Oideas 55

Joseph Travers

THE IMPACT OF THE GENERAL ALLOCATION MODEL POLICY ON LEARNING SUPPORT FOR MATHEMATICS IN IRISH PRIMARY SCHOOLS

Joseph Travers is Director of Special Education, St. Patrick's College, Drumcondra. He is a former primary school teacher (mainstream, special class, learning support/resource). He is currently lead researcher on a DES funded project entitled 'Addressing the challenges of inclusion Irish schoolsl" and a member of the research team which conducted a review of the role of special schools and classes in Ireland for the National Council for Special Education.

ABSTRACT: Drawing on data from a multi-method study this paper analyses the impact of the General Allocation Model policy on learning support for Mathematics. The findings show that overall pupil access to support has not increased, despite more schools and teachers providing support in the subject. This is explained by reduced teacher caseloads and the redistribution of some teachers from larger schools to small schools. The findings also suggest that pupils with difficulties in Mathematics in non-designated schools are more likely to have their needs addressed than pupils in designated disadvantaged schools. Reported benefits of the General Allocation Model include the creation of special education teams in schools, a reduction in shared learning support teachers and an increase in in-class support.

INTRODUCTION

This paper addresses the issue of whether the General Allocation Model (GAM) introduced in primary schools in 2005 is meeting the needs of all pupils with low achievement/learning difficulties in Mathematics and whether there are differences in the level of support given to pupils between schools designated as disadvantaged and other schools. The paper draws on data from teacher respondents from six focus groups, six individual case study interviews and a questionnaire survey of 137 schools. It will firstly outline concerns about achievement levels in Mathematics, secondly the development of the General Allocation Model, thirdly the methodology of the study and fourthly, the findings and discussion of same.

Since the publication of the *Study of Remedial Education in Irish Primary Schools* in 1998 (Shiel and Morgan, 1998), there have been many other reports in the past decade which have highlighted concerns about the differences in mathematical achievement levels and the number of pupils who are experiencing low achievements, between schools designated as disadvantaged and those that are not (Shiel and Kelly, 1999; Shiel *et al.* 2006).

It was also clear from these evaluations that despite very different levels of need, the proportion of pupils receiving learning support in Mathematics across these differing school contexts was largely similar. Thus pupils in non-designated schools were more likely to have

their needs addressed by the learning support service in Mathematics, as there were proportionately less pupils in these schools in need of support. The role of the *Learning Support Guidelines* in reinforcing this inequity is clear when one considers the following advice from the Guidelines:

> Supplementary teaching should be made available to pupils with low achievement in Mathematics. Schools that do not provide such a service should introduce it on a phased basis over a period of two to three years *as the school's needs in English are reduced* (DES, 2000, p.58) (emphasis added).

Such guidance is only relevant to schools where the needs in literacy are reduced. However, this is far more likely to occur in non-designated schools. In fact there is evidence that the gap in literacy achievement is widening between schools in designated disadvantaged contexts and other schools (Eivers *et al.* 2004).

Thus it was no surprise that *The 2004 National Assessment of Mathematics Achievement* found that there was still no difference between the level of support in designated and non-designated schools despite a huge differential in achievement levels (26% of pupils in designated schools achieved scores at or below the 10th percentile, as against 8% in non-designated schools). In terms of overall access 12.4% of pupils were receiving learning support for Mathematics. Half of the pupils attended schools in which learning support was provided (Shiel *et al.* 2006). Of the teachers surveyed 35.5% provided learning support in English only, 2.9% in Mathematics only and 61.6% provided support in both subjects. Of the learning support teachers providing support in Mathematics only 24% of their time and caseload was devoted to the subject.

Since this report, there has been a major change in policy with the introduction of the General Allocation Model in primary schools since September 2005 (Department of Education and Science (DES) 2005).

THE GENERAL ALLOCATION MODEL

Three significant changes can be delineated in the circulars (DES, 2003, 2005) outlining the General Allocation Model. First, schools are allocated resources differentially within two systems; second, once allocated, schools can deploy resources flexibly, creating special education teams; and third a staged approach to assessment, identification and programme planning was also introduced. These changes will be discussed in turn.

