools to enhance targeted weaknesses. Finally Marino's system also gave a meaning to *work yield oriented* , the idea that you can not just do something, but the result should have. This is also supported by the government, though without specifying what they meant by that. "



In the method of Jay Marino are the children, the teacher, the educational team and the school share responsibility for the results.

## Experiment

A few months later Alkemade followed a five-day workshop Marino, and then she decided to try his method itself in one classroom. To understand just beforehand a brief explanation that experiment, for whom the Cito test known only as a final test. Cito tests are now conducted every six months, to keep track of the kids make enough progress. From a lean perspective can thereby ask questions of course. All these tests indeed do not add value (knowledge or social skills) for children and are in fact a form of *processing*. It would be better to organize the learning process so that no additional quality checks are needed! The school, after all tests even though the material itself or controlled. Schools are faced with all kinds of rules which must be met by the government. "It is also good that you can compare schools" says Alkemade. **Technical reading** " We focused on a Cito-related problem in group six, "she continues. "The score for *technical reading* was too low in that group. You then measure how many words a child can read correctly in a given time. Good technical reading is a prerequisite to reading comprehension, which is of course the ultimate goal is. " According to the method of Marino explained the master in a circle with the children that they, given their age, which is less read than other children. "Hereafter were asked what they thought of it. Then improvement targets were set for the whole group and for each child personally. Progress was finally the group kept on a plate for improvement, and each child registered his or her personal assets in a portfolio folder. " The results were remarkably good. "Many children naturally love their portfolio at. Moreover, it is striking that children with behavioral problems such as autism and ADHD find it nice to work like this. It gives them structure, it is clear what is expected of them. " There are also times when the fixed folders are updated less diligent children so kept in line. Have especially boys sometimes need an extra push? "That's right, yes. Also, you sometimes see that someone sets personal goals high enough, it must be a challenge. "

## Cheering

on the internet you can find videos of classes jubilantly chanting their group mission. On the next image you see then - remarkably often girls -. Enthusiast keep up their portfolio folder, where they shout enthusiastically! "I got my personal goal" The movies seem promotional material from consultants. Ever seen a class with such docile and good children? Alkemade laughs. "Well, of course you ask the most diligent students for such a film. The reality is in fact much more stubborn. Most importantly, the method of Marino really works. A child becomes much more involved in the learning process. We talk as little as possible *about* the children as much as possible *with* the children. To make sure it is not too technical, we will also refer to for example, presentation skills and collaborate in the portfolios. Our school now scored above average on the Cito test, and that we were able to realize our principles without throwing overboard. So we do not only produce targeted, but still well oriented development. "



The teaching team of Pantarhei has its own data wall. Here then shown the way to a "meeting-free school"

### As far as you want

, you can by applying continuous improvement go as far as you want, stressed Alkemade. "We started in eighth grade With the wide deployment of Marino's system. In this group further education model should be chosen. At that time, the Cito tests are especially important, and as the Lean approach fits well with this. Children, for example, like for example, can now see for VWO what they need to accomplish in order to achieve that objective. Continuous improvement is now also applied in fifth grade, and sixth grade is the introduction now underway. " In the Netherlands there are now several dozen primary schools that apply continuous improvement. "I even know a school which already uses Marino's method in a group. But there, I questioned. You'll come out on group goals such as "all children can tie their shoelaces", then the method will have failed. I just finished my master brought to didactics, and to that end I have gone through quite a bit of scientific literature. That confirmed my impression that children must be a decade at the idea of continuous improvement to understand. "

**Team Talk** Lean works not only in the classroom, but also the team meeting of teachers has improved. At that level, the more profound improvement tools also prove useful. Marino example, a PDSA ie Plan-Do-Study-Act cycle defined. Formally there taking seven steps, the cycle is halfway between the PDCA cycle of Deming and the **DMAIC cycle of Six Sigma** . "As previously revealed that there were delays in a particular class, we were sticking plasters. So we took immediate action, "says Alkemade. "Now we do, on the basis of the PDSA cycle, first of reflection: why the problem has arisen, which is the root cause. In this way we can not solve at the moment the problem, but also ensure that it does not recur. "

