

***Curriculum for Excellence* and Subject Choice**

A Parliamentary Evidence Paper

**Submission made on behalf of the School of Education and Social Work,
University of Dundee**

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Abstract

The Scottish *Curriculum for Excellence* (*CfE*) initiative is representative of many recent international trends in curricular policy. Although *CfE* suggested that improved learning should be the main focus of the secondary curriculum, this was enacted through high-level guidelines suggesting a 3-year period of “Broad, General Education”, followed by a “Senior Phase” (years 4-6) of study for qualifications. Relatively little detailed advice was developed to support curriculum designers, as this was to be a ‘local’ process.

This paper, one of a *CfE*-related sequence produced by the author, analyses the evolving shape of the Scottish secondary curriculum (S1-6), resulting from national, local authority and school interpretation and implementation of the *CfE* initiative since 2010. The paper considers the impact of *CfE* on subject areas, specific subjects and course choice in Scottish local authority-controlled secondary schools, seeking to answer the question:

“How has the introduction of the *Curriculum for Excellence* initiative from 2010 impacted on curricular structures, subject choice, individual subjects and/or wider learning contexts in Scottish secondary schools?”

The findings of the paper include evidence drawn from all Scottish state secondary schools of significant fragmentation of the S1-3 curriculum, continuing flux in the S1-3 curriculum, significant variation within S4-6 curriculum structures and narrowing or severe narrowing of the S4 curriculum in a majority of Scottish secondary schools. The paper also identifies subject areas whose curricular ‘footprints’ have significantly to very significantly declined, and some that have increased, after 2013, with evidence of a continuing decline in certain subjects during the period 2014-2018.

Key words

Curriculum; secondary; subject; course; choice; local authority; headteacher; school.

Notes on the Author

Jim Scott is an Honorary Professor of Education in the School of Education and Social Work of the University of Dundee. His research interests include the school curriculum, the nature and effectiveness of major educational initiatives and the nature, quality and effectiveness of politico-educational governance of education. In previous roles, he led and managed the implementation of a 3-3 *CfE* curriculum in one Scottish secondary school and provided *CfE* training and/or local inspections of the transformation from the 2-2-2 curriculum to the 3-3 curriculum in over 50 schools across 7 Scottish local authorities. He was editor/co-author of a set of nationally issued *CfE* curricular publications and led a range of national *CfE* training courses for the University of Edinburgh.

Research Design

Design

This paper provides an analysis of certain aspects of the impact of *Curriculum for Excellence (CfE)* across all Scottish state secondary schools. In particular, it analyses what has happened to subject areas and individual subjects in the First to Third Year (S1-3) and Fourth to Sixth Year (S4-6) secondary curricular stages. The paper considers the impact of *CfE* on subject areas, specific subjects and course choice in Scottish local authority-controlled secondary schools, seeking to answer the question:

“How has the introduction of the *Curriculum for Excellence* initiative from 2010 impacted on curricular structures, subject choice, individual subjects and/or wider learning contexts in Scottish secondary schools?”

In so doing, the paper addresses six questions posed by the Education and Skills Committee of the Scottish Parliament. These questions form the headings of Sections A-F of the Findings part of this paper.

Data

The research has been completed through documentary analysis of four sources of data:

1. a range of printed and electronic curricular publications, website pages and other internet-based evidence from Scottish governmental and national agency websites
2. similar publications resident on Scottish local authority websites
3. a much larger volume of equivalent data drawn from all Scottish state secondary schools.
4. Secondary school inspection reports

Key forms of evidence considered (where these exist) have included national, local authority and school curricular policy documents, local authority curricular, attainment and quality assurance reports, local authority and school curriculum rationales, school handbooks, school quality assurance reports, school transition documents, parental course choice presentations, parent council minutes (and those of other relevant bodies), course choice publications, school option choice forms, school social media pages and inspection reports on secondary schools in the period 2014-2018.

Context

Overarching Issues

One of the major challenges, for academic researchers, headteachers and teachers alike, in analysing the intended and actual impacts of *CfE* on the secondary curriculum, the subjects contained therein and subject choice within that curriculum is that *CfE* has been subject to a degree of what military planners describe as “mission creep” i.e. *CfE* is now being asked to act as a vehicle for a set of purposes which are not entirely those for which it was originally conceived or designed. This particularly true of the secondary curriculum which was envisioned as part of a unified 3-18 curriculum (Scottish Executive, 2004a), was then transformed to part of a 3-15 curriculum with an attached 15-18 curriculum ((Scottish Executive, 2006) and now functions as two linked 3-year secondary phases, the Broad General Education and the Senior Phase. This issue of the shifting nature of the secondary curriculum provides a critical lens through which many of the issues identified in Sections A to F below may be better understood.

There is, however, a second issue for consideration in that the *CfE* documentation provided to schools is not, as such, a specification or framework for a curriculum, as the initiative was initially nationally presented as an improvement in *learning*, designed to develop the Four Capacities: “successful learners, confident individuals, responsible citizens and effective contributors” (Scottish Executive, 2004, p.12) in all learners through a process conducted through improved teaching methodology and practice, leading to improved learning activities, with the curriculum largely mentioned *en passant*, as a construct which would (have to) change to accommodate such improved teaching and learning.

No details of, or structures to support, the needed curricular changes are included in the key *CfE* documents issued to schools (Scottish Executive, 2004a; Scottish Executive, 2004b; Scottish Executive, 2006a; Scottish Executive, 2006a; Scottish Government 2008; Scottish Government, 2009a; Scottish Government, 2009b; Education Scotland, 2016). Such curricular exemplification (e.g. Scott & Broadley, 2009; Scott (ed.), 2010) as exists was largely issued by quasi-independent groups such as the Building Our Curriculum Self-Help Group (BOCSH), a group of headteachers and local authority managers. The limited national curricular specification - in the *CfE* documents published before or just after the launch in 2010 - generally focuses solely on the Broad General Education (BGE) phase of secondary years 1 to 3 (S1-3), with the Senior Phase (S4-6) left almost entirely to the Scottish Qualifications Agency to specify through their qualifications documentation. As Priestley and Minty suggest, the focus in this national work was on “teachers as agents of change and professional developers of the curriculum” (Priestley & Minty, 2013, p.1), rather than on any national prescription of the curriculum. This inevitably generates a question regarding the extent to which teachers or headteachers have been (successfully) trained to carry out - and are thus capable of - such actions. This question forms a second lens through which many of the issues identified in Sections A to F below may be better analysed.

Before presenting research findings which analyse the impact of *CfE* on subjects and course choice, the evolving “mission” of *CfE* and the approaches which have been adopted by local authorities and schools in developing a “*CfE* curriculum” are contextualised through analysis of four key national *CfE* documents from the set identified previously. The two original *CfE* documents, *a curriculum for excellence* (Scottish Executive, 2004a) and *a curriculum for excellence: progress and proposals* (Scottish Executive, 2006a), adopted a very high-level, strategic approach. The third document *Building the Curriculum 3* (Scottish Government, 2008) has been the main vehicle for curricular advice, although this is still high-level. The fourth document, Her majesty’s Chief Inspector of Education’s *Statement for Practitioners* (Education Scotland, 2016) is a restatement of documents 1-3 in the light of the ‘mission creep’ induced by the First Minister’s prioritisation of equity (in order to “close that attainment gap completely.” (MacNab, 18 August 2015)) and the OECD Report on Scottish Education (OECD, 2015).

Document 1

The first *CfE* document, *a curriculum for excellence* (Scottish Executive, 2004), did not propose a structure for the curriculum, addressing only the overarching values, purposes and principles of a unified 3-18 curriculum. This approach culminated in the suggestion that, by providing structure, support and direction to young people’s learning, the principal purpose of the curriculum should be to enable learners to develop the Four Capacities (*ibid.*, p.12). For teachers and schools, there should be:

- “Clarity about what education is seeking to achieve for each child”
 - “Flexibility to apply professional judgement in planning programmes and activities to respond to the needs of individual children”
 - “A curriculum which is not overcrowded because of too much content”
 - “More teaching across and beyond traditional subject boundaries”
 - “Time and space for innovative and creative teaching and learning.”
- (Scottish Executive, 2004a, p.16)

For learners, there should be:

- “Higher standards of achievement through a clearer focus on the purposes of learning”
 - “Better progression from one level to the next”
- (Scottish Executive, 2004a, p.16)

Document 2

The second *CfE* document, *a curriculum for excellence: progress and proposals* indicated that: “our task is to develop a curriculum framework which will support all children and young people from 3 to 18” (Scottish Executive, 2006a, p.6). However, possibly because it had been developed by an almost entirely different group of personnel from the first, the second document withdraws from the broad, holistic vision of the first document, splitting the single curricular framework into four contexts:

- the ethos and life of the school as a community
- curriculum areas and subjects
- interdisciplinary learning (IDL)
- opportunities for personal achievement.

These four areas are examined in the context of subject choice later in this paper. In summary, however, analysis of the publications of all 358 state secondary schools in Scotland suggests that, of the four areas, the only significant context for learning and attainment evident in the documentation provided by a majority of schools is the second, with little to no evidence of the use of the other three contexts for many or most learners.

The second document’s other contribution to developing a curriculum framework is to unveil the idea of Experiences and Outcomes which, as Priestley and Humes (2010) indicate is confusing, undermines the holistic approach of the Four Capacities and is supportive of a revanchist move to a subject- and content-based curriculum. The second document contains a single page (Scottish Executive, 2006a, p.20) on what “might” be different in the secondary curriculum within *CfE*. Of the 13 bullet points on that page, points 3, 4, 5, 10 and 12 relate to curriculum design:

- (3) Greater scope for different approaches to curriculum design in S1 to S3 within clear parameters
- (4) Curriculum includes planned opportunities for broader achievements, interdisciplinary activities and choices as well as learning across all curriculum areas
- (5) S1 to S3 provides a strong platform for further learning and a good basis for choice and greater specialisation
- (10) In due course, changes needed in the S4 to S6 curriculum, to build upon the revised S1 to S3 base
- (12) Scope to plan for S4 to 6 as a single stage with a great deal of opportunity for individual pathways and choice, with continued emphasis on the development of the four capacities

The extent to which these five bullet points have become reality may be seen in the findings of Sections A-F but Scott (2017) and Scott (2018) have already suggested that points 3 to 5 have not been consistently achieved across a range of Scottish secondary schools; point 4 being particularly difficult to identify. It is also interesting to note that *CfE* document 2 made nothing of point 10, a highly significant change (from the original unified 3-18 curriculum of document 1) to a P1-S3 curriculum, succeeded by a semi-uncoupled S4 to 6 curriculum, and offered no detail of, or rationale for, this move. Point 12 was exemplified through a national professional training campaign led by Learning and Teaching Scotland and through the publications and conferences provided by BOCSH, but has somehow come to be associated with “the six-six-six model [with six subjects taken in every year of the Senior Phase]” (Swinney, 2018, p.2) provided by a small minority of Scottish schools.