All schools are allocated learning support/resource teacher support based on a weighted model taking into account factors such as school size, school location and whether the school is single-sex boys or girls. For example, all schools designated as disadvantaged get an additional teacher for every 80 pupils whereas a non-designated all-girls school receives their first full-time additional post when they reach 195 pupils. Small schools get fulltime access to the service when they have 105 pupils enrolled. The more favourable ratio for designated schools resides within a wider social policy of targeting disadvantage. However, all designated schools are treated similarly regardless of levels of disadvantage, and the different allocations based on whether the school caters for all-boys or all-girls did not apply in designated schools. Given the greater prevalence of boys assessed with mild general learning disabilities or dyslexia (NCSE, 2006) in these schools, this is surprising.

The teacher allocated under the new weighted model is called a learning support/resource teacher to reflect the fact that the teacher has a much wider brief than the traditional learning support teacher. They now also cater for pupils with borderline and mild general learning disabilities, dyslexia and mild behaviour problems. These categories of pupil

represented the largest categories on the former resource teachers' caseload and were termed high incidence disabilities. Pupils with dyslexia and mild general learning disabilities had since 1999 received 2.5 hours of resource teaching per week from a resource teacher with a caseload of between six and eleven pupils. Now they are part of the caseload of a learning support/resource teacher who had a recommended caseload of 30 pupils (DES, 2000).

Furthermore, the GAM drew a distinction between allocation and deployment for the first time and allows schools to deploy their support teachers, regardless of teacher title in the service of any pupil with special educational needs. This was the first time this blurring of roles and flexibility of deployment in creating special education teams was given official approval by the DES. How this change has affected support teaching in Mathematics is a further key focus of the paper. Thus the teacher sample in this study includes learning support/resource teachers, resource teachers for special educational needs, resource teachers for travellers and special class teachers, as under this new system any of these teachers can have a range of pupils (from pupils with very mild difficulties to low incidence special educational needs) on their caseloads regardless of teacher title. The GAM also introduced a staged approach to assessment, identification and programme planning allowing schools to prioritise support for pupils with the greatest needs.

The key policy issue addressed in this paper is the impact of the General Allocation Model policy change on the position of learning support in Mathematics within the wider context of inclusion. It is interested in how the new model affects provision and if there are any differences between designated and non-designated schools in relation to access to the service. The import of these issues is summed up by Shiel *et al.* (2006) in their comment that "it would seem important to ensure that application of the new system [the GAM] results in an appropriate response to the needs of pupils with learning difficulties in Mathematics in all schools" (p.165).

METHODOLOGY

To address the research question (Table 1) a mixed method research design was employed incorporating three stages.

Table 1 *Research question, level and methods*

Research question	**Level**	**Research method**
In the context of inclusion and equity, is the General Allocation Model meeting the needs of all pupils with low achievement/learning difficulties in Mathematics?	Policy and school	Focus group discussions, questionnaire and teacher interviews

Stage one consisted of five focus group interviews with 99 learning support teachers and resource teachers responsible for co-ordinating Mathematics learning support/special education across ten counties. The purpose of these group interviews was to pilot ideas, garner opinions and map the range of pertinent issues. In addition, the views were sought of 19 learning support and resource teachers seconded as regional learning support advisers for what was then the Primary Curriculum Support Programme.

Stage two consisted of a questionnaire survey. One full cohort (2005-6) of learning support teachers and resource teachers who were pursuing postgraduate studies in learning support/special education in all six centres around the country and four previous cohorts from

one of the centres were identified as the purposive sample which amounted to 230 teachers. The questionnaire addressed issues of pupil numbers receiving support in Mathematics, the level and organisation of support, size of teacher caseload, views on the GAM and views on learning support for Mathematics.

The third stage consisted of six individual teacher interviews with learning support/resource teachers and resource teachers in different contexts. Semi-structured interviews (Bogdan and Biklen, 1992) were perceived as providing the best means of addressing those issues raised in the previous stages in greater depth across different contexts.

FINDINGS AND DISCUSSION

Information on the background to respondents is followed by presentation of the key findings under the following headings: overall access to learning support in Mathematics, increase in provision, policy on access, size and nature of teacher caseload and the effect of the General Allocation Model at policy level. All of the descriptive and inferential statistics presented are derived from the questionnaire data. Different numbers of teachers responded to different questions in the questionnaire. This is indicated by (n=) in the text where n refers to the total number of respondents for that question.

