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The Validity of Educational Disadvantage Policy Indicators

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Abstract

Many countries have implemented policies to prevent or combat educational disadvantage associated with socioeconomic factors in the students' home environment. Under such policies, educational institutions generally receive extra support from the central or local government. The support is normally based on indicators available in the home environment of the children, mostly family-structural characteristics. In the Netherlands, the core of educational disadvantage policy is the so-called weighted student funding scheme, which awards schools with disadvantaged students additional financial resources. When this scheme was developed in 1984, three indicators of disadvantage were selected, namely: parental education, occupation, and ethnicity. Analyses conducted at the time established a predictive validity estimate of 0.50, amounting to 25 percent of explained variance. Nowadays, some thirty years later, the funding scheme is based on only one indicator, namely parental education. Analyses performed on data collected in 2014 show a validity estimate of 0.20, thus accounting for no more than four percent of variance. This dramatic decrease of the indicator's predictive validity shows that the empirical basis of the Dutch weighted student funding scheme has become highly problematic. It is suggested that instead of employing family characteristics as educational disadvantage indicators, the actual performance of students based on test achievement and teacher observations may offer a more valid alternative.

Keywords: *Educational Disadvantage Policy, Weighted Student Funding, Predictive Validity, The Netherlands*

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Introduction

A recent review of education systems complimented the Netherlands for its excellence, which is evidenced by a strong average performance, but at the same time cautioned her for a widening achievement gap between students from disadvantaged socioeconomic backgrounds and more privileged students (OECD, 2016). The latter is not a unique development and can be witnessed in several Western countries (Davis-Kean & Jager, 2014; Goodman & Burton, 2012; Goodman, Sands & Coley, 2015; Machin & McNally, 2012). This occurs despite the fact that in most countries under the umbrella of educational disadvantage policy targeted school financing schemes and stimulation programs have been implemented specifically designed to address these inequalities (Ballas et al., 2012; OECD, 2012; Ross, 2009; Stevens & Dworkin, 2014). Such compensatory policy instruments aim at achieving equality by unequal treatment according to the principle of giving more to those who have less (Demeuse, Frandji, Greger & Rochex, 2012). For the allocation of the support, a wide range of indicators are used to identify the policy's target groups, that is the disadvantaged students. Most indicators concern family structural characteristics, such as parents' education, parents' occupation, ethnicity/race, home language, family structure, family income, and free school-meal eligibility. Research into the reliability and, especially, the predictive validity of these proxy measures for disadvantage is scarce, or typically not up to date. Insofar results are available, caution is warranted as to the appropriateness of the indicators (Colpin et al., 2006; Gorard, 2012; Kounali, Robinson, Goldstein & Lauder, 2008; Ladd & Fiske, 2009).

In the present study, the focus is on the Dutch educational disadvantage policy, and specifically on the most important instrument of this policy, the weighted student funding scheme which is used to allocate additional financial resources to schools with disadvantaged students. In the next section, this policy and funding scheme will be further explained. Then, the results of empirical analyses into the validity of the educational disadvantage indicators will be presented, and some conclusions will be drawn.

The Dutch Educational Disadvantage Policy

Educational disadvantage policy in the Netherlands has been in effect since the 1970s. It aims at preventing and combating educational disadvantage caused by social, economic and cultural factors in the home environment of children. Its origin lies in the meritocratic ideal that educational opportunities should be solely determined by innate abilities and that environmental factors should play no role (Meijnen, 2003). To compensate for deficiencies, or lack of cultural capital, for children living in lower socioeconomic milieus (Bourdieu & Passeron, 1977; Huang & Liang, 2016), a policy was initiated to award schools with disadvantaged students extra financial support. Especially politicians from the political left (i.e. the Labour Party) supported this policy.

Initially, the policy focused on children of native-Dutch parents from lower socio-economic environments. However, in the 1960s the number of children from non-Western immigrants in Dutch education institutions started to increase dramatically. Three categories can be discerned: (1) immigrants from former Dutch colonies (Surinam and the Netherlands Antilles); (2) so-called guest workers from Mediterranean countries (especially Turkey and Morocco) and subsequent waves of immigration from these countries for purposes of family reunification and family formation; and, more recently (3) asylum seekers from Eastern Europe, Africa and the Middle East. In 2016 the Netherlands had nearly 17 million inhabitants, and the largest non-Western immigrant groups had the following origins and numbers: Turkey (397,000), Morocco (386,000), Surinam (349,000), and the Netherlands Antilles (151,000) (Statline, 2017). One characteristic shared by most of these non-Western immigrants is their comparatively low level of education. Because of their low socio-economic status and immigrant background (and inherent language and cultural differences), the children of the non-Western immigrants soon became the main target groups of the educational disadvantage policy.

