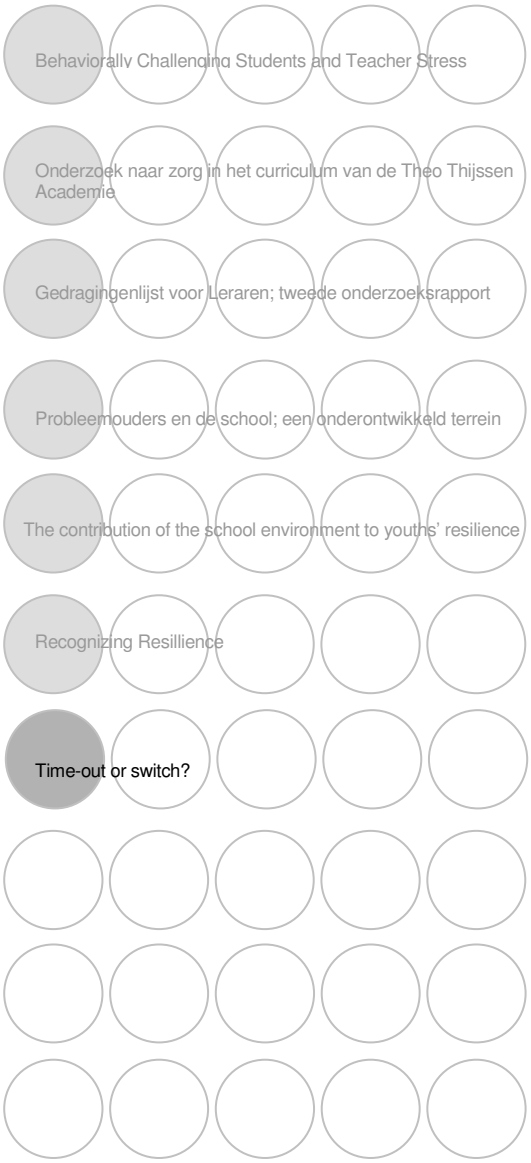

KG-publicatie nr. 7

Time-out or switch?

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Time-out or switch?
Paper presented at the ECER conference On 9 September 2005, University College Dublin

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Voorwoord

De Kenniskring Gedragsproblemen in de Onderwijspraktijk aan de Hogeschool van Utrecht bestaat uit ongeveer tien personen met als lector J.C. van der Wolf.

Het lectoraat is opgericht in 2003 en heeft als taken het verrichten van vooral toegepast onderzoek en het helpen bij de ontwikkeling van curricula voor de onder de Faculteit Educatieve Opleidingen vallen de afdelingen.

Door de 'leden van het lectoraat' worden allerlei stukken, artikelen, plannen, nota's etc. geproduceerd die dan in verschillende kringen worden verspreid zodat niet altijd een goed beeld ontstaat van de activiteiten van de Kenniskring. Via deze KG-publicatiereeks wil de kenniskring een vaste groep geïnteresseerden in staat stellen om op de hoogte te blijven van de activiteiten. Verwacht mag worden dat de KG-publicatiereeks uit zeer verschillende, uiteenlopende stukken zal gaan bestaan.

Voor U ligt KG-publicatie nr.7
U wordt van harte uitgenodigd om commentaar te leveren.

KG-publicaties

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nr.1 Everaert, H.A. en J.C. van der Wolf (2005).
Behaviorally Challenging Students and Teacher Stress.

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nr.2 Wolf, Kees van der en Hanne Touw (2005)
Onderzoek naar zorg in het curriculum van de Theo Thijssen Academie.

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nr.3 Doorn, Frida van (2005)
De Gedragingenlijst voor Leraren (Tweede onderzoeksrapport).

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nr.4 Kees van der Wolf
Probleemouders en de school: een onderontwikkeld terrein

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nr.5 Enthoven, Mascha (2005)
The contribution of the school environment to youths' resilience: A Dutch middle-adolescent perspective.

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nr.6 Enthoven, M.; A.C. Bouwer; J.C. Van der Wolf & A. Van Peet (2005)
Recognizing Resilience: Development and Validation of an Instrument to Recognize Resilience in Dutch Middle-Adolescents.

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nr.7 Velderman, H & H. Everaert(2005).
Time-out or switch? (Paper presented at the ECER conference On 9 September 2005, University College Dublin)

Time-out or switch?