Background on respondents to survey

Of 230 questionnaires posted out 137 were returned representing a return rate of 60%. All of the respondents, due to the nature of the survey sample, had either a postgraduate diploma in learning support or special education. School sizes ranged from 41 to 878 pupils. Teachers in designated disadvantaged schools accounted for 33% of respondents, leaving 67% in non-designated schools. Table 2 outlines the teaching roles of the respondents.

Table 2 *Percentage of teachers in the following roles (n=137)*

Learning support/resource teacher	Resource teacher for pupils with SEN	Resource teacher for travellers	Special class teacher
75.9	13.1	3.6	7.3

Access to support teaching in Mathematics

One hundred teachers in the questionnaire sample gave figures for the number of pupils receiving support in Mathematics in their schools. Overall, the 100 schools had 31,732 pupils with 2,712 getting additional help in Mathematics, which represented 8.5%. This represents a reduction in overall access, as the corresponding figure from 2004 was 12.4% (Shiel *et al.* 2006).

In designated disadvantaged schools 12.3% of pupils received support in Mathematics (n=38 schools). The corresponding figure in non-designated schools was 7.0% (n=62 schools). In terms of the mean figures for each type of school there was not a statistically significant difference in the number of pupils receiving support in Mathematics. Shiel *et al.* (2006) found that in 2004 "the percentages of pupils in fourth class in receipt of support did not differ between designated and non-designated disadvantaged schools, despite the lower level of achievement in designated schools" (p.164). The evidence from the present study suggests that this has only slightly improved under the GAM despite the policy taking disadvantage into allowance in the distribution of learning support/resource teachers. Given the extent of the disparities in achievement levels (Shiel *et al.* report a difference of 26% versus 8% between designated and non-designated schools as regards the number of pupils under the 10th

percentile) it is clear that the GAM is not meeting the mathematical needs of pupils in designated schools. Thus, a key finding from this sample is that pupils in non-designated schools are much more likely to have their needs addressed as regards support in Mathematics under this new model.

Table 3 *Percentage and number of schools with no Mathematics provision*

Designated school (n=45)	Non-designated school (n=87)	Overall (n=136)
8.9% (4)	7.6% (7)	8.0% (11)

Table 3 outlines the percentage of schools that do not provide learning support in Mathematics. A higher percentage of designated schools (8.9%) had no Mathematics provision compared to non-designated schools (7.6%). This again represents a differential negative impact on designated schools given the extent of low achievement levels in these schools.

However, while overall percentage figures for pupil access to support decreased in this sample, a greater number of schools (92%) now seem to provide some service in Mathematics than in 2004. This apparent discrepancy is explained by an increase in provision in smaller schools at the expense of other schools and reduced teacher caseloads. This would show a significant broadening of provision, as Shiel *et al.* (2006) report that just over half of pupils attended schools in which learning support for Mathematics was provided in 2004. Results show that provision for Mathematics has increased in terms of additional teachers providing it, more in-class support, greater attention to lower classes (1st class upwards), more frequent small group withdrawal due to smaller caseloads and less teachers shared between schools. Significantly, the proportion of pupils on teachers' caseloads who receive support for Mathematics has increased from 24% in the Shiel *et al.* (2006) benchmark study to 43% in the present study.

Increase in provision for Mathematics

Across 135 schools, 430 support teachers out of a total of 558 provided support in Mathematics (Table 4). This represents 77.0% and is an increase since 2004 when the figure was 64.5% (learning support teachers only) (Sheil *et al.* 2006).

Table 4 *Percentage of teachers providing support in literacy only, maths only or literacy and Mathematics across 135 schools (n=558)*

Literacy only	Maths only	Literacy and Maths
22.9	2.3	74.7

However, there have been differential gains and losses across school contexts from this overall increase. Table 5 shows the impact of the changes in terms of its effect on learning support/resource teaching in Mathematics. While most schools reported an increase in Mathematics support teaching, it seems some of this was at the expense of other schools with 12% reporting that in their school there has been a decrease in support teaching in Mathematics (Table 5).

