



An enlightened use of educational monitoring for Greece

Enlightened use
of educational
monitoring

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Abstract

Purpose – This paper aims to discuss the issues surrounding educational monitoring systems.

Design/methodology/approach – This paper is a general review of the situation in Greece.

Findings – This paper suggests that a superior educational monitoring system aiming to alleviate educational and social inequalities as well as discrepancies between schools and/or between classrooms would rely on both attainment and progress criteria, as these criteria operate differently and allow to bring into the fore different aspects of problems/educational inadequacies.

Originality/value – The benefits and pitfalls associated with the employment of different criteria for educational monitoring are discussed, so that a new monitoring system can be suggested for the Greek setting of public primary and secondary schools.

Keywords Educational administration, Greece, Performance monitoring

Paper type General review

1. Introduction

The current paper suggests a system of educational monitoring, characterised by the provision of support to individual classrooms and/or schools and of classroom and/or school accountability. Such a Greek educational monitoring system may be informed from the strengths and the limitations of the British and the American educational systems so that it does not follow the same steps but instead takes a shortcut to the issues, informed from the long debates on educational monitoring that educational systems in the above Anglo-Saxon countries have been through.

2. The current Greek picture in relation to assessment and monitoring proclaimed by the new law 2986/2002

Until recently, in Greece there was no assessment exercise, which would hold teachers accountable for the quality of teaching they provide. Recently, the Greek Ministry of Education has authorised the new Law 2986 of the Greek Government (2002) by which (article 4, in Φ EK 24/13-02-02) a new framework assessing primary and secondary teachers has been established in Greece. While other countries, such as the UK and USA have a long tradition in educational assessment and monitoring, educationalists, policy-makers and teachers in Greece, are unfamiliar with such practices. The above-mentioned law 2986 set out to raise the standards of all the contributors to the educational enterprise (teachers, principals, school counsellors and educational administrators) and to continuously improve the pedagogic communication and the pedagogic relation with pupils through assessment exercises. Other related goals served by this law were:

... to diminish the achievement discrepancies between schools and to identify the limitations of the school-system, to evaluate the various initiatives undertaken, to improve the total



educational outcomes and finally to ensure that all pupils in primary and secondary education enjoy equal access to the educational process... in order to decrease social inequalities (Law 2986, article 4, in ΦΕΚ 24/13-02-2002).

A major aim of this law is to “make sure that all the pupils in primary and secondary education enjoy equal access to the educational process”.

Law 2986 (p. 233) asserts that:

... equal access to the educational process contributes to the democratisation and the qualitative improvement of education, but also to the improvement of society, given that a smooth development of pupils' personalities as well as access to knowledge are definitely contributing factors towards decreasing social inequalities.

According to law 2986/2002, (p. 234) teachers, and particularly those seeking promotion, after each having composed a self-assessment report (that complies to a set of a pre-specified criteria) are finally assessed by the school's principal and the counsellor, in other words, subjective criteria were adopted only in teachers' evaluation.

3. The possibilities of addressing some of the issues described in the new law 2986/2002 through a monitoring system/school effectiveness exercises

The school effectiveness methodology offers a well-known framework according to which differences in attainment and progress between schools and classrooms can be identified; similarly groups of pupils whose attainment and/or progress differ significantly may be identified. Subsequent action can be undertaken in order to bridge the gap between the educationally disadvantaged and the advantaged pupils. These actions may be perceived within a comprehensive framework of support teaching policies. These policies can be set out in order to tackle both of these structural inequalities through a systematic and sustained endeavour to alleviate educational and social disadvantage.

School effectiveness research can map out the impact of a range of different variables such as characteristics of individual pupils and characteristics of classrooms and schools. Characteristics of the pupils enrolled in a given classroom, along with the characteristics of a given classroom and the characteristics of a given school jointly shape the performance of foreign/repatriated pupils in particular and of disadvantaged groups in general, as well as the performance of majority pupils.

School effectiveness studies make use of multilevel modelling to disentangle the impact of individual pupils' characteristics and contextual classroom characteristics on pupils' final attainment and on their progress. School effectiveness research can identify whether school and/or classroom effects exist, or to what extent schools or classrooms make a difference in pupils' attainment or in their progress rates. This analysis is necessary because pupils' final attainment score is jointly defined by their individual characteristics and by their school or classroom membership. Furthermore, the magnitude of these effects is reflected in the percentage of the total variation in pupils' final scores that can be attributed to the fact that pupils are enrolled in schools or classrooms (intra-school and intra-class correlation coefficients).

4. The use of school effectiveness research in England and in the USA for educational monitoring

School effectiveness research studies have been employed in England and in the USA for the purpose of educational monitoring. The dictionary defines monitoring as “regular surveillance on a situation” (Kirkpatrick, 1997). Tymms (1999) refers to professional monitoring systems, which exist in parallel with the monitoring of learning in the classroom. The purpose of such systems is to oversee the provision of appropriate teaching, learning and assessment within the school as a whole.

However, in contrast to Greece, decentralisation is a pertinent characteristic of the English educational system. In England, most schools can select their pupils’ intake and allocate resources to meet the school’s needs while school principals can hire their own teaching staff. On the other hand, parents can select a school for their child according to the relative ranking of each school in relation to other schools in the same area according to an annual report published by Office of Standards for Education (OFSTED) (the English inspectorate). Each school’s results based on pupils’ attainment levels obtained from this exercise are published annually in the so-called “League tables[1]”. The publication of schools’ outcomes in league tables enables comparisons between individual schools to be undertaken in terms of their pupils’ unadjusted final attainment scores. Students’ performance is regularly monitored, as pupils are yearly assessed in basic skills at the end of key stage 1, 2, 3, and 4 (at the end of 2nd, 6th, 10th and 12th grades, and at ages 7, 11, 14 and 16). The average school performance is employed as an indicator of the quality of education provided in each school:

The systematic publication of “performance tables” for key stages and exam results, began in 1992, and is now an established feature of the educational system in England and Wales (Goldstein, 2001a, b).

