



An Chomhairle Náisiúnta Curaclaim agus Measúnachta
National Council for Curriculum and Assessment

Innovation and Identity: Ideas for a new Junior Cycle

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Introduction

This paper is not a set of proposals about the future of junior cycle. Rather, it is a set of ideas about what a junior cycle of the future might look like, and some ideas about how we might get from where we are to where we would want to be.

When the Minister for Education and Science, Batt O’Keeffe T.D. addressed the National Council for Curriculum and Assessment (NCCA) in June of this year, he asked us to look at the entire junior cycle experience and to review the innovations happening in other places at this stage of education. He mentioned the Junior Certificate examination in particular and asked that we look at what it does and does not do for the 55,000 or so students who take the examination each year.

Research conducted by the Economic and Social Research Institute (ESRI) for the NCCA over the last number of years means that we have new insights into the junior cycle experience and the impact of that experience on participation and achievement – including on subsequent achievement in senior cycle and in the Leaving Certificate examination. We can now bring these insights into this review, together with the findings of a study of student well-being in post-primary school.

The recently published *Teaching and Learning International Survey (TALIS) National Report for Ireland* has also given us access to teachers’ understanding of their role in junior cycle classrooms.

Our own work in the publication of *Leading and Supporting Change in Schools* has generated considerable debate about how change happens, and sometimes doesn’t, in Irish education.

This paper draws on all of these – and more, and is full of interesting and challenging ideas and commentary about how junior cycle might develop in the future. In places the paper goes well beyond what we usually understand as review into a re-thinking of junior cycle. And in places it even moves into re-imagining. But all of these possibilities are rooted in an emerging consensus about how meaningful change can happen in education, and in the public sector more generally. Education systems in other parts of the world are already beginning to be re-shaped by this powerful idea. Evidence of this is presented in section 4. The idea? That local innovation delivers better results than centralised command and control models. The National Economic

and Social Development Office (NESDO) have just published the outcomes of the Futures Ireland project which examined Ireland's ability to innovate and to learn and to turn learning into continuous improvement. This timely report noted the following as one of its key findings:

The evidence suggests that relations between the policy centre and local delivery could be reconfigured in ways that yield more tailoring of solutions to problems, more learning and more real accountability. This would require public organisations – at both 'centre' and 'delivery' level to pay far greater attention to finding a more productive relation between organisational design, inter-personal relations in work teams and careers and professional identities. Such a system would neither be centralised nor decentralised as conventionally understood, since the centre remains both important and powerful. Indeed it is possible that better systems of local review and learning could help in recasting the organisational structures.

In keeping with that exhortation for new relationships between the centre and the local, the NCCA is suggesting that from the outset of this process, schools work with the ideas, generate some more, and tailor them to meet their local needs and solve local problems.

This new thinking about change is accompanied by a second powerful idea about education, and particularly about schooling. Across the developed and the developing world schooling finds itself at the centre of a set of global concerns about the future of the planet, about food and water security, and about the movement of peoples in the face of climate disasters. The global economic crisis adds to these concerns and increasingly, schools are being asked not simply to teach students about these issues but to shape the next generation of creative problem solvers who can quite literally, 'save the world'. To us this may seem like a tall order. To our students it is an imperative. They will outlive us, they will have to be the generation of problem solvers.

At one level, the organisational structure of junior cycle looks solid, secure and 'sound'. Evidence from a number of studies would indicate that most young people are relatively happy, and satisfied with their schooling. The familiar rhythm of junior cycle, its value as an organising principle and the public expectation of examination grades at its conclusion all serve to consolidate that sense that nothing is 'broken' and that 'fixing' is not required. The TALIS report reassures us that teacher-student relationships are good. But it also tells us that more than any other country in the study, teachers focus more on what the study refers to as 'structuring practices' (how learning is structured and organised) than on student-oriented

practice or enhanced learning activities. It will be interesting in the course of the debate about junior cycle to discuss with teachers whether this is a preference, or a solution to the problem of needing to make greater and greater effort while feeling that students are engaging less and less. It will also be interesting to discuss with students whether they feel empowered to 'save the world', or simply prepared to write an essay about it.

Research on student well-being undertaken by a consortium in St. Patrick's College, Drumcondra concluded that:

The balance between the academic achievements of students and their other strengths and capacities needs urgent attention in a performance driven system where talent and achievement are so narrowly defined. Students need to have the skills and cultural tools to participate in society, but the current drive for higher standards of achievement and performance without genuine commitment to holistic development and equality of condition for all, is seriously problematic for the well-being of many young people, and for society more generally. (p 177)

The rest of this section discusses some of the junior cycle problems that have been identified by the ESRI research as problems of *identity*. In keeping with the principle of prioritising the local, the quotes are all from the junior cycle students who participated in the research.

1. The dilemmas of lower secondary education

Since the development of mass second-level education, school systems across the world have continued to engage with what some have called the dilemma of lower secondary education. While the early childhood, primary and upper secondary stages of schooling have not been immune to contestation, debate and ongoing reform, the debates about lower secondary education have always been different in tone, and generally less urgent. What the debates lack in urgency however, they make up for in longevity and complexity! Lower secondary is rarely a site of crisis, but is always the subject of comment and much of that comment focuses on *identity*.

As an age cohort, students in lower secondary education are experiencing identity crises of their own as they progress on their journey from childhood to adulthood. In most parts of the world, the school system responds to this significant change process with a symbolic change — usually from one school to another, or from one campus to another. However, once that bridge is crossed, the students find that they encounter the most rigid of curriculum structures, and the most traditional of subject-based learning.

For most students, the experience of passing through lower secondary education is doing just that — ‘passing through’— coming from somewhere in the school system and headed for somewhere else within that system. Lower secondary is often defined by its relationship to one or other of those stages. It is seen either as a continuation of the primary stage of education or as the preparation for upper secondary education, or sometimes has an ill-defined existence combining both roles. The identity of lower secondary education often comes not from the needs of the students at that stage of their lives, but from their experiences *prior* to lower secondary, or the expectations of the *next* stage.

Lower secondary education in Ireland: the junior cycle/certificate

The examination that marks the transition from junior to senior cycle, the Junior Certificate, makes Ireland’s lower secondary dilemma more acute. This examination—subject-based in structure and largely traditional in style—ensures the rigidity of curriculum organisation in junior cycle. It can also work to disconnect the three years from the stage of education that went before, and to some degree from the stage that follows. Of note too is that the phrase *Junior Certificate* is used to mean the examination, the qualification and the programme of study. In

other education systems the programme of study that learners follow in school, the examinations they undertake and the qualification they gain are more distinct entities.

The recent publication of the third year of the longitudinal study conducted by the ESRI for the NCCA focuses on the experiences—and achievements —of students before and after their Junior Certificate examination. The policy dilemmas associated with junior cycle in Ireland and with the examination are perhaps best summarised by the students in their own words. The first dilemma has to do with value.

‘The Junior Cert, like, doesn’t do anything...’

Prior to the Junior Certificate examination, almost all the students in the study noted that they felt it was important or very important for them to do well in the examination. However, in interviews, students raised questions about the value of the examination other than as a ‘dry run’ for the subsequent Leaving Certificate:

Because the Leaving Cert – it kind of shows you what you are going to do after school and then Junior Cert like, doesn’t do anything, it’s like a practice for the Leaving Cert.

As well as offering a dry run for the Leaving Certificate examination, the Junior Certificate examination was also seen as guiding students in making choices around subjects and levels for that important examination.

Because it kind of guides you on what you want to be doing for your Leaving, and that just guides you on what you want to do for the rest of your life.

Most students did not see any connection between the examination and the three years of learning it was intended to assess! Instead, they saw it as preparing for the *next* stage of education and for the *next* examination. However, for some students in the study, the Junior Certificate examination does ‘do’ something: These students still see no relationship between the examination and the learning it was intended to assess. Instead their focus is on its role beyond school. The students in question tend to be from working class schools.

It gets you prepared for real life like. Because if you drop out of school, you’ll need your Junior Cert, at least you’ll have one bit of education.

Because you can’t get a job without one, if you don’t do your Junior Certificate, no job without one.

The policy dilemma becomes clear. Here is an *examination* that is used and seems to work well as a dress-rehearsal for the Leaving Certificate, but is less connected to the experiences of

junior cycle students – the focus is on senior cycle subjects and levels. And here is a *qualification* that is seen as necessary, particularly for those who may not stay on in school, a credential that's seen as of some value. As the junior cycle is currently configured, access to the 'valuable' qualification is through an examination that's often seen as of little 'value' in and of itself.

This policy dilemma is made more acute by two inconsistencies. The first is that the current value of the qualification, for those who might leave school, is in turn diminished by the stated national policy priority of keeping as many students in school for as long as possible. The second dilemma relates to the standard of the qualification available at junior cycle (at Level 3 of the National Framework of Qualifications only) and the access to that qualification (through examination only). These factors result in some students with special educational needs having no opportunity to acquire a qualification even though they may be participating in mainstream schooling as a consequence of a national policy goal. Ironically, it is students who continue in *special schools* who may have a greater opportunity to acquire a Level 2 or Level 3 qualification through FETAC awards, an opportunity often denied to students with special educational needs in mainstream schools.

'I don't think it's a good way of seeing how much you've learned...'

The shortcomings of the Junior Certificate examination have been well documented in a number of studies and reports. While the Leaving Certificate examination has undergone considerable development in recent times through, for example, the introduction of coursework in History, Geography and Home Economics, the Junior Certificate has remained as it was when introduced in the early nineties. Students in the study presented two problems: the once-off nature of the test, and the range of assessment methods in use.

Because if you have an off-day like, I know a few people in an exam and [their] mind[s] just went blank and they couldn't do it and they're really good in class so.

I think there's a lot more written work than there is practicals and I think more people are better with their hands and doing practical work than more people are written work like. So then it's not really fair on people who do like to do practical work.

Recent work by the NCCA on rebalancing a number of junior cycle subjects resulted in a consultation process. The issues raised in respect of the examination were interesting. While the themes of the responses were not new, the strength and depth of feeling was remarkable. One history teacher, describing the work of colleagues noted:

They must teach to the exam paper and the values it fosters will shape the way they teach. If it rewards them for teaching the skills of the historian then that is what they will teach. If, as at present it rewards students who memorise names, dates and chunks of facts... they will do that too. There are many good teachers who try to do both, but they are swimming against a tide, which comes from the nature of the present exam paper.

A number of participants in the consultation process suggested that the introduction of learning outcomes to support teaching and learning, and the rebalancing of content will have little impact if the examination does not change.

We can have all the wonderfully formatted aims and outcomes we wish, but the reality is, if the assessment procedures are not updated, the 'rebalanced' syllabus will have little or no impact on actual practice.

Of note however, was that while those participating in the consultation had been asked to consider *assessment*, the feedback focused almost entirely on the examination. As in previous consultations on junior cycle, the absence of assessment talk, ideas and proposals was evident. In the light of recent developments in primary assessment and reporting practice, the absence of assessment 'talk' in junior cycle contexts is further evidence of a disconnect between primary and junior cycle education.

'If you're smart at Maths, you go to the higher level, if you're alright at maths you go to the ordinary, if you're useless you go to foundation.'

The third dilemma arises from the impact of the examination on the junior cycle experience. Unsurprisingly, the ESRI researchers found that third year of junior cycle was generally focused on the examination with more homework, teaching and learning methods that were more traditional, and a greater focus on examination and mock examination preparation. The researchers refer to this as an 'intensification' of schoolwork. The students report it as a significant change in classroom dynamics in third year.

It (the exam) is mentioned a lot, 'You're in third year now, it's not second year, you've to knuckle down'.

You used to do fun things in class, they'd come in and say let's play games. If you say it this year you get like stared at, what do you think you are?

The examination appears to be a significant feature of third year only, rather than of junior cycle as a whole. Given the low-stakes nature of the test, and its limited value as discussed above, this confined impact is understandable. However, two key features of the first and second year experiences as highlighted in the research findings are worth flagging in this context. The first is

the lack of progress of most students in reading and mathematics in the first year of post-primary school. Most make no progress while some go backwards. This 'drift' in achievement, a well-documented phenomenon across education systems that feature a transition at 11 or 12 years of age, may not be helped by the idea that it's the third year that really matters

In second year, the 'drift' is in student behaviour and attitudes rather than in academic progress. While the increase in self and teacher-reported student misbehaviour and in bullying in second year is associated with a general settling down process of the cohort, it is also associated with a sense that this is a year 'without a purpose', a holding area before the real work begins.

The second feature is streaming. Differentiation of the examination into higher, ordinary and foundation levels was introduced to allow all students to achieve. Ironically, this policy has had the inverse result. Schools which opt to stream students to 'match' them to their 'levels' stack the odds against those placed in the lower streams. They achieve less well than students of similar ability who learn in mixed-ability settings. The impact of streaming has been much discussed in the Irish context, but those who advocate it suggest that so long as junior cycle ends with an examination differentiated by level, differentiating the students in a similar fashion makes for good policy alignment. However, the ESRI study has documented the negative impact of streaming on both the experience and outcomes of junior cycle for students.

Developing junior cycle

The points of concern within the junior cycle, including the dominating effect of the Junior Certificate examination on teaching and learning practice and on school organisation and structures, the perception of an inflexible overcrowded curriculum, the disengagement of many students at an early stage in the cycle, the inadequate time for engagement with deeper learning, the narrow range of assessment activity and the limited access to a single qualification – all the issues highlighted earlier have existed for some time.

Some of these issues have been discussed in previous reviews of the junior cycle, whose work lays a foundation and useful reference point for debate and review this time. An example of this are the outcomes of the junior cycle set out in the *White Paper on Education* (1995) and reiterated in the NCCA's *The Junior Cycle Review, Progress Report: Issues and Options for Development* (1999). These suggest that the junior cycle curriculum should be viewed as having a wider perspective than the mere choice and range of subjects and their examination. Indeed,

the outcomes were seen in that review as informing a curricular framework at junior cycle that was intended to provide a wide educational context for the various subjects on offer and to ensure a smoother transition from primary to second level and from junior cycle to senior cycle. The outcomes of junior cycle were set out on the basis that, on completion of the junior cycle, all students, in accordance with their abilities and aptitudes, will have achieved or experienced the following:

- competence in literacy, numeracy and spoken language skills which will allow them to participate as young adults in society
- experience in various domains of activity - artistic, intellectual, scientific, physical and practical
- formative experiences in moral, religious and spiritual education
- knowledge and supportive guidance in matters of personal health, sexual awareness and relationships
- competence and understanding in practical skills, including computer literacy and information technology
- knowledge and appreciation of their social, cultural and physical heritage and environment
- understanding and appreciation of the central concepts of citizenship
- understanding and appreciation of the value of thinking and learning and a positive attitude towards schooling and the opportunities it offers.

As such these outcomes of junior cycle – which are seldom referred to or at the heart of discussion about junior cycle – combined with the ESRI research and the Minister’s observations on junior cycle, represent as good a starting point as any for discussion of developing junior cycle. The rest of the paper is designed to feed into and encourage that discussion. It comprises three sections. The next section looks at the question of *how* we can go about developing junior cycle and suggests a process for doing this. Section 3 then identifies five pathways for change that invite discussion of *what* should change at junior cycle and how far that change could and should go. The final section is intended to act as a resource for the rest of the paper. It collects some examples of what is currently happening at lower secondary level internationally. The examples have been chosen to illustrate or amplify the process that has been outlined in section two or the pathways described in section three. These examples are simply presented as possibilities, aspects of which might inform developments in Ireland.