Table 5 *Effect of the introduction of the General Allocation Model on support teaching in Mathematics (percentage of respondents)*

Effect of GAM	Overall (n =132)	Designated school (n=45)	Non-designated school (n=87)
Support teaching in Mathematics has decreased	12.1%	20.0%	8.0%
Support teaching in Mathematics has increased	56.1%	46.7%	60.9%
Support teaching in Mathematics has remained the same	31.8%	33.3%	31.0%

However, when the responses are separated out according to whether the teachers teach in a designated school or not it is clear that there has been a disproportionately negative impact on support teaching for Mathematics in schools in designated disadvantaged areas (Table 5). Consequently, schools in non-designated areas in this sample seem to have benefited far more from the policy changes in relation to support teaching for Mathematics. However, given that the confidence intervals for the differences in percentages overlap, this present sample does not provide sufficient evidence of a wider underlying trend. This was confirmed by a chi-square test (p=0.99, Chi-Square=4.621, df=2).

It is legitimate to ask how some designated schools could end up with less of a support service in Mathematics, as they were given a more favourable ratio in the appointment of learning support/resource teachers to cater for their additional needs. To answer this question it is necessary to explain how these schools had gained resource teachers under the previous system. As pupils with mild general learning disabilities and borderline mild general learning disabilities are over represented in areas of socio-economic disadvantage (Tomlinson, 1982; Mittler, 2000), designated schools had secured additional resource teachers for these pupils. Outside of these areas resource teachers were dealing with proportionately more pupils with low incidence disabilities. As pupils with mild and borderline general learning disabilities were removed from the caseload of resource teachers for appointment and retention purposes, designated schools lost proportionately more of these teachers, which in some cases were not offset by the teachers appointed under the GAM. Some all-boys designated schools were particularly affected as proportionately more boys than girls have been identified with mild general learning disabilities and dyslexia (NCSE, 2006). Some losses were quite dramatic:

> *We had six SEN teachers. Now under the GAM we have three. We are in a designated disadvantaged school. The children lost out big time. (Questionnaire respondent 37)*

In one teacher interview, the respondent reported that their school ended up with 60 pupils under the 10th percentile on standardised tests between two teachers and:

> *If we were to move up to the fifteenth percentile we would have another forty children. We would have a hundred children under the 15th percentile in a combined group of literacy and Maths need. (Teacher interview one)*

In another interview the respondent was in an inner city disadvantaged area with a high proportion of pupils with dyslexia:

The upshot for us when they put this new model together was an appalling vista. We had a large numbers of pupils with dyslexic difficulties who were getting support but who under the new model were called high incidence. We were wiped out. The Department in its wisdom put us into a cluster with four schools and we were losing all 3 of our support teachers and we were being granted 0.75 of a teacher through the GAM. (Teacher interview six)

However, following representations this school retained the resources on a year on year basis.

Also, teachers felt the GAM had a negative impact on pupils with mild general learning disabilities. As proportionately more of these pupils are in designated schools, this also contributed to the negative impact. There was evidence that some of the reduced time given to pupils with MGLD or dyslexia was taken from their former Mathematics provision:

Children now taken in groups of 4/5 with wider ability range - don't feel their individual needs are met, especially MGLD children relating to Mathematics - they now receive no maths in our school. (Questionnaire respondent 58)

Policy on access to support teaching in Mathematics

Less than 10% of 135 respondents were in schools that had one dedicated support teacher for Mathematics. This represented just over 2% of the total support teachers in these schools (Table 4) and does not seem to have increased as a result of the GAM. Many teachers were very clear in their comments that official guidelines prioritise literacy support over Mathematics and they expressed frustration with this:

In my experience (disadvantage) all our energies and innovations have been in the area of literacy. (Questionnaire respondent one)

As long as guidelines stress dealing with literacy first, then Mathematics - rather than putting them equal - children's learning support in maths will be insufficient. (Questionnaire respondent 58)

Proportionately more teachers in designated schools expressed these frustrations but they were also mentioned by the focus group teachers, the learning support advisers, questionnaire respondents and by teachers in the interviews.