Paper presented at the ECER conference, on 9 September 2005, University College Dublin

Abstract

Pupils with problem behaviours are challenging teachers as well as they are a challenge to teachers to find a way to teach them what curricula prescribe. Especially middle school teachers and those working in schools for special education are con-fronted with pupils with behavioural problems. There, teachers experience hard classes and find it difficult to fit classroom management with the pupils' needs. In this paper we focus on two questions:

- *is pullout an effective treatment to handle problem behaviour?*
- *do special classes have advantages for pupils who were pulled out or not?*

First we present a theoretical framework about pullout and we explicit our expectations. Then we describe the methods of our research in schools for special educa-tion during two months for students (N=759) when pulled out. We examined the reason of pulling out and the interactions during the process outside the classroom and the return. Because teachers noticed date and time of the removal, it was possible to use survival analysis to show the effects of the treatment. We found that pullout occurs under quite different circumstances, so the treatment integrity is a problem because deficiency of the intervention leads to repeated pullout. The data also showed that special classes for pupils who are pulled out seem to trigger and/or in-tensify the process itself. So, we conclude that these classes have a contra-productive effect.

Theoretical framework

Pull out the classroom is an intervention used as a part of classroom management to deal with problem behaviour. Our assumption is that pupils preferably learn in the planned learning environment such as the classroom and that pullout is effective when it is not repeated. Most behaviour can be handled in the classroom with unobtrusive techniques, though some misbehaviour requires more direct intervention. Alberto en Troutman (1990) mention four levels of procedural alternatives for behaviour reduction: reinforcement (level I), extinction procedures (level II), time-out (level III) and the presentation of aversive stimuli (level IV) if necessary. The hierarchy precedes form least intrusive and most positive to most intrusive and least positive. Others mention specific classroom management techniques such as ignoring, distraction and redirection, verbal intervention, logical consequences, time-out, and a talk-it-over table (Wardle, 2003). If students continue to be chronically disruptive, they should be taken out of class (Bennett, Finn & Cribb, 1999), so pullout is a technique that only should be used when less intrusive measures don't work. In this paper we research the effectiveness of pullout and the effectiveness of the special classrooms for removal.
We distinguish three main concepts concerning removal: time-out, switch and other pullouts (OPO).

Time-out

Behaviourists know pull out the classroom as time-out. A pupil has to leave the classroom for time-out from positive reinforcement. The problem behaviour de-creases and stops (extinction) because it is no longer reinforced by other pupils (or the teacher). Abramowitz & O'Leary (1991) declare that time-out should be reserved for the most disruptive behaviour. Time-out is meant to be a more intrusive intervention and an accurate implementation process is needed (Deitz & Hummel, 1978; Barkley, 1990, 2000; Abramowitz & O'Leary, 1991; Olmi, Sevier & Nastasi, 1997; Ewing, 1998). There is concern over using time-out, because it is seen as a more restrictive form of behaviour management and it has been used inappropriately and ineffectively. Sometimes it seems that students like to be removed and other times pupils feel that they are punished when they have to leave the classroom. A pupil is pulled out the situation in which he can learn good behaviour (Deitz & Hummel, 1978; Abramowitz & O'Leary, 1991) and it leads often to negative interactions between pupil and teacher (Abramowitz & O'Leary, 1991) and to avoidance and aggression (Jones and Downing, in Olmi, Sevier & Nastasi, 1997).
When pupils have to leave the classroom for time-out, basically the teacher pays no attention until the problem behaviour has stopped (extinction). During this process the pupil gets no attention when he is outside the classroom. After the time-out period has been completed, the child should return to the classroom with a minimum of attention regarding the inappropriate behaviour. Increased attention after time-out may increase the negative behaviour. The teacher should reinforce the first appropriate behaviour displayed after the time-out, so the child will learn to associate appropriate behaviour with reinforcement (Sterling Tuner & Watson, 1999). Interactions between a student and teacher should occur primarily during time-in. (Shriver & Allen, 1996). When the time-out is completed and the child is to be released, minimize secondary gain. Use either a very brief verbal prompt (such as the child's name and the phrase "time-in") or a physical prompt (such as a touch on the shoulder or a flashing of the lights) to release the child (Ewing,1998).
Because of the treatment integrity, the process of pullout should be one of minimal attention when you call it a time-out. Outside the classroom and when the pupil returns in the classroom there should be no reinforcement or secondary gain.
In the questionnaires we worked out 'time-out' by the following items:

- during the time-out the pupil gets no attention outside the classroom
- there is no reinforcement when the pupil returns in the classroom.

In our research except time-out we distinguish two other treatments: switch and other pullouts. We'll describe now our concept of 'switch'.