Document 3

The third curricular document, *curriculum for excellence: building the curriculum 3: a framework for learning (BtC3)* (Scottish Government, 2008), appeared after a further two-year gap. After five years of development (and with only two years to go until the launch of *CfE*), the centrepiece of curricular planning documentation within *CfE* confirmed that:

“The curriculum is the totality of experiences which are planned for children and young people through their education, wherever they are being educated. It includes the ethos and life of the school as a community; curriculum areas and subjects; interdisciplinary learning; and opportunities for personal achievement.”
(Scottish Government, 2008, p.20)

BtC3 is a commendably concise document. However, this conciseness sometimes leaves the user seeking exemplification (or full understanding) of its recommendations, particularly with respect to a curricular framework within which schools might innovate to meet local needs. The high-level curricular overview is set out graphically on a single page (Scottish Government, 2008, p.13). The purposes and principles of the two secondary stages of the curriculum are described on pages 34-43, although advice on structuring S1-3 occupies a single page and S4-6 only a single paragraph. This lack of detail may be an origin – and perhaps *the* origin - of the plethora of S1-4 curricular designs evident in Scott (2017).

The overview of curriculum areas and subjects suggests only that:

“Curriculum areas are not structures for timetabling: establishments and partnerships have the freedom to think imaginatively about how the experiences and outcomes might be organised and planned for in creative ways which encourage deep, sustained learning and which meet the needs of their children and young people.

Subjects are an essential feature of the curriculum, particularly in secondary school. They provide an important and familiar structure for knowledge, offering a context for specialists to inspire, stretch and motivate. Throughout a young person’s learning there will be increasing specialisation and greater depth, which will lead to subjects increasingly being the principal means of structuring learning and delivering outcomes.”

(Scottish Government, 2008, p.20)

As may be seen in the findings of this paper, despite *BtC3*’s drive for imaginative thinking and creative planning by local authorities, schools and others, curriculum areas and subjects continue to be the predominant feature of the secondary curriculum. Given the

extent of CfE documentation (but limited exemplification) issued to support the launch of CfE, it is perhaps unsurprising that – with the exception of some bold experimentalists – many local authorities, headteachers and teachers have fallen back on *some* subjects (although varied choices of the “some” have been made) which they know and understand from the past, although these have been encased in a variety of local frameworks, some of which do not appear to derive from any of the national documentation issued to support the implementation of CfE. Some of the curricula thus generated appear to be the result of ‘thinking imaginatively’, although not many. Imagination, of course, must be tempered with wisdom and the outcomes achieved by schools (Scott, 2018) adopting an imaginative approach are of equal interest.

As will be evident from the findings of this paper, analysis of the curriculum-related publications of all 358 Scottish secondary schools raises questions as to the intent of at least a minority of curriculum planners and demonstrates that, in many schools, some previously significant subjects have been relegated to the ‘minor subjects’ zone.

Document 4

Coming 13 years after the beginning of CfE developments and more than a decade after the original statements of the Curriculum Review Group (Scottish Executive, 2014a) and, perhaps more significantly, after the First Minister’s emphasis on equity in education (MacNab, 18 August 2015) and the OECD report on Scottish Education (OECD, 2015), the *Statement for Practitioners* issued by H.M. Chief Inspector of Education in August, 2016 (Education Scotland, 2016) describes itself as a “definitive statement” on CfE. It partially reconceptualises CfE (as suggested by OECD (2015, p.12)), suggesting that the aims of Curriculum for Excellence are now:

- “to raise standards [less attainment-specific than before]
 - to close the (poverty-related) attainment gap [significantly increased in emphasis]
 - to prepare children and young people for their future” [as before]
- (Education Scotland, 2016, p.4).

In seeking to achieve these three aims, the Chief Inspector indicates that teachers and practitioners should: “provide a curriculum that is coherent and flexible, takes account of the local context and ensures appropriate progression and levels of attainment for all children and young people”. However, the Chief Inspector indicates that the “appendix to this statement summarises the key components of the curriculum framework within which teachers and practitioners are now expected to teach”. Analysis of the appendix (Education Scotland, 2016, pp.2-5) reveals that it is largely a restatement of p.13 of *BtC3* and of some of the curricular section of *BtC3*. Crucially, it states that: “the curriculum framework, as laid out in the *Building the Curriculum* Series, remains the same” (Education Scotland, 2016, p.4). As we have already seen, the *Building the Curriculum* series (deliberately) did not provide a detailed description of courses or choice processes and thus does not entirely assist headteachers, teachers and communities faced with freedom to design “their own” curriculum and to “think imaginatively”. Since such processes take place in consultation with staff, parents, pupils and the wider community, it is unfortunate that not all of them may be well-placed to participate in such a debate.

The Chief Inspector noted that a number of challenges remained to be overcome if CfE was to be successfully implemented. The first of these is that: “there is currently too much support material and guidance for practitioners. “ Whilst this is true in generality, it is not true of curriculum design and the processes of course choice, as evidenced by the four key documents. The Education Scotland website also contains fairly general advice on the curriculum, although the Updated Guidance document on *Progression from the Broad General Education to the Senior Phase* (Education Scotland, 2012) does contain some

worthwhile curricular design advice for schools. Unfortunately, much of this advice was not originally available to schools, headteachers and teachers at the launch of *CfE*.

Criteria for Curricular Analysis

The strategic issues (almost all contained in the bullet points within the summaries of documents 1-4) from the Context section provide a set of key criteria through which the questions (see Sections A-F) posed by the Scottish Parliament's Education and Skills committee (after an initial round of evidence in the autumn of 2018) may be considered.

The key criteria comprise:

- Is there a clear and identifiable rationale for the curriculum in its current form?
- Is the curriculum sufficiently flexible to provide effective learning and progression pathways for every child?
- Does the curriculum achieve appropriate balance in neither being too overcrowded nor too narrow to meet the needs of learners?
- Does the curriculum foster innovative, creative and enjoyable learning opportunities for every learner?
- Are all the four curricular contexts (community ethos and life, subjects, IDL and personal achievement) appropriately identifiable within the curriculum and accessible to all learners?
- Does the curriculum provide a broad and appropriate range of subject choices for each learner at each stage?
- Does the curriculum provide better progression (than pre-*CfE* curricula) from one level to the next?
- Does the curriculum provide appropriate breadth, depth and choice for each learner?
- Does the S1-6 curriculum enable and support higher standards of achievement and attainment?
- Is the BGE phase used appropriately to provide an effective platform for enhanced achievement and attainment in the Senior Phase for all learners?
- Have the likely individual pathways of learners drawn from the school's community been adequately considered in the creation of BGE and Senior Phase course choice mechanisms?
- Does the curriculum enable and support closure of the (poverty-related) attainment gap?
- Does the curriculum enable and support learners in preparing for their future lives beyond school?

Although these criteria are derived directly from the four *CfE* documents considered in the Context section, they also appear to fit well with relevant Challenge Questions from "How Good Is Our School? (version 4) (Education Scotland, 2015) and with those set out in Sections A-F. The criteria will therefore be used appropriately in the remainder of this paper.

Findings Related to Questions Posed by the Education and Skills Committee

Previous papers (e.g. Priestley & Humes, 2010; Scott, 2015; Scott, 2017; Scott, 2018) have addressed some of the key criteria listed in the previous section. Their findings have included illustrating an absence of sound theoretical underpinning for *CfE* and an apparent lack of effective national governance of *CfE*. The last two papers demonstrated a lack of clarity in the construction of the S1-4 curriculum in a minority of secondary schools, curricular overcrowding in the S1-3 curriculum of at least a minority of schools, curriculum narrowing in a majority of S4 curricula, lower standards of attainment for average-ability and (particularly) lower ability learners, as well as some unusual approaches to progression in a small minority of secondary schools.

This paper progresses the analysis of *CfE*, suggesting that there is now far more complexity in the structure and range of subjects and course choices available in many Scottish schools than before *CfE*, although a not-insignificant minority of schools adheres closely or quite closely to previous practice, albeit not necessarily overtly. Conversely, despite the increased complexity, some key subject areas appear to have significantly declined with potential issues for the future of Scotland's economy, ability to operate in a world environment and cultural life. For the individual learner, the range and quality of choices available to them very much depends on the school and geographical location in which their learning takes place.

The following sections of findings of the paper are keyed to a set of questions posed by the Education and Skills Committee of the Scottish Parliament.

Section A: Has the structure of the Senior Phase of the Curriculum for Excellence allowed for better learning and overall achievement than previously?

Better Learning

The two aspects of this question are closely interlinked. The "better learning" aspect of the question is the more challenging, not least because there are ontological, epistemological and philosophical issues attached to the meaning of "better". There is also an issue related to the outcomes from "better" learning: should learning be "better" for the individual learner, for society or for other groups such as employers or governments? A glib answer would be "all of these", but necessarily there must be a hierarchy – of intent and of outcomes.

Those for whose benefit "better" learning should be targeted include (in order of importance):

- The learner her/himself
- Their family
- The local community
- The wider community ("society")
- Others who hope to gain materially from the learner's successes (e.g. future employers – through improved product range, market share and/or profit; governments, through increased production, market share and/or taxation)

Clearly, if this hierarchy is agreed (and it is not clear if all schools do agree with this as only a small minority of schools offer a rationale for their curricular provision), then the focus of each school curriculum must primarily be on the development of every individual

learner (as curricular policies in Scotland and internationally have usually asserted). This must, however, be tempered to some extent by the needs of others in the list as, in an extreme case, the production of several hundreds of thousands of experts in cake decoration annually might create enjoyment for the individuals but would only be of limited applicability in strengthening local communities, companies or the national economy (or improving health and wellbeing). Those whose role is to provide each individual learner with appropriate learning experiences (e.g. schools, colleges, universities), must therefore be cognisant of the hierarchy of needs evident in the bullet-point list and must find means of incorporating this in their curricular structures, qualifications presentation policies and support mechanisms. This is not a simple task. It is further complicated by the fact that not all headteachers or other school curricular managers have the same background or expertise in the development of curricular structures, or of the theoretical and practical factors which influence such structures.

Analysis of the curricular structures of all 358 Scottish council-operated secondary schools reveals considerable disparities in their curricula, with respect to the following criteria:

- Structure (particularly in S3 and S4, but also to a significant extent in S1-2 and S5-6).
- Breadth of the curriculum (in the BGE, in S4 and, to a lesser extent, in S5/6).
- Range of options available within course choice processes for the S3-6 years
- Extent of vocational and other non-academic learning opportunities
- Availability/provision of consortium or partnership arrangements to augment school-based curricular provision.
- Flexibility (in meeting the needs of all learners; in offering courses at most or all SCQF levels).
- Provision of information to parents and learners to support their choice of school and courses, transitions to and from that school and progression from stage to stage within the school.

Analysis of school curricular structures showed less variation in the set of courses which populate given curricular structures than in the ways in which curricular structures are created to hold groups of compulsory and optional subjects. Thus, two schools might offer the same overall set of courses but arrange them – and their accessibility - in quite different ways. The numbers of courses available to a learner in S1-6 in each of the 358 schools are addressed in Section C.