2. A process for developing junior cycle

Once the rationale for change at junior cycle has been established, once the *why change* questions have been addressed, thoughts turn to questions of the *what* and *how* variety. What should change? How can we go about changing it? What is noteworthy in the early stages of the discussions about change at junior cycle is that the *how* questions have been as prominent as the ones to do with *what* should change. Maybe this reflects a concern that whatever changes, the change involved should be real and meaningful, deep and lasting. This section of the paper sets out to address the *how* questions by suggesting a process for developing junior cycle.

The *purpose* of any change at junior cycle should be to ensure that all learners at this stage of their lives sustain and further develop a strong relationship with learning; that their growth in and through learning is supported, advanced and deepened. The research about junior cycle considered in the previous section supports the idea that this stage of education is essentially about the experience of learning and being a learner. In the junior cycle years, young people get to build on the learning of their primary years, and prepare for the challenge of senior cycle. But what the research has shown us is that these years are also when students, as they begin to mature, learn more about and think more about themselves as learners and come to a set of expectations about what they can – and can't – achieve in school.

This would suggest that this stage of education should focus more on the experience and quality of learning and be less concerned with subjects and examinations. Of course, there are related and more specific purposes of junior cycle in the areas of inclusion, the promotion of skills, and the encouragement of creativity and innovation in learners. But junior cycle should essentially be about ensuring that learners have experiences that build on the advances they have made in primary education and, in the process of passing from childhood towards adulthood, develop a strong disposition towards and enjoyment of learning. This is the learning point of junior cycle education.

But how can this kind of purpose be pursued in schools and the education system? Ultimately, deep and lasting educational change can only be achieved through, and find real expression in, the experience of learners, the work of teachers and the life of schools. These are the people and the places that are central to the question of whether the envisaged change will or will not

actually happen. It follows that schools, teachers and students must be directly involved from the start in thinking not only about *why* change should take place and *what* will change but also about *how* the change can and will happen. And that involvement has to extend beyond consultation and discussion into ongoing development. So what does this mean for changing the junior cycle?

The process of change should be centred on the students, teachers, school leaders, school communities and other partners who will be the main agents of the change. Essentially, this involves embarking on a developmental process which will result in the junior cycle being changed from within by schools themselves or working together in groups and networks. In all cases, they will be working with an agreed framework that is common to all. A more extensive treatment of the underlying ideas informing this approach to educational change is contained in the NCCA's discussion paper on *Leading and Supporting Change in Schools*.

The change will be rooted in an agreed **Framework for Junior Cycle** that schools, teachers, and very importantly students and their parents are involved in generating, reviewing and improving. The framework will not involve 'starting from scratch' on every aspect of junior cycle education; it will recognise that all realistic change comes about through integrating what we already know with new ideas, and through building on what already works well. In this sense, aspects of the change process will proceed on a phased and incremental basis and will build on developments already happening and experience already gained in junior cycle. The experience of Transition Year is also relevant. But the framework will also provide for dramatic development in new directions by schools. The third section of this paper looks in more detail at the pathways the change may take and explores the question of how far schools and the education system can, could and should travel in these directions.

The process through which this kind of change can occur, while placing primacy on schools as centres of innovation and change and on teachers as key agents and drivers of change, must also recognise that schools and teachers cannot do the change by themselves. This echoes the point made in the NESDO report, quoted in the Introduction to this paper, which referred to the new relationships needed between the 'centre' and the site of 'delivery'. Since the NCCA began working more closely with schools on curriculum development initiatives, we have learned that teachers and schools, while they can do many things, cannot do the change entirely by themselves. Research in many countries and on many change initiatives supports this insight. To engage effectively with junior cycle change teachers need to draw on substantial

professional development and networking with other schools in order to reflect on and integrate the knowledge and experience they and others have gained in their working lives. Professional development also enables teachers to engage with new ideas and thinking in teaching, learning and assessment. Equally, schools as learning organisations need to tap into external sources of support as well as their internal resources. In other words, a combination of approaches, on the one hand devolving greater opportunities for development to schools themselves but on the other ensuring that this is done within a context of appropriate resourcing and external support, should be a key feature of the change process. The harnessing of external support to assist schools in the change process will involve an integration of the expertise available across a wide range of education agencies, organisations and institutions. For example, VEC's could play an important role in supporting or co-ordinating networks of schools, or schools of a similar ethos or in the same place could work together. In the developmental scenario envisaged, the Inspectorate of the Department of Education and Science would have a central role to play in the external evaluation of junior cycle development in schools.

It appears likely that the change process for junior cycle will have at least four stages. While presented in sequence, each stage should also be viewed as developmental. In other words, in keeping with the emphasis in this process on communication, consultation and development, it is likely that the stages will overlap somewhat and that ideas generated in one stage of the process may change the content or sequence of what will happen in another.

Stage 1: Big ideas about change at junior cycle

The first stage, which will be completed by early 2010 at the latest, involves developing the big ideas about change at junior cycle and about how that change might happen. The Minister addressed Council in June 2009. Since then, through discussions at Council and at its Junior Cycle Review Committee, the ideas contained in this paper have been generated to feed into and provide a basis for wider discussion and action. The paper has also been informed by looking at relevant features of current international developments in lower secondary education in a number of countries. Following consideration by Council this paper will issue to the Minister for Education and Science. It should also provide the basis for Stage 2 of the process.

Stage 2: Sharing and discussing the big ideas

Opening out the ideas about developing junior cycle for wider discussion, debate and ultimately action is essential. The kinds of change under consideration will not happen without extensive reflection and debate. So, this stage involves extending and deepening debate about junior cycle education among the education partners and the wider public. This will take the form of consultation on the ideas in the paper and will feature a symposium on junior cycle education planned for Spring 2010. The ideas from the paper will be presented in a number of forms, including podcast material as well as a booklet summarising the key ideas from the paper for a general audience.

The aim of this debate is to arrive at a shared understanding of the kinds of change and areas of change that will be involved and an agreed platform for and approach to change among the education partners, parents, and wider public interests. At the end of this process we will have the Draft Framework for Junior Cycle. This will include statements about what is studied and when, about the nature of teaching and learning in junior cycle and about the components of the curriculum such as subjects and skills. It will include how evidence of learning is generated, presented, interpreted and shared. It will say something about the qualification/s to be awarded at the end of junior cycle. This will be the framework within which schools will commence their thinking and planning for developing junior cycle in their school. In recent years, NCCA has had considerable experience of developing curriculum frameworks of different kinds, Aistear – the Framework for Early Learning being the most recent example, the Key Skills Framework at senior cycle being another. These frameworks are characterised by their flexible, enabling nature, by the clarity with which they describe the curriculum or skills in question, and by their development in partnership with those involved in the relevant sectors. Material related to these frameworks and others are presented in Appendix 1.

The generation of the Draft Framework for Junior Cycle could be completed by the end of Year One¹ following the commencement of work on junior cycle development. The process of change would also need to be agreed at this stage.

¹ A generic timescale has been used in suggesting the duration of the various stages of the process. This reflects the fact that, at this stage, no decision has been made to proceed with the development of junior cycle along the lines outlined in the paper.

Stage 3: Schools working on their big ideas for junior cycle

As schools will be the key sites of change, teachers the key agents of change and students the key participants in change, the third stage involves a number of schools thinking about how their junior cycle is to be developed and, in the process, starting to change it. They will be the leaders of this process themselves but will be intensively supported by external agencies in undertaking this task. A substantial number of schools, at least 50, perhaps 100, should be involved in this preparatory work. Some schools may decide to undertake the development work largely by themselves. Others may work more closely with other local or linked schools in this context. All would be part of an overall network of schools involved at this stage.

The outcome of this stage will be the generation of a range of models for junior cycle, customised to the various sizes and types of schools, to the varying needs of schools at different stages of their own development, with different dispositions towards development, and with different levels of human, capital and financial resources at their disposal. The common feature of these models is that they will all have been developed within the context of the Draft Framework for Junior Cycle. But, as the framework will be flexible and enabling the models will reflect the differing ways in which junior cycle in particular schools will be planned for and envisaged.

Each model will describe the kind of educational programme and experience students in the school will follow. It will include descriptions of the kind of learning, teaching, curriculum, assessment, qualification and learning environment involved in the programme. Because the models will reflect the perspective, situation and context of the schools involved, they are likely to be on a developmental continuum ranging from the *cautious* to the *exploratory* to the *adventurous*. This degree of difference, reflecting the best fit with the school in question, is to be encouraged. For example, schools at the cautious end of the continuum may plan for a junior cycle which only differs from their current programme in small ways or in particular aspects while schools at the adventurous end of the spectrum may plan for significant curriculum change involving placing a very strong emphasis on skills or introducing new curriculum components or reframing the first year of junior cycle as a bridging year. Again, the important point here is that across these models for junior cycle, schools will comply with the Draft Framework for Junior Cycle, thereby ensuring that all students are taking a junior cycle which is common in certain essential aspects and that, in the process a baseline is established in terms of equality of access and opportunity. In this sense, the framework must achieve an ideal level of commonality across schools that ensures that allowing schools to offer different versions of

junior cycle results in a more equal and more inclusive education system. Diversification should not lead to stratification or to deeper inequalities in the system. Thinking through and planning for the models would also contribute to the generation, at system level, of an accurate picture of the resources needed to introduce the kinds of change envisaged. This is a critical element of the process. In order for the development of junior cycle to have the confidence of all involved, it is essential that the resources needed to provide for greater flexibility for schools and teachers are quantified and their availability planned for, through a combination of the re-allocation and redistribution of existing resources and the generation of new resources.

The overall value of this stage of the process is that it places the impetus for development firmly in the hands of schools, it contributes through feedback to the finalisation and improvement of the Framework for Junior Cycle, and it provides important information on resourcing. But above all it commences the process of development, it builds momentum, because once schools start to generate good ideas, they also generate discussion by sharing them with other schools, and they tend to move as quickly as possible towards their introduction.

It is envisaged that this stage of the process could take place in Year Two of the work on junior cycle development and that it would take a full school year to complete.

Stage 4: The framework and models in all schools

The fourth stage sees the schools that were involved in Stage 3 commencing the introduction of the models 'live' in their schools. In this stage, the wider dissemination of the approach taken in the third stage to all schools will also take place, the main difference being that the finalised Framework for Junior Cycle and the various junior cycle models will be available for the other schools to use in working on developing their own junior cycle. At this point in time it is difficult to set out the best approach that could be taken to that wider dissemination to all schools. Much depends on what is learned during previous stages. The clearest option or choice is whether the wider dissemination would proceed in all schools simultaneously or would be phased in across a couple of years.

This stage of the process, specifically the introduction of the junior cycle programmes developed by the schools involved in the model-building process, could take place in Year Three or Year Four of the work on junior cycle development. During this period the wider group of schools or all schools could also commence their thinking and planning for developing their junior cycles.

3. Pathways towards change

We know that the imperative is to support schools in developing junior cycle in ways that improve on what we already have and therefore on the educational experience of all learners at this stage of education. But what does that mean in tangible terms? A key issue for consideration is that of degree. How much change are we talking about here? Our tradition in Ireland has been of slow, steady, incremental change. We do that sort of change reasonably well, although if you take a look at the *Leading and Supporting Change in Schools* paper you will see that sometimes, at the end of a slow and steady process, it can feel like very little has changed. Does junior cycle need the slow and the steady or is something different required?

Learners have a strong foundation in the Primary School Curriculum. The emerging senior cycle with its key skills, curriculum options and broader forms of assessment is well on its way. The 'bit in the middle' offers possibilities for some new thinking that might go beyond simple reform, or improvement, towards the 'new' and the 'different'. How far we go depends on how far we *want* to go, how far we judge that we *should* go, and how far we feel we *can* go. It may involve taking a small move, moving further or taking a sizeable step as suggested in the five pathways that are set out in this section. How far we travel along each of these and, of course, whether there are other pathways too – that's a matter for debate!

A word about the diagrams that follow each pathway. The diagrams describe what movement along a pathway might look like. The text at the different points should not be viewed as targets. The three points should not be understood as staging posts that schools are envisaged as reaching. Rather the pathways should be viewed as a tool to think about the big ideas at junior cycle and that schools will be able to use as a thinking and planning tool.

Pathway 1: From curriculum conformity to schools having freedom to be different

In the junior cycle of most schools, all elements of the curriculum are developed centrally, implemented universally, and monitored (through examinations and inspections) externally. School communities, including students, teachers, parents, and school management are in receipt of this package and make selection decisions influenced by a series of school level and national factors. In this decision making process school tradition and policy is the most significant factor. Other factors which influence curriculum choices include; regulation (there is a list of subjects set out as required for different school types), parental preference, and resource availability (time, teachers and facilities). This results in an effective alignment between the school curriculum and national examinations, and between schools. It also provides students with greater ease of mobility between and within schools and to a certain extent may reduce the scope for inequality within the system.

Schools also consider students' learning needs or particular capacities as the most significant factor impinging on their curriculum decisions. However, the list of options in terms of available curriculum components is fairly unyielding. It offers school communities very little scope to respond to any particular curricular needs in customised ways, let alone take a more active role in providing learning opportunities for their students which reflect more accurately their learning needs or local and community contexts. Some students in some schools do follow a slightly more flexible mediation of the Junior Certificate, the Junior Certificate School Programme, aimed at supporting students in more managed learning contexts with shorter term learning goals, and through this engaging them more fully and retaining them in junior cycle.

In the current definition of subjects, success is represented in terms of the mastery of an ever-increasing amount of knowledge without significant reference to the quality of the learner's engagement with content. The important role, indeed responsibility, of the curriculum in identifying and assisting in the transmission of a sound knowledge base to all learners must be recognised. The knowledge engaged with in schools embodies the best achievements of humanity over centuries of endeavour in understanding the world we live in, each other, and the life we lead. Schools, among others, carry the responsibility of passing this knowledge from generation to generation. The foundational disciplines and subjects, while not being the sole vehicle for the sharing of this thinking and understanding, will continue to have a role. A future

junior cycle must continue to provide learners with the opportunity to acquire a significant body of culturally and developmentally appropriate knowledge, continuing the work begun in primary schools. It must also however ensure that they have a deep engagement with that knowledge rather than a passing encounter that has short-term retention (for examination purposes) as its overriding aim. By prioritising this, schools move the curriculum discussion onto the quality of learning and away from considerations that concentrate solely on what subjects and how many are offered. The latter debate appears to offer schools very limited scope for innovation, for improving the quality of learning and teaching and indeed frequently leads to chronic overloading of the curriculum with increasing numbers of subjects, because in the absence of a clear identity for junior cycle doing 'more' invariably becomes the only viable way of doing it 'better'.

