

Neil Kay  
93 Shore Road  
Innellan,  
Argyll PA23 7SP

Tel 01369-830429  
Neilkay@aol.com

2<sup>nd</sup> April, 2000

## **SCHOOL CLOSURE PROGRAMME, ARGYLL AND BUTE**

### **Some comments on the programme - Introduction**

The following is an analysis of the school closure programme currently being pursued by Argyll and Bute Council. I should first declare a statement of personal interest in this exercise. I have a daughter in Primary 3 at one of the schools threatened with closure, Toward, and a son who is due to start Primary 1 there this year. I am also an economist, and it is from that perspective that I look here at the implications of the closure programme.

I think the key word here is consultation, and I am acting on the presumption that the Council is still willing to listen to arguments on the closure programme in general, as well as for individual schools in particular. It is worth noting the government issued a consultation document in March on school education. It has admitted it does not have all the answers. I hope this exercise here will encourage the education policy-makers in Argyll and Bute to concede that a similar exercise is needed here.

As I note later in the paper, it is understandable that not everything can be taken on board in any planning process, and that there will be inevitably errors and omissions. Making errors is natural and inevitable, and the planners who developed this closure programme undoubtedly did so in good faith and on the basis of the information in front of them. There is only really a problem if an open mind is not kept as to the possibility of relevant new information and arguments that could lead to a reappraisal of the programme. In turn, I am open to arguments that my own information is incomplete or wrong here - this is work in progress, with an target of end-April when I hope to have a final version to submit to Councillors. But I believe there is already enough in the enclosed paper that constitutes relevant new information and arguments. I believe there is already enough evidence to justify asking the Council to pause and review the logic and rationale of the closure programme, on both educational and economic grounds.

The Accounts Commission report which provides much of the impetus for the current closure programme was carried out in 1996 while Michael Forsythe was still Secretary of State for Scotland. However, many things have changed since then. Indeed, much has happened just in the last few months in the areas of internet developments, council finances, regional growth, and educational research and policy. Some of these are discussed in the paper.

There is also an intangible but very real issue in the background to all of this. There is an atmosphere and expectation of risk of closure about much of the primary school

system of Argyll and Bute. As an economist I have to say that you do not have to stick with the schools system to see how that can have profound economics consequences. Just the atmosphere and expectation of closure of Longbridge is already having an impact on demand for Rover cars, with potential buyers worried about reputational implications, warranties, future dealer support and spare parts. Similarly, when somebody moves into the Argyll and Bute area they are, in part, buying into a certain perceived quality of life, for themselves and their families. If they think that there is a reasonable chance that their childrens' schooling may be affected by threat of closure, they may think again about moving into, or staying in the area. The effect of just the threat or possibility of closure is intangible but real. Just ask the people at Longbridge.

I also think that the short-term focus of the closure programme should be looked at. A school may have a dip in numbers, and school ventures and community activities are very dependent on parents and teachers actually in place at the time. Even if your schools appears safe just now, a considerable proportion of schools in the region must have some at least some concern about their future, given the basis of the current closure programme.

I do think there are very real possibilities for building on Argyll and Butes dispersed small school system and treating it as a genuine economic and educational asset rather than a liability, especially given the possibilities and opportunities afforded by developments in information and communications technology. But before we get to that point, there is the more urgent of the closure programme. I hope the arguments here can contribute to a case that the Council should really take time to pause and review the whole rationale behind the programme.

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Comments by Neil Kay,  
93 Shore Road, Innellan, Argyll, PA23 7SP  
[neilkay@aol.com](mailto:neilkay@aol.com)  
01369-830429

Version 02 April, 2000

Comments welcomed

## SUMMARY

I present some comments below on the rationalisation programme for schools in the Argyll and Bute area being pursued by the Education Services Department of the Council. The Department has defended this programme on both educational and economic grounds. I argue here that the programme may be questioned on both counts.