Switch

The ecological perspective emphasises that behaviour is a function of the transaction between person and environment. Problem behaviour in the classroom is a behaviour depending upon student and teacher characteristics and the relationship among these variables. "In summary: to understand or predict the psychological behaviour (B) one has to determine for every kind of psychological event (actions, emotions, expressions, etc.) the momentary whole situation…" (Lewin, 1935; p 79). Behaviour of the student acts on the teacher, and the teacher influences on

his turn the student-teacher interaction (Bronfenbrenner, 1979; Thomas & Chess, 1980; Greene, Abidin & Kmetz, 1997; Van der Wolf, 2003), for example through his teaching style and his tolerance in case of problem behaviour. The way to deal with problem behaviour is that teacher and student work together to realistic goals, which both participants really agree.
Teacher and pupil try to find a way to have a good day, where the teacher can do his teaching and the pupil can do his learning. Thomas and Chess (1980) call it the 'goodness of fit'. Goodness of fit is about the tuning between teacher and pupil: the properties of the environment and its demands are in accord with the organism's own capacities, motivations and style of behaving. In the ecological theory a behaviour problem is seen as a 'failure to match' (Apter,1984). The demands of the teacher are in accord with the capacity and motivation of the pupil. The teacher as well as the pupil influences the situation (Van der Wolf, 2003), they both have a responsibility and a choice. The purpose of an intervention in a system is to let the system work without intervention (Apter, 1984; Van der Wolf, 2003).
The intervention in which the student is outside the classroom and as well the student as the teacher can calm down and make plans, we call 'switch'. 'Switch' is the treatment during the pullout that is focussed on understanding and changing the behaviour of the pupil and when he returns in the classroom on tuning between teacher and pupil. The concept 'switch' can be defined as searching for the goodness of fit during and after a pullout. In the questionnaires we worked out 'switch' by the following items:

- During the pullout the pupil cools off when necessary, thinks about what happened and makes a plan on how to behave when he returns in the classroom. When somebody coaches the child the purpose should be that the pupil overviews what happened, he learns to understand the situation and to think about solutions (Van Lier, Hoeben & van Lieshout, 1993; Hoeben, Van Lier, & Van Lieshout, 1995). Rogers (2000) notes that it is helpful to give the pupil a form, containing questions to think about what happened, what rule is broken and what can be done to fix things up.
- When the pupil returns in the classroom, the teacher should talk to the pupil and together they have to make a 'switch'. What should be changed to have the goodness of fit? The teacher as well as the pupil has to reflect on the pullout. Are the demands in accord with the capacity and motivation of the pupil? Thus during switch both teacher and pupil try to find a solution for the problems, they look for the fit: during the pullout and when the pupil returns.

Other pullouts (OPO)

In schools we observed other pullouts than time-out from positive reinforcement or switch.
All other pullouts we call OPO, for example the removal with the purpose to teach the pupil how to behave appropriately, theoretically according to the competence model (Slot & Spanjaard, 1999, 2000). The competence model differs from 'switch' because it focuses on child behaviour (and blames the child). Misbehaviour is seen as the result of specific skill deficits.
This model aspires to increase the abilities or competences of the pupil. The competence model uses four learning theories (Slot & Spanjaard, 1999, 2000): the classic learning theory (e.g. Watson, 1914), the operant learning theory (e.g. Skinner, 1987), the social learning theory (e.g. Bandura, 1999) and the self-management model (e.g. Seligman, 1990).

In case of problem behaviour the competency-based curriculum is designed to provide required competency for a person in order to learn accepted behaviour. It is the theoretical foundation for the technique of behaviour modelling which is widely used in training programs (Bandura, 1997). After OPO the student may think about better behaviour and he makes a plan (Rogers, 1999). In case the student needs help outside the classroom, a teacher or counsellor teaches good behaviour. But sometimes problem behaviour is consequence of a disorder and pullout isn't effective, because the pupil needs systematic help. Then a therapist or the school psychologist can intervene to change behaviour by psycho education (Van Doorn & Verheij, 2002, Vanspranghe & Vermeulen, 2004). These therapists are working in schools for special education as in our sample, so it is theoretically possible that they coach pupils when removed.
OPO as well as time-out has in common that the student has to change his behaviour. This issue is unilaterally laid by the pupil, he is blamed. He caused the pullout and the problem will be solved when he has changed. In the questionnaires we elaborated OPO as:

- All other treatments than time-out and switch. For example the pupil has to think about the pullout outside the classroom, but the teacher doesn't talk with him when he returns. Or the pupil gets no attention outside the classroom and the teacher starts a conversation when he returns.

We expected that an explicit combination of time-out and switch decreases the number of pullouts and makes special classes redundant and even contra-productive.

Methods

After a study of literature quantitative research was done on schools for special educational needs (called in Dutch: Regionale Expertise Centra) about the effectiveness of pullout and if special classes are helpful for pupils who were removed. As described before, we formulated the interactions during pullout in the questionnaire just as actions for time-out, for switch and all the pullouts that deviate from these treatments as Other Pull Outs (OPO). We consider to entitle these treatments as 'nattering' (Dadds and Salmon, 2003), but we haven't decided yet. Essentially nattering is unsuccessful in stopping the behaviour, because there is a gradual increase in the aversive ness of responses, until extremes of punishment may be used.
We first made pullout operational in a pilot study to test the formulation of the items and the procedure, during April and May 2004.

a. The pilot

We choose a long period (two months) to research because pullout isn't an everyday happening. Our experience is that some teachers pull out more times a week and others (almost) never remove a pupil. The period is important to get the right picture, when you investigate for example in December there might be relatively more pullouts. To get a clear definition of the removal, we defined this state precisely so the teachers knew exactly when the target event occurred. Pullout is every action in relation to problem behaviour that a child has to leave the classroom temporarily and returns after some time.