Previous papers on attainment by the author (e.g. Scott, 2018) have pointed to issues of attainment and enrolment at SCQF levels 3 and 4. The apparent absence of Level 3 courses uncovered by the analysis of all secondary schools' publications appears to imply that, whereas a variably small but identifiable proportion of level 3 enrolments could be found in almost all schools (more in more deprived areas) before *CfE*, these have disappeared from a large minority of Scottish schools since its appearance. There are several possible explanations for this:

- Some schools do not understand that curricular levels and attainment levels are not the same (there is some written evidence to support this in a small minority of school handbooks) and thus assume that completion of curricular level 3 MUST lead to presentation for SCQF Level 4.
- Some schools have taken a deliberate decision to drop SCQF 3 courses, as it is not their "core business" and allows them to redeploy staffing to provide a wider range of courses for SCQF 4-7 learners (or, in a few cases, to non-traditional courses designed to meet the needs of aspects of the school's clientele).
- All Level 3 courses have been replaced by courses "more appropriate to the needs of individual learners".

- *CfE* HAS resulted in better learning and attainment in many schools and thus all learners are passing at SCQF 4 or above.

Of itself, *CfE* is unlikely to have raised all Level 3 learners in any given school to Level 4. The evidence of the survey does not suggest that there is a direct correspondence between falling numbers of SCQF 3 courses and increased numbers of alternative courses; if anything, the opposite appears to be true, based on the sample. That leaves the other two possibilities, singly or in combination, to account for the disappearance of courses. This issue will require fuller examination across the full population of school courses and school attainment sets before a potential set of answers is identified.

Better Achievement

The “better overall achievement” aspect of the question is easier to evidence. Scott (2018) provided significant evidence on the declining patterns of attainment, particularly at SCQF 3 and 4, although much less so at SCQF 5 and 6. The attainment trends at SCQF 7 appear to be largely unaffected by *CfE* so far. That paper and the September 2018 evidence paper to the Scottish Parliament by the Scottish Qualifications Authority (SQA) provide full details of these patterns but there are several points which merit further development here.

Under the Scottish Executive, “better” learning was closely linked to raised attainment for all learners and to the attainment of significant groupings of subject qualifications (usually 5 or more qualifications at a given level). Under the Scottish Government, attainment appears to have moved below equity on the ladder of political importance, with “better” learning linked to increased equality of opportunity and ‘better’ achievement linked to improved standards in three (much) more narrowly focused contexts:

- a) achievement in literacy, numeracy and health & wellbeing (although there are few acceptable – or meaningful - yardsticks for the measurement of the third)
- b) the achievement of certain SCQF levels by school leavers. These are evidenced through the “headline” publication of results against *very* limited targets for leavers (e.g. one or more qualifications at SCQF 5 and 1 or more qualifications at SCQF 6).
- c) The achievement of SCQF tariff points (as each SCQF-graded course has a points value).

There is much political emphasis placed on “scope for schools to tailor the curriculum to the specific needs of all their young people” (Swinney, 2018, p.1) and correctly so. Unfortunately, almost no secondary schools publish *any* evidence of achievement in such courses, units or other experiences and such evidence as there is of the actual existence of such courses – whether SQA alternative courses or units, courses from other bodies (e.g. ASDAN or school-created courses - is only found in a minority of schools. In S1-3, there are only 47 secondary schools (13%) that indicate they offer one or more “non-traditional” courses in their S3 curricular structure and significantly fewer in S2 or S1. Almost all schools, however, appear to make such vocational and other non-traditional provision in S4-6, although to significantly varying extents (often apparently to do with the location of the school and the availability of partners, although a few remote schools appear to have made significant progress in such ventures). Urban schools appear to be best served with respect to “city campus”-type ventures to share learners and increase the range of courses on offer, although school-to-school partnerships are also evident, as are school-college partnerships.

The first two aspects of point (a) are familiar territory, although the subject names have been replaced by the more generic terms; the third aspect is a political imperative from the Scottish Executive era of the early 2000s (Scottish Executive, 2004, p.2) but also an

extension of societal concerns about the health of Scotland's citizenry. The only means used with any regularity to gain an understanding of success on this area, however, are attendance and exclusion figures - which are at best a crude measure of two extreme points of this domain. There is (as yet?) no agreed means of assessing achievement in the wider context of health and wellbeing or of assessing whether the millions of pounds being spent across Scotland in this context (not least by the nine Scottish Attainment Challenge Authorities) are, in fact, being well used.

Point (b) has always featured in SQA results analyses but gained more prominence under *CfE* as the Scottish Government's view is that the focus must be "on the totality of what a young person achieves over the entirety of the three year period [of the Senior Phase]" (Swinney, 2018, p.3). This is a very reasonable concept but, as with several aspects of the eventual implementation of *CfE*, its execution appears to be flawed. The Depute First Minister suggests:

"Whilst we may see fewer entries for qualifications at lower levels, the proportion of young people leaving school with qualifications at these levels has increased in recent years. For example, the proportion of leavers with at least one qualification at SCQF level 5 or better has increased from 77.1% in 2009/10 to 86.1% in 2016/17."

He also notes that:

"the proportion of leavers with at least one qualification at SCQF level 6 or better has increased from 50.4% in 2009/10 to 61.2% in 2016/17."

These statements are, of course, correct, as they come directly from the annual set of Scottish Government Leaver Statistics. However, there are issues here which the Depute First Minister does not address:

- (i) "The totality of what a young person achieves" is not summarised by one qualification (or possibly more) at SCQF Level 5 or 6. A much more robust method of demonstrating the **totality** of learning and achievement would be to publish how many leavers have achieved 5 or more qualifications at SCQF Levels 3 to 6 at the end of each year of the Senior Phase (and how many have achieved at 1+ and 3+ at Level 7 in S6). There are issues in such an approach for the Scottish government and for at least some Scottish local authorities as, in some authorities, the 5 or more at Level 3 figure has dropped significantly, the 5 or more at Level 4 has dropped and the 5 or more at Level 5 figure has increased, thus demonstrating that equity may well have worsened.
- (ii) The "at least one qualification at SCQF level 5 or better" figure HAS increased from 77.1% in 2009/10 – to 82.7% in 2012/13 (the last year of the old qualification system) and then to 85.9% (as quoted on the Scottish Government website for 2016/17) in 2016/17. As 5.6% of the growth occurred in the last three years before *CfE* and only 3.2% in the 5 years of *CfE*, it would appear therefore that the rate of growth has almost halved (from 1.9% p.a. before *CfE* to 1.1% thereafter).
- (iii) The equivalent figure for 1 or more qualifications at Level 6 has also increased. Unfortunately, this figure grew from 50.4% in 2009/10 to 60.2% in 2014/15 (the year of mixed old/new Highers) and then to 61.2% in 2016/17." As 9.8% of the growth occurred in the last five years before *CfE* and only 1.0% in the 3 years of *CfE*, it would appear therefore that the rate of growth has dropped to one-sixth of the pre-*CfE* growth rate (from 2.0% p.a. before *CfE* to 0.33% thereafter).

The SCQF tariff points noted in point (c) are at best obscure, even to members of the teaching profession. Very few parents or lay readers will understand what is meant by these figures.

CfE, Flexibility and Leaver Attainment

Section A of this paper partially addressed the attainment of leavers and analysed the Scottish government's leaver performance statistics which refer to the more able part of each cohort of leavers. This sub-section provides a further insight into issues with leaver performance by examining the trends in learners leaving school with no qualifications at all in the latter period of a modal S3-4 curriculum from 2009-10 to 2012-13 and then in the period of greater flexibility under CfE from 2013-14 to 2017-18.

The statistics of Table 3 are drawn from the 2017-18 publication of national school leaver statistics (Scottish Government, 2019):

Table 3: Percentage of Leavers Attaining No Qualifications at SCQF Level 3 or Higher, by Local Authority, 2008-09 to 2017-18

Local Authority	Session: 2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Aberdeen City	2.3	2.8	2.6	2.9	2.3	3.1	2.4	2.3	2.3
Aberdeenshire	2.4	1.3	1.7	1.1	2.0	1.9	1.7	1.4	2.9
Angus	1.6	1.6	2.0	0.9	2.1	1.8	2.0	1.8	2.4
Argyll & Bute	3.0	1.7	1.5	1.6	2.0	3.7	3.0	*	3.6
Clackmannanshire	2.3	4.1	4.3	2.5	3.9	4.1	2.2	3.4	2.1
Dumfries & Galloway	4.4	1.2	0.6	1.0	1.6	1.7	1.7	1.8	4.5
Dundee City	1.8	1.8	0.8	1.1	2.0	3.5	3.3	4.5	3.0
East Ayrshire	3.8	3.6	2.7	1.8	1.9	3.1	2.8	2.6	*
East Dunbartonshire	4.2	*	*	*	*	0.5	*	0.5	2.9
East Lothian	1.0	2.3	0.7	1.4	2.2	1.9	1.8	2.2	0.7
East Renfrewshire	2.2	1.0	0.8	0.7	0.4	0.9	0.5	1.0	1.5
Edinburgh, City of	1.2	2.1	1.7	1.5	1.8	1.8	1.9	2.3	0.5
Falkirk	3.2	1.2	1.1	1.0	1.5	2.5	0.8	0.9	2.8
Fife	1.8	3.0	2.7	2.2	1.8	3.1	3.5	2.6	2.8
Glasgow City	3.3	4.9	3.7	2.8	2.4	3.1	2.5	2.7	3.0
Highland	6.3	2.9	2.4	1.6	1.5	3.0	3.0	2.9	1.0
Inverclyde	2.8	2.1	0.9	*	0.7	*	*	1.1	0.8
Midlothian	1.6	1.8	0.9	*	0.8	1.1	*	0.8	3.7
Moray	1.1	2.2	2.2	1.8	1.4	2.5	2.1	3.0	*
Na h-Eileanan Siar	2.6	*	*	*	*	*	*	*	1.1
North Ayrshire	2.2	1.2	*	0.7	0.7	0.8	1.7	1.4	3.5
North Lanarkshire	1.7	2.4	1.9	1.1	1.6	2.3	2.5	2.6	3.1
Orkney Islands	2.6	2.4	*	*	*	*	2.8	*	1.9
Perth & Kinross	*	1.0	0.5	0.9	1.6	1.0	2.5	2.4	1.7
Renfrewshire	1.6	2.5	3.1	2.1	1.2	1.8	1.5	1.6	2.3
Scottish Borders	2.9	1.5	0.9	0.8	1.5	1.0	1.5	2.1	*
Shetland Islands	2.3	*	*	*	2.8	*	*	2.2	0.5
South Ayrshire	*	1.3	0.4	1.1	0.6	0.8	1.2	0.5	2.1
South Lanarkshire	1.8	2.8	2.0	2.3	2.8	2.4	2.2	2.2	1.4
Stirling	3.2	2.4	1.4	0.8	0.7	1.6	0.8	1.1	2.4
West Dunbartonshire	2.9	1.2	1.4	1.5	1.2	1.5	1.5	1.8	1.0
West Lothian	2.4	1.4	0.7	0.5	0.7	0.6	0.9	0.9	2.2
Scotland	1.8	2.3	1.8	1.5	1.7	2.1	2.0	2.0	2.3

In a very positive trend, the percentage of leavers leaving school with no qualifications at any SCQF level had declined across almost all authorities from 2009-10 to 2012-13. Unfortunately, the opposite is true after the introduction of CfE from 2013-14 onwards with two-thirds (21/32) of local authorities having a greater “no award” figure in 2018 than in 2012-13 and almost a half (14/32) of authorities having a worse figure than in 2010. This tends to confirm analyses made in Scott (2018) and elsewhere in this paper that the least able appear to be suffering most under the CfE regime.