There are also challenges in relation to how Mathematics is viewed within learning support in schools. Table 6 outlines some of these views. A significant minority of 15% would prefer to be giving learning support in literacy only. Nearly a quarter of the teachers agreed with the statement that Mathematics is less important than literacy and 36% agreed that schools should focus on literacy difficulties first before turning to Mathematics with a further 22% undecided on the issue. It could be argued that this is simply reflective of official policy in the *Learning-Support Guidelines*. Another consequence of this policy is that some schools because of the level of need in literacy would have insufficient time for Mathematics. This view is further validated by the 73% of teachers who expressed agreement with it.

Table 6 *Percentage of teachers' level of agreement or disagreement with the following statements*

SA: Strongly agree, **A**: Agree, **U**: Undecided, **D**: Disagree, **SD**: Strongly disagree	**N =**	**SA**	**A**	**U**	**D**	**SD**
Because of the degree of needs in literacy there is insufficient time for learning support in Mathematics	119	21.0	52.1	5.0	20.2	1.7
I would prefer to be doing learning support/resource in literacy only	120	5.0	10.0	3.3	43.3	38.3
School should focus on literacy difficulties first before turning to Mathematics	120	3.3	32.5	21.7	32.5	10.0
Mathematics is less important than literacy	117	1.7	23.1	10.3	41.9	23.1

Size and nature of teacher caseloads

The mean number of pupils on the caseloads of the 137 teachers was 21, ranging from five to 49 (SD=8.3). There was no significant difference between the size of the caseloads of teachers in designated and non-designated schools. Teacher respondents had a mean number of two pupils with low incidence special educational needs on their caseloads, ranging from 0 to 12 (SD=2.3). Fifty-one (37.2%) of the teachers had no such pupils on their caseloads. The mean number of pupils with high incidence special educational needs on the teachers' caseloads was nine (n=133) (SD=8.9). The mode and median were both five for such pupils. As the standard deviation for the mean is very large, the mode and median are better indicators of the average caseload in this case. Teachers had low numbers of minority ethnic pupils on their caseloads and similarly low numbers of travellers unless the teachers were specifically resource teachers for travellers. In the case of learning support teachers, caseload size has reduced since 1998 (Shiel and Morgan, 1998). However, the nature of the caseload has changed with more pupils with high incidence special educational needs included. However, the redesignation of many resource teachers as learning support/resource teachers has meant an increase in their caseload from the previous maximum of 11. Likewise, the nature of their caseloads has changed with more pupils with difficulties but not assessed special educational needs now included. Some resource teachers are continuing to operate the previous system and hence have small caseloads made up entirely of pupils with low incidence special educational needs. There was no significant difference between the number of girls and boys receiving support for Mathematics with means of 4.9 and 5.2 per teacher respectively.

A total of 103 teachers gave figures for overall caseloads and for Mathematics. For these teachers 43% of their caseload received support in Mathematics. This is a large increase since 2004 when the corresponding figure was just less than 24% (Shiel *et al.* 2006). However, the net effect of the percentage increase in the proportion of pupils receiving support in Mathematics has been offset by the reduction in the average teachers' caseloads from 46 for learning support teachers in1998 (Shiel and Morgan, 1998) to 21 in this study. The mean number of pupils per teacher caseload under the 10th percentile in Mathematics was nine in designated schools (n=31) (SD=5.4) and five for the teachers in the non-designated schools (n=51) (SD=3.0). The Mann-Whitney U test showed this difference to be statistically significant (U=359.5, Z=-4144, *p*=. 001). These differences then had a knock-on effect on the number over the 10th percentile in Mathematics on caseloads. Of the 30 teachers in designated schools who gave this data and teach Mathematics, 43% had pupils over the 10th percentile on their caseloads. This compared to 53% of the 51 teachers who gave this data and teach Mathematics in non-designated schools.

Therefore, in relation to these teachers, it is clear that those in non-designated schools were able to give support services to more pupils over the 10th percentile. Some of these

schools reported offering support in literacy and Mathematics up to the 30th percentile, one up to the 66th percentile in Mathematics and another, enrichment activities to pupils over the 90th percentile.

Influence of the GAM on teachers' work

Teachers were also asked to describe how the new model has affected their work. One hundred and six teachers responded to this open-ended question on the questionnaire. On the whole, comments were positive about the policy change. However, seven teachers reported that their schools lost teachers (others lost teaching hours) under the model. The effect of these losses was recounted as decreasing provision in Mathematics; not being able to cater for all pupils under the 10th percentile; reducing the number of pupils receiving learning support and only catering for literacy needs.