During eight weeks three teachers filled in lists with questions about the process of pullout, like: who was pulled out, at what time, where was the pullout area, how was he treated there, how did you react when he came back into the class?
The teachers gave feedback about their experiences. The restriction of this research is that teachers sometimes forgot to fill in forms 'in the heat of the fight' and rather frequently they had to register the pullout after the lesson, so the forms have to be short and simple. A first statistical analysis of the data confirmed this and learned that some questions didn't give information because the response possibilities were too specific.

b. Research on the schools
We adjusted the questionnaires based on this information and visited the schools to ask the teachers to participate our research. We promised to give feedback of our findings on a 'in company conference' for the schools. During eight weeks teachers (N=122) filled in forms for their students (N=759) when they had to leave the classroom. So this is our sample. In the months September, October and November removals were reported after we had frequent contact with the schools to remember our research. Without contact persons on the schools, we wouldn't have got our data. Teachers are very engaged writing plans and register results and progress in their classes, so questionnaires are easily forgotten. Building the database we took note that a part of the forms wasn't completely filled in. Some teachers forgot to fill in the time the pupil returned in class or the date he was send away.

c. Analyzing the data
The outcomes are imported and saved in ACCES and SPSS, so it would be possible to generate quantitative data. We wish to estimate the proportion pupils surviving (not being pulled out) by any given time, which is also the estimated probability of survival to that time for a member of the population from which the sample is drawn. You can see the probability that a pupil is not pulled out, because of the pullout (being removed from the classroom) is censored. Thus it is required that at every time point of interest, each individual is classified into two mutually exclusive and exhaustive states and we know when the transition from one state to the next occurs.

So the event is pullout and pupils survive until they are pulled out. The Kaplan-Meier method shows for each time interval the probability that those who are still in class will not be pulled out at the end. This is a conditional probability (the probability of being a survivor at the end of the interval on condition that the subject was a survivor at the beginning of the interval). Survival to any time point is calculated as the product of the conditional probabilities of surviving each time interval.

In our sample a day starts at 8.30 a.m. and ends at 15.00. On Wednesdays school ends at 12.30. Counting the minutes, on Monday we count 0-390, Tuesday 391-780, Wednesday 781-1020; Thursday 1021-1410 and Friday 1411-1800 minutes. So the time in a week is limited to 1800 minutes.

For example in a class we have on Monday morning 10 students. After 50 minutes 1 pupil is pulled out. So at t=50 the survival is 90%. In this way we continue to the end of the table or until we reach the last event. Observations censored at a given time affect the number still at risk at the start of the next interval. The estimated probability changes only in minutes when there is a pullout. Survival probabilities are usually presented as a survival curve (figure 3, 4 and 5). The "curve" is a step function, with sudden changes in the estimated probability corresponding to times at which an event was observed. The times of the censored data are indicated by short vertical lines.
We'll analyse our data in survival analysis by the Kaplan-Meier method, pullout can be censored and differentiated in time-out, switch and OPO. Then we'll show the survival in schools with or without a special class. First we'll describe the teachers and the pupils of the sample.

The teachers

During our research 120 teachers (62% female) filled in forms, 86 of school A with 4 locations, functioning as almost autonomous schools, 24 of school B and 9 of school C. At most schools there are working more women than man, at one location we registered only 1 male and 20 females. Only at one school location we found more males than females. 72% of all the pullouts are given by female teachers. On average, teachers have almost 12 years of experience in school. There are relatively many young teachers at these schools and especially the young teachers pull out pupils. This could be expected because the move from teacher education to professional practice is difficult for many teachers (Veenman, 1984; Kelchtermans & Kwatrijn, 2002). There is one teacher who has already been working for 25 years in school who removes a lot of students, but in average the number of pullouts decreases when the teacher is more experienced.

The pupils

The population consists of 759 pupils, at an age of 4 till 18 years old. All pupils are placed at a school for special education because of behavioural problems. In the Netherlands, children can go to such a school (called: Regionaal Expertise Centrum, cluster 4; see footnote 1) when they are diagnosed (DSM-IV) because of behavioural problems. Three schools (A, B and C) in the Dutch provinces Utrecht, Gelderland and Overijssel were researched. One large school (A) is divided in more locations, we investigated four locations. So in total we researched six locations belonging to three schools. Two locations are for externalizing problems (zmok in Dutch) and four locations for internalizing behavioural problems. Most of the children come to school by bus, because special education schools have a regional function, so the distance between the home of the child and the school is quite large.