Right from the start, there has been discussion regarding which indicators of disadvantage should be used to award schools extra budgets. Two approaches can be distinguished, a groupwise versus an individual approach. In the first case, support is given for *all students* who have one or more family structural characteristics in common, regardless whether they actually have educational delays or not. It is assumed that all students who meet these characteristics suffer from a comparable lack of stimulation in the home environment, and therefore need to be compensated for these deficiencies at school. It is then crucial to select indicators in the home that best predict educational opportunities. In the second case, support is given to *individual students* who actually show educational delays. The relationship with the child's social milieu in this approach is indirect. Both approaches have advantages and disadvantages (Colpin et al., 2006; Jepma & Beekhoven, 2013). In the groupwise approach, the predictive validity of the indicators is paramount. When the validity is low, there is a high probability of false-positives and false-negatives, or on the one hand students who wrongly receive support, or on the other hand students who wrongly do not receive support. An advantage of the groupwise approach is that it facilitates preventive action at an early stage. Furthermore, it is relatively easy and cheap to collect the information on the indicators. In contrast, a disadvantage of the individual approach is that it can be costly, because children need to be tested individually. In addition, action takes the form of remediation *after* it is established that a child has delays. Also, there is discussion regarding the reliability of testing very young children. An advantage – certainly for the older children – is that there will be fewer false-positives and false-negatives. After heated discussions in the Dutch Parliament as to the pros and cons of both approaches, the groupwise approach eventually was chosen and a so-called student weight funding scheme was developed to award schools additional financial resources for combating educational disadvantage.

The Student Weight Funding Scheme

The basis for the student weight funding scheme, which in essence is still functioning now, lies in analyses performed in 1984 (Doesborgh, 1984). At the time, the predictive power of three indicators – professional level of father and educational level of father and mother – of the children's educational attainment was estimated using a national large-scale dataset. Ethnic origin was also considered, but as there were no comparable data available containing information on ethnicity, this indicator could not be included in the analyses. The results showed that the educational level of the father was the best predictor with a correlation of 0.42 and 17.6% ($=0.42^2$) of variance accounted for. Adding both other indicators resulted in only a limited improvement of the prediction: educational level of mother 2.7% extra, and professional level of father another 1.0% extra. It was decided to dichotomize the three indicators (low versus intermediate and high educational and professional level). For educational level of father, this resulted in 11.9% of explained variance, for professional level of father in 3.6% extra, and for educational level of mother in another 2.1% extra; thus, a total of 17.6% explained variance and a multiple correlation R of 0.42.

In the course of the years, the student funding scheme has been reconsidered several times (Claassen & Mulder, 2011; Fettelaar & Smeets, 2013). The most important changes implemented included, first, dropping professional level as an indicator, and then also ethnicity (or more precisely: parental country of birth). At present, there is only one indicator left, namely parental level of education: the more students with low-educated and very low-educated parents a school caters for, the higher the extra budget the school receives. Three categories are distinguished: a student weight of 1.2 for very low-educated parents, a weight of 0.3 for low-educated parents, and a weight of 0.0 for parents with an intermediate or higher education; the two previous categories are considered the disadvantaged students, the latter the non-disadvantaged students (CFI, 2006).

In the 2013/14 school year, the total budget for the student weight funding scheme in the primary education sector was €358 million. However, as the Early Childhood Care and Education policy is also based on this scheme, the total sum amounted to €729 million (Algemene Rekenkamer, 2015). In that year, 89% of the primary school student population had a weight of 0.0, 6% a weight of 0.30, and 5% a weight of 1.20 (StatLine, 2016). In the 2008/09 school year, the average budget for a 0.0 student was €4900, for a 0.3 student €6900, and for a 1.2 student €10800. Consequently, for a 1.2 student a school received more than twice as much as for a 0.0 student (Kuhry & De Kam, 2012).

The student weight funding budget is awarded to the school boards as part of the lump sum they receive from the Ministry of Education (De Vijlder, Verschoor, Rozema, Van Velden & Van Gansewinkel, 2012). Although the extra funding is based on individual characteristics, this budget is not earmarked, either at the individual, or at the group level. School boards and schools are free to spend it. Therefore, it is the question if the extra financial resources end up with the students for whom they were awarded. A previous study concluded that an important part of the schools indicated that they were not aware of the fact that they received extra funding. Furthermore, only a small number of these schools deployed the money for specific activities aimed at combating educational disadvantage. In practice, the extra means were considered as regular budget which in most cases resulted in smaller classes (Mulder, 1996). More recent studies showed that nothing much has changed in the intervening years (Claassen & Mulder, 2011; Ministerie van Financiën, 2017).