To assist schools in this endeavour, the nature of curriculum specification should change, moving towards specification that is less content heavy, that articulates learning outcomes clearly and concisely, that features key skills to a significant extent, that is more flexible in terms of requirement, and that provides a sound basis for planning and for generating evidence of learning. Schools of the future should have the freedom to develop into responsive learning environments where knowledge is combined with skills; preparing young people for studying and living in increasingly complex environments.

A move to counterbalance the influence of subjects on the nature of the junior cycle curriculum would not be the first of its kind. An attempt (begun in the early nineties) to introduce a framework for junior cycle planning and provision based on eight areas of experience failed to gain, much less maintain, a foothold in schools. The areas of experience themselves (eight in all) were easily understood. However what was less clear was how they would provide the basis for structuring learners' experiences, their intended relationships with subject disciplines in terms of planning and teaching, as well as the implications for staff deployment and qualifications. It may also have been the case that the areas of experience concept came to schools as a fully formed solution providing the answer to a problem that was not immediately recognisable as such by schools and teachers at the time.

The introduction of a Framework for Junior Cycle will provide schools with an opportunity to take a greater role in planning, monitoring, and reviewing their curriculum. This might even mean developing some element of the curriculum themselves. It will involve reduced levels of curriculum requirement. In this regard, the role of the Framework for Junior Cycle would be

crucial in setting out the scope for school innovation and points of reference in the planning, monitoring and reviewing process. Allowing schools to choose and/or develop material in this way would be a recognition that they have the experience and expertise to take greater control over what their students are learning and how. A new balance would be struck between curriculum elements that a school develops itself with its own situation in mind and those it includes arising from regulation. In such a situation, the freedom taken on by the school allows it to bring the learning of its students to the fore in curriculum decision-making. It could also facilitate schools deciding to orientate their curriculum towards a degree of specialisation; for example, a school might emphasise learning experiences and curriculum components in the sciences or in the arts. Of course the degree to which they would be free to engage in this kind of specialisation would be determined by the Framework for Junior Cycle and that would be informed by a more extensive debate on whether 'specialisation' is desirable in junior cycle.

Key skills have become the focus of developments at all levels of education systems around the world. In Ireland we have recognised this trend by consolidating a skills emphasis in early childhood education, the primary school curriculum and senior cycle. In junior cycle, skills have a role to play in deepening the students' learning and in making them more self-aware as learners and this will contribute to equipping them to take up the challenges of further study, in senior cycle and beyond. Junior cycle development should involve a blending of subject content knowledge, specific subject skills, and more generic skills (such as the Key Skills currently being considered for senior cycle) and this can assist in achieving the education outcomes appropriate for young people in the 21st century. Skills at junior cycle should also be seen as a means of promoting continuity with the primary school and senior cycle.

The senior cycle key skills could form an important aspect of learning in junior cycle

- being personally effective
- working with others
- critical and creative thinking
- communicating
- information processing.

However, there may be additional skills which are also especially relevant to the junior cycle learner; those that relate to areas such as

- creating and innovating
- using (and learning through) Information and Communications Technology

- developing personally and socially
- improving literacy and numeracy
- behaving ethically
- taking leadership

Of course this list is not finite and if the junior cycle curriculum of the future is to be responsive to changing social conditions, it will be the focus of continued debate as to its content and structure. Whereas debates in the past usually concerned themselves with the content of syllabuses or whether subjects should be compulsory or not, the debates of the future may very well focus on the extent to which the designated skills remain relevant or the requirements of ongoing modernisation. The adoption of attributes of “local innovation” mentioned earlier may see the debate and discussion about the relevance or replacement of skills more frequently take place in schools.

A reformed junior cycle must describe the skills involved in accessible, relevant terms and suggest how they should be represented effectively and imaginatively in the curriculum, including how students would display tangible evidence of learning in respect of the skills.

An important first step in moving away from an unnecessarily extensive centralised control of curriculum is for schools have a greater involvement in the formulation and monitoring of their own junior cycle curricula. Schools that have greater freedom to make curriculum decisions are better positioned to forge stronger relationships with the communities within which they operate. They may draw on the experience and expertise of groups and individuals who can offer students additional, complementary learning opportunities. Of course, having a more customised curriculum which prioritises explicit community links has the effect of integrating the school into the fabric of the community, making it more likely that the activity that happens inside the institution will be relevant to the learners’ lives outside.

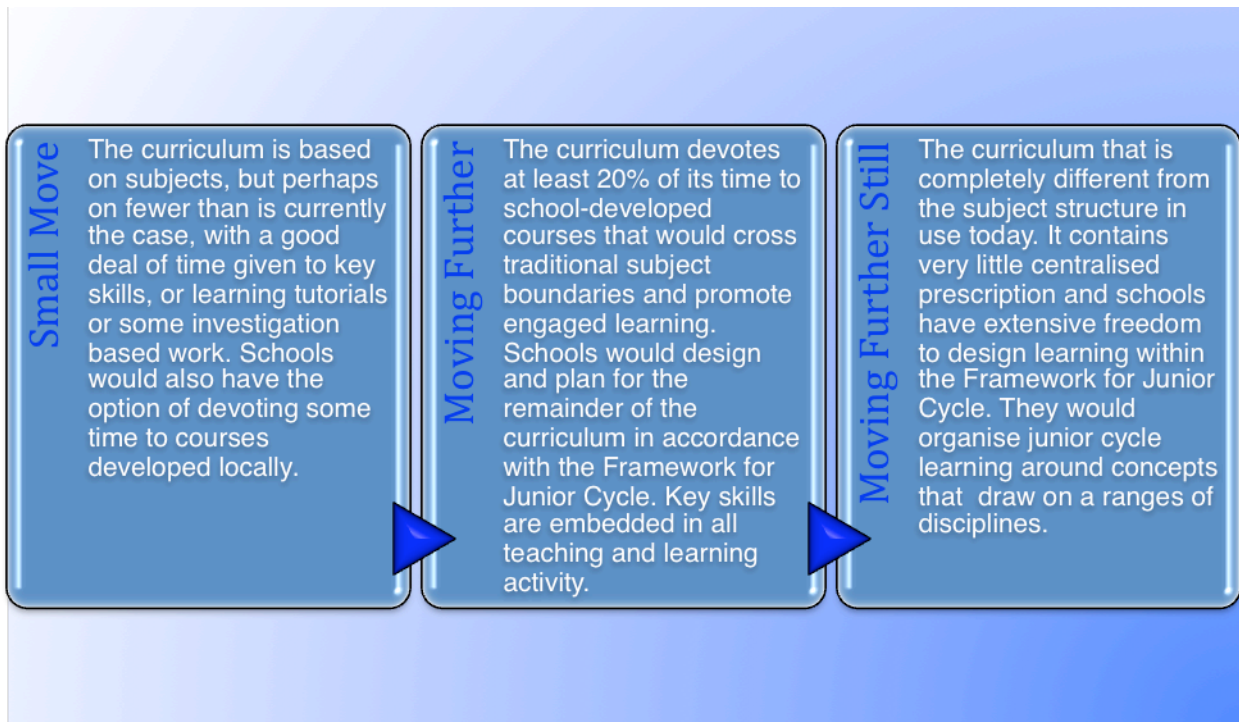
In putting in place a junior cycle that is more adaptable and responsive to the needs of learners, the very differences between learners to which we are trying to respond more effectively must not form the basis for some learners being disadvantaged. Nor should the setting of a school be allowed to be a disadvantage when it comes to situating the curriculum more obviously within the community. Not all schools have access to the same, or even roughly equivalent, community resources. This is not an argument that should undermine the idea of situatedness outlined above but it does point to the need to offer support to all schools according to their needs. It is

important to recognise that a movement towards providing schools with increased levels of participation in curriculum planning and development raises issues of equity for students between schools and possibly in some cases within schools. But the Framework for Junior Cycle plays a very important role in establishing an initial level playing pitch in this context.

Increased levels of curriculum freedom and greater discretion about the use of the resources made available to them cannot be thrust onto unprepared, unsupported schools whose limited involvement with curriculum development to date has not prepared them to take advantage of greater responsibility in this area. For example, one of the most significant benefits of a school taking responsibility for its curriculum is the opportunity it provides for increased internal democracy; the real, active involvement of all members of the school community in shaping the way that learning is structured. Harnessing the potential of this increased involvement however, requires a significant move away from current practice in many schools and is unlikely to come about spontaneously. Schools will be encouraged to be different and to make full use of the freedom being offered.

In a future junior cycle therefore, schools will need to be assisted in making the most of the opportunities available to them, in negotiating the pathways that are currently less numerous and in forging new paths. In this context, the DES and NCCA would adopt a role of supporting; moving away from prescribing curriculum for universal coverage to setting the parameters for school-focused design, posing the key questions to schools, drawing attention to the need for multiple, more customised curriculum responses and then supporting those working in schools to find appropriate solutions. As the paper *Leading and Supporting Change* describes it, the DES and NCCA should be *viewed more as facilitators, supporters and encouragers of collaboration to address challenges being faced by schools on a daily basis* (p. 9).

The pathway from curriculum conformity to schools having freedom to be different might look something like this.



Pathway 2: From the Junior Certificate to qualifications designed for all

This pathway looks at moving from the current junior cycle qualification, the Junior Certificate, based solely on performance in the Junior Certificate examination, towards the development of a qualification or qualifications based on multiple sources of evidence of learning. The latter form of qualification would accommodate the kind of learning, evidence of learning and curriculum flexibility described in other pathways.

The Junior Certificate is currently the single, recognised award or qualification available in schools at the end of junior cycle. It is placed at Level 3 of the National Framework of Qualifications. That framework sets out the learning indicators for qualifications at Level 3 as having to do with the breadth and kinds of knowledge gained and the know-how and skills involved. The indicators also refer to the competence of the learner in terms of the contexts they can learn in, their role as learners in relation to others, and their engagement with and insights into learning and themselves as learners. The learning indicators at Level 3 and other levels of the National Framework of Qualifications are outlined in Appendix 2.

But the Junior Certificate has become more than just an examination and qualification. It has come to dominate schooling at junior cycle in ways that were never envisaged and that are inconsistent with the aims and purposes of junior cycle education. It has come to act as a major determinant of how schools organise and run the junior cycle. It is not only embedded but tends to act as a determinant of the structure, culture, and procedure of junior cycle schooling. In some ways, this is a good thing. It provides a focal point and directs much of the learning that takes place in junior cycle. It acts as a central motivating force at this level for schools and teachers and as a source of at least extrinsic motivation for students. It also acts as a preparation for the rigours of the Leaving Certificate examination. It is widely recognised in these contexts by the general public.

But the ESRI research on the junior cycle experience of students has drawn attention to some of the consequences of this. Significant numbers of students disengage from the particular forms of learning and examination preparation involved; some as early as second year. Commentary even from those who do well in the Junior Certificate examination that they don't find the experience very enjoyable and that they are motivated less by any emotional attachment to the

learning involved than by the idea of doing well in the exam. All in all, in its current form, the Junior Certificate appears to have a disproportionate and negative effect on what students learn as well as on how, and indeed why, they learn it. It has resulted in forms of learning that are too focused on preparation for the examination, especially in third year, and less focused on the depth of the relationship being formed with learning itself. Furthermore, the intensive focus on examination-led learning happens in relation to a stage of education where the examination carries much lower stakes than its senior cycle equivalent. There is an inherent contradiction and inconsistency in having an examination that looks like a school leaving test, and feels like one, but takes place in a context where the stated policy is to have everyone stay on in school. Should it really look and feel like that?

Of course, the inevitable question that arises in this context is if we didn't have a Junior Certificate examination what would replace it? Or worse! If we didn't have a Junior Certificate examination would we, in a few years, have to reinvent one? From an assessment and examinations perspective these questions have been addressed in the discussion on evidence of learning. From a qualifications perspective they are discussed here.

The pathway on evidence of learning establishes the rationale for moving from almost a singular focus on examinations to looking at multiple sources of evidence of learning. In this pathway, the rationale underpinning discussion of a move towards broadening the qualification at junior cycle reflects the concern that the existing Junior Certificate does not cater for all junior cycle learners and has not developed over the twenty years or so of its existence to keep pace with developments in the world of qualifications. Since the Junior Certificate was introduced the world of qualifications in Ireland and elsewhere has fundamentally changed.

At that time, at least in the context of schooling, the words qualification and certification were inseparable from examinations. Hence the qualification awarded at the end of the junior cycle of schooling was called the Junior Certificate, the same title as the examination. Today, Ireland has its own National Framework of Qualifications (NFQ). All education and training awards or qualifications are placed on the various levels of this framework and contextualised by the framework. Recently, the Irish framework has become one of the first in Europe to be formally aligned with the European Qualifications Framework for Lifelong Learning (EQF). This enables our qualifications to be understood and recognised in the light of other qualifications across Europe.

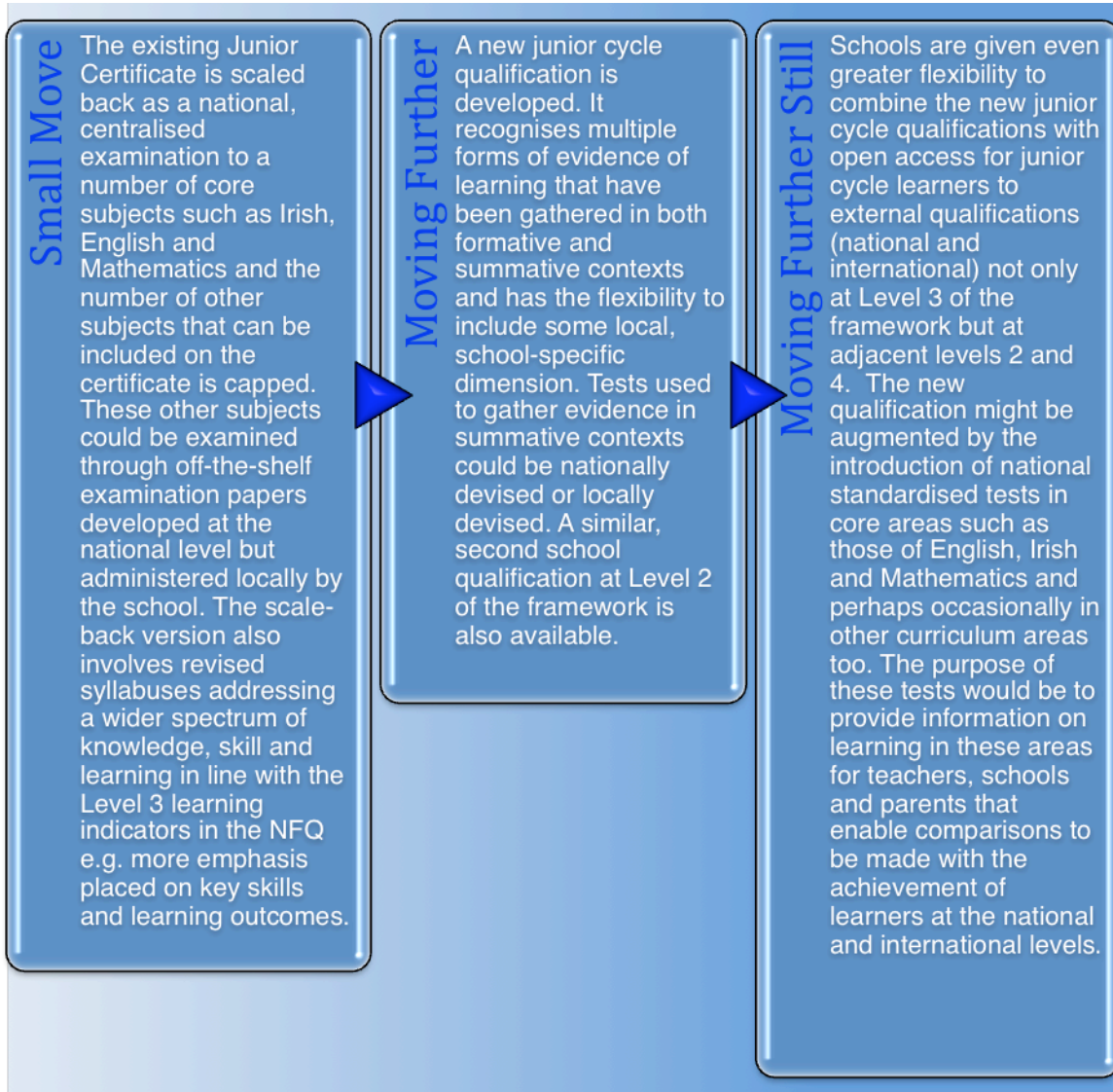
The emergence of qualifications frameworks influences developments in several aspects of education relevant to junior cycle development. They place a strong emphasis on outcomes-based curricula and skills and competencies where learning is described in terms of what the learner will be able to do. They encourage real engagement with the question of the standards, levels and evidence of achievement that apply to particular educational programmes. They encourage attention to the volume and duration of curriculum components. They promote attention to the principles of access, transfer and progression in the interests of learning and learners. These dimensions of qualifications frameworks resonate strongly with the areas discussed in the other pathways for development at junior cycle.