Through such an accountability exercise, a closer educational monitoring of school outcomes is under way. This is of increased importance for schools in England as on many issues (such as on equal educational opportunities) schools define their own policies and emphasise different priorities for action, demonstrated in the schools’ policy documents. Hence, the English system strives to ensure that all schools may be able to provide a basic standard in education. OFSTED (2000a, b, c, d), in its guidelines to inspectors proclaims that in order to make an inspection report on a school, the performance of the school at the end of key stages (in terms of absolute attainment) should be considered. OFSTED monitors the progress of schools in special measures (schools that on average perform at a below average level in terms of unadjusted attainment) often located in disadvantaged (usually inner city) areas. These schools are characterised by a high proportion of unsatisfactory teaching or management of schools (OFSTED, 1999b). Yet, Gray and Wilcox (1995, p. 17) consider that:

... by insisting that schools and Local Educational authorities publish their raw exam or test results we run the distinct risk of rewarding schools for the “quality” of the intakes they can attract rather than what they actually do with pupils.

Parental choice and schools’ choice are pertinent characteristics of the English primary and secondary educational system. The English educational system by providing parents with data on schools’ performance enables them to apply their choice for their child. The league tables system is able to provide high quality education for the children of highly educated parents who are able to play an active role in their

children's education, by choosing schools with the best possible outcomes in league tables. A Scottish study (Willms and Echols, 1992 cited in Asher and Burnett, 1993) has shown that parents who exercised their right to choose were more highly educated and had more prestigious occupations. Parents living in high-status neighbourhoods have access to high performing schools. Parental education is related to pupils' outcomes. In their overview of the determinants of children's educational attainment, Havenman and Wolfe (1995) conclude that the most fundamental factor describing children's educational attainment is the human capital of their parents, typically measured by the number of years of schooling attained. The human capital of the mother is usually more closely related to the attainment of the child than is that of the father. Educated parents can prepare their children better for the regular national assessment exercises (SATs); once their children have attained high marks in the national exams they are more likely to be accepted in schools performing at an above average level. Hence, parental choice of individual schools and schools' choice of individual pupils are pertinent characteristics of the English primary and secondary educational system. Simple comparisons of schools in terms of unadjusted final attainment scores in a small number of "key skills" were introduced by the British educational administration "for the purpose of providing a yardstick by which parental choice of schools could be assisted" (Goldstein, 2001a, b, p. 2).

Mahony (1998 in Sukhnandan, 1999, p. 7) believes that parental choice is the trigger behind the school – effectiveness movement in the UK, in a context of competition between schools for students. Schools that appear as highly effective in league tables get more funding. Yet, "Output – related funding tends to inhibit the recruitment of the least able to succeed" (Rathbone *et al.*, 1997; Leney *et al.*, 1998 referred in Hodgson, 1999, p. 19):

Whether increased funding leads to increased performance is a highly contentious and politically loaded issue. In practice, the atomisation of schooling too often merely allows advantaged schools to maximise their advantages (Whitty *et al.*, 1998, p. 113).

Furthermore, comparisons between individual schools or between individual classrooms on a one to one basis are not justified, for several reasons. First of all, comparisons between individual schools or between individual classrooms are not legitimate from a statistical point of view; instead, comparisons of school or classroom performance with the performance of an average school or classroom are legitimate. "There is the need to interpret residual estimates of individual school's effects by reference to the confidence limits associated with such estimates" (Creemers, 1994; Goldstein *et al.*, 1993). In most cases where a multilevel analysis is undertaken, only a minority of classrooms or schools' residual estimates are significantly different from the residual estimates of average classrooms or schools. Confidence intervals contain the estimates of these classroom/school intercepts and slopes. Therefore, assessing the effectiveness of classrooms or schools according to their relative positions in the league table is quite biased from a statistical point of view (Figure 1).

Up to 2002 a single assessment criterion was adopted in England and Wales, which is schools' unadjusted final attainment score, not including criteria of school progress or adjusted progress. Only recently the Department for Education and Science (DfES, 2002) piloted value-added projects in a sample of primary and secondary schools.

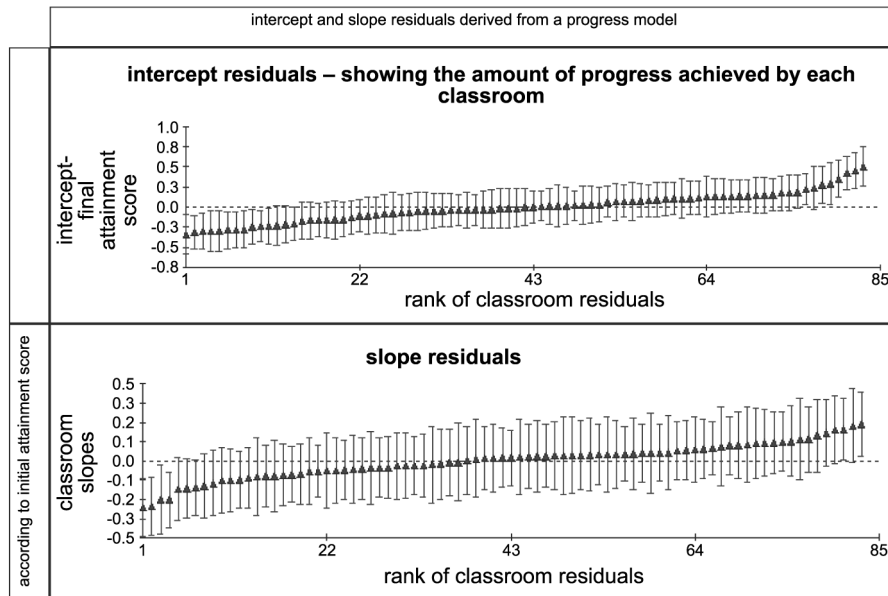


Figure 1. Rankings of intercept and slope residuals of classrooms. These residuals came out from a progress model (a model adjusting for initial attainment score)

For the first time schools were compared in terms of progress made by pupils enrolled in them.