An important question is whether the employment of extra financial means, via the student weight funding scheme, has resulted in achieving the central goal of the educational disadvantage policy, which is reduction of the achievement gap caused by socioeconomic factors in the home environment of the students. A limited number of studies have tried to answer this question. Because no random control group design was employed, reservations were made with regard to causality. The general conclusion was that the policy has not led to a permanent reduction of language and mathematics delays of disadvantaged students. Several reasons for this were put forward: a continuous changing of goals, target groups and instruments; goals that were ambiguous and contradictory; a policy characterized by input financing without output obligations; as a consequence of deregulation and decentralization processes a limitless freedom for school boards and schools as to how to spend their budgets; the lack of a theory on the origin of educational disadvantage and evidence-based solutions (Algemene Rekenkamer, 2001; Karsten, 2006; Ladd & Fiske, 2010; Leuven, Lindahl, Oosterbeek & Webbink, 2003; Mulder, 1996).

Several monitoring studies have been conducted focusing on the development of the various target groups. A recent study concluded that large differences exist between disadvantaged and non-disadvantaged students at the start of primary school. Ethnic minority target group students have a substantial language delay. In the last year of primary school, this delay has diminished somewhat but is still substantial. The relative position of the non-minority target group students (i.e. the native-Dutch low-SES students) regarding their language skills has deteriorated. It was also concluded that there are often hardly any differences between disadvantaged students with the 0.3 weight and students with the 1.2 weight, while at the same time, ethnic minority students achieve substantially lower than non-minority students with the same weight (Driessen & Merry, 2014; Herweijer, 2009).

Research Questions

Thirty years ago, the student weight funding scheme was developed. Since then, the circumstances have changed and the funding scheme has been reorganized several times. The main question this study aims at answering is if the scheme is still adequate. More specifically, the research questions are:

1. How strong are the correlations between family structural indicators of educational disadvantage on the one hand, and language and mathematics achievement of young children on the other?

2. How do these correlations relate to the correlations found thirty years ago, when the weight funding scheme was developed?

To answer these questions, analyses were performed on recent large-scale data. In the next section, the results of these analyses will be presented.

Method

The data for the present study come from the Dutch cohort study COOL[5-18] collected in the 2013/14 school year (Driessen, Elshof, Mulder & Roeleveld, 2015). A total of 437 primary schools with 28529 students in grades 2, 5 and 8 (6-, 9- and 12-year-olds) participated in this national large-scale study. The total sample consisted of a so-called reference sample of 340 schools, which is representative of all Dutch primary schools, and a supplementary sample of 97 schools with many disadvantaged students. The latter sample was added to obtain sufficient numbers of students from smaller categories of disadvantaged students. Furthermore, disadvantaged students and, especially, minority disadvantaged students tend to be concentrated in particular schools in large cities. The over-representation of these schools in this supplementary sample thus provides a ‘typical’ picture of the minority disadvantaged student.

In this study, the focus is on grade 2. The students in this grade took a standardized language and mathematics test developed by CITO (the Dutch National Institute for Test Development). The results of both tests were expressed in so-called proficiency scores. For the sake of comparability, these scores were transferred into *z*-scores, with a mean of 0 and a standard deviation of 1. Information on the student weight came from the school administrations: 88% of the students had a weighting factor of 0.0 (i.e. with intermediate or higher educated parents), 7% had a weighting factor of 0.3 (low educated parents) and 5% with a weighting factor of 1.2 (very low educated parents). The students’ parents had completed a questionnaire with both the mother and the father answering questions on their education, country of birth, work, religion, and language. This written questionnaire was accompanied by an instruction in Dutch, English, Turkish and Arabic. Nevertheless, not all of the parents returned the questionnaire. Especially the response among immigrant parents was low, 38%, compared to 65% among native-Dutch parents. Also, the test scores of children of parents who had not returned the questionnaire were lower than those of children whose parents had completed the questionnaire (a difference of 0.30 standard deviation). This points to selective response. To check whether this response possibly influences the results, analyses were performed on the original representative sample, that is including the students whose parents had not returned the questionnaire. This sample also includes information on the parents’ education and country of birth and the student weight factor provided by the school administrations (but not, as in the parents’ questionnaire, on work, religion, language choice and language proficiency). The correlations between these indicators and the language and mathematics test scores were practically identical to the ones that will be presented hereafter. Thus, it does not appear that the selective response has led to deviating correlations. In addition, because the aim of this study is not to present representative data but to explore relationships, this selective response is less problematic here (Zetterberg, 1963).