There are obvious implications in these statistics about whether increased curricular flexibility within the CfE curricula of many Scottish secondary schools has been achieved at the expense of the least able. Given that, as Scott (2018) demonstrates, Level 5 and 6 attainment is not as adversely affected (and in some aspects, in some local authorities and at some times, has improved), this appears to substantiate the suggestion in the last Section that equity may have been adversely affected by CfE.

It is obviously a matter of concern that levels of “zero attainment” have risen and that this has reached over 3% in almost a quarter of local authorities. It might be that this is due to schools providing non-SQA courses in all curricular columns of their S4-6 curriculum but, since the author has analysed a very large proportion of Scottish secondary schools’ curricula and can find little, if any, evidence of such extensive alternative provision, the inevitable conclusion appears to be that more learners are failing all their qualifications.

Thus, “better overall achievement” is difficult to discern outwith SCQF Level 5 (and level 7).

Section B: Education Scotland says the Senior Phase has the “flexibility to offer a range of pathways that meet the needs and raise the attainment levels of all learners”. How does your school offer flexibility to its learners through the Senior Phase and how does this impact on the range of subjects available and the depth of pupils’ learning?

The overall patterns of subjects offered within the curriculum, both in the BGE phase and in the Senior Phase, are analysed in Section C. Fluctuations in individual subjects are analysed in Section E. To minimise repetition in a long paper, these issues are dealt with only in those sections. In this section, the impact of flexibility on curricular articulation between the two secondary phases and on the subjects available across the BGE-Senior Phase interface is analysed.

Flexibility Within the Senior Phase and Subject Availability Across the BGE-Senior Phase Interface

A significant aspect of flexibility of curricular construction and a major support to the provision of curricular pathways containing subjects which a school’s learners will wish to pursue lies in the articulation between the BGE phase and the Senior Phase. This must be successfully handled if there is to be a smooth progression into the Senior Phase.

Given the unheralded appearance of the BGE after publication of *a curriculum for excellence* (Scottish Executive, 2004) and without significant detail in *progress and proposals* (Scottish Executive, 2006) or *BtC3* (Scottish Government, 2008), the S3 curriculum itself was almost inevitably the area where most structural change from the pre-CfE pattern would be seen, given the S3 curriculum’s role-change from the middle (certificable) secondary curriculum to the BGE phase of CfE.

With the S3 curriculum leading to 5-, 6-, 7- and 8-course (plus core subjects) S4 structures, it might be expected that the S3 curriculum pattern would be tailored by schools (or, where the structure of parts of the curriculum has been mandated by the local authority, by the authority in concert with its schools) to ensure the smoothest possible approach to the

'two-term dash' towards initial qualifications in S4.

The actual pattern of linkage, or otherwise, between S3 and S4 was first analysed in Scott, (2017) and is shown in Table 1:

Table 1 S3-4 Curricular Progression in Scottish State Secondary Schools (Session 2017-18)

S3 Structure	Frequency (f) with which the S3 Structure leads to the Relevant S4 Structure			Total f
	6 Subjects	7 Subjects	8 Subjects	
No. of Subjects	f	f	f	
9	1	1	0	2
10	7	7	1	15
11	31	14	9	54
12	21	20	3	44
13	13	10	3	26
14	19	3	3	25
15	5	3	0	8
16	5	3	1	9
17	1	1	0	2
18	1	1	0	2
19	4	0	0	4
20	0	1	0	1
Unknown (from schools indicating 3 of 4 years' curriculum)	19	8	5	32
Total	127	72	25	224

Notes:

- The pale blue colour suggests that the S3 total number of subjects (this includes PE, RME and PSE) is approximately the same as the S4 total (which does not include PE, RME and PSE), thus modeling the former pre-CfE curricular structure.
- The pink colour suggests that the S3 number is rather high for effective progression to the S4 total.
- The orange colour suggests that the S3 number is very high for effective progression to the S4 total.

Table 1 suggests that 11 or 12 courses in S3 is the commonest pattern, *regardless of whether students are proceeding to 6, 7 or 8 courses in S4*. On one hand, this suggests a commonality within the final stage of the S1-3 curriculum which appears to unite many learners' experiences. On the other hand, it raises a question as to why students in some schools are apparently able to successfully proceed from such a position to 8 qualifications but others are only able to proceed to 7 or 6 and thus of whether all schools are engaged in maximizing learners' achievements. Continuous analysis of Education Scotland/HMI reports on schools' curricula and attainment since 2014 does not suggest that those schools engaged in supporting learners towards higher numbers of qualifications are less effective than schools only offering 6 qualifications.

Of greater concern are those schools offering unusually narrow or unusually wide S1-3 curricula:

There are relatively few of the first category in S3, as curricular narrowing is a phenomenon much more evident in S4. Those schools offering 9 courses in S3 will provide Maths and English, as well as PE, RME and PSE (or equivalents), leaving only 4 other courses. This either implies that the course choice process leading to S3 has largely determined the four optional subjects to be taken forward to S4 (i.e. the previous system) or it implies that several subjects form a rota in one or more of these columns. The latter then becomes an issue of the extent of depth of learning where, say, 6 subjects are fitted into two of these four columns.

It is more difficult to rationalise why a pupil should require 15-20 different subjects in S3, especially where this is a direct precursor to a narrowed (7-subject), or greatly narrowed (5/6-subject), experience in S4. These issues are also evident in S1-2 where, although breadth is a traditional strength of Scottish education, the 1997 HMI report, reinforced by the National Debate (2002) findings – both precursors of the drive towards CfE - suggested that extreme breadth (or extreme narrowness) in the curriculum would lead to highly detrimental outcomes for learners.

This research which led to Table 1 was repeated recently for a forthcoming paper (Scott, 2019a, in press). Table 2 demonstrates the findings of the second survey:

Table 2 S3-4 Curricular Progression in Scottish State Secondary Schools (Session 2018-19)

S3 Structure	Frequency (f) with which the S3 Structure leads to the Relevant S4 Structure			Total f
	6 Subjects	7 Subjects	8 Subjects	
No. of Subjects	f	f	f	
9	3	0	0	3
10	3	5	2	10
11	44	25	16	85
12	30	36	5	71
13	22	13	2	37
14	22	11	2	35
15	7	9	2	18
16	7	3	0	10
17	2	0	0	2
18	1	0	0	1
19	3	0	0	3
20	1	1	0	2
Total	145	103	29	277

Notes:

- This table contains data on significantly more schools than Table 1.
- The ratio of 6-course S4 schools to 7 and 8-course S4 schools is much nearer to 1:1 than in Table 1 where the ratio was 4:3 in favour of 6 courses.

The repeated survey, based on more than three-quarters of Scottish secondary schools, suggests that, although there have clearly been some movements between S3 curricular structures and S4 curricular structures, the overall balance remains about the same. The modal S3 structures of 11 or 12 subjects correspond to English, Mathematics, PE, RME,

PSE and 6/7 other subjects. In many of these schools, analysis of the detail of their curricular offerings suggests that this is exactly or almost exactly the pre-CfE era *status quo ante*, where learners took 8 subjects plus the 3 core subjects. In a significant minority of cases, this perception is further strengthened by the lack of evidence of other curricular contexts beyond subjects or of significant opportunities to engage in vocational or other broadening/deepening of individual learners' curricula.

Section C: Do you think there has been a narrowing of the range of subjects and subject choices in: (i) The broad general education phase, (ii) S4, (iii) S5 (iv) S6?

Identifying whether individual schools or local authorities "think" there has been a narrowing of the range of subjects and subject choices at the various stages is not necessarily a fruitful pursuit. Each school/authority will obviously know their own situation well and can speak authoritatively in that context but, unless they have fully analysed other schools'/authorities' curricula carefully, their thoughts on the matter will, at best, be uninformed. The basis on which any school or local authority answers this question will therefore be at least as important as the answers themselves.

This paper draws on a forthcoming analysis of the S1-6 curricular structures of all Scottish state secondary schools (Scott, 2019a, in press) and is thus as definitive a study as can currently be, given that 222 of 358 state secondary schools fail to explain part, or – in a much smaller number of schools – all, of their S1-6 curriculum to parents and prospective parents through their handbook, website or other means. Scott (2017) provided an analysis of the S1-4 curricula of 224 of the (then) 359 state secondary schools: these were the 224 schools which provided information on at least 3 of the 4 S1-4 years. This paper draws on several forthcoming papers (Scott, 2019a; Scott, 2019b; Scott, 2019c) which analyse the data from a second analysis carried out in the period from October 2018 to January 2019, slightly more than a year after the original S1-4 survey and covering the full S1-6 curriculum.

"Best practice" schools, however, either have their course choice sheets for S4-6 (or S2-6 in a few cases) in their handbooks or easily accessed with good signposting on their websites. The very best link these to curricular rationales, local explanations of the choice process and subjects available, PowerPoint presentations for parents and other helpful documentation. In this iteration of the research, the number of schools providing very good to satisfactory information on at least 3 of the 4 S1-4 years of the curriculum has increased from 224 to 246, a significant improvement. Worryingly, however, the number of secondary schools providing full information on the subjects available in their Senior Phase years, either through their handbook, website or other means, is only 198/349 (349 because 9 schools do not have complete S4-6 provision

It must be noted that all secondary schools provide course choice booklets and/or course choice forms to the restricted group of parents of children in the year group where that set of choices is made - but this only informs one small group of parents, failing to inform prospective parents seeking to exercise choice about their child's future education or even parents of children in associated primaries or earlier years of the secondary school itself. Such failures to provide the necessary information appear to represent a breach of Section 2 of the Education (School and Placing Information) (Scotland) Regulations 2012. These issues are analysed by Scott (Scott, 2019c, in press) in one of the forthcoming papers.

Broad General Education

With respect to subjects offered, either as compulsory subjects or as choices from 'subject choice columns' not only in S3 but also in some S2 curricula and a few S1 curricula (as choice is now more evident across S1-2 since the inception of *CfE*), analysis of the data from all 358 Scottish council-operated secondary schools indicates that:

- 261 schools offer from 8 to 25 subjects in S1 (as shown in Table 4) and 97 schools do not publish their S1 curriculum.
- The modal number of subjects taken in S1 is 15 and almost all schools fall within the range comprising 12 -18 subjects.
- In a large majority of schools there is no choice in the S1 curriculum.
- 259 schools offer from 9 to 24 subjects in S2 (as shown in Table 4) and 99 schools do not publish their S2 curriculum.
- The modal number of subjects taken in S2 is also 15 and almost all schools fall within the range comprising 12 -19 subjects.
- There is some form of choice in S2 in a majority of schools.
- 277 schools offer from 9 to 20 subjects in S3 (as shown in Table 4) and 81 schools do not publish their S3 curriculum.
- The modal number of subjects taken in S3 is 11 and almost all schools fall within the range comprising 10 -16 subjects. The commonest pattern is usually configured as 8 "academic" courses (generally modal courses in the sense of Munn modes) plus 3 core subjects (PE, RME, PSE). As seen earlier in this section, a majority of schools appeared to offer '8 to 10 subjects plus the PE/RME/PSE core', where the balance of core and optional subjects fluctuated across schools (and both within and between local authorities).
- 47 schools (13%) indicate that they offer one or more "non-traditional" courses in their S3 curricular structure. The commonest number offered is one, in almost half of all cases, with 2 courses being the next most common. One school provides 5 separate non-traditional courses within its curricular structure; this is obviously one of the schools with an unusually large number of S3 courses. Work-related learning forms by far the most common content for such courses, although problem-solving, critical thinking, Scottish studies and social issues are also evident. A few schools offer such provision in S2 and S1.
- 55 schools do not publish any of their S1-3 curricula and thus cannot be categorized. They are included in the "no information provided" row of Table 4, as are the 52, 54 and 32 schools failing to provide information for S1, S2 and S3 respectively.
- 143/358 schools have changed 1 to 3 years of their S1-3 curricular structures in the year-and-a quarter since the analysis published in Scott (2017), according to their published statements. The research process partly reported upon in this paper has tracked schools' published secondary curricula since 2014. From that analysis, it appears that most Scottish secondary schools are now implementing the second, third or fourth iteration of their BGE curriculum. There is, therefore, little evidence to suggest that the S1-3 curriculum is as yet a settled product in Scotland.