Among the current aims of the English educational system is not the introduction of an educational monitoring mechanism that would alleviate the discrepancies between schools and classrooms as well as between disadvantaged groups and the non-disadvantaged groups and that would guarantee that every pupil has fairly equal access to high quality education. On the contrary, Bartlett (1993, p. 150 cited in Whitty *et al.*, 1998, p. 116) pointed out that an increasingly selective admissions policy in over-subscribed schools open enrolment may have the effect of bringing about increased opportunity for cream-skimming and hence inequality.

Instead of centrally alleviating educational and social inequalities, the English educational system aims among others that parents are well informed about individual school performance level, and that they become more knowledgeable about what is going on in the schools in order to be in a position to make informed choices about schools:

In UK government policy, education has over the past decade been dominated by concerns of parental choice, the establishment of a National Curriculum, and the encouragement of greater managerial and financial independence of schools (Ruxton, 1996, pp. 201-3).

In a similar way parents choose high performing schools and high performing schools also select academically “bright” students. These schools then select from among the applicants, according to criteria such as academic performance, or parental status, given that they need to retain their reputation. Consequently, initially high achieving pupils are proportionally over-represented in schools having scored at an above average level in league tables. Subsequently, minority pupils with limited competence in English, pupils from low social class and boys who, according to

Mortimore *et al.* (1988) are over-represented among low achieving pupils in the UK, are over-represented in schools performing at a below average level. Thus, the British system perpetuates a form of segregation along ethnic, and social class lines. According to Whitty *et al.* (1998, p. 116) for high achieving schools “The least desirable clientele include those who are less able ... as well as children from working-class backgrounds and boys.”

Goldstein and Noden (2001, p. 1) showed that in English schools:

As school funding was primarily determined by pupil numbers, schools would be keen to enhance their popularity among parents. In order to achieve this, so the theory went, schools would wish to protect their league table position and therefore seek to attract the pupils most likely to succeed in public examinations, that is, more advantaged pupils.

Their findings suggest that in Britain from 1994 to 1999 there was a fairly smooth increase in the between school variance in levels of free school meals (FSM) eligibility, which played the role of a proxy variable for social class. Hence, schools serve increasingly more differentiated pupils' intakes in terms of social class composition. According to Goldstein and Noden (2001, p. 1) there was “a marked increase in segregation from 1994-99, with a marked increase in segregation in areas operating selective secondary education systems”. It is very probable that the league tables system contributed to this segregation effect, as it accentuates social disparities mainly through “parental choice” and “school's choice”.

Recently, the British Government has initiated the policy:

... of raising educational standards for literacy and numeracy achievement, and adopting a principle of “zero tolerance of underperformance” applying to all schools and local education authorities (Secretary of State for Education, 1997, pp. 9-10 referred to in Gamarnikow and Green, 1999).

In this case an attempt has been made to correct the limitations of the established educational system by the creation of “Education Action Zones”. In education action zones:

... clusters of around 20 schools work in a partnership with the district, local parents, businesses, teachers ... to encourage innovative approaches aiming to tackle disadvantage and raise standards (DfEE, 1997, p. 4 referred to in Gamarnikow and Green, 1999).

In addition, Goldstein and Woodhouse (2000) have shown that in Britain school effectiveness data involving schools' achievement or learning gain have been unjustifiably employed by the British Government to blame these schools. However, some projects carried out in the UK have shied away from blaming individual schools and instead put forward procedures of collective responsibility to improve schools' outcomes. A project abiding by the afore-mentioned guidelines was the Hampshire project, conducted by the Hampshire Local Education Authority (Goldstein *et al.*, 2000a, b). In this project, appropriate adjustments of prior attainment and other intervening variables were taken into account so that the differences found among schools were properly put into context. According to Yang *et al.* (1999, p. 17) the approach used in the Hampshire project was that the school effectiveness methodology was seen as evolving over time in the light of feedback from users, availability of new data and national developments. It was also recognised that value added estimates, derived from the analysis, were interval estimates rather than point estimates.

In the USA, school districts share the responsibility of raising the educational outcomes of low-achieving classrooms or schools. According to the recent “No child left behind act” (United States of America – Congress House, 2001), in the USA districts are also held accountable for the attainment and progress of their schools.

Disaggregating by social class and race/ethnicity has played a key part in research and school improvement efforts (Edmonds, 1979; Brookover, 1985; Shoemaker, 1984; Lezotte, 1986). According to these authors failure to disaggregate can result in schools being identified as effective even though the working class students and/or minority students enrolled in them have unacceptably low performance. They believed also that pinpointing achievement discrepancies for pupils of low social class and/or minority status can both show the way towards needed changes and begin to build in accountability mechanisms for initiating such change (Lezotte and Bancroft, 1985; LeMahieu, 1988, cited in Levine, 1992, p. 29).