As far as is known, the points I make below are largely based on new information that has not been taken into account before. It is argued that they are sufficiently important to make a case for review of the closure programme as a whole. The main points are;

1. **Limited use of performance indicators, influencing conclusion on effect of closure** (Education Services use a limited interpretation of Accounts Commission indicators which is not justified by the Commissions own presentation and analysis of their performance indicators).
2. **Limited interpretation of effect of class size on educational output and value of investment in education** (Education Services draw on partial information to argue the benefits of larger peer groups, while not taking into account strong evidence that larger classes may have adverse educational and economic effects).
3. **Neglect of adverse effects of closure programme on local economic development** (small classes and schools can have beneficial effects in terms of regional economic development. This is recognised and pushed by enterprise agencies such as AIE, but it is not something considered by Education Services).
4. **Misinterpretation of important population projections** (the closure programme is based on a misinterpretation of published data. This has important implications for the whole rationale and basis of the programme).

However, the bottom line on the closure programme is that it something that potentially affects all residents in the region, not just the parents and children of the schools closed. Its main motivation is the reduction of the number of schools with less than 60% occupancy and most (55%) primary schools in the region fall into that category. Even those schools that are above the 60% level may be affected by increased class size, and, overall, may adversely affect the regions economic development.

The programme has no perceivable off-switch (at least in the foreseeable future), but appears to be effectively a rolling programme that will continue to consolidate schooling into larger schools and larger class sizes. Since a strong case can be made that the assumptions on which the programme can be seriously questioned, it is suggested that consideration should be given to (a) calling a temporary pause to the programme, and (b) undertaking a systematic review of all educational and economic implications before considering restarting it.

Neil Kay

## DISCUSSION

### ***BACKGROUND***

The Education Services Department of Argyll and Bute Council have emphasised financial savings (building-related) and educational gains (larger peer groups) that may be achieved by the closure programme. While we still have to collate the various Consultative Documents, provisionally it does seem that the major cost savings will not be buildings-related from bigger and fewer *schools* but teacher-related savings from fewer and bigger *classes*, than would have been the case in the absence of the closure programme. While subject to confirmation, this appears to hold both for pupils for the school closed, and for pupils in the school to which these pupils are transferred. The pupil-teacher ratio tends to rise for *both* schools.

But whatever the balance of effects, it is important to recognise that the main effects of the closure are not buildings-related effects from having fewer and bigger *schools*. Instead it is teacher-related effects from having fewer and bigger *classes*. For the moment, reference is made to the Consultative Document (CD) for Toward School since that is the only one to hand. Later in this process we hope to produce a general overview based on the closure proposal for the programme as whole. It is emphasised that this paper is provisional and tentative; it is itself subject to review and correction as further information is obtained.

### ***ECONOMIC AND EDUCATIONAL IMPLICATIONS OF CLOSURE***

I set out 4 items for consideration below that suggests the CD does not provide a sufficiently balanced analysis of the economic and educational case for closure. Individually, the items each constitute grounds for questioning the assumptions and arguments behind the consultative document. Collectively, they provide an argument that the case for the rationalisation programme may be seriously questioned. At the very least, they provide a case for actively reconsidering the basis of this programme.

#### **Item 1: indicators of councils' performance in education**

The CD draws attention to the fact that the Accounts Commission noted in 1996 the existence of significant excess capacity in schools across Scotland. It notes that "Argyll and Bute Council is one of six councils with the highest percentage of primary schools operating at 60% or less when compared with all Scottish Councils". It cites the evidence in the Accounts Commission annual analysis of performance indicators in Scottish Councils education services<sup>1</sup>. The CD does not note that the Accounts Commission document also warns against simplistic interpretation of the statistics; "you need to be aware of (several factors) in order to understand why results may vary. Some of these factors are outwith the control of the Council – for example, population size and density, geographical area..." (Accounts Commission, 98/99 report).

But, crucially, the CD makes no mention of the fact that the Accounts Commission annually produces *two* indicators of councils performance in looking at primary

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<sup>1</sup> Accounts Commission, annual series, Comparing the Performance of Scottish Councils: Education

schools in Scotland. The second indicator is what the CD chooses to focus on, which is the occupancy levels of primary schools, particularly those with an occupancy level of than 60% of available places. The first indicator is the size of primary school classes. Here the Accounts Commission (1998/99 report) note that “twenty-two councils show a reduction in the average number of pupils per class compared with 1997/98” (one was Argyll and Bute).