Table 4 demonstrates the range of subjects available to S1-3 learners in Scottish secondary schools. Subject choice is a standard feature of all but a very few S3 curricula, most S2 curricula and a minority of S1 curricula.

Table 4 Range of Subjects in the Secondary Broad General Education Phase of CfE

No. of Subjects Provided in the Curriculum for the Stated Year Group	Number of Schools Offering the Stated Range of Subjects in Each Year Group		
	S1	S2	S3
No information provided	107	109	91
7	0	0	0
8	1	0	0
9	1	1	2
10	2	3	11
11	4	7	85
12	15	15	71
13	28	25	37
14	37	39	35
15	62	54	18
16	45	42	10
17	33	38	2
18	18	16	1
19	7	10	3
20	2	3	2
21	3	4	0
22	1	1	0
23	0	0	0
24	1	1	0
25	1	0	0

Note: The number of subjects includes every subject taken by a learner in the S1, S2 or S3 year, including the 'core' subjects (usually PE, RE/RMPS and Social/Personal Education).

There are clearly issues of curricular balance, depth and breadth here as some schools offer very narrow curricula from S1 onwards (although some of this is achieved by integrating substantial parts of the curriculum (e.g. the Sciences, Social Subjects, Expressive Arts, Health & Wellbeing and/or Technology) and some crowd their curricula with many subjects, resulting in 'taster' courses (long disapproved-of by the Inspectorate for their potential superficiality), rotas of (usually) related subjects or single period exposure to many subjects (again with the danger of superficiality).

In almost all schools, there is little or no evidence of three of the four curricular contexts:

- the ethos and life of the school as a community
- interdisciplinary learning (IDL)
- opportunities for personal achievement.

Inevitably, curriculum areas and subjects predominate in curricular and course choice documentation. The ethos and life of the school is seldom evident in the curricular documentation of schools but, in most schools, can be seen to greater or lesser extents, through webpages, Facebook pages and handbook sections on the wider curriculum or social events and other non-curricular aspects of the school documentation. Opportunities for personal achievement are also seldom seen in the curricular documentation of schools but may also be seen through webpages, Facebook pages and non-curricular sections of

handbooks in a small majority of schools. Only a small minority of schools explain or illustrate that they provide any planned and coherent opportunities for interdisciplinary learning (IDL), although that does not mean that IDL is not present in a learner's experience where the school fails to provide this. There is little help, however, for a parent trying to identify where their child will encounter this aspect of the curriculum.

Senior Phase

With respect to subject 'choice columns' within Senior Phase course choice structures:

- 193 schools offer 'traditional' S4-5-6 structures (with subject column patterns as follows: 8-5-5, 8-5-4; 7-5-5, 7-5-4, 7-5-3; 6-5-5, 6-5-4, 6-5-3) [with a total of 14 to 18 qualifications available to learners as a result of their S4-6 experience]
- 9 schools offer traditional S4-6 6-5-5 structures with an option for some learners to pursue a 6-6-6 structure [with a total of 16 to 18 qualifications available to learners]
- 22 schools offer a 6-6-6 structure in S4-6 [with a total of 18 qualifications available to learners]
- 7 schools offer some other pattern (e.g. 6-6-4, 6-5-6, 6-5-3, 5-6-6, 5-5-5) [with a total of 14-17 qualifications available to learners]
- 127 schools do not publish all of their S4-6 curricula and thus cannot be categorised.
- There is now almost no evidence of schools opting for 2-year blocks within their S4-6 curriculum, where qualifications are not attempted until the second year of the block.

As S4-6 are the years of qualifications and full course choice, the number of subjects listed for each year does not include the 'core' subjects (again, usually PE, RE/RMPS and Social/Personal Education), merely the academic/vocational subjects taken in each of the subject choice columns of the curriculum (with each mostly leading to a qualification) as this is the standard means of describing the Scottish senior curriculum.

To address the question of subject choice *within* any given curricular structure, a 72-school sample (approximately 1 in 5 of the 358 secondary schools) was selected using a purposive sample (with the intent being to choose schools from each of the 32 local authorities with the number in each authority varying from 1 to 5 to model the relative numbers of schools in each authority). This was not entirely achieved as 7 local authorities had either no or virtually no schools which publish their S3-6 curricula (the main years where choice is available) and so the 72 schools were proportionally balanced across the other 25. The sample was employed because of the time/labour-intensive nature of such analysis.

As with all samples there may be schools which transcend the boundaries identified by this analysis. It is intended to repeat this analysis in a year, analysing all secondary schools. The findings of the sample were:

- The choice of Advanced Highers available to learners ranged from 0 to 19, with the bulk of schools in the range from 5 to 14. Some of the larger groupings included selections from a city campus arrangement where pupils travelled to other nearby schools for certain Advanced Higher subjects.
- The choice of Highers available on-site to S5/6 learners varied from 13 to 31. These were augmented by an off-site choice provided by campus arrangements, smaller partnerships or colleges; this provision varied from 2 to 19. The two provisions were, in general, in inverse proportion so that a school with 30 on-site Highers only added 4 external Highers whereas a small school with 13 on-site Highers offered 13 off-site Highers. Thus, the total range of discrete Higher courses available to learners varied

from 14 to 36. In most cases, larger groupings of Highers were more readily available in urban or semi-urban areas with the smallest choice almost always available in rural areas.

- The choice of National 5 courses available to S4-6 learners, including the core subjects of English and Mathematics, varied from 18 to 35. Again, this was augmented by partnership or, less frequently, campus arrangements (which mostly appear to offer Scottish Credit and Qualifications Framework (SCQF) Level 6 and 7 provision) or partnership arrangements. The off-site provision of National 5 courses varied from 0 to 11. Thus, the total number of National 5 courses available to learners varied from 19 to 43.
- The choice of National 4 courses followed similar lines: including the core subjects of English and Mathematics, this varied from 18 to 37. Again, this was augmented by partnership arrangements; the off-site provision of National 4 courses varied from 0 to 10. Thus, the total number of National 4 courses available to learners varied from 19 to 44.
- The situation at National 3 differed significantly. A small majority of schools did not indicate that National 3 courses were provided. Where there were noted, they were often only discernible in English and Mathematics. Numbers of National 3 courses varied from 0 to 7. No partnership provision was evident in the sample schools.
- Some alternative provision (e.g. SQA Skills courses, SQA units, ASDAN courses and some school-based courses) were provided. In most cases, these were few in number in relation to the overall curricular offering. Numbers varied from 0 to 11.
- In S3, a majority of schools provided a compulsory core consisting of English, Mathematics, Modern Languages, Physical Education, Religious and Moral Education and Social/Personal Education. A small minority added Science and/or Technology to the core, presumably to support the development of the Science, Technology and Mathematics (STeM) initiative.
- A large minority of the surveyed schools did not include Modern Languages in the S3 Core (although inspection of the complete population suggests this is a slightly smaller minority there). Other evidence collated suggest that this is a smaller, but still significant, minority when the complete population of schools is considered. A smaller minority also did not include Languages in the S2 core and a very small number of schools *appeared* not to make Modern Languages compulsory in S1. These positions are all in contravention of the 1+2 Languages policy. Almost all S3 curricula provided optional columns for “personalisation” i.e. choice. The number of options varied from 2 to 6 but 5 or 6 were commonest by some distance. A majority of schools appeared to offer ‘8 to 10 subjects plus the PE/RME/PSE core’, where the balance of core and optional subjects fluctuated as described.

The availability of individual subjects is addressed in Section E. It is worth noting, however, that almost all schools offer the “traditional” range of academic subjects (as would have been familiar in a Munn mode context in S4 or a traditional Higher context in S5 or S6. There is significant variation in the number of Advanced Highers on offer.

**Section D: What are the factors that influence the range of subject choices?
Possible factors include: curriculum timetabling; local decision making; school size; area and school demography.**

The first CfE policy paper, *a curriculum for excellence* (Scottish Executive, 2004) suggested that:

“The opportunity for children to develop the four capacities will strongly depend upon:

- the environment for learning
- the choice of teaching and learning approaches
- the ways in which learning is organised .”

(Scottish Executive, 2004, p.13)

All of the factors stated in the question are evident, to varying extents, as factors which have influenced schools’ curricula across local authority areas and from school to school within such areas. It is extremely difficult to evince a hierarchy of importance for these factors as they interact. From those schools which publish a curricular rationale, or similar document, their relative influence *appears* to vary quite significantly within and across local authority areas. Analysis of council and school documentation suggests that the differing (and fluctuating) influences include the following groups;

Geography and Demography

Significant parts of Scotland do not enjoy the sophisticated transport network to be found in the Central Belt of Scotland, other Scottish urban areas or many parts of the remainder of the UK. Consequently, geography appears to play a significant role, in several ways. There are traditional differences *between* urban, suburban, semirural and rural areas (with schools in at least two of these areas claiming to be most challenged due to aspects of their setting), but there are also evident differences *within* the set of schools from a single geographical class. The challenges for remote schools of transport to colleges, partner businesses and events mean that their curriculum may not be enriched to the same extent as that of more urban areas, although a few remote schools appear to have chosen to become schools in a wider world context and to use the internet and international partnerships to enhance their curricular offerings, rather than accept that they are small, remote schools destined not to offer what their more fortunate (in some senses) urban colleagues can. This obviously requires vision, leadership, equipment and finance (all of which may derive from the school, their council, their community or their business partners) in attempting to redress these inequities.

The most obvious demographic differential lies in the fluctuations of the Scottish Index of Multiple Deprivation (SIMD) deciles 1-10 across the catchment areas served by urban and suburban secondary schools. This causes curricular design issues in meeting the needs of more diverse groups of learners and timetabling/staffing issues as more diverse pupil groups require a wider set of curricular pathways than would be needed in a more homogeneous area. This may also result in consequent flows of learners from one catchment area to another as parents seek “better” learning and attainment for their children than - they perceive - would be available at the local secondary school. This raises an issue highlighted by several headteachers interviewed for a parallel research project within this CfE research suite. As headteachers of schools with “affluent” catchments, their concern lay in providing for the incoming learners from a very different catchment as their local authorities did not class their schools as requiring additional forms of learning support or the staffing set to provide a very different set of courses due to the

council's classification of their school's SIMD profile. The staffing problem is not simply related to requests for extra staff; if a radical improvement in the range of courses is required to meet an influx of learners with different needs, it may mean that the school requires to remove certain members of staff and bring in other types of teachers for the different courses. In a time of financial restraint, councils cannot necessarily absorb such changes - certainly not quickly – and this may impact adversely on schools' budgets and abilities to meet wider needs.