Pullouts during a week

As we noted some teachers forgot to fill in the time the pupil returned in class or the date he was send away. Unfortunately these data can't be used for the survival analysis, for the analysis about the first, second and third pullout we only can use 326 of the registered removals. In our

sample we registered 227 pupils who were pulled out at least one time (figure 1), also the second and third pullout are mentioned.

Count

		Week number in which pupil is pulled out								Total
		38	39	40	41	42	44	45	46	
First pullout in a week	1	47	38	30	36	33	18	14	11	227
Second pullout	2	12	13	12	11	5	6	4	3	66
Third pullout	3	10	4	2	7	2	2	3	3	33
Total		69	55	44	54	40	26	21	17	326

Figure 1. Number of pupils pulled out at least one time.

Figure 2 shows the number of first pullouts and the number of pupils that stay in class. In total we had eight weeks observing 759 pupils makes 6072 events (see figure 2). During the weeks the number of pullouts is decreasing from 69 in the first week till 17 in the last week.

		Pupil is pulled out this week; or not.		
		Pupils not pulled out	Pulled out	Total
number of the week the pupil was followed	38	712	47	759
	39	721	38	759
	40	729	30	759
	41	723	36	759
	42	726	33	759
	44	741	18	759
	45	745	14	759
	46	748	11	759
Total		5845	227	6072

Figure 2. Pull out and week number

We notice three reasons for this. First of all, teachers may forget to fill in the forms after four weeks, although we sent reminders to the school after the holidays in week 43. Increased research attrition is a consequence of longer data collection periods (Singer & Willet, 1991). Secondly there may be the effect of the new director at school C, we'll interview him and some colleagues to know more about this speculation. At school C the decrease was enormous from 109 in the first 5 weeks to 3 in the last 3 weeks. At the third place, we think that a possible declaration might be found in the theory of group dynamics, that groups have lives of their own that begin with formation and end with termination (Tuckman, 1965; Kahn, 1995). When the observations started groups may have been in the storming or norming stage because the

school started 3 or 4 weeks earlier. Kahn (1995) concluded: establish ground rules, such that students know what is expected of them and how they will be rewarded; Behaviour in the classroom should be clear to the pupils and the way teachers reward influences group behaviour. So the way teachers deal with problem behaviour, including the way they pull out pupils, affects the norms in a group. Nine weeks after the start of our research (week 43 schools were on holiday), pupils are often used to the norms in the classroom and the group structure is functional and accepted. And we should not forget that we found much more teachers who didn't pullout, so this is a treatment chosen by teacher and school.
We asked the reason for pull out the classroom and we found that most pupils (60%) are removed because of disturbing behaviour: other pupils can't learn because they make noise and won't listen to the teacher. The second reason to pullout (22%) is to guarantee the safety of other pupils. Only a small part (3,74%) of the pupils is pulled out during a week.

Survival function after the first and the second removal

Because we want to research if pullout is an effective treatment to handle problem behaviour, we are interested in the second and third removal. If time-out, switch and OPO are effective, the pupil will stay in class after a first removal. In terms of survival analysis: the pupil will survive after returning from a pullout and for this reason we study the second and third time the pupil is pulled out.
In figure 3a we see at the second removal 66 events, so we conclude that 61% of the 227 pupils aren't pulled out after a first time. Maybe the pupils have learned how to behave or the teachers have learned to handle them. When pupils are pulled out for the second time, we see that they have a short survival time. They are especially at risk to be pulled out within 500 minutes. The mean is 1279 minutes and the standard error 51.