While the impact of the closure of a primary school would be expected to improve performance on indicator 2 (reducing the percentage of schools with less than 60% occupancy), as we have noted above the net effect of closure would be expected to be increased class sizes for the affected schools, and so would have an adverse effect on indicator 1.

It is not clear why the CD focuses on only one of the two indicators of council performance in its discussion of the effects of closure, especially when closure could be expected to affect the performance indicators in opposite directions. However, it does have the effect of influencing the argument in the direction of closure.

### **Item 2: educational and economic effects of class size**

The CDs reference to class size is limited to pointing out perceived costs of smaller class size, despite the fact that Accounts Commission indicator 1 is oriented to signalling potential gains from small or declining class size.

In contrast to the emphasis that the CD puts on bigger class sizes (if starting from a base of very small class size), it is probably fair to say that there is a common belief or understanding that, on balance, smaller class size are better educationally than are large ones.

This point has now been supported emphatically from an unexpected source; the US Department of Education in its latest review of research, and in its new policy statements. Because of its importance, a separate appendix on this issue is provided at the end of this paper.

On the basis of the new research on class size there is now evidence that was not available until recently (and is ignored in the CD) that reducing class size is beneficial in both educational terms (pupil performance) and economic terms (value in the labour market). By way of contrast, the proposed closure would *increase* class sizes and this latest research suggests that this could be expected to have an adverse effect on both educational and economic outcomes.

This question is seen as important enough for the Accounts Commission to make smaller class sizes one of its indicators of council performance. The supposed advantages for larger peer groups sizes put forward in the CD are selective, assertive and not based on any evidence, as far as is known.

### **Item 3: Small class size and economic development**

AIE (Argyll and Islands Enterprise) are responsible for attracting inward investment into the region. In their web pages they put forward arguments under “Special

Quality of Life” as to why people and firms should relocate into the region. The first of these is education and AIE state; “there are around 90 primary schools, 11 secondary schools and three special schools in the AIE area. *The high standards set and met are reflected in the low pupil-teacher ratio.* There are 436 full-time equivalent (FTE) teachers for the 7,825 primary school pupils in Argyll and Bute where 23% of the primaries have under 20 pupils each and 35% between 20-50. There are 432 (FTE) teachers for the 5,595 secondary pupils. The area achieves exam results above the national average”<sup>2</sup> (italics added).

In other words, AIE sees the excellent exam performance as following from the small class size, and also sees small school size as an asset. It also clearly sees these as strong selling points that could encourage inward location in the area, both by firms and workers. In short, while economic development may generate resources for education, resources for education can also help generate economic development.

AIE sees the current primary school set up (with small schools and small class-sizes) as an economic *asset*, while the CD sees this as it as an economic *liability*. These are clearly inconsistent perspectives. At the very least the perspective introduced here by AIE is ignored in the CD. Closures could have major implications for economic development in the region that are simply not seen as relevant by the CD. Even the possibility of closure and uncertainty concerning future schools policy could have a detrimental effect; inward migration to an area may be discouraged if there is perceived to be a reasonable possibility that the local school may be targeted for closure in the future.

#### **Item 4: Projecting and predicting future demand for education**

There is a fourth issue which raises serious concerns as to the reasoning behind the closure programme. The CD states “the population predictions for the whole of Argyll and Bute produced by the General Register Office in January 1998 estimate that overall population will fall from 90,840 in 1996 to 89,269 in 2013. The same predictions also show that, while overall population will fall by 1.73% in that period, the school age population aged from 5-16 will fall by 18.33% ie from 13,544 in 1996 to 11,723 in 2004 and to 11,061 in 2013.”

This is in fact a misinterpretation of the General Register Office figures. The General Register Office did *not* produce “predictions” and indeed they are at pains to emphasise this fact; “the (population) projections are the result of assumptions made about future fertility, mortality and migration *based on past trends. Therefore the projections are not a prediction of what will happen*, but simply a projection of what would be the outcome on the basis of particular assumptions”<sup>3</sup> (italics added).