The parent questionnaire includes the following information on fathers and mothers. *Family structure* discerns one-parent and two-parent families. Regarding *country of birth,* two categories were discerned: The Netherlands and other Western countries (hereafter taken together as 'The Netherlands'), versus non-Western countries. *Education* distinguishes the highest level attained, and the highest level completed with a diploma. *Paid work* indicates having a paid job for at least 12 hours per week, or not. *Religion* has two categories, namely religious, versus not religious. *Language choice* discerns Dutch versus a foreign language. *Language proficiency* refers to the average score of the four modalities listening, speaking, reading, and writing with categories (1) very low; (2) low; (3) intermediate; (4) high; (5) very high.

The original sample included 5257 grade 2 students whose parents completed the questionnaire. For 4871 students in this sample both language and mathematics test scores were available and they serve as the final sample for the analyses. Table 1 presents an overview of the indicators selected for analyses, with a short explanation of their meaning. For some of the indicators, combinations were constructed, for instance, for country of birth the *number* of parents within a family who were born in the Netherlands, and for highest education the *average* and the *highest* level of the mother and the father.

< insert Table 1 about here >

Results

In the left panel of Table 2, descriptive statistics are presented, in the right panel the bivariate correlations between each of the indicators and the language and mathematics test scores. Two types of correlations are discerned, namely Pearson *r* and *eta*, or the linear correlation and the total correlation, that is the linear plus not-linear correlation. In the case of dichotomous indicators, the *eta* coefficient is the same as the *r* coefficient and is therefore not included in the table. The difference between *eta* and *r* gives an impression as to how much the correlation deviates from linearity.

< insert Table 2 about here >

The bivariate correlations between the indicators and test scores show that the correlations *r* vary in strength from 0.02 (language choice child-friends) to 0.26 (education: average mother + father). According to the rule of thumb provided by (Cohen, 1988), a correlation of 0.10 is weak, a correlation of 0.30 is moderate, and a correlation of 0.50 is strong. A first conclusion therefore is that all correlations in this table point to less than moderate associations. The correlation between the present indicator, the student weight, and the language and mathematics scores is not stronger than 0.20. In general, the correlations for language are somewhat stronger than those for mathematics, but the differences are very small indeed. As such, these marginal differences are rather unexpected, as language is something which is learned both at home and at school, while mathematics typically is learned at school. Mathematics proficiency, therefore, is expected to be less dependent on family characteristics. A second conclusion is that in almost all cases, the correlations for the mother indicators are somewhat stronger than those for the father indicators. A third conclusion is that the correlations for the multiple (or combined) indicators (e.g., education mother plus education father) in general are hardly any stronger than those for single indicators (such as mothers' education, or fathers' education). Multiple indicators therefore appear to not result in added value. A fourth conclusion is that when the linear correlations *r* are compared to the total correlations *eta* the differences are only minimal. This means that there are hardly any deviations from linearity. Taken together, the findings from this table show that the importance of all of these indicators as a basis for the funding of extra financial budgets for combating educational disadvantage is very weak.

In the analyses reported thus far, a total of 34 indicators were included, all of them separately. To get an impression of the correlations when several indicators are analysed simultaneously, regression analyses were performed. Because many of these indicators within the same block (e.g. country of birth) are strongly inter-correlated (e.g. country of birth of mother with country of birth of father), a selection within each block was made for the mothers' indicators. The reasons for this choice are that in general these indicators are somewhat stronger correlated with the test scores than the fathers' indicators; that the number of missing values for mothers is considerably lower than that for fathers because in most one-parent families, there is a mother but not a father; and that as a result of this criterion a consistent selection was obtained. Within the block of education, a selection was made of the highest education level attained because the correlation of this indicator with highest education completed with a diploma was very strong (0.87). In the selection process of the final indicators, a lower boundary for the correlation with test scores of 0.20 was employed. This resulted in the following indicators: country of birth, highest level of education attained, and language proficiency. In Table 3, the results of the regression analyses are presented. [1]

< insert Table 3 about here >

When we take the indicator with the highest percentage of explained variance as a starting point, the table shows that there are differences between the prediction of the language and of the mathematics test scores. In the case of the language test scores, language proficiency of the parents appears to explain most of the variance, namely 6.2%. Highest level of education attained adds 2.5%, and country of birth another 1.0%. Taken together, these three indicators explain 9.6% of the differences in language test scores. In the case of the mathematics test scores, highest level of education explains most of the variance, namely 5.6 %. Language proficiency of the parents adds 1.7 %, and country of birth another 0.5%. A total of 7.8% of the variation in mathematics test scores is thus being explained by the three indicators, which is less than for the language test scores.