But if there is one dimension that the existence and growing influence of frameworks has introduced it is that of flexibility and this is of enormous relevance to the junior cycle developments. *We no longer have to think about a junior cycle qualification as relating solely and directly to an examination!* We can think about the kind of learning and the qualities of the learner that we would like to see rewarded by a qualification and about the best ways of gathering evidence of achievement of that learning and of those emerging qualities in the learner; in other words we can look beyond grades in terminal examinations as the only expression and source of recognition of achievement. We can reflect on the question of how much of the educational programme at junior cycle should be part of the qualification and whether parts of the programme should be unrelated to the qualification? We can legitimately address the issue of whether, given the wide-ranging ability of learners at junior cycle, it is one qualification or more that is needed. For example, should new or related junior cycle qualifications at Level 1 and 2 of the NFQ be introduced to meet the needs of specific groups of learners with special educational needs? Are there students whose learning progress is advanced at a rate that justifies their pursuing some form of Level 4 qualification in an area of particular interest to them during the time they are in junior cycle?

However far we wish to go along this pathway, a junior cycle qualification that recognises the achievements of learners is essential, particularly as the end of junior cycle schooling currently comes towards the end of the compulsory period of education². But the central consideration and spur to action is that a qualification at junior cycle need not remain synonymous with a centralised, national examination, particularly in the context of the lower stakes of junior cycle schooling.

² It is worth noting that as the school leaving age is now 16, the Junior Certificate examination no longer coincides with the end of the period of compulsory education in the case of most learners.

The pathway from the Junior Certificate towards qualifications designed for all might look something like this.



Pathway 3: From the three years in junior cycle to three years of junior cycle

All the pathways lead ultimately to the question of how we structure and frame the junior cycle in schools. Should we continue to see junior cycle as a three year programme or are there variations and developments of this which should be pursued?

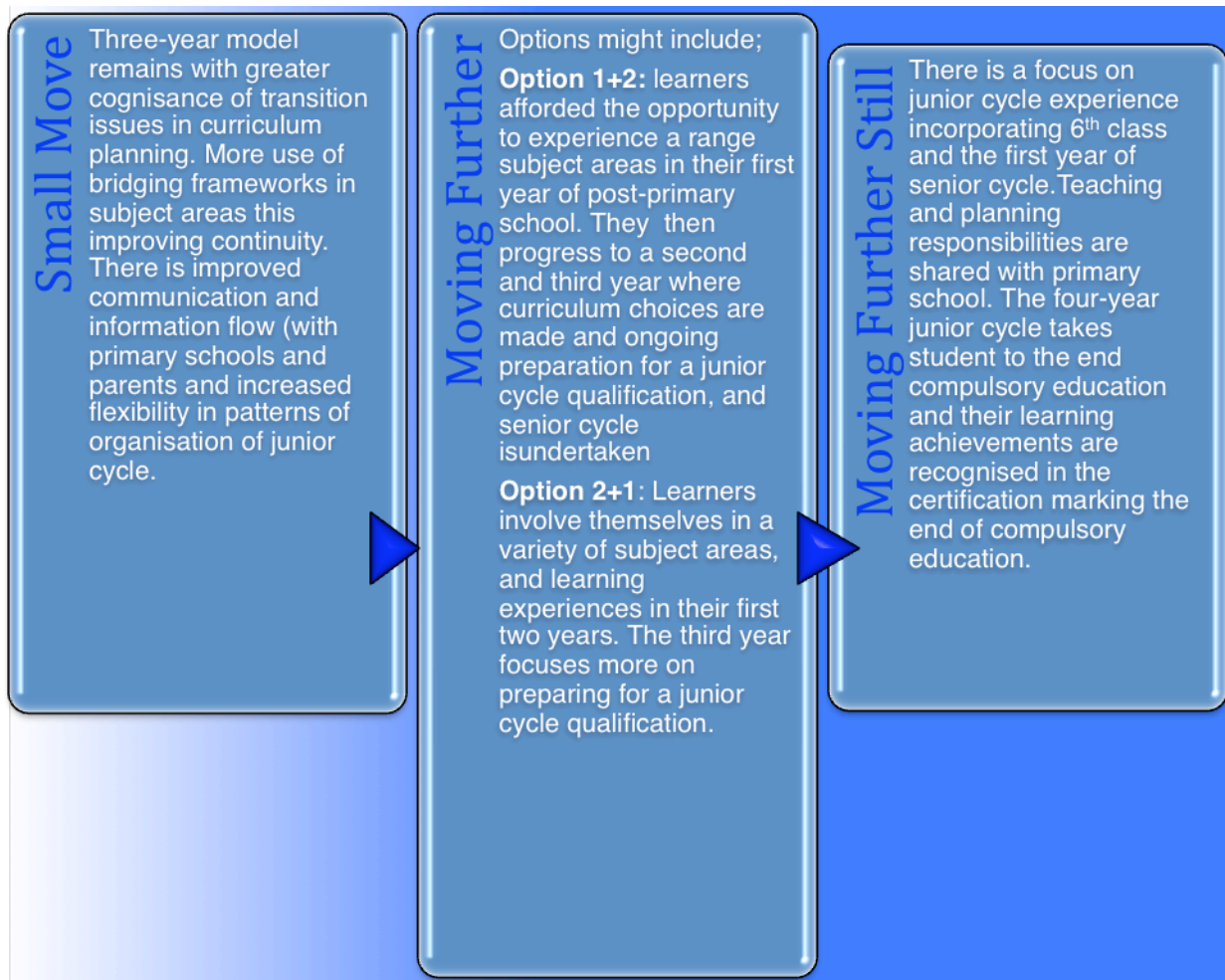
We have inherited a three-year junior cycle from pre-Intermediate Certificate days. Now that an opportunity arises to look anew at the lower secondary stage of post-primary education, we can reflect on the appropriateness of the current structure, and also the patterns of organisation within those structures. Three, sometimes competing, considerations emerge in suggesting possible approaches to presenting the junior cycle in a manner more suited to the 21st century student. What structure will be most accommodating of students as they transfer from primary school? How can junior cycle be organised to make the movement from primary and towards and into senior cycle most coherent? And most importantly, which arrangement/s of the junior cycle serve to provide learners with the greatest benefit from their time in school? We may consider various structures for junior cycle, including those outlined below, and decide that the current arrangement of three years for all is the best option, but the issue merits consideration.

The research carried out by the ESRI into the experiences of students in junior cycle indicates that all students in their first year of junior cycle experience some discontinuity and disruption, with some having serious and enduring problems in making the move. It may be that the abrupt move from one to another doesn't do the learning (and the young person's experience) any favours. However, students in schools with carefully developed integration programmes experienced a smoother transfer from primary school with consequent benefits to their learning. A range of measures taken by schools had the effect of blurring the dividing line between the structures of the respective school systems. It could justifiably be said that the way the programmes were merged had a significant role to play in assisting students settle into post-primary education.

While the tensions associated with transfer from primary school have been debated for some time, they should not deflect from the role of junior cycle, especially the later stages of it, in preparing students to progress successfully into senior cycle. An element of preparation for progression to the senior cycle will come with curriculum innovations at junior cycle such as an

increased emphasis on key skills, but the structure of the junior cycle will also need to be such as to begin the lead in to senior cycle as the student moves through the latter stages of the cycle. This in turn might call for a re-evaluation of the relationship between the last year of junior cycle and the first year of senior cycle.

Reflection around the patterns of organisation within the structures provided at junior cycle also needs to be considered. Schools, in organising a curriculum that best meets the needs of their students, would take account of the purpose and nature of the learning, and also, how they can make best use of the resources and expertise available. This could involve consideration of: more flexible timetabling; the inclusion of shorter and longer class periods; the provision of both continuous subjects and discrete modules; teachers team teaching and teaching outside of their subject expertise, and; the teaching and learning environment—where teaching and learning happens. The pathway from the three years in junior cycle to three years of junior cycle might look something like this.



Pathway 4: Towards a renewal of learning and teaching

The fourth pathway has to do with renewing learning and teaching at junior cycle. Other pathways – about curriculum and evidence of learning – are closely connected to it but the identification of junior cycle as a stage where students need to deepen their relationship with learning means that learning and teaching should be a particular focus. Teachers use many approaches to learning and teaching in seeking to promote engagement by learners. The ESRI research shows that students readily recognise this and are also quick to identify the teaching approaches that most engage them and help them to learn.

Students reported that they learned best when teachers explain things clearly, make learning fun, do practical activities, encourage them to express their opinions in class and allow them to work in groups. ‘Teaching from the book’ or didactic approaches to teaching was viewed by students as less helpful in their learning. In the recent TALIS research (with 24 participating countries) not only did Irish teachers, in the context of junior cycle, record greater use of ‘structuring practices’³ than any of the sub-group of comparison countries (N=6), they also ‘showed the strongest preference for structuring practices across all the TALIS countries’ (p 78). The report concludes that this affinity to structured practice may be explained by, among other things a belief that their subject is unsuited to other ways of teaching and learning, their classes are too large for effective use of alternative approaches, and the need to prepare students for examinations precludes other (more expansive) teaching approaches (p 99). It also concludes that a lack of awareness of the other approaches or of their need for related professional development may also be contributory factors for teachers.

It would appear that keeping students interested in and focused on the learning process is supported by the use of a range of active teaching approaches. These approaches also reflect continuity with those used in primary education and have a greater link with the ways students learn outside of school. In their everyday lives students experience an array of learning approaches. For example, when finding out how to use their mobile telephones, iPods or video games, they almost never refer to the official manual but rely on intuition, trial and error, sharing ideas, working together or browsing the internet to come up with an effective solution.

³ Structuring practices are described as one of three (not necessarily mutually exclusive) sets of practices, the others being ‘student-oriented practices’ and ‘enhanced practices’ (p77). Constituent items of structuring practices include explicitly stating learning outcomes, focus on checking homework and exercise books, reviewing previous lesson, use of questioning to check for understanding.

Creating *meaningful* learning for students is the principal aim of all learning and teaching activities. A vision of meaningful learning starts, according to Hargreaves⁴, with a principle of making visible and valuing students' own ideas and interests. Creating and building on the relationship between 'school' knowledge and the student's 'informal' knowledge is central to the search for more effective learning and teaching approaches. Teachers have always sought to engage learners by adapting their approaches and curriculum to make them more relevant to learners' needs and interests; finding out what is relevant to the learners and trying to draw on the abilities and experiences they may have developed elsewhere in their formal education and life outside of school. The process of making these connections as well as the integration of the congruent learning they uncover, allows teachers and learners to construct new meaning together.

Students have told us what helps them to learn best. By reflecting on this insight, schools can go about creating a learning environment that would support these approaches. Experience from the work on key skills at senior cycle has shown that focusing on key skills embedded in subjects encourages both teachers and students to reflect on the learning process. But in order to make space for the kind of learning and teaching that leads to deeper engagement, other aspects of the junior cycle will have to change. At a very basic level, time is a finite resource and many teachers respond (as the TALIS report indicates) to calls for the use of the kind of approaches suggested by the ESRI research with the frequently justified assertion that *there just isn't time*. Research on junior cycle has established that students can take an average of twelve subjects with some taking as many as fifteen. *Is this volume of subjects warranted?* In practical terms, moving towards greater engagement with different kinds of learning and teaching has a lot to do with making progress on other pathways discussed in this section of the paper.

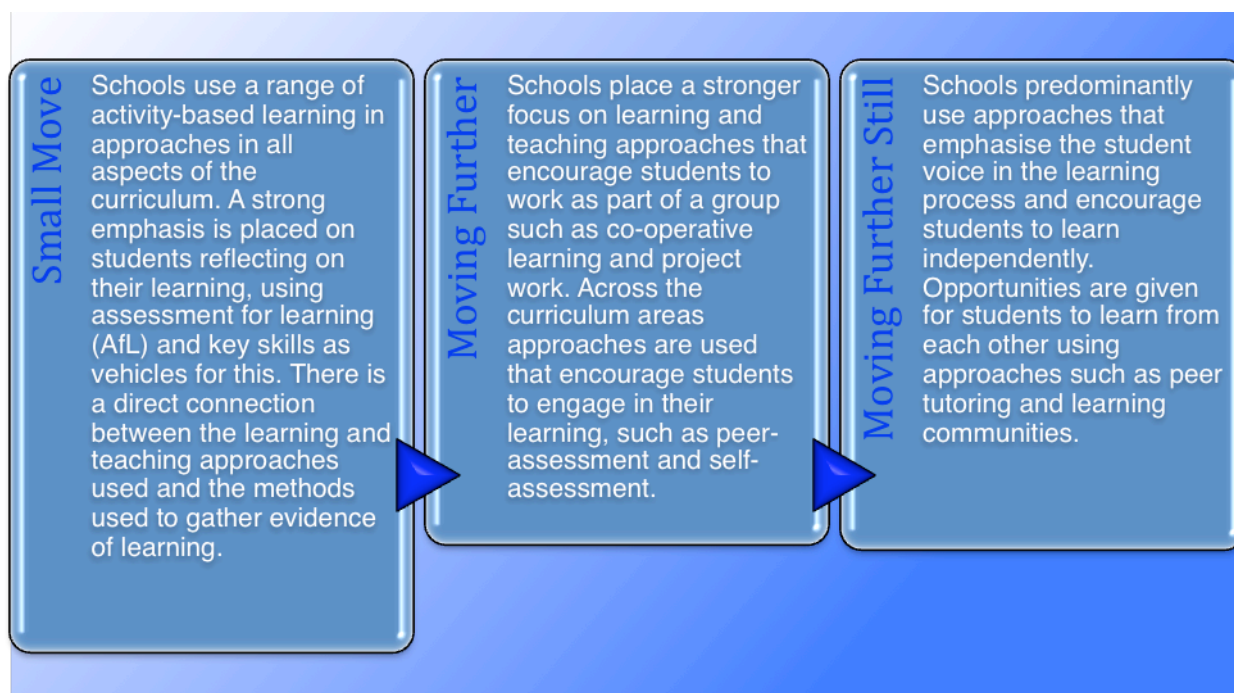
But, in more ambitious scenarios, the students' engagement can go beyond the actual task of learning. In bringing the decisions about what constitutes the junior cycle learning experience closer to the learner, schools could foster a sense of ownership and joint responsibility that would surely improve the relationships that teachers (TALIS, p91) and students (ESRI research) rightly identify as valuable. How different a school might be if more responsibility was given to students in deciding *what* they learn, *how* they learn and *where* they learn? Engaging students in their learning by enabling and allowing them to lead, negotiate and choose *how*, *what* and

⁴ Hargreaves, Andy & Shirley, Dennis, *The Fourth Way: The Inspiring Future for Educational Change*, SAGE:USA (2009)

where they learn is known as co-construction. Co-constructive approaches are more frequently used with older students but, taking account of the maturity levels of learners in junior cycle, students could still be allowed to participate in negotiating on *how* and *what* they learn. For example, students might choose to learn through collaboration with peers or they might take responsibility for choosing the kind of projects they could work on. If they had such choices, it is likely that they would choose to organise that interaction, report on it, and present the outcomes of it using ICT.