Teddle and Stringfield (1993, p. 224) proposed a distinct way to improve these “failing schools”. They suggest schools should look into the socio-economic backgrounds of parents of the children, whether they are mixed or homogeneous. Then they would look into the schools’ geographic context and how it might affect the school’s improvement plan. They would also look into the major sociological and historical factors associated with educational and social disadvantage.

Based on disaggregated information American districts generate informed recommendations for classrooms or schools with below average final attainment score or progress rates, or schools in which significant discrepancies have occurred between disadvantaged and advantaged groups of pupils.

Districts annually review the progress of schools and try to ensure that all schools eventually are in a position to improve all pupils’ outcomes, but mostly the educational outcomes of disadvantaged groups (Sack, 2000, p. 2).

Improving the educational outcomes for schools that have a substantial percentage (40 per cent) of disadvantaged pupils is accomplished through adopting and implementing school-wide programmes (United States of America – Congress House, 2001, p. 49). School-wide programmes can be perceived as programmes targeting a whole school, as the legislator may have considered that it might be easier to target the whole school if many disadvantaged pupils are served in the school. Where a school has a lower percentage of disadvantaged pupils (lower than 40 per cent) then the school becomes a targeted assistance school, running programmes categorically targeting disadvantaged groups.

According to this new legislation (United States of America – Congress House, 2001, p. 57), elementary schools that fail to make adequate yearly progress for two consecutive years are identified for school improvement. Where high achieving schools in which all pupils in general and pupils’ major subgroups (defined by ethnicity, disadvantaged status and special educational needs) are meeting the state’s proficient level of academic achievement these are not subject to programme improvement.

Districts combine absolute attainment and progress criteria to exercise educational monitoring. The performance of a school having performed at a below average level in terms of educational attainment is followed up, so as to guarantee that during subsequent years the school demonstrates positive progress rates for its pupils.

A substantial percentage of the school's funding is allocated to teachers' professional development. The "No child left behind act" (United States of America – Congress House, 2001, p. 51) supports high quality and ongoing professional development for teachers, principals and paraprofessionals, which is especially emphasised in the case of school-wide programmes. According to the above-mentioned act (USA, p. 57) American districts should monitor closely the effectiveness of schools performing at a below average level in terms of absolute attainment, which fail to make good progress for two consecutive years, after their identification. In this sense, American districts have to employ a joint criterion of a school making adequate educational attainment and adequate progress in relation to other schools so as to judge the effectiveness of each individual school. If schools perform at a below average level in terms of progress and in addition these schools do not meet the attainment standards for the whole pupil population as well as for pupil groups, then these schools are identified as needing a closer educational monitoring. If a school, with previously low progress rates, is able to demonstrate that every student, with special reference to pupils belonging to disadvantaged groups is meeting or exceeding the state's proficient level of academic achievement, then the school's performance is considered to be satisfactory.

Geographical areas serving populations with a high proportion of poverty and educational and social disadvantage can be characterised as educational priority areas, so that they can attract additional funding for support programmes.

5. How can value-added analysis be employed in the Greek educational system?

In contrast, to the English educational system, Greek public primary and secondary education is characterised by centralisation (Kavouri, 1996). The majority of the decisions concerning the appointment of teaching staff, budgeting, planning curricula, school operation, etc. are made by the Greek Ministry of Education, or by the directions and offices of primary and secondary education, which operate at an intermediate level between the ministry of education and the schools.

Selecting an assessment and monitoring system would influence school and classroom discrepancies as well as discrepancies between different groups of pupils. The question that emerges from the above discussion is: "What kind of society do we wish to create in Greece?" Do we want an accountability system, which exacerbates existing inequalities between social class and ethnic groups, or between high and low achieving pupils, thus creating a society divided to a greater extent by class and ethnic lines? Or do we want an educational system that would enable us to use the school effectiveness methodology or the school effectiveness research as part of an educational monitoring mechanism, coupled with school improvement initiatives and support schemes in order to alleviate discrepancies between classrooms, schools and groups of pupils? In the second case the SER would serve as a screening device, identifying schools or classrooms performing at a below average level as well as identifying disadvantaged groups within the school system. Average differences in attainment between ethnic groups is one of the criteria employed to show that there was underachievement among ethnic minority pupils in England. The Swann Report (Swann, *et al.*, 1985), reported on the much lower examination attainment of African Caribbean school leavers and concluded that this should be a matter of deep concern to

the whole community. Then the Junior School Project (Mortimore *et al.*, 1988) explored both ethnic group, socio-economic and sex differences in attainment and in progress at primary school, by adopting a longitudinal school effectiveness approach. Sammons (1995) followed up the same sample of pupils that took part in the JSP throughout secondary school years to conclude that the gap in attainment associated with economic disadvantage and sex widened even further during secondary school years (minority ethnic groups made less progress than majority pupils and boys made less progress than girls). In these studies, attainment and progress differences were jointly employed to argue that ethnic minority groups and boys underachieve. Differences in progress are indicative about the direction of future attainment differences; Initial attainment differences can be alleviated only if the underachieving group shows positive progress rates with its respective comparison group. Once attainment differences have been identified Thomas and Collier (1997, p. 67) assert that minority pupils who speak the language of the school as a second language “must make more progress with each year of the school than the typical native speaker makes to ever close the academic achievement gap on school tests”.

Strand (1997) who followed a sample of over 1,600 pupils in one inner London local educational authority from baseline at age 4 through to their national end of key stage 1 (KS1) tests at age 7 reported that pupils entitled to FSM fell further behind their peers, but that pupils with English as an additional language made more progress catching up with their monolingual peers by the end of KS1. Hence, progress criteria can show whether initial discrepancies in attainment are increased or reduced at the end of a pre-specified period of time.