Another eight teachers reported no change in their set up. Another 30 specifically mentioned increased provision and reduced caseloads in their schools, which also could be inferred but not stated by many more teachers. In terms of gains, some were quite dramatic:

> *…increase from three to seven people in special education team meant 'crash' course for four newcomers. (Questionnaire respondent 98)*

Others reported reductions of up to ten pupils in their caseloads. Teachers in small rural schools reported significant benefits. Seven teachers who had been shared between schools are now based in one school fulltime:

> *I am now fulltime in my own school. I used to be shared. We now have another fulltime LS/RT teacher who focuses on Mathematics, whereas I focus on literacy. (Questionnaire respondent 38)*

Another four have had their cluster size reduced by the new policy.

In relation to how this new increased provision is being utilised, teachers reported the following changes: thirteen stated that provision for Mathematics was increased including having one teacher dedicated to Mathematics; ten that in-class support had been introduced or developed; four that early intervention had been initiated and another five that provision had been extended to pupils up to the 30th percentile.

By far the biggest change reported was the development of special education teams in schools. Twenty-eight teachers mentioned this and, on the whole, found it to be positive. They reported better co-ordination between support staff, more collaborative whole-school approaches, more generic caseloads, greater flexibility in deployment with teachers working with class streams as against working with pupils with a particular category of need, and more professional discretion around organising support for pupils. Typical comments included:

> *School has developed a special education team. Less specialisation by teachers, more generic caseloads. Members of team have clearer overview of process of whole caseload receiving supplementary teaching. More collaborative approach. (Questionnaire respondent 73)*

This is a welcome development as one of the features of the Irish support system has been its differentiated nature with different types of support teachers with little or no contact or co-ordination between them (Travers, 2005).

CONCLUSION AND RECOMMENDATIONS

This study has found that while the General Allocation Model has led to an increase in the number of schools and teachers providing support for Mathematics, overall pupil access has decreased because of reduced teacher caseloads and an increase in support in smaller schools at the expense of some larger schools. However, for those pupils receiving support the level of this support has increased since 2004.

The most disconcerting conclusion from this study is that contrary to Government policy of targeting disadvantage, there is clear evidence that pupils with difficulties in Mathematics in non-designated schools are much more likely to have their needs addressed than pupils in designated schools. Despite the differential allocation of resources through the GAM, schools in non-designated areas benefited far more from the changes in relation to support teaching in Mathematics. The following findings from this study combine to validate this claim:

(i) In designated schools 12% of pupils were receiving support for Mathematics while in non-designated schools 7% of pupils were receiving support. These figures need to be set in the context of the different levels of need between the two school types. Figures for low achievement, for example, from Shiel *et al.* (2006) show 26% of pupils in 4th class in designated schools scoring under the 10th percentile as against 8% in non-designated schools. Weir (2003) reports 46% of pupils achieving under the 10th percentile in 6th class in the *Breaking the Cycle* scheme schools.

(ii) There was no statistically significant difference between the mean number of pupils receiving support for Mathematics across designated and non-designated schools despite significantly different levels of low achievement between the two school contexts.

(iii) Learning support/resource teachers in non-designated contexts served a higher proportion of pupils performing over the 10th percentile on standardised tests of achievement than in designated contexts.

(iv) A higher percentage of designated schools than other schools had no learning support provision for Mathematics.

(v) Since the introduction of the GAM, 20% of learning support teachers in designated schools reported that support teaching in Mathematics had decreased as against 8% in non-designated schools.

(vi) Since the introduction of the GAM, 61% of learning support teachers in non-designated schools reported an increase in support teaching for Mathematics while the corresponding figure in designated schools was 47%.

With nearly a decade gone since the publication of the *Study of Remedial Education* (Shiel and Morgan, 1998), which raised similar issues in relation to literacy provision, it seems the same situation is being repeated for Mathematics. Clearly the objective of targeting disadvantage, at least in relation to a subject termed "the worst curricular villain in driving students to failure in school" (NRC, 1989, p.6) does not seem to be working.