One of the aims of co-construction is to support the student in becoming more self-directed in their learning. Complete self-directed learning is something that is developed over time and with more maturity but learners, even at this stage of education, can be supported in the move towards more independent learning through approaches such as peer tutoring. This encourages students to share learning with each other, to receive and use feedback from their peers and to approach learning tasks from different viewpoints.

Moving along a pathway towards renewal of learning and teaching at junior cycle might look something like this.



Pathway 5: From generating an examination grade towards generating evidence of learning

If learning at junior cycle is to evolve in this way then one of the essential supports for this will be the gathering of evidence about how well students are learning. A junior cycle that facilitates greater choice for schools in how they think about and plan for learning will also need to include some choices as to how they can generate and use evidence of that learning.

In a school that uses the Framework for Junior Cycle to embark with enthusiasm on the pathway towards a renewal of learning and teaching and places, the principal consideration will be how to generate evidence that gives both the learner and the teacher an insight into what is being learned and how that learning is happening. In such a school, this kind of evidence would be generated throughout junior cycle. We know that aspects of this process are going on in many post-primary schools already, but we also know from our work with schools on AfL, that such evidence can pass unnoticed, or that it is generated only by teachers! Of the many challenges faced by the 24 schools leading the Project Maths initiative, it is the process of gathering evidence of what and how students are learning in mathematics that is proving among the most difficult for teachers. None of this is surprising. In a system where most evidence of learning is generated in the context of an examination at the end of junior cycle, which in turn is gathered by an external examinations body (the SEC), interpreted by them and reported on as a grade, the message is clear. Generating evidence of learning is not the business of schools, nor the concern of teachers, or learners.

In a school moving towards co-construction the message is different. Everyone involved gives more attention to generating, gathering and interpreting the evidence of learning. Reporting to parents on that evidence also becomes a process in which the learner is involved. Generating evidence for those outside the school and by those outside the school is also important, but the means used reinforce and support the processes that happen within the school. It is these that matter most.

A Framework for Junior Cycle that would give schools some choices about how they organise their curriculum at this stage of education would represent a challenge for any process of generating and gathering evidence conducted from outside schools – by the SEC for example. So schools would have to be provided with choices in relation to gathering evidence to support

that local flexibility. Schools could generate evidence in many ways – including by means developed outside the school, for use in and by all schools. But they would use them as they needed to, to suit the requirements of their circumstances and how they are using the Framework. Whatever approach is taken, statements of students' progress and on their learning will have to be made; to the student as part of the learning process, to parents to provide them with a picture of their child's progress, to the school for a number of purposes including planning and accountability, and to the authorities who are responsible for awarding junior cycle qualifications.

Another dimension of the process of gathering evidence of learning is the role that can be played by standardised testing. In primary school pupils must take standardised tests in English and mathematics on at least two occasions. In addition to this testing at school level, the National Assessment of Mathematics Achievement, and the National Assessment of English Reading conducted by the ERC for the Department of Education and Science provides important information on system effectiveness. In the absence of nationally administered standardised tests in post-primary school, the outcomes of the Junior Certificate examination have become the chief means of providing information on the effectiveness of the education system at this level. Participation in the international assessment known as PISA organised by the OECD is also important.

Ongoing research on standardised testing at another point in compulsory education will pave the way for a decision to be made on whether students at junior cycle will also undergo another set of standardised tests. The options in this regard appear to be numerous and dependent to a large extent on the purposes for which the tests are being administered. Standardised tests are either sample-based or census-based and are used to generate evidence of achievement relative to other students of the same age. In a sample-based assessment, students are selected as representative of the specified grade or age levels that are the focus of the assessment. In a census-based assessment, all (or nearly all) students, usually at specific grade or age levels, participate.

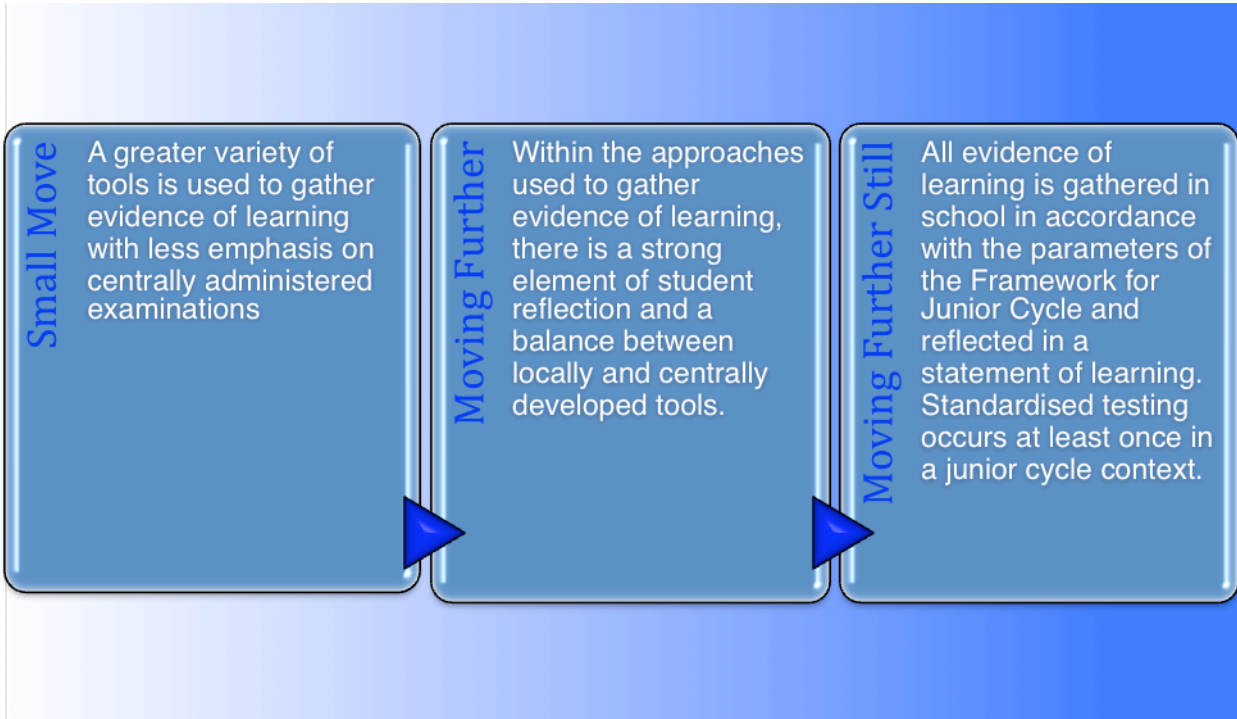
While the need to use evidence of learning for the purposes of awarding qualifications remains important it should not overshadow its wider role in learning and teaching. Confining the discussion to the former doesn't provide a forum to reflect on much innovative work being done in schools and to consider how schools might focus less on the examination grades and more on the generation of multiple sources of evidence of learning.

Reforming the junior cycle provides an opportunity to put in place and support a wider range of everyday approaches to gathering evidence in support of learning and as a consequence make available a greater range of evidence for reporting to parents and for possible inclusion in qualifications. High quality, comprehensive evidence of student learning in junior cycle could be gathered, for example, by greater use of

- assessment for learning; use of evidence of learning to identify where learners are in their learning, where they need to go and how best to get there
- e-assessment; generating evidence of learning where ICT (in whatever form) is used for the presentation of the activity and the recording of responses. While this approach presents significant challenges in terms of logistics and resources, it can also be more relevant to both the learning under consideration and dispositions of the learners. *Webquests* for example are widely used in other countries to allow learners to demonstrate not only what they have remembered (which traditional tests do) but also to demonstrate their ability to manipulate ICT, source information, select appropriate relevant information, and present responses in imaginative ways.
- portfolio assessment; collection of class work is assembled (by the learner) according to a set of criteria which determines what should be included and is used as a source of evidence of learning on which judgements about levels of achievement are made. As well as completed test pieces/scripts, a portfolio might contain self-reflection material, projects, homework assignments or other items thought to be relevant to and reflective of the learner's progress and learning.

In conclusion, this pathway involves the concept of evidence of learning in junior cycle changing, alongside the relationships which underpin its collection. This represents a significant change from how we currently generate, interpret and report on evidence in schools. But it is also a challenge for parents and society in general where the competing perspectives are held that, on the one hand, we'd like schools to be promoting the kinds of learning needed for our complex world but, on the other, we'll value examination grades above any other kind of evidence of learning.

Moving along the pathway from generating an examination grade towards generating evidence of learning might look something like this.



Other features of junior cycle

An earlier section of this paper identified the purpose of junior cycle as being concerned with assisting young people to sustain and further develop a strong relationship with learning and to ensure that their growth in and through learning is supported, advanced and deepened. The pathways outlined in the previous section are seen as essential in enabling junior cycle to develop in ways that will fulfil this purpose. However, there are other features and aspects of junior cycle described here that are also seen as having a role in allowing this purpose to be pursued. These are outlined briefly below. Each, in different ways and contexts, links with the pathways already discussed.

Transfer from primary school

The need for continuity remains a concern in that the interests of the learners requires that they make smooth and effective transfers to and from junior cycle and we know that, currently, some students don't. Addressing this aspect of the young person's experience is not a matter solely relating to the curriculum and organisation of junior cycle; it must also reflect the articulation with previous learning. Neither is it adequate to concentrate on the time immediately around the actual transfer, though that period is important. Ensuring successful movement from childhood to young adulthood (in educational terms at least) should be a process characterised by gradual change of experiences in curriculum terms and physical settings.

Much of what is described elsewhere in this section will ultimately have the effect of making the junior cycle a less alien place for the incoming learner. For example

- *greater variety in approaches to gathering evidence of learning* – allowing for the use of assessment to provide students with a more accurate sense of the progress of their learning and opening up the certification process to the inclusion of a wider range of learning
- *more variety in curriculum elements including less focus on discrete subjects* – provides more immediately obvious continuation with the primary school experience where subjects are less confining and the focus on skills more evident
- *reduced impact of terminal examination*- allowing for more use of active learning approaches and less focus on preparation for traditional examination

In looking at how to improve the connections between learners' primary and junior cycle experiences the outcomes of the Project Maths work in the development and use of a bridging framework will be monitored closely. Such frameworks have a potentially valuable role to play in identifying gaps in the primary-junior cycle relationship in terms of knowledge and pedagogy and offering approaches by which these gaps can be avoided or dealt with.

Moving on to senior cycle

Transferring **from** the junior cycle for most students means moving on to senior cycle and the particular challenges and requirements that presents. Developments at senior cycle will be reflected in the junior cycle of the future. The flexibility becoming more evident in senior cycle through developments in subjects and curriculum components and the emphasis on key skills is consistent with the ideas discussed in the pathways and should be mirrored by congruent developments at junior cycle. The prospect of choice is likely to be a growing feature at both levels with schools having increased freedom to make choices across the entire post-primary curriculum. The deeper engagement with learning and subjects brought about by a strengthened skills emphasis but also through the concerted focus on learning and engagement with evidence of learning should diminish the gap between what learners experience at junior cycle and what's expected of them at senior cycle. But there is a challenge for all in ensuring that an effective transfer is achieved from a richer junior cycle experience to a senior cycle that continues to feature a centralised national examination linked to a selection role for further and higher education and the high stakes associated with this for learners.

Learning outside the school

Issues of continuity are not confined to curriculum or even to stages of schooling. Possibly the most critical aspect of continuity relates to the continuity between the school experience of the young people and the world experience they have outside the time and place that is school. Learning in the larger world happens in an increasing number of settings (real and virtual). It involves different relationships with knowledge and how it is generated, and is based on radically diverse access routes into learning. Much of this altered learning environment might be said to revolve around concepts of literacy. While literacy is alluded to earlier in the document when discussing skills, it is also pertinent here as it relates to the ways knowledge is mediated in society and the ways in which it can be accessed. Increasingly, students:

- communicate through digital means - email, instant messaging, other web-based platforms
- generate their own meanings from a widening range of sources

- construct and share identities using digital technologies
- create texts to share experiences instantly and generate dialogue(s) based on those

In reflecting on what students learn in junior cycle and more importantly, on how they are expected to learn, it is important to consider how well learning and the curriculum in schools will reflect the expanding literacies of its students and whether the junior cycle that is envisaged by the paper has sufficient capacity to accommodate newer developments in this area.

Identity and junior cycle

It is clear from what has gone before that the junior cycle has the potential to forge a strong identity for itself by building on what it currently does very well, by drawing on the multitude of innovative, challenging educational ideas which exist and are yet to emerge, and by looking positively at the opportunities offered by the rapidly evolving environment in which it operates. Central to the system's (curriculum, schools, and individuals) capacity to take advantage of all of these factors is the capacity to be open to potentially beneficial influences, discerning in adoption, and 'nimble' in application.

Looking for evidence of learning in new ways, using it to improve the learning of students, and being confident in using the evidence to demonstrate the effectiveness and impact of the learning will signify real progress. Schools embracing the freedom to be flexible and to be different will require maturity but will reward the prudent risk-takers with learning outcomes of greater relevance and sustainability as well as professional fulfilment not always evident in the existing models of schooling. Providing qualifications that better reflect the deeper and more individualised learning that will take place in the junior cycle of the future will mean that young people are rewarded in a tangible way for their achievements, at an appropriate level. Offering a structure that goes outside of the three-year, self-contained frame can be seen as making a statement about the emerging identity of the junior cycle; that the junior cycle will continue the learning initiated in primary school, broadening and deepening it to a point where the learner is confident and capable of moving on in life (inside and outside of school). All of these, the pathways and other ideas described above, are derived from and lead to the inevitable and indisputable conclusion that it's all about the learner and the learning.