In contrast, if the initially underachieving disadvantaged group makes less progress in relation to its comparison group for subsequent years, then this entails that initial attainment differences are exacerbated as the years go by. For example, Korilaki (2005) has shown that minority pupils have made less progress than Greek pupils in mathematics and pupils from lower social class have made lower progress than pupils from higher social class in mathematics. Given that these groups had also lower initial attainment in relation to their respective comparison groups, lower progress rates entail that initial attainment differences increase as years go by.

Prompt identification of discrepancies in attainment and progress can serve to provide information about the districts' and the schools' needs in order to alleviate existing structural inequalities. The districts and the schools can assume a redistribution function through the provision of educational support by school districts and the setting up of additional programmes providing intervention or enrichment activities to low achieving classrooms, schools or disadvantaged groups. If the latter option is chosen, then such a compensatory mechanism should be combined with a policy that directs funds and resources to these disadvantaged areas, classrooms or schools, targeting existing inequalities.

Districts, schools, mainstream class teachers and support class teachers undertake different roles addressing different aspects of intervention policies for pupils from a foreign/repatriated ethnic background who have limited performance in Greek, and also for pupils belonging to disadvantaged groups in general (Greek and foreign). The school system can thus be perceived as a conglomerate of policies and practices, which support, reinforce and/or inhibit the implementation of support schemes, rather than acting independently from each other. Districts can use the information derived

through the school effectiveness exercise “to identify problem areas in the schooling system, so that corrective action can be taken” (Willms, 1992, p. 3). Districts based on classroom and school performance should be able to intervene, raising the absolute attainment level of low-performing classrooms or schools. The performance of pupils in classrooms and/or schools that have demonstrated negative progress rates is deteriorating in relation to the performance of the average classroom/school. Therefore, these classrooms and/or schools should be the target of an educational monitoring exercise. This intervention is more urgent if these classrooms or schools are also positioned at a below average level in terms of absolute attainment, as these schools really generate cause for concern. The English OFSTED (OFSTED, 1992 cited in Gray and Wilcox, 1995, p. 67) specify that “low standards and achievement among the majority of pupils or consistently among particular groups of pupils” are among the criteria employed to determine whether a school is at risk. Greek districts should also pay special attention to these classrooms/schools, so that support schemes are operating, class size is reduced, teachers are trained, etc. Districts supply schools under their jurisdiction with teaching staff and resources so that support schemes are implemented. On the other hand, decisions of whether a given support scheme is required are currently taken at the school-level. In the case of support provision for foreign/repatriated pupils, Greek schools have to choose between two support schemes available (reception classes and coach classes). Districts should be able to assist the schools in this decision-making process and they should be able to provide guidance, consultancies and trained teaching personnel.

In order to ensure that every pupil attains competency in basic skills and becomes able to follow the mainstream class curriculum, the system should ensure a second chance for all pupils and particularly for the educationally and socially disadvantaged.

Among the limitations of school effectiveness research is that it has not acknowledged the role of the school as an agent able to alleviate educational and social disadvantage:

SER treats the class backgrounds of students as a given when of course, they are not really given at all, they are socially constructed, and can be made worse or better through housing, health, employment, and taxation policies, all of which will therefore affect student achievement (Anyon, 1997 cited in Thurpp, 2001, p. 448).

SER could instead highlight the need for the impact of social class to be reduced throughout each pupil's schooling, through joint schools' and districts' efforts. Cowie and Croxford (1999) identified inequalities in pupils' baseline attainment at the beginning of the 1st grade of primary school by entitlement to FSM, which is used in Britain as a proxy variable for social class. In addition, the authors found that pupils with free school meal entitlement made less progress in reading than other pupils in the 1st year of primary school. Meijnen *et al.* (2003, p. 159) state that in The Netherlands for four-year old pupils, attainment differences between pupils from higher and lower social class have already appeared and amount to one year of mental age. Furthermore, “pupils' initial attainment score is the most powerful predictor of attainment score at the end of a period of schooling” (Goldstein, 1997a, b, p. 382).

As initial attainment score is the most powerful predictor of pupils' final attainment score, if disadvantaged pupils with low initial attainment are not assisted to catch up, they often demonstrate negative progress rates in relation to pupils from higher social class, resulting in widening their attainment gap with the more advantaged pupils.

Negative progress rates were shown in the studies of Sammons (1995), during secondary school years, and in studies by Mortimore *et al.* (1988), Bondi (1991), Hutchison (1993) and Strand (1997, 1999) during primary school years.

SER in its endeavour to highlight that the school to which a given pupil is enrolled can make a difference, it has not adequately stressed the need for the impact of social class to be reduced throughout pupils' schooling, by joint schools' and districts' efforts aiming to alleviate educational and social disadvantage. Mortimore and Whitty (1997) suggest "a continuing need for positive discrimination and the effective targeting of human and material resources". Support mechanisms in the school as well as other experimental programmes or initiatives can alleviate the impact of social class and/or ethnicity on pupils' educational attainment by creating positive progress rates for these low-achieving groups.

Examples of successful support teaching literacy programmes for disadvantaged pupils are Slavin and Madden (1987), Slavin and Leighton (1990) and Slavin *et al.* (1996) "Success for All", Pinnell's (2000) "Reading recovery", etc.