School catchment size and the age (and accommodation/equipment fit) of school buildings can also affect the range of courses and curricular pathways potentially available. It appears from the curricular structures analysed for this paper, however, that very similar schools with similar sizes, pupil bodies and communities, sometimes even in the same town/city, can provide significantly different extents of vocational provision, particularly with respect to college courses and courses provided with business partners. Since local authorities appear, in general, to attempt to mediate college provision to ensure appropriate access to college courses for senior pupils, the available evidence suggests that this variability is related to headteacher/school community preference/vision.

Local decision-making

The extent of local authority direct support for schools also appears to vary. Factors such as promotion of college and business partnerships to support course provision, provision of multi-school campus arrangements to increase the range of courses (and course levels) available to senior pupils, finance, facilities within school buildings and staffing levels and balances all appear to vary, sometimes significantly. Some of this is again clearly related to geography. Some evidence from the analysis of council minutes and reports suggests that this is also due to hard choices made by councils in the face of a very difficult and on-going budgetary situation. Curriculum support officers are far less frequently seen in council staffing lists; attendance officers have disappeared from a range of councils, some with significant aspects of deprivation. This can be a significant blow to equity as attendance is a prerequisite for good learning, low exclusions and high achievement. On the positive side, the appearance of a large set of modern, well-equipped school buildings as the result of joint governmental and council actions has greatly improved the learning environment for many Scottish learners.

Local authority curricular policies and/or guidelines were very hard to find and, apparently, very few in number. Given that it is the duty of the local authority to provide an effective and efficient service and to ensure continuous improvement, it would have seemed likely that a clear curricular policy framework for the major curricular initiative of the era would have been an essential component of their work. Of the 32 local authorities, only 6 displayed a published curriculum policy on their website (or alluded to it in their council reports), although one of these was a pre-CfE policy dating from before 2010. Of the six, two had significant curricular sections within their websites which would support parents in preparing for course choices. Almost all, however, published Standards and Quality reports (and, in a large minority of cases, other reports) which provided some insight into progress with CfE, although none of these analysed subject issues.

In the end, the school curriculum is *usually* the choice of the school senior management team, in consultation with the school community, although some local authorities have mandated their schools to implement a 6-course curriculum in S4. In a small minority of the schools analysed, there was clear evidence of consultation on the curriculum. In most schools, there was no similar evidence; this does not mean that there has not been consultation on the curriculum, but it is not recorded in parent council minutes or does not form part of the curricular documentation of that school. In some schools, parent council minutes for the years just before and immediately after the launch of CfE and/or the launch

of the Senior Phase were not available on the school website and so initial consultations may have happened without evidence remaining in a public place. However, given that the Senior Phase launched three years after the original launch and given that almost all schools have made one or more significant adjustments to their BGE curricula, it is surprising to find so little evidence of consultation on the curriculum or the subjects and experiences available within it.

The end product must be to produce an appropriate *CfE* curriculum to meet the needs of their learners and community. Given some of the more unusual BGE and Senior Phase structures, it seems fair to raise the question of whether the background, experience, training and capabilities of all school senior management teams are of a suitably high standard. Inspectorate statements on leadership (including leadership of improvement and curricular leadership) have suggested that, although many are of a high or very high standard, not all fit into these categories. This therefore raises a further question of the extent to which school curricular provision is mediated – either nationally or by councils – beyond the major inspection which occurs every 15 years or so. Most councils have a “supported self evaluation” process in place. Despite this, there are a few quite extreme curricula, school websites do not exist in some places and published handbooks (some on council websites) may be years out of date. The evident question is that of whether, in an age of fiscal pressure and radically reduced central education staffing, local authorities have the capacity to ensure that their schools are fully meeting the necessary standards.

To balance the previous issue, there appear to be interesting correlations between the efforts of some schools in areas of high deprivation to provide meaningful and interesting curricular opportunities to attract their learners to attend, as well as the previously-mentioned efforts of some remote and semi-rural schools to widen and deepen their curricula and increased achievement in some/most of these schools. It appears that vision, knowledge, widely based leadership, empathy for the learner body and appropriate professional skills are the fundamental requirements for a successful curriculum that will support “better” learning and “better” achievement.

Timetabling and Staffing

Timetabling and staffing should not be permitted to be constraints. The first of these must be a servant to the needs of the curriculum, not its master. The stereotype of the huddled timetabler, instructing the senior management team on “what works” in the curriculum is long-gone in most Scottish schools. Many secondary schools now have a timetabling team to spread expertise, protect against illness at crucial times and provide debate and reflection on how curricular priorities can be achieved. Given the high-quality annual timetabling courses provided by at least one university and several councils, timetabling skill should not be an issue. The only professional issue is that of whether the timetabler(s) understands the priorities and challenges of *CfE* to the necessary extent.

The main issues in timetabling lie with staffing issues, particularly with respect to what can be done with unneeded teachers or how to cope with the lack of necessary teachers, although campus arrangements, school-to-school partnerships, business partner provision and college/university partnerships all provide extra resources and opportunities for the curricular planner and timetable alike. As seen before, however, some schools have greater access to these than others.

Section E: Have you experienced any changes in the level of uptake in particular subjects in the past 5 years? If so, what subjects in particular and what do you think has caused this change?

The Scottish S4-6 *CfE* curriculum may appear fairly ‘traditional’ to users such as parents or employers as, in almost all schools, pupils still pursue sets of qualifications in S4, S5 and S6, as per the experience of earlier generations of learners. A closer inspection, however, reveals that across Scotland there is a highly significant disparity of experience for learners. The Depute First Minister has indicated that this is because:

“schools now have the freedom and flexibility to design a bespoke three year senior phase of a range of courses and qualifications tailored to meet the needs of the young people at the school (Swinney, 2018, p.2).”

This is undoubtedly true but it was also true a decade *before* the Senior Phase. Circular 3/2001 *Guidance on Flexibility in the Curriculum* (Scottish Executive, 2013) granted headteachers significant flexibility in the design, organization and delivery of the curriculum, subject to certain criteria:

- there should be clearly identified educational gain for pupils based on a clear rationale and objectives and consistent with the [then] National Priorities;
- there should be full consultation with stakeholders (including parents, teachers and pupils) and consensus before proposals are introduced; and
- rigorous quality assurance arrangements should be in place to monitor and evaluate the proposals and their implementation against the objectives and the results of these evaluations should be made available to the key stakeholders; and
- there should be well planned implementation using development plans and action plans.

That these criteria were still being quoted to headteachers and their colleagues during the build-up to, and implementation of, *CfE* is evidenced by their place in two HMI national presentations of 2010 and 2011 accessed as part of the evidence for this paper. It would be difficult to disagree with the criteria, with the exception of the now-obsolete National Priorities, as all four criteria were wholly or partially incorporated into advice to schools on the implementation of *CfE*. However, Scott (2017), Scott (2018) and Section C of this paper identify significant disparities in the construction of the S1-3 and S4 curricula across Scottish schools and Section A of this paper summarises aspects of the findings of Scott (2019a, in press) which identify further significant disparities in the S5-6 curriculum.

The findings presented in the Senior Phase part of Section C suggests that senior phase courses are more traditional than the Depute First Minister’s statement would suggest. The analysis carried out also suggests that the four criteria of Circular 3/2001 may not have been met in all schools. There are, however, some encouraging signs with respect to the extent to which a majority of school senior curricula now provide courses for less able, average or more vocationally inclined learners in a more coherent manner than before *CfE*.

The issue with curricular design does not appear to be that of “tailoring to meet the needs of young people” but rather that some local authorities (and some schools) have adopted positions with respect to their S4 curricular structures - ranging from a formal council requirement to follow one model (usually 6 subjects in S4) through to allowing each school to select 5 to 8 courses to suit their ‘local needs’. There is significantly greater variation in secondary curricular structures and examination presentation patterns in the *CfE* era than was previously the case with O Grades, Standard Grades and the Munn curriculum (SED, 1982) and/or the subsequent Higher Still programme. Analysis of each school’s curricular

structure and their curricular rationale (where such exists), however, does not support the concept that the more extreme or greatly narrowed curricular models provide a better fit for many or most of their pupils.

The end result of the taking up of curricular positions – not based on theory, as Priestley and Humes (2010) have noted and not based on the four criteria listed at the start of this section - is that some individual subjects and a few whole subject areas have been greatly reduced in numbers of enrolments, particularly amongst the least able and particularly in S4 but with a range of consequent effects in S5 and S6. Since 2013, some subject enrolments have fluctuated to a highly significant extent, some have dropped significantly and some have grown. Obviously, the outcomes of the S4 uptake have an impact on uptake and attainment in S5 and S6, although SCQF 7 results have been almost impervious to lower curriculum changes, as the most able appear to succeed (almost) regardless of the curriculum provided.

As Terry Lanagan, former Director of Education in West Dunbartonshire told the Education and Skills Committee on 18 January 2017, “we cannot look at S4 in isolation – we have to consider the whole senior phase.” This is self-evident but what Mr Lanagan omitted to add was that, if something goes badly wrong in S4, particularly if this happens amongst the most able who provide the “gold standard” Higher candidates of the future, then the effects of this will become evident in reduced uptake and attainment in the subsequent years – hence the interest of several researchers in S4 curriculum, uptake and attainment, as uptake and attainment trends are more readily evident in S4 than in the subsequent years where *CfE* is still relatively new.

The Depute First Minister recently noted that: “any comparisons of the Senior Phase must take into account the fundamental differences between curriculum design before and after the introduction of Curriculum for Excellence” (Swinney, 2018, p.1). Insofar as this statement goes, it is accurate. The most obvious difference to an observer is that most Scottish schools have moved from 8 qualifications in S4 to 6 or 7. Although the proportions fluctuate from year to year, the basic position for the last two years appears to be that around one-half of schools offer 6 S4 courses, one-third offer 7 courses and one-sixth 8 courses (with a handful offering 5) A very few schools moved to 5 or 9, although almost all of these have now reverted to 6, 7 or 8. The equation for the average number of courses offered is therefore:

$$0.5 \times 6 + 0.33 \times 7 + 0.16 \times 8 = 6.64$$

6.64 is 83% of the “traditional” 8 courses; thus, the reduction from 2013 to 2018 in the average number of qualifications offered is 17%. In actual fact, it is currently 16.7% (but note the modifying comments above) as the “half-third-sixth” picture is merely an easily understood approximation to the actual figures. Thus, in considering what has happened to subjects in S4 under *CfE*, the observer should expect an average decline of 16.7% in enrolments from the 2013 position to the 2018 position.