There are at least four reasons why this situation has emerged. First, policy has prioritised literacy in a way that linked the freeing up of resources for Mathematics on the basis of first reducing needs in literacy. As shown, this favoured non-designated schools. Second, the GAM treated all designated schools similarly which impinged more negatively on those dealing with severe disadvantage. Third, the GAM gave no additional allowances to all-boys schools in disadvantaged contexts. Fourth, the differential makeup of resource teachers' caseloads (balance of pupils with high and low incidence disabilities) between disadvantaged and non-disadvantaged contexts seems to have been given insufficient attention. This resulted

in designated schools proportionately losing more and gaining fewer teachers under the GAM than non-designated schools.

RECOMMENDATIONS

(i) The general allocation model

From the research the GAM policy would seem to be a crude mechanism based on prevalence estimates and not on actual needs. As a consequence, it requires redress procedures for schools where there is a clear mismatch between resources and need. In terms of the general allocation allowances, the case for treating all designated schools alike is weak, as is having different allowances based on whether schools are single sex boys, girls or co-educational for non-designated schools, and not for designated schools. These need to be reviewed. The case for taking designated schools, especially those in band one of the DEIS initiative out of the GAM and treating them on the basis of need is strong while allowing some flexibility to deal with specific anomalies in other schools.

(ii) Equity in distribution of resources

Policy makers should ensure all needs are met first in designated schools if the rhetoric of addressing educational disadvantage is to be matched by deeds. This should entail a redistribution of existing resources first in favour of those with greatest needs. Provision should be adequate enough to facilitate in-class, small group, individual withdrawal and special class placement where appropriate.

The study has shown that the GAM has considerable shortcomings in the design and outcomes of the policy. These include, at the design phase, making no allowances for different levels of disadvantage or gender differences in disadvantaged contexts. It has highlighted the disconcerting situation that despite rhetoric about targeting disadvantage, pupils in designated disadvantaged contexts are less likely than their peers in non-designated schools to have their learning needs in Mathematics addressed by the learning support service.

REFERENCES

Bogdan, R.D. and Biklen, S.K. (1992, 2nd edn) *Qualitative Research for Education*, Boston, M.A.: Allyn and Bacon.

Department of Education and Science (DES) (2000) *Learning-Support Guidelines*, Dublin: The Stationery Office.

Department of Education and Science (DES) (2003) *Circular 24/03: Allocation of Resources for Pupils with Special Educational Needs in National Schools*, Dublin: DES.

Department of Education and Science (2005) Circular 02/05, *The Organisation of Teaching Resources for Pupils who Need Additional Support in Mainstream Primary Schools*, Dublin: DES.

Eivers, E., Shiel, G. and Shortt, F. (2004) *Reading Literacy in Disadvantaged Primary Schools*, Dublin: Educational Research Centre.

Mittler, P. (2000) *Working Towards Inclusive Education: Social Contexts*, London: David Fulton Publishers.

National Council for Special Education (NCSE) (2006) *Implementation Report: Plan for the Phased Implementation of the EPSEN Act, 2004*, Trim: NCSE.

National Research Council (NRC) (1989) *Everybody Counts: A Report to the Nation on the Future of Mathematics Education*, Washington, DC: National Research Council.

Shiel, G. and Morgan, M. (1998) *Study of Remedial Education in Irish Primary Schools*, Dublin: Educational Research Centre, St. Patrick's College.

Shiel, G., and Kelly, D. (2001) *The 1999 National Assessment of Mathematics Achievement-Summary Report*, Dublin: Educational Research Centre.

Shiel, G., Surgenor, P., Close, S. and Millar, D. (2006) *The 2004 National Assessment of Mathematics Achievement*, Dublin: Educational Research Centre.

Tomlinson, S. (1982) *A Sociology of Special Education*, London: Routledge, and Kegan Paul.

Travers, J. (2005) 'Reflections on the challenges of inclusive education', in M.A. Lyons and F. Waldron (Eds) *Perspectives on Equality, The Second Seamus Heaney Lectures*, Dublin: Liffey Press.

Weir, S. (2003) *The Evaluation of Breaking the Cycle: A Follow-up of the Achievements of 6th Class Pupils in Urban Schools in 2003*, Dublin: Educational Research Centre.