Hence, if an assessment framework was developed for the Greek setting, the Greek public education system should not go through the same stages but learn from the pitfalls associated with the English school-system. The situation in Greece is "better" from an equity point of view as the majority of state schools (not the experimental ones) have no choice but to accept all pupils who are residents in their catchment area. Parental choice has a very limited place within the state education system as the Greek system has a much more egalitarian character. Regular SER exercises could assist in monitoring the Greek education system so as to diminish disparities between classrooms' and schools' educational outcomes and guarantee increased educational opportunities for disadvantaged groups of pupils. Adjusting for possible correlates so as to perform fair comparisons between individual classrooms and schools in similar circumstances may help the state to identify classrooms/schools performing especially well as well as classrooms/schools performing at a below average level. Yet, such an exercise may be of less value for educational redistribution purposes according to school and classroom needs. Making comparisons between classrooms or/and between schools according to their initial unadjusted attainment score could better serve the purpose of educational monitoring; as such an exercise would enable districts to reallocate funds among classrooms/schools in order to achieve greater equity. In so doing discrepancies between classrooms and schools are alleviated and more equitable outcomes for all pupils in general, as well as for particular pupils' groups, are finally achieved. The school districts, in partnership with the universities, can target low-performing classrooms/schools through different initiatives so as to raise the educational outcomes in these settings of every pupil in general and of disadvantaged groups in particular. Such initiatives can be literacy and numeracy programmes, teacher training provision and the provision of support schemes for low achieving pupils. The adoption of such initiatives can result in positive progress rates in these classrooms/schools during subsequent years.

Such a monitoring system resembles that suggested by Mortimore and Whitty (1997, p. 88) in England, who recommended a stronger interventionist role from the district and suggested the targeting of resources in disadvantaged areas and the transfer of resources to school improvement.

According to Hill (2001), schools can be engaged in a benchmarking exercise; they can be provided with summary information concerning their performance in relation to the average performance of all other schools in the same district or nationwide; or they can be provided with information relating their current performance to the performance of comparable schools, in terms of pupils' socio-economic status, pupils' ethnic status or any other individual pupil characteristic. Alternatively schools can also compare their attainment scores and their progress rates with those of "best practice" or experimental schools located either in the same district or nationwide. In addition, schools can look into the attainment and the progress of minority pupils in relation to the attainment and the progress of the majority group, into the attainment and the progress of low social class pupils in relation to the attainment and the progress of pupils from higher social class and into the attainment and the progress of boys in relation to that of girls. An essential feature of this exercise is that attainment as well as value-added (progress) scores will remain confidential to the school and the district.

The school effectiveness design can serve as an initial evaluative tool or as a screening device pinpointing schools or classrooms which have performed at a below average level in terms of attainment and schools or classrooms which have performed at a below average level in terms of progress. The British OFSTED (OFSTED, 1992a cited in Gray and Wilcox, 1995, p. 67) specify that "low standards and achievement among the majority of pupils or consistently among particular groups of pupils" are among the criteria employed to determine whether a school is at risk. However, school and classroom residuals derived from absolute attainment models should not be employed to hold individual schools or classrooms accountable. Such criteria are not adequate to assess how well school policies and teaching practices worked; progress criteria should be applied instead. Residuals derived from the progress model are more informative about classroom contribution in raising pupils' educational outcomes. Absolute attainment criteria may serve to identify groups of pupils whose outcomes significantly lagged behind the outcomes of the majority group, so that compensatory steps are taken in the direction of equal educational opportunities. Progress criteria reflect more school or classroom endeavour to raise pupils' attainment. Gray *et al.* (1999, p. 168) described effectiveness as the extent by which the school boosted pupils' final score performances above the levels that they should have predicted from knowledge of their starting points.

Willms (1992, p. 34) stated that: "A preferable indicator of a school's performance is the distribution of the rates of growth of its pupils, rather than the distribution of pupils' scores on one occasion."

Stoll and Mortimore (1997, p. 9) defined an effective school as "one in which pupils progress further than might be expected from consideration of its intake" (in comparison with other schools serving pupils with similar baseline attainment and other socio-economic characteristics).

Progress comparisons are required in any exercise involving teachers' assessment, as teachers serving in schools and classrooms who in spite of their circumstances managed to contribute to increased progress rates for their pupils should be rewarded, irrespective of pupils' final attainment scores, while other schools/classrooms with below average progress rates should be more carefully monitored. It might be that schools/classrooms with below average progress rates did not provide enough

challenge to their pupils to enable them to raise their final attainment score to a higher level than that indicated by their initial attainment, and therefore they failed to show adequate rates of progress in their pupils' outcomes during the given time-period. Hence, examining whether school effects and/or classroom effects exist is tested in progress or in adjusted progress models. Examples of studies that identified school effects in primary schools by using a multilevel design were in the UK Mortimore *et al.* (1988), Tizard *et al.* (1988), Thomas (1995), Sammons (1995), Plewis (1991a, b), Strand (1997, 1999), Bondi (1991), Tymms *et al.* (1997), in The Netherlands Brandsma (1993, cited in Scheerens and Bosker (1997)) and in USA Teddlie *et al.* (2000).

In that case intervention can take place in schools with below average progress rates in the form of literacy and numeracy programmes, teacher training provision and the provision of support schemes for low achieving groups of pupils, provided that these schools are not located at an above average level in terms of absolute attainment. The school effectiveness design can also identify "educational priority areas" where many such schools are located or where different kinds of problems are present (such as discrepancies in performance associated with ethnic and social class differences). In any case, further investigation needs to take place to identify plausible reasons, which can be at the origin of these discrepancies. This additional investigation can take the form of a more qualitative design, which may involve observations in these low achieving classrooms or schools, or discussions or semi-structured interviews with teachers on the problems and the challenges they face, or through other forms of evaluation. Districts need to find ways of encouraging schools themselves to take responsibility for understanding what are the main messages for action and for negotiating the alternative pathways they appear to entail. Districts can support schools in their own self-evaluation activities, thus allowing schools to develop the capacity to think about themselves (Gray and Wilcox, 1995, p. 32).