### Additions readers

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### Emmaschool: 'A child of six can well ask what it wants'

**Pantarhei is not the only 'lean' school. One of the dozens of other primary schools went to work with Lean-like improvement methods, the Emmaschool in Rijnsburg. This relatively small school with 155 pupils, although there are less far along than Pantarhei, but they believe that continuous improvement is ultimately suitable for all groups, even for the youngest. "Even a child of six can very well ask what it wants," says class teacher Vooijs Ellen.**

Ellen Vooijs is a teacher of the combined group 2 and 3 of the Protestant Emmaschool in Rijnsburg. "We faced three years ago with a declining number of students. Moreover, we were once again rated as unsatisfactory school and placed under surveillance. It was in our case not a luxury that we improved our learning, it's a necessity! "



Emma School in Rijnsburg

### Distinguished

That is successful, the school currently scores a plenty. "But we want to improve our further course, so we really distinguish ourselves and thereby attract additional students." The process to Emmaschool takes place under the supervision of a consultant Monique Rosen. "They experimented successfully with continuous improvement in primary school La Res in Enschede, at the time she was director there." **Direct Instruction Model** 's had Emmaschool, as Panta Rhei in the editorial, especially need more structure. "Plans of action, pickets, things like that. To give substance to *teach yield oriented*, we switched to the *direct instruction model*, DIM. Here, the children are divided into groups at their own level, and inside they then get instructions in an interactive way. Followed over a period of self-employment, followed by feedback, and the instruction cycle begins again. Vooijs see that children have different skills than before, when they arrive in Group 1. "There is also more expected of them. By the offer of nurseries, kindergartens or use of an iPad, you do it often to learn the names of colors. On the other hand, the children are easily distracted. You have to therefore provide structure and DIM offers a good stepping stone for that. " I like that show the children that they want more control. They want a piece of 'ownership', as in Lean terminology hot. Of course, the students do not use such words. "In the superstructure, we take off regularly surveys to ask what the students find our education. For example, you will see comments such as "The teacher never asks what / think. "



New students describe themselves and their expectations

### Individual objectives

This strengthens the Emmaschool the desire really to tackle and Lean teaching method, developed

by Jay Marino to implement fully. "We now have eg no group missions, but do want to go there. There is already a separate meeting to discuss the Cito between scores, and we love that kind of data also on improvement signs. We want to give more structure. We also want to move towards individual goals that are established in consultation with each child. Finally, we plan to introduce child-led parent-teacher conferences. The child tells himself to the parents how things are going at school, and how will respond to his or her strengths and weaknesses. " Unlike Panta Rhei in the editorial, the Emmaschool think data-driven improvement is also suitable for the lower classes. "Even a child of six can well ask what it wants to achieve, and what problems the rubbing. Such a child can say for example that it is afraid to make mistakes. Here we go together aimed to get started. " Not only the children, the parents put a greater commitment on price. "Even we surveyed them, and then you see that they want to think anymore. To put this into practice, we engage example some parents in the development of the new school. ' **Meetings Sociocratic** In a short time has already changed a lot, even outside the classroom, says Vooijs. "The meetings of the team now expired example, much easier and more effective. *Sociocratic meetings* , so called the method we have adopted for this purpose." It gets everyone in advance all the information about what will be discussed there. Then the meeting is as follows: First, lay the person who has made a proposal of what this means. Others can then ask for clarification, but without them express their opinion. Only later following the opinions, everyone can say what they do and do not like about the proposal, and then searches for solutions to overcome objections. Finally, the President, chosen by the group sociocratic way at the beginning, a new proposal. Can anyone live with that compromise, it was adopted. "

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