One must be careful in accepting this, however, as pre-*CfE* S4 pupils did not all do 8 courses: some schools offered only 7 and many less able pupils in many schools were permitted to take 7, 6, 5 or, in a few cases, fewer subjects. This reduces the extent of the decline in S4 uptake caused by the “fundamental differences between curriculum design before and after *CfE*” from the 16.7% noted in this section to around 14- 15%. The actual decline in course uptake from 2013 to 2018 is 25.5%, almost twice the *CfE* structural decline.

The uptake figures for national 3-5 courses are shown in Table 5:

Table 5 Overall (National 3-5 or equivalent) Learner Enrolment by Subject

Enrolments at SCQF 3-5	SESSION						Change from 2013 to 2018	% Change from 2013 to 2018
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
Accounting/A.& Fin.	1,664	976	975	895	846	896	-768	-46.1%
Administration	10,674	10,075	8,815	8,416	5,898	7,184	-2,490	-23.3%
Art & Design	22,535	19,301	15,988	14,833	13,969	13,165	-9,370	-41.5%
Biology	37,212	35,254	32,745	30,970	30,627	28,773	-8,439	-22.7%
Business / B.Mant.	11,611	11,708	10,961	10,483	10,670	10,215	-1,396	-12.0%
Care	1,108	1,025	1,156	1,123	858	915	-193	-17.4%
Chemistry	28,247	26,709	24,232	23,099	21,937	20,485	-7,762	-27.5%
Chinese Languages	245	156	228	183	211	262	+17	+6.9%
Classical Studies	331	245	148	149	127	134	-197	-59.5%
Computing Studies	15,985	13,088	11,790	11,153	10,418	9,622	-6,363	-39.9%
Craft & Des./Tech., Design & Mant.	10,283	6,753	7,158	6,756	6,453	6,257	-4,026	-39.2%
Dance	H only	361	437	521	499	558	N/A	
Drama	8,400	6,715	6,247	5,794	5,585	5,609	-2,791	-33.2%
Economics	362	270	250	289	292	277	-85	-23.5%
Engineer'g Craft Sk./ Eng. Science	1,963	1,693	2,234	2,228	2,155	2,180	+217	+11.1%
English	79,947	76,685	71,046	65,755	63,863	60,899	-19,048	-23.8%
ESOL	860	1,076	1,273	1,587	1,781	1,837	+977	+113.6%
French	28,546	18,160	15,328	12,656	12,477	11,019	-17,527	-61.4%
Gaelic (Learners)	371	294	153	198	151	159	-212	-57.1%
Gaidhlig	237	222	195	185	165	196	--41	-17.3%
Geography	21,514	18,333	16,805	15,284	15,076	13,936	-7,538	-35.0%
German	5,925	3,744	3,110	2,760	2,557	2,500	-2,425	-40.9%
Graphic Comm'n	11,139	9,374	8,097	7,822	7,470	6,645	-4,494	-40.3%
History	27,857	25,304	23,670	23,246	21,941	20,877	-6,980	-25.0%
HE. F.T.T.	684	866	718	769	716	660	-24	-3.5%
HE. H.F.T.	884	3,382	3,065	2,720	2,608	2,085	+1,201	+135.9%
Creative Cake Prod. Hosp.:Pr. Cake Cr.	244	1,406	1,681	1,785	1,730	1,394	+1,150	+471.3%
Hosp.:Pr. Cookery	13,506	12,500	11,179	10,491	9,446	9,213	-4,293	-31.8%
Italian	445	496	304	491	337	452	+7	+1.6%
Latin	513	466	480	473	376	393	-120	-23.4%
Mathematics (incl. Lifeskills Maths)	86,033	81,431	79,553	81,932	78,049	76,501	-9,532	-11.1%
Media Studies	1,833	1,670	2,070	2,171	2,063	2,359	+526	+28.7%
Modern Studies	18,953	17,580	16,826	16,527	17,446	16,755	-2,198	-11.6%
Music	13,909	11,138	9,698	9,178	8,892	8,460	-5,449	-39.2%
Physical Education	22,402	20,850	19,850	20,067	20,434	19,700	-2,702	-12.1%
Physics	22,669	22,285	20,936	20,216	18,762	17,621	-5,048	-22.3%
Pract. Craft Skills	0	412	364	409	330	388	N/A	
Pract. Electronics	0	161	254	228	320	344	N/A	
Pract. Metalwork'g	0	203	1,130	1,387	1,437	1,413	N/A	
Woodworking Sk./Pract. Woodwk.	6,443	5,576	6,427	6,205	6,107	6,294	-149	-2.3%
Psychology	733	733	668	631	622	775	+42	+5.7%
RMPS/Rel. Studies	4386	4214	4,992	5,898	5,033	5,433	+1,047	+23.9%
Science	2125	690	815	727	625	709	-1,416	-66.6%
Sociology	231	348	242	259	242	206	-25	-10.8%
Spanish	7644	6,178	5,975	6,081	6,230	6,756	-888	-11.6%
Urdu	103	82	80	89	97	76	-27	-26.2%
TOTAL	555,689	489,202	453,510	437,481	420,872	405,464	-150,225	-27.0%

Notes:

1. Minority subjects with very small groupings or which are almost entirely taught outwith schools are omitted. A range of subjects which ceased in 2012-13, just before the time of introduction of the Senior Phase, are omitted unless they continued largely unchanged under a new title; where this happened, the uptake for the old and new courses are amalgamated in the years where they overlapped.
2. The “Total” row includes the total for **all** subjects, including, in 2012-13, those not later continued into the *CfE* era (and thus omitted from this list) and, for all sessions, some minor subjects which are usually taught in colleges rather than in secondary schools.
3. Subjects in the 2012-13 column with 0 enrolments are subjects which began in 2013-14 with the onset of *CfE*.
4. The pale green and pink colours denote a significant increase or decrease in the number of enrollees from year to year.

In S4, the overall uptake by subject has changed significantly. The average 16.7% decline (or 14-15%) is mirrored by only a limited number of subjects. A number of key points may be seen:

- The three core subjects (blue) – English, Gaidhlig and Mathematics have fared quite differently, with Gaidhlig following the average decline, Mathematics doing better than the average decline and English doing significantly worse. The reasons for this are not clear from the data collected.
- 15 subjects (bright green) have performed better than the expected 15-17% decline. Caution should, however, be exercised with Business, Home Economics and technology subjects as most of these gains are due to the radical restructuring of these subject areas at the beginning of *CfE* (with both “winners” and “losers” apparent).
- 11 subjects (yellow) have fared significantly worse than the average 15 to 17% decline expected because of the “fundamental differences between the Senior Phase curriculum now and under the previous system. Their decline has been between 39% and 61%. Again, caution should also be exercised with Business, Home Economics and Technology subjects as most of these losses reflect the other half of the picture of restructuring of these subject areas at the beginning of *CfE*

The principal “winners” in this evolving situation are Cake Production and some other parts of Home Economics, although some parts of Technology have also fared well. In all of these cases, these aspects of the subject appear to have prospered at the expense of other parts of the subject area concerned. However, both RMPS and ESOL have also grown significantly.

Of the declines shown, the Modern Languages decline in French, Gaelic (Learners) and to a lesser extent, German are of highly significant concern, given the importance of this subject area, not least in a post-Brexit era where Scotland and the UK will need to “speak for themselves” to foreign countries. The small Language subjects have held on to their limited clienteles and Spanish is again growing after a 21% drop at the time of *CfE* implementation.

Expressive Arts, particularly Art, Drama and Music, have not fared well. Computing Studies, once an apparently highly important growth area is also in sharp decline. However, the 22-27% declines evident in the three main Science subjects are significant in a country for which SteM subjects (Science, Technology and Mathematics) are an important part of the future economic, scientific and academic wellbeing of the country. Almost certainly, this is because parents do not find it as easy to ensure that their children can take three subjects in a narrow 6-subject curriculum (where 2 subjects are already committed to English and Mathematics). Although Mr Lanagan suggested that schools,

“can continue to have the breadth of choice and the specialism of three sciences even if they opt to have six subjects at S4” (Swinney, 2018, p.2), this does not seem to be the case.

The uptake figures for Higher (SCQF 6) subjects are shown in Table 6:

Table 6 Overall National 6 Learner Enrolment by Subject

Enrolments at SCQF 6 Subject	SESSION						Change from 2014 to 2018	% Change from 2014 to 2018
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
Accounting	1,072	1,277	1,139	1,364	1,319	1,254	-17	-1%
Administrat'n & IT	2,403	2,686	3,510	3,963	4,099	4,051	+1,365	+50%
Art & Design	6,494	6,392	6,234	5,500	5,369	5,299	-1,093	-17%
Biology	10,134	10,328	9,903	7,492	7,575	7,306	-3,022	-29%
Business Manag't	7,306	7,853	8,454	9,108	9,116	8,755	+902	
Care	982	1,052	1,137	1,130	1,180	1,285	+233	+21%
Chemistry	10,656	11,419	10,893	10,077	10,135	9,992	-1,427	
Childcare	0	0	45	524	713	766	N/A	
Chinese Languages	66	100	89	111	129	152	+52	+52%
Classical Studies	348	403	409	422	429	400	-3	-1%
Computing Science	3,989	4,468	4,190	4,454	4,476	4,099	-91	-2%
Dance	370	380	440	427	427	461	+81	+21%
Design & Manuf.	0	0	2,224	3,079	3,021	2,820	N/A	
Drama	2,638	2,856	3,108	3,115	2,881	2,946	+90	
Economics	591	620	600	558	642	656	+36	+6%
Engineer'g Science	0	0	881	1,029	1,125	1,014	N/A	
English	30,436	31,589	35,361	36,345	35,713	36,181	+4,592	
ESOL	629	714	691	689	783	732	+18	+3%
Envl. Science	0	0	83	392	454	423	N/A	
F.T.T.	174	156	241	305	282	370	+214	
French	4,239	4,157	4,572	4,581	3,918	3,780	-377	
Gaelic (Learners)	119	103	97	84	69	75	-28	-27%
Gaidhlig	117	122	135	132	126	130	+8	+6%
Geography	7,787	8,496	8,234	8,157	7,945	7,329	-1,167	
German	1,051	1,006	1,114	1,020	890	817	-179	-18%
Graphic Comm'n	4,066	4,150	4,682	4,611	4,351	4,133	-17	
H.F.T.	846	953	971	1,448	1,438	1,375	+422	
History	10,344	10,882	11,281	11,165	10,759	10,301	-581	
Human Biology	4,275	4,157	4,726	5,990	5,926	5,918	+1,761	
Italian	238	173	212	219	264	252	+79	+48%
Latin	218	258	258	310	286	226	-32	-13%
Mathematics	20,665	21,851	21,105	18,871	18,861	18,753	-2,352	
Media	977	1,140	1,087	1,055	1,012	1,062	-78	
Modern Studies	8,038	8,929	9,494	9,849	9,319	9,332	+403	
Music	5,093	5,154	5,189	5,181	5,162	5,061	-93	
Music Technology	0	0	280	486	639	669	N/A	
Philosophy	810	1,017	992	1,006	759	743	-272	-27%
Photography	1,740	1,759	1,848	2,260	2,216	2,320	+561	
Physical Education	6,890	7,385	9,135	9,714	9,673	10,089	+2,704	
Physics	9,634	10,209	9,780	9,129	8,956	8,280	-1,929	
Politics	475	531	679	781	982	1,214	+683	
Psychology	3,370	3,478	3,675	3,589	3,666	3,488	+10	=
RMPS/Rel. Studies	4,144	4,318	4,444	4,383	3,783	3,658	-660	
Sociology	907	1,136	1,039	953	1,224	1,067	-69	
Spanish	1,645	1,880	2,413	2,600	2,809	2,795	+1,015	
Urdu	109	103	87	92	104	103	0	=
TOTAL	182,730	191,859	199,869	197,750	194,804	191,952	+93	=

Notes:

1. A range of subjects which ceased in 2013-14, just before the time of introduction of the Senior Phase Higher courses, are omitted unless they continued largely unchanged under a new title; where this happened, the uptake for the old and new courses are amalgamated in the years where they overlapped.
2. The “Total” row includes the total for **all** subjects, including, in 2012-13 and 2013-14, those not later continued into the *CfE* era (and thus omitted from this list) and, in 2014-15, the “old” and “new” Higher totals have been combined.
3. Subjects in the 2012-13 column with 0 enrolments are subjects which began in 2014-15 with the onset of *CfE* Highers.
4. The pale green and pink colours denote a significant increase or decrease in the number of enrollees from year to year.