School climate instruments can reveal that "below average" schools suffer from a lack of coordination among the teachers, or low staff morale.

Thus, plausible reasons may be found at the origin of low attainment or low progress rates. Racism, lack of support schemes in schools with a high percentage of foreign/repatriated pupils with inadequate language skills, poor teaching skills and lack of resources are factors associated with teachers' low morale and with low classroom/school performance or progress rates. "One imagines that in central systems of education there would also be an interest in finding out about the effectiveness of schools and in intervening if possible" (Daly and Ainley, p. 141 in Thurpp, 2001, p. 451).

Recommended courses of action or intervention to be adopted by the classroom, school and the district would rely on the problems identified and on the specific priorities set by them. The support made available to the school for this purpose should reflect these needs and priorities.

At the school level such an exercise can entail the compilation of all individual pupils' records in order to enable the school to assess the performance of each pupils' group that merits specific interest. At the classroom level (in the mainstream) such an exercise can help in the direction of indicating curriculum areas, which pupils have not mastered, so that remedial action is undertaken. Pupils' final attainment score in both basic skills subjects can be broken down to curriculum sub-domains so that profiles for

each pupil can be created that can be used for individual pupils' record keeping and/or for target setting.

A school effectiveness exercise can be used for institutional responses in relation to the problems identified from the part of the school, the district, or the ministry of education (Spours and Hodgson, 1996). Such institutional responses can take the form of partnerships with university departments so that specific areas of low attainment are targeted. The school effectiveness movement can lead in the direction of a more egalitarian educational system in two respects:

- (1) it can address inequalities between classrooms/schools so that steps are undertaken to improve their outcomes; and
- (2) it can address inequalities between groups of pupils; in so doing, it can trigger mechanisms of intervention that would raise educational outcomes for these groups.

By engaging in partnerships the schools may recognise that "teachers develop most effectively as a part of a professional team, dedicated to the improvement of teaching and learning" (Hopkins *et al.*, 1996, p. 45).

To conclude, school effectiveness can be conceived as a methodological tool allowing schools and districts to evaluate themselves and further to identify subject areas in which the pupils have accumulated weaknesses or schools/classrooms where there are groups of pupils with significantly lower attainment or progress than the majority group. As soon as these systemic weaknesses are identified, the districts can assume a coordinative role in setting up interventions in order to raise the educational outcomes of their schools, classrooms and pupils (Table I).

In the table the advantages and disadvantages of employing absolute attainment and progress criteria are shown.

Relying on absolute attainment criteria only does not do justice to the efforts of teachers appointed in schools basically serving an intake of disadvantaged pupil, since pupils from disadvantaged backgrounds on average have lower attainment than pupils from advantaged backgrounds when they are initially enrolled in the school. Conscientious teachers serving in schools with a high percentage of disadvantaged pupils can invest extra time and effort in their teaching and finally they may manage to improve these pupils' performance level. However, at the end of the school year disadvantaged pupils' attainment may still be low despite the fact that these pupils have demonstrated adequate progress during the period investigated. In spite of teachers' efforts and their substantial progress, these pupils may not have been able to catch up with their peers. For this reason, in making judgements about individual classrooms and schools, absolute attainment criteria should be combined with progress criteria. Alternatively, requiring from all classrooms or schools compliance with the criterion of having made adequate progress during a given school year might not do justice to schools which have initially performed at an above average level. It might prove difficult for these excellent schools to raise pupils' outcomes even further. These schools' attainment might have reached a ceiling (ceiling effects may affect pupils' final performance level):

One of our most serious concerns with the DfES's methodology is that it exhibits a prominent ceiling effect, which adversely affects the most highly achieving children ... It is virtually

Absolute attainment criterion	Progress criterion
<p>Shows the absolute performance level/standing of each classroom and school according to pupils' final attainment scores</p> <p>Enables comparisons between classrooms, schools and pupils' groups in terms of their final attainment score, or according to an absolute standard</p> <p>However, the employment of absolute attainment criteria without simultaneously referring to progress criteria may not do justice to schools serving pupils with initially low educational attainment who may be of disadvantaged backgrounds. Conscientious teachers may strive to raise these disadvantaged pupils' attainment level, and eventually they may succeed in creating substantial progress for these pupils, but still their absolute attainment level might be relatively low and not reflect their teachers' endeavours. Absolute attainment criteria may reflect intake achievements rather than teachers' endeavours</p> <p>The absolute attainment criterion can be most effectively employed for educational monitoring aiming to reduce discrepancies in educational attainment due to educational and social disadvantage through intervention programmes</p>	<p>Progress criteria enable the assessment of school or classroom contribution in improving pupils' educational outcomes</p> <p>Progress criteria can identify schools and classrooms that contributed in raising pupils' initial educational attainment score. Progress criteria enable comparisons between classrooms, schools and pupils' groups in terms of progress made during a pre-specified period</p> <p>However, the employment of progress criteria without simultaneously referring to absolute attainment criteria may underestimate the endeavour undertaken by classrooms/schools serving pupils initially performing at an above average level in terms of absolute attainment</p> <p>These schools/classrooms may not be adequately assessed if progress criteria alone are employed, as there is hardly any more room on the top to further improve pupils' outcomes (as ceiling effects may emerge). Progress criteria alone without simultaneously referring to absolute attainment criteria do not reflect the work undertaken in these classrooms/schools as for schools that have already attained very satisfactory performance it is difficult to further improve their pupils' attainment level</p>
<p>Absolutely attainment criteria are especially useful for the identification of schools/classrooms performing at a below average level and/or displaying discrepancies in educational attainment between pupil groups (e.g. between pupils from foreign ethnic background and majority pupils or between pupils from lower social class and pupils from higher social class), so that school/classroom improvement programmes are organised in these classrooms/schools and that support teaching programmes and other interventions are established</p>	<p>Progress criteria can identify schools or classrooms that did well in spite of difficult circumstances, and more specifically in spite of their initially low-attaining pupil intake</p> <p>Progress criteria can be employed for individual school or classroom accountability, as they can estimate the extent that schools or classrooms contributed to their pupils' progress. Progress models in SER can be used in order to identify effective school or effective classroom processes or effective school/classroom correlates, which contributed in raising pupils' outcomes</p>