In the analyses performed for the validation of the student weight scheme back in 1984, only information on parents' educational and professional level was used. This amounted to a multiple correlation *R* of 0.42. Country of birth was not available at the time, but from later studies it appeared that this also was a relevant predictor of educational disadvantage. To arrive at an indication of the size of the extra predictive power of this indicator, a rough estimation was made with the help of the present data. For the language test scores *R* for student weight plus paid work of father and paid work of mother was 0.22, which results in 4.9% of explained variance. Adding country of birth of father and country of birth of mother resulted in a *R* of 0.27 and 7.4 percent of explained variance, which is about half more. For the mathematics test scores *R* was 0.21 and 4.4% of explained variance, and after adding country of birth 0.24 and 5.8 % of explained variance, which is about one third more. If we translate these results back to the situation of 1984, this means that to the *R* of 0.42 and 17.6% of explained variance between one half and one third must be added for country of birth, which thus results in a total *R* of about 0.50 and 25% of explained variance. As a point of reference, the present student weight (based solely on parental educational level) has a *r* of 0.20 and 4% of explained variance.

Discussion

The results of the analyses unequivocally show that the validity of the present indicator of educational disadvantage is very limited. At the start of the Dutch educational disadvantage policy, some thirty years ago, the multiple correlation of the three indicators was estimated at 0.50 with 25% of explained variance; nowadays, with parental education as the only indicator left, this correlation is 0.20 with not more than 4% of explained variance.

Two explanations of this decrease can be put forward. On the one hand, the decrease may be caused by characteristics of the indicator(s) used, but on the other hand may also be caused by changes in society. Regarding the latter, in a society with more equality, the children's social and/or immigrant background may have lower explanatory power on educational achievement than in societies with less equality. The question is if this explanation holds for the Dutch situation, and elsewhere. In the introduction section of this article, several studies were mentioned that proved the opposite to be true (Davis-Kean & Jager, 2014; Goodman & Burton, 2012; Goodman, Sands & Coley, 2015; Machin & McNally, 2012; OECD, 2016). Recently, the Dutch Inspectorate of Education in her annual report also warned that the educational gap between children from different social backgrounds is increasing, and this not only holds for primary, but – as a consequence – also for secondary education and higher education. In addition, in both primary and secondary education achievement of immigrant children is significantly lower than that of native-Dutch children (Inspectie van het Onderwijs, 2016). This conclusion is in line with findings from the large-scale longitudinal study by Driessen and Merry (2014) who showed that although immigrant children have improved their educational position in the last decades, they still lag substantially behind their native-Dutch peers. Especially, the position of Turkish and Moroccan children is worrisome, even more as many of them are second or third generation. It is obvious that this group still needs extra attention. The question is how.

A far-reaching implication of the dramatic decrease in validity of the indicator is that the hundreds of millions of Euros yearly awarded to schools is based on quicksand. As a consequence, this inevitably leads to unacceptable numbers of false-positives and – probably even worse – false-negatives, or students for whom the schools unwarranted are awarded extra budget, respectively students for whom the schools unwarranted are *not* awarded extra budget. An additional problem is that many schools indicate that they are not aware of the fact that they receive extra budgets for combating educational disadvantage because this is part of the lump sum they receive from the Ministry of Education. In practice, the extra budgets therefore are often spent on creating smaller classes, as a result of which in principle *all* students, both disadvantaged and advantaged, may benefit from the extra budgets. This not only leads to dilution effects (the extra budget is spent on more students than intended), but also so-called Matthew effects may occur. The latter means that the better students, mostly the non-disadvantaged students, profit more from the extra budget than the disadvantaged students, which will result in an even wider achievement gap; Stanovich,1986). To this should be added that there is no evidence that creating smaller classes *sec* is an effective strategy for combating educational disadvantage (Vignoles, Levacic, Walker, Machin & Reynolds, 2000).