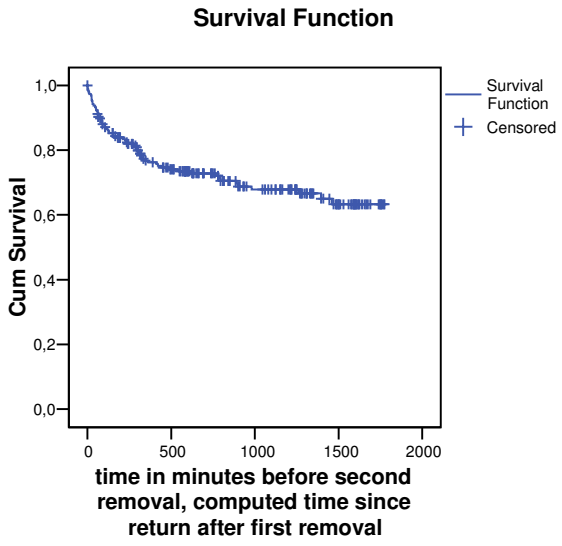

Figure 3a: survival second removal N=66

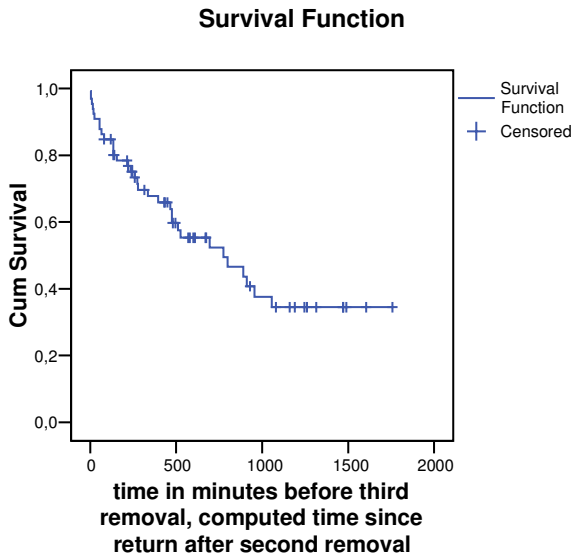

Figure 3b: survival third removal

At figure 1 we saw that 33 pupils are pulled out for a third time and figure 3b shows that they are pulled out within 500 minutes or after a quiet period they are pulled out between 650 and 950 minutes. This is on Tuesday afternoon or Wednesday morning. Not all pupils leave class for a third time, 50% do so, and a small number is removed even more often than three times. The mean is 890 minutes, standard error 97, so after the second removal pupils are relatively quick removed for a third time. We conclude that some children do not learn from removal. The question is if we can find an explanation for this failure. In the classroom one is inclined to belief this problem is caused by the deficit of the pupil, but we establish that some pupils are pulled out more often than others; some teachers pull out often, others don't.
This brings us to the question if pullout can be effective and what circumstances make pupils learn from this treatment, this concerns the effectiveness of the treatment.

Treatment

We now research the question of the treatment integrity and again, we are interested in the second and third removal. When pupils are removed, are they threatened at a consistent way and does this mean that he has learned from time-out or teacher and pupil have made a switch? In the questionnaires the teachers noticed the place where the pupil had to go. Sometimes he had to stay in the corridor or in a room. Being there, sometimes a teacher discussed the problem or the pupil had to do his homework. So when pupils got pulled out, the interactions were inconsistent. However, the treatment time-out requires no reinforcement and the treatment switch requires searching for the goodness of fit.
Also the reactions of teachers when the pupil returned after the pullout were inconsistent. Sometimes a child got no reinforcement (20%), another time the problem was discussed (34%) and by exception a pupil got punished or a reward.

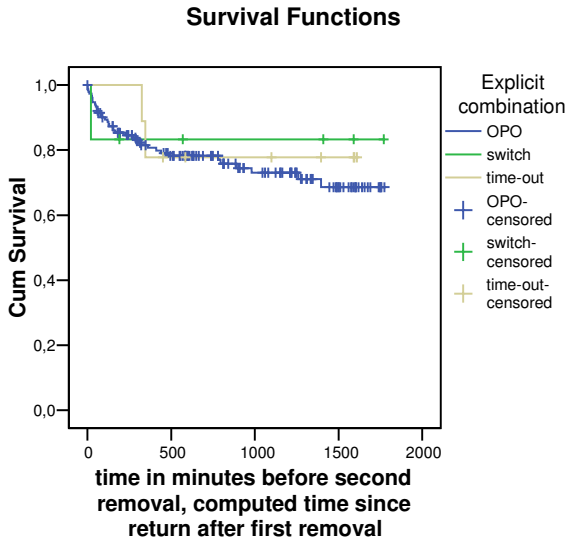

Figure 4a: time after first time-out/switch/OPO

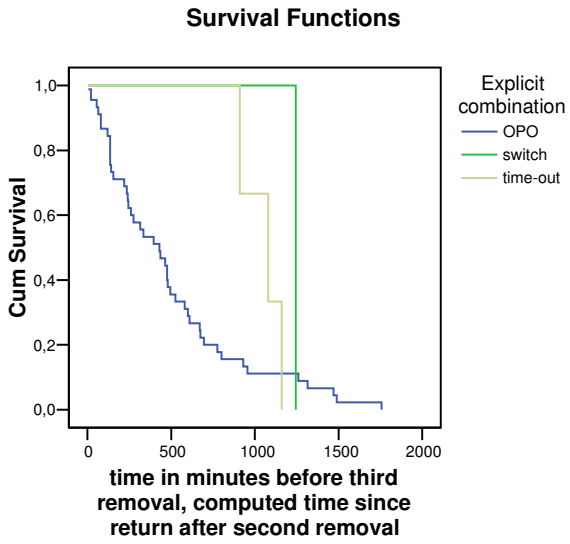

Figure 4b: time after second time-out/switch/OPO

As we saw, 227 pupils (figure 1) were pulled out for the first time. After this first removal, the survival analysis in figure 4a shows the survival time of the pupils pulled out a second time. We see time curves connected with the treatment of the first removal. In case of switch, more than 80% survived the rest of the week, one pupil was “switched” again. Time-out results in three new removals, the other time-outs, almost 80%, survive the rest of the week. The other pullouts (OPO) are removed 45 times, the cumulative survival time is about 70%.
Figure 4b shows the pupils that are pulled out after a second removal. The shape of the third removal is coherent with our view, but unfortunately the number of events is limited. After switch