(continued)

Table I.
Scope, advantages and disadvantages of employing absolute attainment criteria and of progress criteria

Table I.

Absolute attainment criterion
<p>Therefore, absolute attainment criteria and progress criteria should be jointly used for educational monitoring. The first step in an educational monitoring exercise would be to identify schools, classrooms and pupils' groups having progressed at a significantly below average level. In the long-term, and provided that these trends persist and remedial measures are not taken to counteract this effect, pupils' average attainment in these classrooms/schools is going to fall further and further behind the average attainment of all schools/classrooms having taken part in the evaluation exercise.</p> <p>If existing trends persist, the attainment of pupils' groups, who make significantly less progress in relation to their respective comparison group, is going to fall further and further behind in the future. Such groups can be defined by ethnic group membership, social class background or gender. Measures have to be taken to counteract these negative patterns.</p> <p>Furthermore, schools and classrooms attaining at a significantly below average level in relation to the average attainment of all schools/classrooms need to demonstrate positive progress rates in the future, in order to improve. Disadvantaged pupils' groups attaining significantly less than their respective comparison groups need to demonstrate positive progress rates in the future, in order to improve their relative position in terms of attainment.</p> <p>Competent teachers are found where there are positive progress residuals of their classrooms in relation to the average and more specifically where classrooms score at a significantly above average level.</p> <p>Effective schools are found where there are positive progress residuals of these schools in relation to the average and more specifically where schools score at a significantly above average level.</p> <p>Effective districts are found where there are positive progress residuals of these districts in relation to the average and more specifically where districts score at a significantly above average level.</p> <p>Effective intervention programmes are found where there are positive effect sizes of interventions in relation to the absence of any intervention. Priority should be given to schools and classrooms that perform at a significantly below average level in terms of progress and at the same time perform at a significantly below average level in terms of attainment. These schools/classrooms should be the first target of educational interventions, as their already inferior relative positions in terms of attainment deteriorate.</p> <p>Schools and classrooms having attained at a significantly below average level should be the next target of educational interventions, in order that the educational level of pupils enrolled there improves, educational standards are raised and the negative effects of existing educational inequalities associated with ethnicity, social class and gender are alleviated.</p>

impossible for anyone with a very high input score to achieve a positive value-added score (Tymms and Dean, 2004).

Therefore, a monitoring exercise should be based on the combined picture of pupils' unadjusted attainment scores (residuals derived from null model) and progress (residuals derived from progress models) of classrooms or schools. Pupils' unadjusted attainment scores should preferably be measured at the beginning of the school year so that there is still time for remedial and support teaching initiatives to take place in order to address educational inequalities.

To conclude, in the Greek case, there is need for a combination of accountability and support. This combination would enable teachers to increase their expertise by offering them in service training and on the job support, while at the same time highlighting areas in which their class performance lags behind the performance of other classrooms. This assistance should be provided in such a way, as not to discourage teachers' need for critical reflection and action over the decisions taken, which concern the school or the classroom. Such a system can be based on the premise that "collaboration within and between schools, districts and Universities may cause standards to rise". This approach should be juxtaposed to English educational system where accountability serves the purpose of adherence to a philosophy of the market in the school system where the major assumption is that "competition among schools may cause standards to rise".

After classrooms or schools that scored below average in the unadjusted null model have been identified, a more thorough investigation into the particular conditions in these settings could shed light on the conditions at the origin of this low attainment. The districts may choose to appoint a committee (for example, consisting of counsellors, academics, permanent members of the district, etc.) who would be delegated the task of looking deeper into the issue. The findings of the school effectiveness study may be subsequently used as a starting point for a small qualitative evaluation in these settings. When an opinion about the school setting has been formed and preferably when possible causes for school/classroom low attainment have been identified, a course of action may be drawn up in partnership with local universities. Intervention for low-achieving pupils will be only one parameter in a more holistic approach aiming to raise educational outcomes in these classrooms/schools. Pedagogical approaches and problems in the mainstream classroom may be considered as well as meriting alternative courses of action. Mainstream class teachers may be assisted in improving their teaching skills in key subjects (mathematics, or language). In addition, organisational aspects or problems of the school, having an impact on the school's climate (e.g. the quality of working relationships between the teachers or between the teachers and the principal) could be considered. Alternatively, discussion with the key stakeholders can reveal tensions in the relationship between the school and the district.

School effectiveness framework is a screening device that allows educationalists to identify structural inequalities inherent in a school system. Social class effects, ethnicity effects and gender effects can be considered as structural inequalities or pitfalls inherent in the educational system. Such structural inequalities are challenges for academics and educationalists and officials serving in the ministry of education, or in the districts, who should strive to find ways to alleviate them.

Note

1. Average school performance is published on a school-by-school basis by the Department for Education and Skills, and this information is ranked-ordered into League Tables.

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About the author

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