To summarize, the analyses show that serious doubt is warranted as to the empirical foundation of the most important instrument of the Dutch educational disadvantage policy, viz. the weighted student funding scheme. The question then arises whether the present groupwise approach of educational disadvantage is still justified and whether one should not look for alternatives. Until recently, the individual approach was held off, mainly because this was assumed to be very expensive and in the case of very young children would lead to unreliable results. However, linguists argue that nowadays, a range of adequate language tests for young children are available (Colpin et al., 2006; Onderwijsraad, 2002; Verhoeven & Vermeer, 2005). And most Dutch institutions for Early Childhood Education and Care targeting children between 2 and 6 years (playgroups and kindergartens) already work with comprehensive child monitoring schemes that often combine standardized tests and observations by staff and teachers. A recent Dutch study shows that subjective teacher assessment adds significantly explanatory power to cognitive test scores in predicting student ability (Feron, Schils & Ter Weel, 2015). Another option is a two-stage approach: a first screening by teachers followed by a more elaborate testing, or a first selection on the basis of structural family characteristics followed by (repeated) individual testing (Onderwijsraad, 2001).

Note

1. In addition to the monolevel regression analyses presented here, multilevel regression analyses were also performed. The results were identical. Language achievement: intercept -1.46; language proficiency

0.17; highest level of education 0.11; country of birth 0.31 (*p*<0.001). Mathematics achievement: intercept -1.24; language proficiency 0.12; highest level of education 0.12; country of birth 0.25 (*p*<0.001).

References

Algemene Rekenkamer (2001). Bestrijding onderwijsachterstanden. Den Haag: Algemene Rekenkamer.

Algemene Rekenkamer (2015). Resultaten verantwoordingsonderzoek 2014 Ministerie van Onderwijs, Cultuur en Wetenschap. Den Haag: Algemene Rekenkamer.

Ballas, D., Lupton, R., Kavroudakis, D., Hennig, B., Yiagopoulou, V., Dale, R., & Dorlinget, D. (2012). Mind the gap. Education inequality across EU regions. Brussels: European Commission.

Bourdieu, P., & Passeron, J.-C. (1977). Reproduction in education, society, culture. Beverly Hills, CA: Sage.

CFI (2006). Nieuwe gewichtenregeling in het basisonderwijs. Zoetermeer: CFI.

Claassen, A., & Mulder, L. (2011). Een afgewogen weging? De effecten van de gewijzigde gewichtenregeling in het basisonderwijs. Nijmegen: ITS.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, NJ: Erlbaum.

Colpin, M., Gysen, S., Jaspaert, K., Heymans, R., Van den Branden, K., & Verhelst, M. (2006). Studie naar de wenselijkheid en haalbaarheid van de invoering van centrale taaltoetsen in Vlaanderen in functie van gelijke onderwijskansen. Leuven: Katholieke Universiteit.

Davis-Kean, P., & Jager, J. (2014). Trajectories of achievement within race/ethnicity: ‘Catching up’ in achievement across time. The Journal of Educational Research, 107(3), 197-208.

Demeuse, M., Frandji, D., Greger, D., & Rochex, J.-Y. (Eds.) (2012). Education policies and inequalities in Europe. New York, NY: Palgrave Macmillan.

De Vijlder, F., Verschoor, M., Rozema, M., Van Velden, J., & Gansewinkel, H. van (2012). Interne middelenverdeling in het primair onderwijs. Arnhem/Nijmegen: HAN Press.

Doesborgh, J. (1984). De secundaire analyse. Nijmegen: ITS.

Driessen, G., & Merry, M. (2014). Trends in educational disadvantage in Dutch primary school. Educational Review, 66(3), 276-292

Driessen, G., Elshof, D., Mulder, L., & Roeleveld, J. (2015). Cohortonderzoek COOL5-18. Technisch rapport basisonderwijs, derde meting 2013/14. Nijmegen: ITS/ Amsterdam: Kohnstamm Instituut.

Feron, E., Schils, T., & Ter Weel, B. (2015). Does the teacher beat the test? The additional value of teacher assessment in predicting student ability. Den Haag: CPB.

Fettelaar, D., & Smeets, E. (2013). Mogelijke indicatoren van schoolgewichten. Onderzoek naar de voorspellende waarde. Nijmegen: ITS.

Goodman, R., & Burton, D. (2012). What is the nature of the achievement gap, why does it persist and are government goals sufficient to create social justice in the education system? Education 3-13: International Journal of Primary, Elementary and Early Years Education, 40(5), 500-514.

Goodman, M., Sands, A., & Coley, R. (2015). America's skills challenge: Millennials and the future. Princeton, NJ: ETS.

Gorard, S. (2012). Who is eligible for free school meals? Characterising free school meals as a measure of disadvantage in England. British Educational Research Journal, 38(6), 1003-1017.