Understanding the difference between a projection and a prediction is absolutely crucial for any institution or individual involved in planning processes. For example, on the basis of the trend of my current account balance over the course of this month, I would *project* that I will be in serious financial difficulties by the first week of next month. However, on the basis of extra information in my position, I would *predict*

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<sup>2</sup> AIE web page.

<sup>3</sup> General Register Office for Scotland: News Release: 1998-based population projections for Scottish Areas

that, as usual, my employer will come to my rescue just before the end of the month and I will continue to struggle on much as before, just above the waterline of financial probity.

It should be of major concern that the author of the closure plan does not make this crucial distinction between projection and prediction. This is of particular importance given the opportunities that information technology and e-commerce are widely expected to provide for businesses and individuals in the Highlands and Islands. An example of this is the present exercise; with the exception of Education Services information, all the sources used here were quickly traced and downloaded from the Internet. This exercise simply would not have been possible (at least so easily and quickly) until very recently. It is ironic that while the new technologies can facilitate decentralisation, rural dispersion and small scale operation, the CD pursues a different philosophy of consolidation, centralisation and larger scale operation.

There is also the danger of making a closure decision on conservative projections of future trends. Once closed, it can be very difficult to re-open a school, and indeed there have been examples in the region where numbers of children of primary school age have increased significantly after closure.

If many commentators (including Highlands and Islands Enterprise - HIE) are correct, then there are indications that the new technologies are already beginning to have an impact on the Highlands and Islands region, whose unemployment rate has fallen substantially over the year and now stands below the Scottish average<sup>4</sup> As far as Argyll and Bute is concerned, the rate of new business start ups per thousand population for the AIE region was the third highest reported for the ten LECs (Local Enterprise Companies) in the HIE region in 1998<sup>5</sup> at 6.2 per thousand population, comfortably beating both the HIE average (5.4 per thousand population) and the Scottish average (4.4 per thousand population)<sup>6</sup>.

There is the real possibility that the opportunities afforded by the information revolution mean that the HIE region in general, and the AIE region in particular, may be at a turning point in terms of economic development and population trends. This will have implications for the both primary and secondary schooling. It is at such times that it absolutely crucial to be sensitive to the notion of switches in economic and social trends, and these are cases where projections and predictions may begin to diverge significantly. That is why the apparent confusion of the CD planners in this area is of major significance in the current debate.

## **Conclusions**

The closure programme can be seriously questioned on both educational and economic grounds: (1) Limited use of performance indicators influencing conclusions on effects of closure (2) Limited interpretation of effect of class size on educational output and value of investment in education (3) Neglect of adverse effects of closures on local economic development (4) Major misinterpretation of important population projections.

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<sup>4</sup> See current HIE "Network Plan" on its web page

<sup>5</sup> Source Scottish Committee of Clearing Banks, from HIE web page.

<sup>6</sup> HIE web page

A fundamental problem with the closure programme is that it appears to be a rolling programme with no obvious off switch, at least not until some years down the line when many schools have been closed and class sizes significantly increased. The effect will be to continue to consolidate schooling into larger schools and larger class sizes. Following the recent closures, five more schools are currently targeted for closure, and there are indications that there are to be five more considered later in the year. Two schools (Rashfield and Ardentinny) have been closed in South Cowal recently and Toward is proposed to be the third.

However, on the basis of the current policy, Toward may not be the last. For example, if just three children do not transfer from Toward to Innellan, Innellan will still be under the critical 60% occupancy level. Since it is only a short distance from Innellan to Dunoon, a case could subsequently be made for closure of Innellan, especially since the savings from closing a larger school would be expected to be proportionately greater than the savings from closing a series of smaller schools such as Toward.

I would emphasise that I do not believe that Innellan is in imminent danger of closure. The point I am making is that since 55% of schools fall below the 60% occupancy level in Argyll and Bute<sup>7</sup>, the potential threat of closure is something that may be seen as eventually affecting a large proportion of schools in the area. Even those schools that are not directly affected or threatened by closure may be affected by increased class sizes due to displaced pupils. The programme itself may also have adverse effects for the regions economic development as we have noted. In short, it is a programme that has significant implications for the whole of Argyll and Bute, not just the parents and children in the schools that are closed.