the pupil is pulled out again after 1250 minutes, in case of time-out the pupils (N=4) are removed for a third time after 1000 tot 1200 minutes. OPO leads within 500 minutes to a third removal for 50% of the pupils.
Our conclusion is that pupils stay longer in class when the explicit combination of time-out or switch is used. Outside the class and when the pupil returns he gets no reinforcement and when 'switched' pupil as well teacher explores the goodness of fit. We see that you stay longer in class when the treatment was clear and explicit.

Special classes for pullout?

In the Netherlands pullout and drop out are hot items. Under pressure of parliament the government spends in the next years about €30 million on projects to master the number of pupils with behaviour problems that 'strongly grows' (Ministerie OCW, 2005). Rebound 'supply' outside the regular classes and extra places in schools for special education ought to solve these problems. Fullan (2001) establishes that most effect can be gained in the pupil-teacher interaction and Van der Wolf (2005) notices that 95% of care should be given in the primary process: in the classroom. Brophy (2003) argues that teachers can be in a position to take direct action to help students cope with their problems, rather than just coaching them from afar. Teachers see students every day and under a number of conditions, their authority-figure role has advantages, because they can provide consequences and students have no reason to feel ashamed when their teachers talk with them about their problems.
Metcalf (1999) considers that nine out of ten times problem behaviour is the fault of the teacher and the teacher has to meet the needs of each individual student and then take the group forward as a whole. In her opinion always the same pupils are sent to special classes and they don't mind. Our research affirms that often the same children are in the special class: most children were more than once in the special class and one pupil was there after pullout 10 times, another one even 12 times.
Rogers (1999) objects against special classes, because there would be almost no significant role modelling and the class gets a special negative reputation and the school environment sends the message that it can't contain the troublemaker in the normality of the classroom setting.

Two schools ("B and C") have a special class for pullout. The school (A) with 4 locations misses such a time-out class. The number of pullouts is in school: A 108, school B 125 and school C 133. Pupils stay in different areas when pulled out. The favourite place is the corridor (184) and the special class (115). On school A most pupils go to the corridor (63) or to the classroom of a college (17). On school C many pupils (72) go to the corridor and 44 in the special class. In school B 49 pullouts stay on the corridor and 68 in the special class.
We conclude that pupils are pulled out more frequently when there is a special pullout classroom available. It seems pulling out occurs more frequently when there is the offer of a special time-out class. Survival analysis shows the time after the first removal and it is clear that the schools with special classes pull out more pupils and quicker. In a school without a special class more than 80% survives, when a special class is available only 58% of the pupils survive! Because the shape in figure 5b is coherent with the shape in figure 5a, we find out results confirmed.

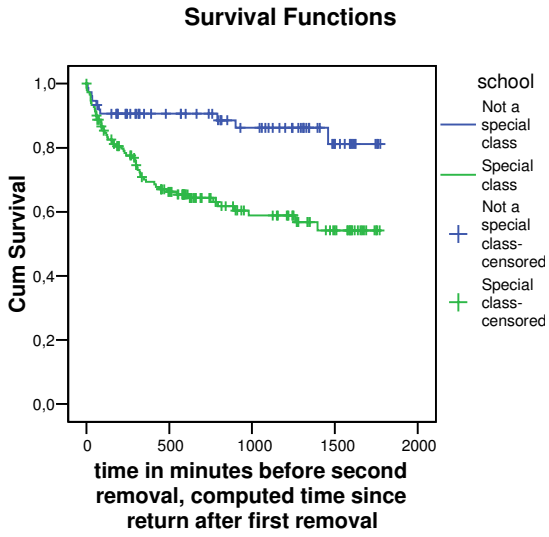

Figure 5a: time-out/switch/OPO

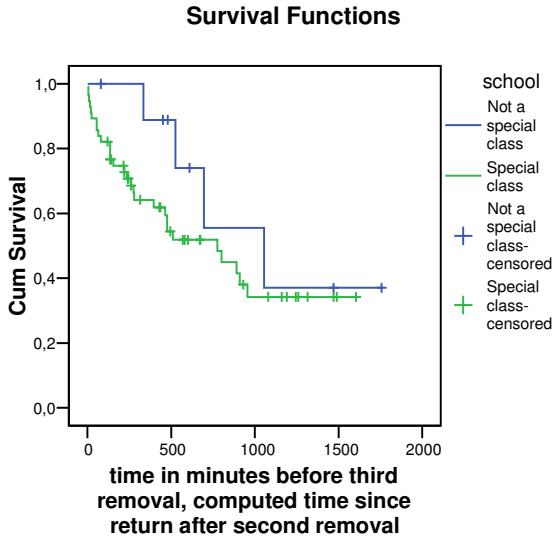

Figure 5b: time after first time-out/switch/OPO

We doubt the efficiency of part of the projects of the Dutch government and thus part of €30 million. Our research establishes a difference between the schools with a special class and the school without so we are convinced that special classes do not contribute to decreasing problem behaviour.