4. What can we learn from innovations in other places?

Reading note

This section is intended to act as a resource for what has gone before in the paper. It collects some examples of what is currently happening at lower secondary level internationally. The examples have been chosen to illustrate or amplify the process of change that has been outlined or the pathways described.

In its current form, it represents an early indication of what the section will ultimately contain. As the generation of ideas continues its contents will be altered, providing more or different illustrations of how practice carried on or reforms initiated elsewhere might inform the development the of a new junior cycle. Further work will be undertaken on this section to illustrate these possibilities as their relevance emerges.

Introduction

This section presents a melting pot of **MAYBE** ideas on developing the junior cycle, in which a range of national and international practice in schools and settings is outlined. The ideas are neither exhaustive nor exclusive but are presented as *snapshots* of how these schools and settings are using them. In doing so we are not attempting to critique any example practice but to describe it; to help answer the question—*does this help our thinking on where and how far the junior cycle can go?*

The ideas have been grouped broadly under headings that correspond to the pathways in Section 3.

1. From curriculum conformity to schools having freedom to be different.
2. From the Junior Certificate to qualifications designed for all
3. From the three years in junior cycle to three years of junior cycle
4. Towards a renewal of learning and teaching

5. From generating an examination grade, towards generating evidence of learning
6. Other features of junior cycle

In terms of practice, these pathways will not be discrete; overlap and interlink in many ways in school life. Some of the ideas will appear familiar while others are certainly less so. The ideas come from practice in a number of countries but the majority originate in Scotland, New Zealand, Canada, and the Netherlands. As frequently happens with attempts to compare educational activity in international settings, the different terms used to describe the same concept or activity can lead the familiar appearing unfamiliar. What in Ireland is understood as an integrated curriculum for example may be referred to as cross-curriculum work, or themed-based curriculum in another system. The paper tries to clarify possible instances of this diversity of interpretation where it arises.

Pathway 1: From curriculum conformity to schools having freedom to be different

To be most effective, curriculum flexibility frequently requires the use of a number of different individual approaches in combination. The main approaches considered here are

- skill-based curriculum
- integrated curriculum
- personalised learning
- in/out of school curriculum.

Skill-based curriculum

Key skills are also known by different titles; key competencies (OECD, DeSeCo Project), essential skills (Wales), functional skills (England), generic skills (Scotland), and essential learning areas (New Zealand). The term *skills* is used here on the general understanding that skills encompass a combination of skills, attitudes/values, knowledge. A skills-based approach puts key skills at the centre of the curriculum and subject areas are taught using key skills as a vehicle. An alternative to a skills-based approach is to continue with a subject-based approach which has key skills embedded in the learning outcomes of the subjects– similar to the approach taken by schools participating in the senior cycle review.

England: Opening minds

This skills-based curriculum approach is structured around a set of five competences: Learning, Citizenship, Relating to People, Managing situations and Managing information. Learners spend more time with fewer generalist teachers, which gives them time to build stronger relationships and support each other through group work. Learners do not study subjects directly but indirectly through the development of competencies.

Opening Minds is a competence-based curriculum framework which evolved from research completed by the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA). The RSA suggested that in place of the National Curriculum, which they view as information driven, competences should be taught to provide young people with the skills and abilities needed to survive and succeed in their future world. There are approximately 200 schools in England currently which have adopted the *Opening Minds* curriculum.

For more details, see www.openingminds.org.uk

Arizona: Partnership for 21st century skills

Mastery of core academic subjects is the basis on which all learning is built in this system.

Learners develop mastery in core academic subjects and also integrate 21st century interdisciplinary themes such as

- Global awareness
- Financial economic, business, and entrepreneurial literacy
- Civic literacy
- Health literacy
- Environmental literacy

Skills are also embedded within subjects. Each subject area is treated differently, with an eye for thoughtful and authentic ways to incorporate skills.

For more details, see www.21stcenturyskills.org

Ireland: Developing literacy and numeracy skills

Killinarden Community School is experimenting with the timetable for their 1st year learners who participate in the Junior Certificate School Programme. This involves blocking the timetable to make available three classes each morning to focus on developing student literacy and numeracy skills. Learners are taking part a substantial amount of co-operative learning and as well as improving their learning generally, this also helps to develop their social and personal skills. This approach relies on a collaborative approach where teachers team teach, and learners' have choices in the kind of activities they do.

The sessions on Mondays, Wednesdays and Fridays focus on developing learners' literacy skills and Tuesdays and Thursday focus on developing their numeracy skills. The library becomes a learning space with four distinct working spaces. Each working space focuses on a different activity—learners are given coloured cards that correspond to each workspace. The approach taken is designed to mirror the learners' primary school experience and helps to smooth their transition into post-primary education.

For more details, see www.killinardencs.ie

Integrated curriculum

Curriculum integration enables learners and teachers to identify and research problems and issues without regard for subject-area boundaries. Broad access to knowledge is provided to all learners through learning that is worthwhile, relevant, and allows learners of all abilities to contribute. Curriculum integration consists of organising themes that are drawn from life experiences, which allows learners to question and engage in real-life issues and promotes collaboration between learners and teachers. Learning is no longer segregated into subject areas or a particular collection of facts. Learners use skills from all disciplines to research personal and global concerns. The concept of integrated curriculum is familiar in the primary school curriculum which encourages connections between learning in different areas and emphasises the interconnectedness of knowledge and ideas.

New Zealand: Curriculum integration

Curriculum integration is used at a number of schools in New Zealand as they 'roll out' their revised national curriculum. These schools are making the move from viewing the curriculum as separate subject areas to seeing it as an opportunity for learning experiences that provide complete curriculum integration. Somewhere in the middle of this continuum is partial integration of content or curriculum areas and this might include connecting literacy and numeracy activities to science, drama or sports events. Schools experimenting with complete integration of subjects, determine their curriculum in collaboration with the learners. For example, in one school learners are looking at the topic of bullying. They decide to explore their peers' concerns about bullying through a survey. They then design a way of sharing information about strategies to deal with bullying such as writing, advertising, and performing a drama production, or the development of a peer mediation programme. With curriculum integration learners have a choice about 'what' and 'how' they are learning.

For more details see <http://nzcurriculum.tki.org.nz/>

Scotland: Dumbarton Academy

Dumbarton Academy a secondary school uses a thematic approach to the curriculum. For example, a thematic approach was used on a *Climate Change* theme and this took place over a two-week period. The 'normal' timetable was suspended for all students involved in the event. Students worked, in groups, on a variety of projects connected with the theme. On some occasions, the entire year group was together in working collectively on presentations, preparing notice boards or listening to some of the external speakers who had been invited to address them on a range of related issues. On other occasions the young people would work in groups in classrooms, in workshops or outside in the school's eco-garden. All students took part in two trips: to a nuclear power station and to a coalmine.

For more details, see www.ltscotland.org.uk/sharingpractice/d/dumbartonacademy

Personalised learning

In contrast to the 'one-size-fits-all' curriculum, personalising the curriculum ensures a fit is achieved between the learners' strengths and challenges, their needs and lives and curriculum choices. Information communication technology can play a role in delivering a more personalised approach. It enables greater collaboration both in the classroom and outside it, for example, through the internet or video-conferencing, the student who has a specialised interest can more easily make contact with experts or other learners with a similar interest. Learners can, if they prefer, work in groups or in pairs, or use discussion boards to comment on each other's work. If they want to continue internet-based research at home, they can. At the same time, technology offers greater opportunities for formative assessment, making it easier, for example, for learners to carry a personalised record of their achievement in the form of an e-portfolio (see assessment section for more details).

Flexible learning profiles (NCCA initiative)

This is a school-based curriculum development initiative that involves working with schools on thinking about and developing flexible learning profiles for senior cycle learners. When it commenced, the initiative was targeted at learners at risk of dropping out of school but as work with the schools progressed, the view emerged that all senior cycle learners would benefit from the kind of thinking and planning associated with flexible learning profiles. In this context, flexibility means offering learners choice in the areas of study that they can engage with at senior cycle. A learning profile is made up of the areas of learning students choose and describes how the learning can be supported within those areas. This profile is personalised in that schools place learners' aptitudes and interests at the forefront of all curriculum planning. Schools involved in the Flexible Learning Profiles offer learners a range of possible options which include subjects in the Leaving Certificate (Established), Transition Units, Leaving Certificate Applied courses, Leaving Certificate Vocational Programme link modules, work based learning, community based learning, and FETAC awards. An example of a Flexible Learning Profile might include the following:

For more details see www.ncca.ie/postprimary/sc/review

Student A	
Leaving Certificate (Established)	Other Modules
English, French, mathematics, Accounting, Business, Economics, Religion, Physical Education	Irish (LCA), biology (TY), career guidance, construction (LCA), Computers (ECDL)

England: Personalised learning at John Cabot Academy

John Cabot Academy is an independent school serving Bristol. Learners in years 10 and 11 are taking learning pathways that create a journey that resembles a London underground map rather than a single 'motorway' route. As learners mature between year 9 and 11, they can move between the pathways to take new options or new courses within the original choices. The pathways are built around the following learning areas:

- English and Maths
- Science
- Science, ICT and Technology
- Personalised Learning-Arts/Sport/ Humanities/Enterprise
- Vocational.

All learners in the John Cabot College have a learning mentor who manages with the student and their parents an Individual Learning Plan (ILP). Teachers have a 40 minute period of mentoring on their timetable each week and in this time they meet with 2 learners to update and modify the ILP. This level of one to one support has been invaluable in tracking and supporting student development. The college is exploring ways (similar to a number of schools in Scandinavia) where learners spend part of the week working independently in a learning centre having negotiated the work they will complete with a learning mentor. To further aid the personalized learning programmes.

For more details see <http://www.cabot.ac.uk>

In and out of school learning (community-based learning)

Approaches, which focus on relevance to the learner, emphasise the learners' own current interests and future aspirations and they link learning to the learner's context. Approaches such as these are intended to make learning meaningful and authentic to the learner. They seek to remove the boundaries between the learning in and out of school. They support the learner in making connections between different learning experiences. These approaches recognise the importance of external learning and community resources to what occurs within schools. Community-based learning is defined as the broad set of teaching/learning strategies that enable youth and adults to learn what they want to learn from any segment of the community. By community, we are including the schools, formal and informal institutions in one's neighbourhood, and the entire world through such resources as the Internet.

Singapore: Community Involvement Programme (CIP)

The CIP aims to nurture learners to become socially responsible and develop their sense of belonging and commitment to their country. Through participating in community work, learners also learn the value of service and develop lasting friendships with one another. Service Learning is an approach where CIP participants not only serve the community, but also learn to identify with the needs of the community and to reflect on their own experience in working with the community so that they have a better understanding and appreciation of what it involves.

For more details, see www.moe.gov.sg/education/secondary/cip

San Diego: High Tech High

High Tech High began with a single high school adopting a project-based approach to learning has grown into a school development organization with seven schools in 2007. Projects based inside and outside school form the foundations of the curriculum from the student's first year. By junior year, students are out in the San Diego community part time, in internships that match them with workplace mentors. Their role is not just to learn but also to create something of value for their employer, for example a website.

For more details, see www.hightechhigh.org

Pathway 2: From the Junior Certificate to qualifications designed for all

Examinations

Most OECD countries have some form of national examinations at the end of lower secondary schooling. The examinations are frequently compulsory or essential for admission to the next phase of education. However some countries do not have any examination and these include Canada, Switzerland, Hungary and Australia (INCA comparative tables, 2009). In many countries, a core curriculum for lower secondary education provides the basis for a national examination. In some countries the core subjects for examination can vary from year to year such as is the case in Slovenia. In Scotland a national sampling programme of assessment is used to monitor standards in English, mathematics, science and certain other subjects. Another practise involves having a set of core learning outcomes that all learners must achieve in order to progress to the next stage of their education as is the case in the Netherlands (see below for more details)

Some countries use standardised testing to measure a learner's achievement in mother tongue reading and mathematics. Standardised testing can be in addition to or instead of a national examination. Standardised results are compared to other learners throughout the country at the

same class level or age level. Standardised testing may include all or just some learners - in Ontario all learners are involved in the standardising testing, while in New Zealand a random sample of learners are involved.

Slovenia: Core subjects with an alternating third subject

At the end of 9th class students take national examinations in three subjects - mother tongue, mathematics and an alternating third subject. The third subject is decided by the Minister who selects four subjects from the range of other subjects students are required to take and in March informs each school which of the four subjects will be examined nationally as the third subject.

For more details, see www.zrss.si/default.asp?link=ang

Netherlands: A core set of learning outcomes

At lower secondary the curriculum in the Netherlands is based on 58 learning outcomes. These outcomes specify the standards of knowledge, understanding and skills that students are required to attain. Schools are responsible for translating these learning outcomes into subjects, projects, or areas of learning (or combinations of all three), or into competence-based teaching. At the end of lower secondary education (end of the first two years) schools assess whether their students have acquired the knowledge, understanding and skills described in the attainment targets for this period. This information is used to advise students as to what further course of study they might take.

For more details, see www.inca.org.uk

Canada: The Ontario Secondary School Literacy Test (OSSLT)

The Ontario Secondary School Literacy Test (OSSLT) which is administered by the EQAO (Education Quality and Accountability Office) is a little different from other standardised literacy tests as questions on the test are aligned with the Ontario curricula for Grade 10. In this way, students will be also assessed on their knowledge of other subject areas within the literacy test. For example, students could be asked questions in relation to history, art, and geography all within the literacy test. For example of a test see http://www.eqao.com/pdf_e/09/11011_Xe_0409_ri_web.pdf. These tests are externally marked. Reports with detailed results are issued to schools at the individual, school, board and provincial levels. The reports include observations, recommendations and strategies for instruction. Its purpose is to determine whether or not learners have acquired the literacy (reading and writing) skills that they are expected to have learned by the end of Grade 9, as outlined in The Ontario Curriculum. The OSSLT identifies learners who have demonstrated the required literacy skills as well as those who have not demonstrated these skills and need additional instruction and practice.

For more details, see www.eqao.com

Qualifications

Flexible Learning Profiles offer an example of a qualification or qualifications based on multiple sources of evidence of learning – students are offered a range of possible qualifications— subjects in the Leaving Certificate (Established), Leaving Certificate Applied courses, Leaving Certificate Vocational Programme link modules, and FETAC awards.

Flexible learning profile schools offer access to a range of qualification

At one of the Flexible Learning Profile schools, 5th Year LCA students are able to access a choice of FETAC awards beginning with 'Customer Services' and 6th Year LCA students are also taking a number of FETAC awards. In 2010-11, the school hopes to open up further flexibility within senior cycle by incorporating mathematics and English, Leaving Certificate (Established) subjects, into the LCA programme. To expand the curriculum at senior cycle the following FETAC modules are being introduced as options to all 5th Year students (both established LC and LCA)

- Information Technology Skills Level 4
- Computer Applications Level 4
- Health and Fitness Level 4
- Cultural Studies Level 4.