It is suggested that consideration should be given to (a) calling a pause to the programme to enable (b) a systematic review of all educational and economic implications of the programme. It should be emphasised that it is not being argued that closure should never be considered under any circumstances. What is being argued is that there needs to be a solid economic and educational rationale underpinning such decisions. They should not simply be subordinated to chasing a crude indicator of capacity utilisation.

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<sup>7</sup> Accounts Commission current figures

## **APPENDIX: POTENTIAL EDUCATIONAL IMPACT OF THE ARGYLL AND BUTE SCHOOL CLOSURE PROGRAMME**

The question of school closures is both complex and emotive. What I hope to do in this short appendix is to argue that the last few months have produced important new research findings and policy decisions of direct relevance to the Argyll and Bute school closure programme. First of all, it is important to separate out one very important issue; the visible effect of closing a school is that we will be left with fewer and bigger *schools*. However, the real financial and educational impact is likely be less visible, in that the children involved will generally finish up in fewer and bigger *classes*.

The Consultative Document on the school closure programme (Toward School version) emphasises savings in the “cost of maintaining school buildings” as a gain from closure. But on closer inspection it does appear that the major cost effects will not be in the form of buildings-related savings from bigger and fewer *schools* but teacher-related savings from fewer and bigger *classes*, than would have been the case in the absence of the closure programme. This appears to hold both for pupils for the school closed, and for pupils in the school to which these pupils are transferred. The pupil-teacher ratio tends to rise for pupils from *both* schools.

The Consultative Document (again Toward version) does not deal with the question of class size directly but does so obliquely; it refers to the problems associated with “smaller peer groupings” with the implication that amalgamation of schools may help with these problems.

It should be pointed out that the issue is complicated by the question of composite classes and the fact that pupil-teacher ratios are not an exact guide to class size. Clearly these things will have to be looked at further, but it is likely that the fundamental effect is likely to be the same; the main impact of the closure programme, both financially and educationally, is likely to be felt in the form of bigger and fewer classes in Argyll and Bute’s primary school system.

This suggests that the issue of the impact of class size in educational performance should be a critical one as far as the closure programme is concerned. The good news here is that there has been a considerable volume of research on this subject, mostly in North America. Until recently the bad news is that there has been no real consensus on the effect, if any, that class size may on educational performance. Some studies reported that smaller primary school classes led to significantly improved performance, others that they could only find a weak link at best, or no effect at all.

However, in 1998 and 1999 the US Department of Education issued major reviews and statements of policies, based both on several new research studies and an official re-assessment of the older research findings. These are available on the US Governments web site (see below). It sets out what is described as a new consensus amongst economists and educational researchers on the effects of class size on educational achievement. It also goes some way to explaining why previous research often led to what appeared to be contradictory results and conclusions. What you find in terms of the effect of class size on performance depends on the base you start from

(the quotes below are taken from the US Department of Education web page on class size, unless otherwise stated).

It seems that “the pattern of research evidence only favors class size reduction if it is substantial and brings the class size below a certain threshold. Reducing class size from 30 to 25, for example, may well have no effect whatsoever”.

What is that threshold, and when do the benefits of reducing class size really begin to kick in? “The significant effects of class size reduction on student (pupil) achievement appear when class size is reduced to a point between 15 and 20 students and continue to increase as class size approaches the situation of a 1 to 1 tutorial”.

Do all years benefit equally from smaller classes? “A consensus of research indicates that class size reduction in the early grades leads to high student (pupil) achievement. Researchers are more cautious about the positive effects of class size reduction in 4<sup>th</sup> through 12<sup>th</sup> grades”.

Is one year of small class size sufficient, e.g. for Primary 1 only? “Research has shown significant differences in achievement among students (pupils) who attended small classes for one, two, three, or four years. More importantly, researchers found that students need to receive instruction in small class rooms *for at least three years* in order to sustain maximum benefits of small classes in the early grades through later grades. The advantages of attending a small class from kindergarten through third grades translate into an additional six months to fourteen months of schooling” (third grade approximates to our Primary 3, but US pupils tend to start school a year or so later than in Scotland).