Herweijer, L. (2009). Making up the gap. Migrant education in the Netherlands. Den Haag: SCP.

Inspectie van het Onderwijs (2016). De staat van het onderwijs. Onderwijsverslag 2014/2015. Utrecht: Inspectie van het Onderwijs.

Jepma, IJ., & Beekhoven, S. (2013). Naar een nieuw bekostigingsarrangement voor het onderwijsachterstandenbeleid. Utrecht: Sardes.

Huang, H., & Liang, G. (2016). Parental cultural capital and student school performance in mathematics and science across nations. The Journal of Educational Research, 109(3), 286-295.

Karsten, S. (2006). Policies for disadvantaged children under scrutiny: The Dutch policy compared with policies in France, England, Flanders and the USA. Comparative Education, 42(2), 261-281.

Kounali, D., Robinson, T., Goldstein, H., & Lauder, H. (2008). The probity of free school meals as a proxy measure for disadvantage. Bristol: Bristol University.

Kuhry, B., & Kam, F. de (red.) (2012). Waar voor ons belastinggeld? Prijs en kwaliteit van publieke diensten. Den Haag: Sociaal en Cultureel Planbureau.

Ladd, H., & Fiske, E. (2009). Weighted student funding for primary schools: An analyses of the Dutch experience. Durham. NC: Duke University.

Leuven, E., Lindahl, M., Oosterbeek, H., & Webbink, D. (2003). The effect of extra funding for disadvantaged students on achievement. Amsterdam: Universiteit van Amsterdam.

Machin, S., & McNally, S. (2012). The evaluation of English education policies. National Institute Economic Review, 219(1), 15-25.

Meijnen, W. (2003). Onderwijsachterstanden: Een historische schets. In W. Meijnen (Ed.). Onderwijsachterstanden in basisscholen (pp. 9-29). Antwerpen/Apeldoorn: Garant.

Ministerie van Financiën (2017). Onderwijsachterstandenbeleid, een duwtje in de rug? Interdepartementaal beleidsonderzoek naar het onderwijsachterstandenbeleid. Den Haag: Ministerie van Financiën.

Mulder, L. (1996). Meer voorrang, minder achterstand? Het Onderwijsvoorrangsbeleid getoetst. Nijmegen: ITS.

OECD (2012). Equity and quality in education. Supporting disadvantaged students and schools. Paris: OECD.

OECD (2016). Netherlands 2016: Foundations for the future. Paris: OECD.

Onderwijsraad (2001). Wat 't zwaarst weegt. Een nieuwe aanpak voor het Onderwijsachterstandenbeleid. Advies. Den Haag: Onderwijsraad.

Onderwijsraad (2002). Over leerlinggewichten en schoolgewichten. Advies. Den Haag: Onderwijsraad.

Ross, A. (2009). Educational policies that address social inequality. Brussels: European Commission.

Stanovich, K. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. Reading Research Quarterly, 21(4), 360-407.

StatLine (2016). Leerlingen in (speciaal) basisonderwijs; achterstand, herkomst, woonregio. Retrieved from the Web June 17, 2016. http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=83295NED&D1=1-5&D2=a&D3=0-2&D4=0&D5=2&HDR=G4

StatLine (2017). Bevolking; generatie, geslacht, leeftijd en herkomstgroepering, 1 januari 2015. Retrieved from the Web July 6, 2017. http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=37296ned&D1=0-51&D2=0,10,20,30,40,50,(l-1)-l&VW=T

Stevens, P., & Dworkin, A. (Eds.) (2014). The Palgrave handbook of race and ethnic inequalities in education. New York, NY: Palgrave Macmillan.

Verhoeven, L., & Vermeer, A, (2005). Het ongelijk van Netelenbos? Toetsing van kleuters en hun prestaties op de Cito Eindtoets Basisonderwijs. Toegepaste Taalwetenschap in Artikelen, 74, 123-133.

Vignoles, A., Levacic, R., Walker, J., Machin, S., & Reynolds, D. (2000). The relationship between resource allocation and pupil attainment: A review. London: Centre for the Economics of Education.

Zetterberg, H. (1963). On theory and verification in sociology. Totowa, NJ: The Bedminster Press.