The above modules were selected as a response to student consultation and also based on what was identified as ways of enhancing senior cycle provision. The choice of modules will change and broaden as the need arises.

For more details, see http://www.ncca.ie/en/Curriculum_and_Assessment/Post-Primary_Education/Senior_Cycle/Senior_Cycle_Developments/Flexible_Learning_Profiles/Flexible_Learning_Profiles.html

Pathway 3: From the three years in junior cycle to the three years of junior cycle

The following is a list of some features of alternative structures to schooling in lower secondary education and a brief explanation of these features where necessary.

Modularisation/Unitisation

Learners select several modules/units from a selection of suitable modules. A core set of modules could be provided for each year. This would allow the learner greater choice in what they study and hence provide them to access a more personalised programme of learning, though this calls for greater levels of guidance for students. Also modules could be updated more easily. Schools would have greater flexibility in the choice they provide learners. To increase availability of options of curriculum areas, students could access some modules in a multi-grade setting, where for example, a third year student and a first year student could study the same module at the same time.

School day/ Flexible timetabling

Some countries offer timetables which run in a fortnightly cycle to accommodate breadth in the curriculum (New South Wales, Australia). Others offer varying lengths of class time to accommodate learners in their learning activities (*Opening Minds*, England). Some *Opening Minds* schools provide timetables to students electronically once a term, which facilitates change in curriculum choices for students. Some schools in Ireland operate a flexible/flip-over timetable to facilitate a greater degree of curriculum choice in Transition year. Students and teachers follow one timetable until Christmas and then an alternative one for the remainder of the year. This system works where gathering evidence of learning is done close or at the point of learning. A flexible approach could ease transitional difficulties for some students by ensuring that they have contact with a reduced number of teachers or to limit the number of subjects in a given term where a large number of subjects are offered as part of a first year taster programme.

Pathway 4: Towards a renewal of learning and teaching

The different approaches to learning and teaching identified below approaches which focus on creating learning experiences that are meaningful and relevant to the learners' lives. A strong emphasis is placed on presenting approaches that encourage co-constructed learning and approaches that encourage co-operative learning, peer tutoring or learning groups are also highlighted.

Manitoba, Canada: School-Initiated Courses (SIC's) and Student-Initiated Projects (SIP's)

School-Initiated Courses (SIC's) are locally developed curriculum designed to reflect and meet the needs and interests of the school and the local community. Course topics range from global citizenship, to meat cutting (in a farming community), to developing a recycling system. Where there is no departmentally developed curriculum, schools may choose to offer a curriculum that is locally developed. The courses developed must meet the requirements established by the Department of Education and also be approved by them. Opportunities are provided for the sharing of SICs among schools. Students may obtain credit for a maximum of 11 SICs during the students' senior years.

Student-Initiated Projects (SIP's) are projects initiated, designed, and carried out by the student under teacher supervision. The SIP's are based on the special interests of the student and can relate to a career they might like to pursue in the future, such as journalism. SIPS are approved locally (regional level). As each SIP is individually created to meet a particular need they are not shared across the province. Students may obtain credit for a maximum of 3 SIP's during the students' senior years.

For more details, see www.edu.gov.mb.ca/k12/policy/sics_sips.html

New Zealand: Co-constructed learning at Pakuranga College

Co-construction guides teaching and learning at Pakuranga College. The role of the teachers in co-construction is to develop high quality relationships with students, families and *whanau* (Māori-language word for extended family) that will create supportive environments for regular and frequent feedback, where diversity and multiple perspectives are shared and acknowledged. Teachers challenge students to think, to evaluate and reflect on their own progress. In planning tasks, a teacher committed to co-construction acknowledges students' strengths, interests and needs, while ensuring that tasks set are challenging, real and fun. The role of students in a co-constructive environment is to be the best that they can be. They are expected to take responsibility for their learning and to respect the rights of others. They learn critical and evaluative thinking skills when setting goals, when receiving feedback and reflecting on their learning.

For more details, see www.pakuranga.school.nz

Sweden: Self-directed learning Kunskapsskolan Schools

In the schools learners choose when, where, and what to participate in during the school day. They are supported by a personal tutor in setting short- and long-term targets and managing their learning. The learners plan their own days, recorded in their learning in log books, as they progress through a range of subjects which are broken down into a series of up to 35 steps and a series of cross-curricular themes, which they might work on in groups. Kunskapsskolan schools follow a pattern of being open plan without corridors and with multi-functional circulation areas, private study booths, tables for group work and tutorials, and social areas. All of which provides flexible accommodation that can be used in many different ways by both students and teaching staff.

For more details, see www.kunskapsskolan.se

Pathway 5: From generating an examination grade towards generating evidence of learning

Generating evidence of learning is that part of the learning process where the learner and the teacher can evaluate progress in the development of a particular skill, or of understanding in an area of knowledge. This evidence generated and collected can be shared with the learner in the form of feedback which should help the learner to become more aware of their own strengths and weaknesses, and identify next steps and strategies for improvement. The wide range of approaches which can be used to generation and gathering of evidence of learning is referred to in the previous section and in addition to the examples given there, it includes: direct observation, self-evaluation, peer-evaluation, portfolios, journals and oral or written presentations. For the purpose of this section, three approaches are highlighted:

- Assessment for Learning
- Portfolio assessment
- E-assessment.

Assessment for learning

Assessment for learning is about using assessment in the classroom as a tool to improve learning, and is characterised by

- sharing learning goals with learners
- helping learners to recognise the standards they are aiming for
- involving learners in assessing their own learning
- providing feedback, which helps learners to recognise what they must do to close any gaps in their knowledge or understanding
- communicating confidence that every student can improve, and
- adjusting teaching to take account of the results of assessment.

Key features of using this approach to assessing learners is the opportunity to use peer-assessment and self-assessment and to enable learners to become more engaged and responsible in and for their learning and to be more self-directed.

Ireland: Assessment for Learning: School based initiative – junior cycle

For more details, see http://www.ncca.ie/en/Curriculum_and_Assessment/Post-Primary_Education/Junior_Cycle/Assessment_for_Learning_AfL/

Scotland: Assessment for learning, – sharing practice

This website shares many examples and case studies of teachers and students in Scotland using AfL both in primary and post-primary settings.

For more details, see www.ltscotland.org.uk/assess

Portfolio assessment

A portfolio is a purposeful collection of student work that exhibits the student's efforts, progress, and achievements in one or more areas of the curriculum. Portfolios provide learners with concrete evidence of their progress and achievements, and as part of portfolio assessment serve as a basis for discussing, reviewing and sharing with teachers, parents and peers.

An electronic portfolio, also known as an e-portfolio or digital portfolio, is a collection of a student's work created using word processing and other multimedia presentations. A portfolio usually includes guidelines for selecting the portfolio contents, criteria for judging the quality of the work and student evaluations of their work. There are two major types of portfolios a *process portfolio*, which documents the stages of learning and provides a progressive record of student growth and a *product portfolio* which demonstrates mastery of a learning task or a set of learning objectives and contains only the best work. Depending on its purpose the portfolio might contain samples of the student's work across the curriculum including - written work, project work, charts or diagrams for mathematics, photographs or video-recordings of the student's participation in an activity and/or recordings of musical work.

Ireland: Flexible learning profile school using e-learning portfolios

One of the schools using the Flexible Learning Profiles is using an E-learning portfolio with their learners and comprises five aspects

1. Me – a profile of the student’s interests, likes/dislikes, hobbies and interests, classroom relationships, events, dreams and aspirations.
2. Learning log – this is the students’ reflection on their own learning and how they feel they are progressing in each of their subjects. It provides an insight into the learners’ perception of what they see as barriers to their learning, areas that they have found interesting, areas they would like more help on, the degree of interest and so on. Learners need to be offered support for this section on how to write about their learning.
3. Showcase of learning – an online repository allowing learners to archive a range of highlights of their learning and evidence of key skills developed.
4. Time-management tools and target setting - learners keep track of their different projects and assignments that are linked to personal effectiveness and career.
5. Feedback and assessment for learning – this is where the learning mentor will give feedback and feed forward to the student.

E-assessment

E-assessment is an assessment activity where ICT (in whatever form) is used for the presentation of the activity and the recording of responses. While this approach has presents significant structural challenges, it can also be more relevant to both the learning under consideration and dispositions of the learners. *Webquests* for example are widely used in other countries to allow learners to demonstrate not only what have remembered (which traditional tests do) but also offer the opportunity to demonstrate their abilities to manipulate ICT, source information, select appropriate relevant information, and present responses in imaginative ways. Online testing too offers the potential to have greater flexibility as to where, when and how assessment is conducted and provides improved capability for ongoing and continuous assessment.

Australian Flexible Learning Framework

This website shows teachers how they can make up their own e-assessment tools and e-learning tools. Examples of webquests are also given on this website. In the webquest, *Climate change: swamped or saved*, learners research how to assist Pacific Islanders manage the impact of climate change through the use of ICT.
<http://www.globaleducation.edna.edu.au/globaled/go/pid/3132>.

For more details, see <http://www.flexiblelearning.net.au/>

Ireland: Health Benefits and Physical activity WebQuest (Physical Education)

This is an example of a WebQuest set in an Irish context. It involves an inquiry-oriented activity in which most or all of the information used by learners is drawn from previous learning and from the web. The WebQuest is designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation.

Students in this Webquest have been asked to put together an **"Information Campaign on the Benefits of Physical Activity"** to help people (like Seán MacCarthaigh in a case-study) to see how physical activity can improve their lifestyles and make them feel better. The student's task as a member of a team is to help Seán to examine the role of rest, physical activity and food in providing energy to meet his body's needs and improve his quality of life.

Students are divided into teams and each team member has a different role. Weblinks are provided as a guide to students to assist them in their data collection.

For more details, see

<http://www.jcpe.ie/resources/webquests/SeanMacCh/SeanMacCh/index.html>

6. Appendices

Appendix 1 Examples of Frameworks

Senior Cycle Key Skills Framework

A framework of five skills has been developed as part of the curriculum and teaching and learning at senior cycle. The key skills framework is an integrated framework reflecting the strong inter-relationship between each of the five skills. Each key skill has associated elements and learning outcomes. The elements further describe the skills, clarifying the skills that students will develop.

FIVE KEY SKILLS



For more details, see http://www.ncca.ie/en/Curriculum_and_Assessment/Post-Primary_Education/Senior_Cycle/Senior_Cycle_Developments/Key_Skills_Framework/Key_Skills_Framework.html

INFORMATION PROCESSING

This key skill helps learners become competent in an information-intensive environment. As well as developing the specific skills of accessing, selecting, evaluating and recording information, learners develop an appreciation of the differences between information and knowledge and the roles that both play in making decisions and judgements.

CRITICAL AND CREATIVE THINKING

This key skill assists learners in being aware of different forms and patterns of thinking so that they become more skilled in higher order reasoning and problem solving. In engaging with this key skill, learners reflect critically on the forms of thinking and values that shape their own perceptions, opinions and knowledge.

COMMUNICATING

This key skill helps learners to appreciate how central communication is to human relationships of all kinds, and to become better communicators in both formal and informal situations. As well as developing specific skills in a variety of media they form a deeper understanding of the power of communication-particularly language and images-in the modern world. It also incorporates competence and confidence in literacy as an essential basic skill for all learners.

WORKING WITH OTHERS

This key skill highlights the role that working with others plays in learning and in reaching both collective and personal goals. It helps learners gain some appreciation of the dynamics of groups and the social skills needed to engage in collaborative work. It contributes to an appreciation that working collectively can help

motivation, release energy and capitalise on all the talents in a group. In a broader context, they come to recognise that working collectively is important for social cohesion and for engaging with diverse cultural, ethnic and religious groups.

BEING PERSONALLY EFFECTIVE

This key skill contributes to the personal growth of learners, to them becoming more self-aware and to their using that knowledge to develop personal goals and life plans. As well as giving learners specific strategies related to self appraisal, goal setting and action planning, an important dimension of this key skill is in building the know-how of learners in recognising how to get things done, how to garner and use resources effectively, and how to act autonomously according to personal identities and personal values.

KEY SKILL ELEMENTS

KEY SKILL	ELEMENTS
INFORMATION PROCESSING	<ul style="list-style-type: none"> • Accessing information from a range of sources • Selecting and discriminating between sources based on their reliability and suitability for purpose • Recording, organising, summarising and integrating information • Presenting information using a range of information and communication technologies
CRITICAL AND CREATIVE THINKING	<ul style="list-style-type: none"> • Examining patterns and relationships, classifying and ordering information • Analysing and making good arguments, challenging assumptions • Hypothesising and making predictions, examining evidence and reaching conclusions • Identifying and analysing problems and decisions, exploring options and alternatives, solving problems and evaluating outcomes • Thinking imaginatively, actively seeking out new points of view, problems and/or solutions, being innovative and taking risks
COMMUNICATING	<ul style="list-style-type: none"> • Analysing and interpreting texts and other forms of communication • Expressing opinions, speculating, discussing, reasoning and engaging in debate and argument • Engaging in dialogue, listening attentively and eliciting opinions, views and emotions • Composing and performing in a variety of ways • Presenting using a variety of media



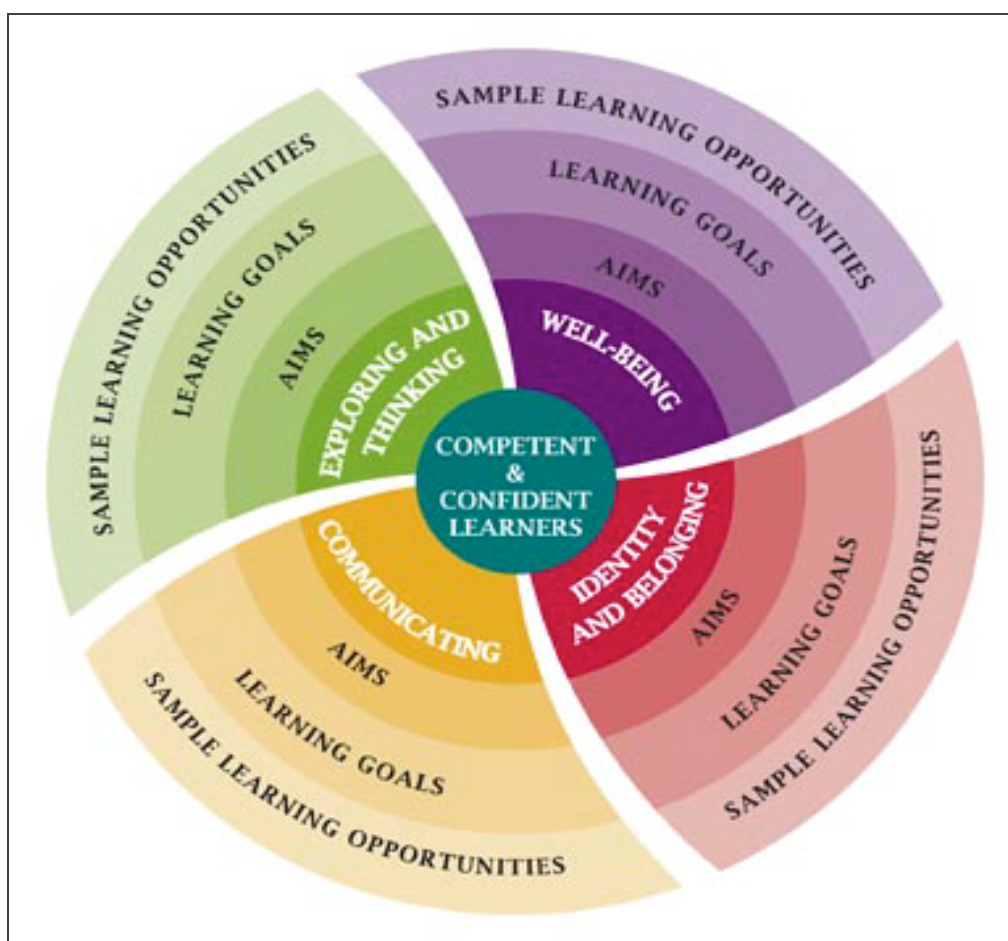
KEY SKILL	ELEMENTS
WORKING WITH OTHERS	<ul style="list-style-type: none"> • Working with others in a variety of contexts with different goals and purposes • Identifying, evaluating and achieving collective goals • Identifying responsibilities in a group and establishing practices associated with different roles in a group (e.g., leader, team member) • Developing good relationships with others and a sense of well-being in a group • Acknowledging individual differences, negotiating and resolving conflicts • Checking progress, reviewing the work of the group and personally reflecting on one's own contribution
BEING PERSONALLY EFFECTIVE	<ul style="list-style-type: none"> • Being able to appraise oneself, evaluate one's own performance, receive and respond to feedback • Identifying, evaluating and achieving personal goals, including developing and evaluating actions plans • Developing personal qualities that help in new and difficult situations, such as taking initiatives, being flexible and being able to persevere when difficulties arise • Becoming confident and being able to assert oneself as a person

Aistear, the Early Childhood Curriculum Framework

Aistear is the new curriculum framework for all children from birth to six years across the range of early childhood settings in Ireland. It provides information, ideas and suggestions to help you support children's learning and development in these early years. **Aistear** comprises four elements:

- **The Principles and Themes** describes children's learning and development
- **The Guidelines for Good Practice** focuses on partnerships with parents, interactions, play and assessment
- **The User Guide** gives practical information about using the Framework
- **The Key Messages** summarises important points from research used in developing **Aistear**.