Are the educational benefits long lasting? “The benefits of class size reduction are seen in kindergarten and through grades 1-3 and the effects are long lasting” (cites evidence of the effects of small class size in early years having a sustained and beneficial effect up and including college entrance level).

The US Department of Education web page also describes as a “myth” that class-size reductions are expensive in the short and long term. It states that the “reality” is that “the cost of implementing smaller class sizes in the early years can be offset by the resulting decrease in within-grade retention’s, reduced high school dropout rates, a diminished need for remedial instruction and long-term special education services, and increased teacher satisfaction and retention”.

A further point could be added that small class sizes could have additional further economic benefits for a region. Not only might it help attract and retain teachers, as noted above, it may help in attracting and retaining inward investment and location. This is a point pursued by Argyll and Island Enterprise whose web pages advertises the “special quality of life” in the region, highlighting especially “the high standards set and met are reflected in the low pupil-teacher ratio. ... the area achieves exam results above the national average”.

The US Government has not only recognised and endorsed the research findings recorded on the Department of Education’s web site, it has reacted by framing policy to reflect these findings. The government recently announced that it plans to spend

“\$12.4bill over 7 years to help schools hire 100,000 new teachers and reduce class size in the early grades to a nationwide average of 18”.

The reasons that are cited for the improved performance in small classes are largely consistent with what one would expect intuitively; “individualized attention”; “atmosphere”; “flexibility”; “fewer students (pupils) to distract each other”; “teachers know each of their students better”.

### **Implications for the Argyll and Bute School Closure Programme**

It is difficult to understate the implications of these latest findings for the Argyll and Bute school closure programme. Essentially they confirm what many parents and teachers believed instinctively all along; small classes benefit the primary school child, especially in the early years, and these benefits can be sustained right through into adulthood. The Americans are matching these firm conclusions with real money (\$12.4 bill dollars) to reduce primary school class sizes.

It also suggests a possible reason for the high educational performance of Argyll and Bute pupils (noted by AIE above). Argyll and Bute pupils may do well, not because of rural schools, and not because of small schools, but because of small class sizes. The fact that small classes tend to be particularly found in small rural schools may mean this influence is overlooked. The American studies suggest that children in the towns benefit as well as children in the country, if they are given the same opportunities as rural children – an argument here for levelling up, not levelling down.

There is the related issue of school capacity, which runs through the closure programme. Questions have already been raised about the realism of the capacity estimates for the existing schools, given modern working practices of pupils and need for new technology such as computers and related equipment. If you are going to have (or keep) small classes, this may require more classes and more room than is currently allowed for in capacity estimates, suggesting they may have to be reviewed.

If carried through, the school closure programme is likely to significantly increase class sizes for many children. Crucially, it is likely that many of these increases in class size will be concentrated in the critical band where size of class does have a major impact on educational performance, that is the size band 1-20 pupils. Consequently, the central issue for the school closure programme is that it may have a severely adverse *educational* impact. The extent to which it will impact will depend on each case, and the impact on the two (or more) schools involved.

As for the supposed *financial* savings from larger classes at this level, in general it is likely they will be largely offset by other costs, in the short term and the long term. That is not my opinion, that is the considered and justified opinion of the US Department of Education (see discussion of “myth” of small class costs above).

In short, the educational and financial justification for the school closure programme can be found severely wanting and flawed on the single issue of effect on class sizes. It is not the only basis on which this programme can be queried (see points in my main paper). However, this issue alone should be sufficient to call for a pause to the programme and a review of the assumptions on which it is based. It is understandable

that not everything can be taken on board in any planning process, and the planners who developed this closure programme undoubtedly did so conscientiously and in good faith. However, if major new information is introduced during the planning process that suggests its assumptions are flawed, then most people would accept that this should encourage a review of the programme. I would argue that this note does constitute major new information.

Neil Kay

**Note** The US Department of Education findings on this can be found at:

[www.ed.gov](http://www.ed.gov)

Click on the "class size" link in the paragraph on this page. Two useful links on this page (1) "Questions and Answers - there are two useful further links here, one to "General Questions and Answers" and "Myths and Realities"; (2) the background research that has led to this major policy change is on the "Research" link.