Table 1. *Overview of the Indicators*

Indicator	Information on	Values
Family structure	mother + father	1=one parent; 2=two parent
Country of birth (grand)parents NL	mother	0=non-Western; 1=NL*
	father	
	mother's mother	
	mother's father	
	father's mother	
	father's father	
	mother + father: number	0=0 NL; 1=1 NL (mixed); 2=2 NL
Highest level attended	mother	1=primary school ... 6=university
	father	
	mother + father: average	
	mother + father: highest	
Highest diploma	mother	1=no diploma ... 7=university
	father	
	mother + father: average	
	mother + father: highest	
Paid work	mother	0=no work; 1=work
	father	
	mother + father: number	0=0 work; 1=1 work; 2=2 work
Religion	mother	0=no religion; 1=religious
	father	
	mother + father: number	0=0 religious; 1=1 religious; 2=2 religious
Language choice NL	child with mother	0=no NL; 1=NL
	child with father	
	child with siblings	
	child with friends	
	mother with father	
	family: number	0=in no area ... 5=in 5 areas
Language proficiency NL	mother	1=very low; 2 =low; 3=intermediate; 4=high; 5=very high
	father	
	mother + father: average	
	mother + father: highest	
Student weight factor	mother + father	1=0; 2=0.30; 3=1.20

*NL = The Netherlands

Table 2. *Indicators and correlations with language and mathematics achievement: means, standard deviations, numbers of respondents, correlations r and eta*

Indicator	Information on	*%/M*	*SD*	*N*	Language		Mathematics	
					r	*eta*	*r*	*eta*
Two-parent family	m + f*	92%		4843	0,06		0,04	
Country of birth	mother	86%		4745	0.23		0.18	
	father	86%		4519	0.21		0.19	
	mother's mother	82%		4773	0.24		0.20	
	mother's father	83%		4749	0.24		0.20	
	father's mother	83%		4671	0.22		0.20	
	father's father	82%		4655	0.22		0.20	
	m + f: number	1.72	0.65	4812	0.24	0.24	0.21	0.21
Highest education	mother	3.94	1.35	4804	0.24	0.25	0.24	0.25
	father	3.88	1.38	4515	0.23	0.24	0.22	0.24
	m + f: average	3.89	1.23	4832	0.26	0.28	0.26	0.27
	m + f: highest	4.25	1.31	4832	0.24	0.25	0.24	0.25
Highest diploma	mother	4.68	1.66	4686	0.23	0.24	0.22	0.23
	father	4.55	1.75	4479	0.21	0.22	0.20	0.22
	m + f: average	4.59	1.53	4826	0.25	0.26	0.24	0.26
	m + f: highest	5.05	1.55	4826	0.24	0.24	0.23	0.24
Paid work	mother	70%		4772	0.12		0.12	
	father	92%		4491	0.11		0.10	
	m + f: number	1.59	0.63	4834	0.15	0.16	0.14	0.15
Religion	mother	58%		4788	-0.12		-0.10	
	father	55%		4492	-0.12		-0.12	
	m + f: number	1.13	0.94	4816	-0.13	0.14	-0.12	0.13
Language choice	child with mother	90%	0.31	4716	0.14		0.12	
	child with father	90%	0.31	4452	0.13		0.09	
	child with siblings	94%	0.24	4324	0.07		0.05	
	child with friends	97%	0.18	4635	0.02		0.02	
	m with f	81%	0.39	4549	0.19		0.14	
	family: number	90%		4817	0.15	0.20	0.11	0.15
Language proficiency	mother	4.62	0.67	4780	0.25	0.26	0.21	0.22
	father	4.63	0.64	4509	0.22	0.23	0.18	0.19
	m + f: average	4.62	0.61	4799	0.26	0.28	0.22	0.24
	m + f: highest	4.72	0.54	4799	0.23	0.24	0.20	0.21
Student weight factor	m + f	1.17	0.49	4747	-0.21	0.21	-0.20	0.20

*m = mother; f = father

All correlations $p < 0.001$, except for Language: Language choice child-friends $p = 0.185$, and for Mathematics: Family structure $p = 0.002$; Language choice child-siblings $p = 0.001$; Language choice child-friends $p = 0.195$.

Table 3. *Results regression analyses language and mathematics achievement and selected mother indicators: unstandardized coefficients (B), standardized coefficients (Beta) and percentages (additionally) explained variance (% R^2)*

	Language				Mathematics		
	Full model		Stepwise model		Full model		Stepwise model
	B	*Beta*	*% R^2*		*B*	*Beta*	*% R^2*
Constant	-1.65			Constant	-1.42		
Language proficiency	0.19	0.13	6.2	Highest education	0.14	0.18	5.6
Highest education	0.12	0.16	+2.5	Language proficiency	0.15	0.10	+1.7
Country of birth	0.34	0.12	+1.0	Country of birth	0.25	0.09	+0.5
Total			9.6	Total			7.8

All effects $p < 0.001$.

Miscellany

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