The schematic below gives an overview of the four themes and how they connect and overlap with each other to outline children's learning and development.



For more details, see www.ncca.biz/Aistear/pdfs/UserGuide_ENG.pdf

Key Competencies for Lifelong Learning – A European Framework

The European Framework for Key Competences is a tool for policymakers, and for education and training providers and learners, in order to make lifelong learning a reality for all. Introduced as a recommendation of the European Parliament and of the Council of Europe in 2006, the Framework identifies and defines the key competences that citizens require for their personal fulfilment, social inclusion, active citizenship and employability in our knowledge-based society. The key competences are all considered equally important, because each of them can contribute to a successful life in a knowledge society. Many of the competences overlap and interlock: aspects essential to one domain will support competence in another. Competences are defined here as a combination of knowledge, skills and attitudes appropriate to the context.

The Reference Framework sets out eight key competences:

- 1) Communication in the mother tongue;
- 2) Communication in foreign languages;
- 3) Mathematical competence and basic competences in science and technology;
- 4) Digital competence;
- 5) Learning to learn;
- 6) Social and civic competences;
- 7) Sense of initiative and entrepreneurship;
- 8) Cultural awareness and expression.

Below illustrates an example - the Mathematical competence and basic competences in science and technology.

For more information see http://ec.europa.eu/education/index_en.html.

3. Mathematical competence and basic competences in science and technology

6 |

Definition:

Mathematical competence is the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations. Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentation (formulas, models, constructs, graphs, charts).

Essential knowledge, skills and attitudes related to this competence:



Necessary **knowledge** in mathematics includes a sound knowledge of numbers, measures and structures, basic operations and basic mathematical presentations, an understanding of mathematical terms and concepts, and an awareness of the questions to which mathematics can offer answers.



An individual should have the **skills** to apply basic mathematical principles and processes in everyday contexts at home and work, and to follow and assess chains of arguments. An individual should be able to reason mathematically, understand mathematical proof and communicate in mathematical language, and to use appropriate aids.



A positive **attitude** in mathematics is based on the respect of truth and willingness to look for reasons and to assess their validity.

Definition:

Competence in science refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world, in order to identify questions and to draw evidence-based conclusions. Competence in technology is viewed as the application of that knowledge and methodology in response to perceived human wants or needs. Competence in science and technology involves an understanding of the changes caused by human activity and responsibility as an individual citizen.

Essential knowledge, skills and attitudes related to this competence:



For science and technology, essential **knowledge** comprises the basic principles of the natural world, fundamental scientific concepts, principles and methods, technology and technological products and processes, as well as an understanding of the impact of science and technology on the natural world. These competences should enable individuals to better understand the advances, limitations and risks of scientific theories, applications and technology in societies at large (in relation to decision-making, values, moral questions, culture, etc.).



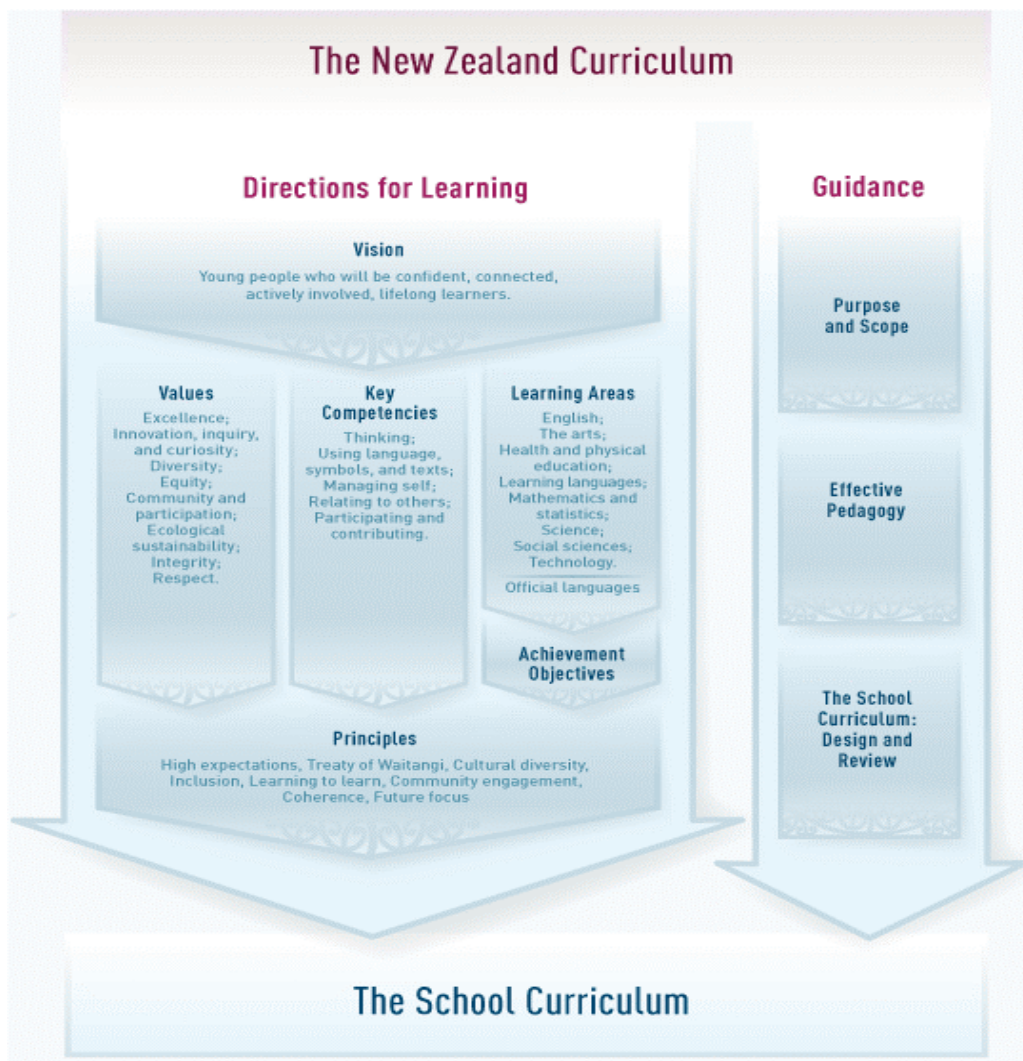
Skills include the ability to use and handle technological tools and machines as well as scientific data to achieve a goal or to reach an evidence-based decision or conclusion. Individuals should also be able to recognise the essential features of scientific inquiry and have the ability to communicate the conclusions and reasoning that led to them.



Competence includes an **attitude** of critical appreciation and curiosity, an interest in ethical issues and respect for both safety and sustainability, in particular as regards scientific and technological progress in relation to oneself, family, community and global issues.

New Zealand: One curriculum for all

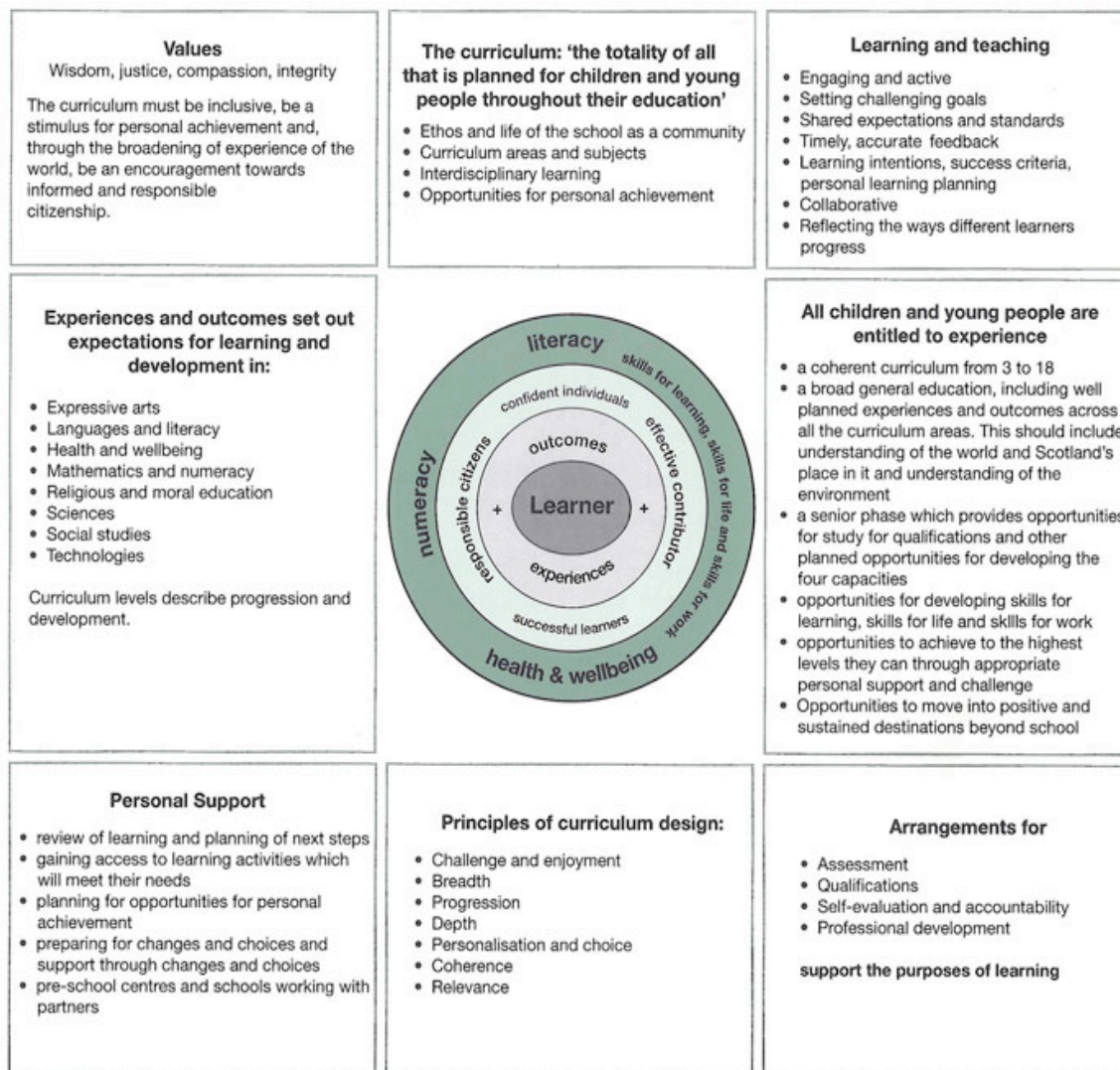
Launched in 2007 the revised New Zealand Curriculum will become mandatory in 2010. This national curriculum applies to all stages of teaching and learning from the ages 6 to 18 years. The aim of the revised curriculum is to provide coherence and to enable schools to form ‘big picture’ framing of teaching and learning. There are eight learning areas and five competencies. The diagram below figure 1 offers a schematic view of the curriculum.



For more details, see <http://nzcurriculum.tki.org.nz/Curriculum-documents/The-New-Zealand-Curriculum>

Scotland: A Curriculum for Excellence

This curriculum framework is for all learners aged between 3 and 18. The curriculum includes the totality of experiences which are planned for children and young people through their education. The purpose of the Curriculum for Excellence is encapsulated in four capacities; to enable each child or young person to be a successful learner, a confident individual, a responsible citizen and an effective contributor. A schematic of the framework is shown below.



For more details, see <http://www.ltscotland.org.uk/curriculumforexcellence/index.asp>

Appendix 2 The National Framework of Qualifications

<http://www.nfa.ie/nfa/en/documents/determinations.pdf>

		level 1	level 2	level 3
Knowledge Breadth	Elementary knowledge.	Knowledge that is narrow in range.	Knowledge moderately broad in range.	
Knowledge Kind	Demonstrable by recognition or recall.	Concrete in reference and basic in comprehension.	Mainly concrete in reference and with some comprehension of relationship between knowledge elements.	
Know-How & Skill Range	Demonstrate basic practical skills, and carry out directed activity using basic tools.	Demonstrate limited range of basic practical skills, including the use of relevant tools.	Demonstrate a limited range of practical and cognitive skills and tools.	
Know-How & Skill Selectivity	Perform processes that are repetitive and predictable.	Perform a sequence of routine tasks given clear direction.	Select from a limited range of varied procedures and apply known solutions to a limited range of predictable problems.	
Competence Context	Act in closely defined and highly structured contexts.	Act in a limited range of predictable and structured contexts.	Act within a limited range of contexts.	
Competence Role	Act in a limited range of roles.	Act in a range of roles under direction.	Act under direction with limited autonomy, function within familiar, homogeneous groups.	
Competence Learning to Learn	Learn to sequence learning tasks; learn to access and use a range of learning resources.	Learn to learn in a disciplined manner in a well-structured and supervised environment.	Learn to learn within a managed environment.	
Competence Insight	Begin to demonstrate awareness of independent role for self.	Demonstrate awareness of independent role for self.	Assume limited responsibility for consistency of self-understanding and behaviour.	