Conclusion

We researched pupils being pulled out the classroom when teachers had to deal with problem behaviour. During eight weeks teachers (N=122) gave us information about 759 students when they had to leave the classroom. In our theoretical framework we distinguished pull-out as: time-out from positive reinforcement, switch and OPO.
In our sample time-out and switch are not frequently seen, but you stay longer in class when switch or time-out are used. The most important conclusion thus far, is that pullout is a complex treatment. Pupils are treated quite differently every day. There is even a treatment difference on the same day. In another study we'll report more specifically about the differences between these treatments. Anyway we'll research the effects of training teachers to pullout in the sense of time-out and in the sense of switch. We expect as result a decreasing number of removals.
We established:

- about 50% of the teachers removed pupils, and young teachers pulled out more than more experienced colleagues;
- most pullouts are because of disturbing behaviour;
- in the first weeks of the school year we registered more removals than later; probably group dynamics can explain a part of this, maybe policy in schools and a part will be caused by research attrition;
- pullout is a complex treatment. Pupils are treated quite differently, we presume that this makes the treatment ineffective;
- when schools organize a special pullout classroom, we see that pupils are pulled out more frequently. Survival analysis shows that the schools with special classes pull out more pupils and quicker.

We have to work out more precisely data about the exact function of time-out, switch and OPO. In a few case studies we'll research the effects of training these treatments. In the last months of this year we will perform four case studies to observe the process of pullout in baseline and to examine the effects of training the teachers to pullout in the sense of time-out and in the sense of switch. Repeated pullouts can be caused by missing or lack of treatment integrity and training could change this, which results in a decreasing number of removals.
We also would like to replicate this research on other schools (such as middle schools, in Holland called VMBO) and if possible on schools in other countries.
In the Netherlands pullout is a major problem, but it is concentrated in some schools, in some classrooms. Some teachers think that pullout is an indispensable intervention to handle behavioural problems and hope that colleagues talk to their students or psychologists give psycho-education. Others are convinced that behavioural problems can be controlled with interventions that are less intrusive and try to solve problems in the classroom.
We believe that pullout should be prevented by educating the teachers improve their teaching roles (Brophy, 2003). Instruction should be fascinating, motivating and challenging the students to their work. Classroom management should create a suitable learning environment, other treatments than pullout as disciplinary interventions should be learned and only when indispensable, teachers should act conform the treatment integrity. The fourth role is the student

socialisation such as communicating expectations, modelling and reinforcing desirable behaviour. This role is part of the treatment integrity of ‘switch’. Our optimistic last statement is that students with problem behaviour are a challenge to teachers to be creative and to find new ways to challenge the pupils to learn.

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[1] Brophy (2003) is convinced that pupils can be helped best in the classroom: "Teachers have certain advantages over therapists or other mental health specialists in helping problem students."

"No matter what a student comes to us with, it is our job as teachers to assess the child – the take him or her forward. Yes the pressure is high. The responsibilities of a teacher are immeasurable, critical and often irreversible. Granted, the ultimate responsibility lies with the student; however, deep down at some point, all children do want to learn and it is our job to try to make that happen and provide an

environment where it can. For example, in my classroom, if something is not working, nine time out of ten it is my fault." (Metcalf, 1999 p. 82, 83)

[1] *Special Education in the Netherlands, Regionale Expertise Centra: Cluster 4*

Education for:	**Indicatiecriteria**
Children with serious problem behaviour, with developmental disorders or psychiatric problems	Children with psychological deficits or developmental disorder; AND With serious social-emotional or behaviour problems in school, at home or at leisure; AND Because of social-emotional or behaviour problems the child doesn't profit education and is an intimidation for itself or others. AND A treatment and observation centre for children with behavioural and emotional problems help the child (and family). It must be clear that the available care is insufficient for the child.

[1] *In Dadds and Salmon, Patterson (1982) characterized parents of conduct problem as "nattering," that is, frequently delivering mild-level threats and scolds that are not supported with more serious outcomes for the child. Further, the delivery of many punishers is noncontingent in that they either do not precisely follow the first instance of a misbehaviour, or worse, are equally likely to be directed at prosocial behaviour.*