Table 6 should be considered in conjunction with the Senior Phase findings of Section C on the construction of schools’ senior course choice sheets.

As with the SCQF 3-5 curriculum of S4, there are “winners” and “losers” in the post-*CfE* SCQF 6 curriculum. Within the *CfE* period, 14 subjects have grown significantly – either as large raw-number rises or as large percentage rises. Of these, the most significant are the highly significant English figure (+4,592 course enrolments per annum) and the significant P.E. figure (+2,704 enrolments p.a.). The growth in Spanish (and, on a much smaller scale, Chinese, Italian and Latin) is also significant as it has been achieved against a more difficult pattern for other foreign languages. The Human Biology gain partially balances the significant loss in Biology. The other notable growth patterns are echoes of the adjustments in Business, Technology, etc. seen in S4.

11 subjects have declined significantly – either as large raw-number declines or as large percentage declines. Of these, the most significant are the declines of 3,022 Biology course enrolments per annum, 2,352 Mathematics course enrolments and the decline of almost 2,000 Physics enrolments. Together with a decline of over a thousand in Chemistry, this again represents a significant negative impact on the key STeM area. Other areas of growth are again adjustments of the balance of subjects in some multi-subject curricular areas such as Business or Expressive Arts.

In terms of the overall set of enrolments, there is little variation between 2014 and 2018. For a sustained period from the early 2000s to 2015, Higher enrolments had grown reasonably steadily, despite – or perhaps because of – the lack of any new curricular initiative affecting Higher during this period and despite a slowly declining pupil population. Since 2015-16, Higher enrolments have started to decline (despite a similar rate of pupil decline).

As noted elsewhere, SCQF Level 7 course choices, enrolments and attainment appear to be relatively little affected by *CfE*. Section C noted that there is significant variation in the availability of SCQF 7 courses. This appears to be jointly due to school size and geography. If small schools are in urban areas, however, they have a significantly better chance of improving the range of SCQF 7 courses available to learners through campus mechanisms or school-to-school partnerships.

Section F: What is the impact, positive or negative, of any limitations on subject choices?

The impact of curricular narrowing in S4 has been described in Scott (2017), Scott (2018) and earlier in this paper. 187/358 schools (down from 195 at the last survey) describe themselves as offering only 6 qualifications in S4. Their 'standard offer' of courses to their students is to provide English, Mathematics and any other four subjects. These schools must attempt to accommodate experiences in Expressive Arts, Languages, Business, Health & Wellbeing, ICT, Science, Social Subjects and Technology within those four columns. Inevitably, for each child, significant aspects of their prior curricular experience cease after S3.

Many parents and learners, whether based on parental experience or a view of the learner's future vocation, appear to have opted for either "two Sciences and a Social Subject" or "two Socials and a Science". This undoubtedly reflects a societal (and school?) perception of the hierarchy of importance of subjects but does not fit well with the relative breadth of curriculum experienced traditionally in Scottish education. Those learners who wish to take three Sciences MAY be able to achieve this (see Section E) but they are then left with one curricular choice to cover Expressive Arts, Languages, Business, Health & Wellbeing, ICT, Social Subjects and Technology. This does not constitute a broad Scottish experience; it is as far more akin to the narrower specialisation seen in the English curriculum. Curricular narrowing also means that most 6-course schools stack more subjects into each column, therefore potentially limiting the number of repetitions of certain high-demand subjects across columns and making the achievement of certain subject combinations more difficult. This can act to reduce the number of curricular pathways available to learners.

In terms of outcomes, the problem is not with the *total* number of qualifications achieved over the Senior Phase – to some extent this is a sterile area of argument as there is relatively little difference in gaining 17 qualifications or 18 (and this will not deter an employer or university if the grades are appropriate). The problem lies with what actually happens when a child pursues a 6-course S4 curriculum. Initial research carried out in several local authorities for forthcoming papers suggests that the average number of qualifications attempted by learners in 6-course environments is around 5 (plus or minus a small increment). Therefore, if anything goes wrong, the learner can be below or well below having the desired set of 5/6 courses to carry forward at appropriate levels and this issue affects the average and the able as well as the least able. This was also a factor in 8-course curricula but these tended to default to 5–7 courses on average, leaving most children with 5 desirable qualifications (hence the national figure for 5 or more courses at Level 3 being in the high nineties) with which to proceed to the next year. This is not so with 6-course curricula.

One worrying feature of the *CfE* era is that the government, local authorities and schools appear to have agreed to cease reporting how many pupils have achieved 5 courses at given levels and at each stage of their studies. Given that these figures are readily available from the Insight database, there has to be another reason for this. The "6 courses becomes about 5 on average" situation described in the previous paragraph may be the reason that (most) schools and authorities have been pleased to give up such reports. Again, initial research in a sample of authorities suggests that, while some schools have had good or very good results, particularly with the most able *CfE* S4 learners, other schools have had significantly poorer results under *CfE*, particularly with the least able - with some schools losing a third to a half of their "5 or more at Level 3 in S4" figures. The Scottish government and local authorities could greatly assist research and analysis of what needs to be done to improve *CfE* by publishing these figures.

The figures published in sections A-E of this paper suggest that a few secondary schools are engendering much narrower curricular choice for their learners from S1 onwards. The figures also suggest that a few schools are inhibiting depth of learning in the BGE phase by exposing learners to large numbers of subjects through “taster” courses and rota arrangements. The broad middle group of schools has held to something resembling a traditional S1-2 experience but with significant variations in S3 and S4.

Some individual subjects have been experienced highly significantly reduced uptake, particularly in S4, but in the case of Modern Languages, Expressive Arts and the SteM subjects, this is evident in S5 and S6 as well. This has the potential to engender a significant impairment of the academic, scientific and business-related capacity of Scotland through the decline in Modern Languages and SteM subjects and of the cultural life of Scotland through the declines in Expressive Arts. Computing is also affected at S4 but this does not appear to have so far impacted heavily at Higher or Advanced Higher. There is, however, a question with respect to the ICT skills of the wider body of learners.

Concluding Thoughts

As the findings of this paper (Sections A-F) suggest, there is evidence from analysis of secondary curricula and course choice documentation of significant variability (although not necessarily flexibility) of curricular design across schools, although a consistency across this very broad range of curricula in meeting the needs of individual children or responding to local needs is not substantiated either by this paper or by the data in the previous papers. There is also a limited amount of evidence of creative teaching and learning evident in local authority and school publications, although this does not mean that such positive aspects are absent. The evidence may be limited because of a traditional Scottish reticence to make claims of success but also because interdisciplinary learning, the ethos and life of the school and its community and (particularly sadly) opportunities for a wider range of personal achievement are largely missing from the curricular and course choice publications of most Scottish secondary schools. Analysis of all state secondary school handbooks and, where available, course choice material, website documents and attainment data suggests, however, that there *is* much less evidence of teaching across and beyond traditional subject boundaries.

Likewise, although there is some evidence of higher standards of achievement for some learners in some schools, the evidence gathered across all schools does not suggest that the curriculum as delivered is producing such an effect for the majority of learners. A previous paper by the author (Scott, 2018) suggested that progression from one curricular level to the next in the Scottish S1-4 curriculum was variable, that the BGE curriculum had become fragmented and that choice had been narrowed for many learners. This is further substantiated by the evidence set out in Sections A-F below and in two forthcoming papers (Scott, 2019a, in press; Scott, 2019b, in press) on the Scottish S1-6 curriculum.

The future of some subjects, particularly a range of Modern Languages, must be in significant doubt in the medium term, if trends continue. The SteM subjects are not in this position but the slower decline here is continuing and may impair Scotland’s economy in the longer term. There is also some evidence in the tables and lists of this paper of some transference of learners from ‘harder’ academic subjects not only to vocational choices but also to ‘softer’ subjects such as RME, PE and Cake Production. If this trend continues, it may better meet learners’ interests but it will not necessarily be a good fit for the business and economic needs of a future Scotland. It seems, therefore, that there is a need for

further analysis of these apparent trends and for societal positions to be considered regarding the importance of Expressive Arts, Languages, ICT and STeM subjects. If they are as important as they have been claimed to be in the past, there will be a need for governmental, local authority and school action to engage and support parents and learners in opting for these subject areas. After 5 years of *CfE* data, the analysis contained in this paper and others of this series reflect the fact that not all aspects of *CfE* are working as they had been envisaged.

There is also some limited evidence within this paper to suggest that equity may, at least in some contexts, have worsened rather than improved, as a result of how some/many authorities and schools have implemented *CfE*. *If* so, this is obviously a significant challenge to the government's equity strategy. Numbers of pupils leaving with no SQA qualifications appear to be rising across many local authorities. Attainment at level 3 has worsened significantly. Attainment at Level 4 has also worsened, although to a lesser extent than at level 3. Results are better at levels 5-7 but there are evident issues in these domains.

There needs to be a degree of honesty and cooperation in all parts of Scotland's politico-educational governance system if these issues are to be addressed effectively. All schools need to publish coherent curricular and attainment information to support ALL parents (as opposed to merely supporting the current year group involved in a particular choice process) in playing their part in the education of their children. All local authorities need to publish their curricular policies and guidelines, as well as overarching attainment data, in forms understandable by all parents and employers. The benefits for learners of pursuing certain currently declining subjects also need to be spelled out and linked to job/academic opportunities for those learners. A few local authorities provide quite effective information on their websites but others have recently withdrawn from such practices (as broken links in schools' website and handbook sections on attainment and curriculum demonstrate most eloquently).

The Scottish Government's insistence on publishing headline 1+ @ Level 5 and 1+ @ level 6 figures for leaver attainment and focusing narrowly on Literacy, Numeracy and "tariff points" (to the bemusement of most parents and some teachers) appears contrived (not least since the 2@, 3@, 4@ and 5@ leaver data is tucked away in an annual publication if one knows where to seek it – but how many parents do?).

It appears, on the evidence of this paper and related publications, that only by allowing light into the continuing (after 16 years!) issues within *CfE* development can Scotland achieve the benefits that have always been potentially available from the introduction of this potentially significant educational initiative.

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