



Planning & Building Unit

1. Pedagogical Brief

Ideas Competition 2013 for a Primary School

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Ideas Competition for a Primary School Design for 21st Century Learners

Pedagogical Brief for the Competition

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Introduction:

The 2013 ideas competition for a primary school design is an opportunity for the Department of Education and Skills to explore with architects and educationalists the development of innovative architectural designs that respond to the emerging 21st century needs of primary school learners and teachers.

Internationally, in the past and during the 20th century, an educational paradigm was common of the school as a vehicle for delivering an accepted wisdom, where information was delivered by one person to many, where largely 'one size fitted all' and where the knowledge being passed on was inherently stable and to remain unquestioned. This paradigm aligned itself very well with the practicalities of school design which governments needed to consider: cost, the need to arrange pupils in manageable groupings (classes), the efficiency of the operation of schools as buildings, availability of materials etc. The paradigm facilitated the development of school buildings and grounds that were practical. Schools that fitted the needs of that time continue satisfactorily, in different ways, to meet the ongoing needs of the present: for example, children continue to learn in classes with their peers and it is a practical arrangement for that learning to take place in classrooms.

The content of this pedagogical briefing document is informed by the findings of national and international research into school design. It contains specific detail about school design trends the Department is interested in exploring in the light of this research. For standard 16-classroom primary schools, the current schedule of accommodation has an overall area of 2,260m² as a benchmark. Solely for the purposes of this Ideas Competition, a 'float' area of up to 10% (plus or minus) of the benchmark is provided to allow latitude in exploring innovative ideas. This is indicated in the Competition Schedule of Accommodation. Priority must be given to learning and teaching space in the use of any additional floor area. The competition pack supports free thinking and the creation of design ideas. All relevant technical guidance documents are provided in this competition pack.

This ideas competition provides an opportunity to pursue designs that are agile, which can accommodate future changes in learner needs and pedagogy over the coming years and decades or that even could be adapted, potentially, for the purposes of secondary education if required.

Successful learners in the 21st century increasingly need to develop a much broader palette of knowledge, behaviours and skills to succeed in life, than were needed generally in the 20th century. It is also an imperative that for modern society as a whole to succeed each 21st century learner must be empowered to succeed and achieve their maximum potential.

21st century school designs need:

- to facilitate more peer to peer work and collaborative project-based work
- to facilitate engagement with information that includes absorbing and understanding and also using that knowledge to build shared understanding
- to complement the range of learning styles among learners as much as possible, so that teachers can provide for an educational experience that is personalised more than ever before to the needs of the learner.

Because 21st century primary school pupils need:

- strong core skills in literacy and numeracy
- from a young age, to learn the skills to access information in a variety of formats, as well as retain it
- the ability to 'learn how to learn'
- to develop strong interpersonal skills, self-confidence and self-knowledge
- to develop their ability to change and adapt.

And because 21st century schools as learning communities should:

- express high expectations of achievement for their pupils
- have a high quality teaching staff that builds upon the skills of teaching learned in undergraduate training courses and in continuing professional development courses. Complementary to their training but crucial to a teacher's professional development is learning from one another's best practice – and from learners. From that learning experience teachers can innovate in their teaching and share that innovation with their peers.
- make it easy for school management and for teachers to identify and share the good practice and the innovation they recognise and value
- be places where critical reflection and self evaluation are central mainstays of professional activity and are actively fostered among the teaching staff.

The architectural design of the learning environment has an important role to play in encouraging all of this activity to happen.

General:

- The school design must be a place that is physically, psychologically and socially safe, promoting the child's growth, health, learning and wellbeing as well as their positive interaction with teachers and fellow pupils. The teacher's role is to facilitate interactions among children and between children and the teacher within an overall well-structured framework – 'the school' – which is a place for building understanding of knowledge.
- Irish primary school education is an eight-year cycle with a pupil spending one school year, typically from the beginning of September to the end of June the following year, in each grade. The eight grades are: junior infants (pupils commencing primary school must be no younger than 4 years, most are 4 or 5 years old in this grade), senior infants (typically 5 or 6 years old in this grade) and 1st through 6th classes (typically pupils in 6th class are 12 to 13 years old). One school year is spent in each of the grades of primary school. The brief for a 16 classroom school means that there will be two of each grade of classes in the design. In the 2013-14 school year the average class size in Irish primary schools is 29 pupils, however the actual numbers of pupils and the physical size of the pupils in classes vary.
- The Primary School Curriculum is a learner-centred curriculum and is taught in all Irish national primary schools. The curriculum is progressive and objective based. During their primary school education pupils learn Irish (Gaeilge); English; Mathematics; Social, Environmental and Scientific Education (SESE) (which comprises History, Geography & Science); Music; Visual Arts; Drama; Social, Personal and Health Education (SPHE) and Physical Education (a subject with wide-ranging strands: not simply sports and games)¹. All subjects are taught at all grades. Structured play is being facilitated in many junior and senior infant classrooms through the implementation of the *Aistear Framework Curriculum*². Literacy and Numeracy for Learning and Life: The National Literacy and Numeracy Strategy³ is

¹ The Primary School Curriculum is available online at www.ncca.ie

² The Aistear Framework Curriculum is available online at www.ncca.ie > Early Childhood Education (note: 'Aistear' is the Irish-language word for 'Journey')

³ The National Literacy and Numeracy Strategy is available online at www.education.ie

also being implemented in schools to enhance pupils' literacy and numeracy skills. There are no subject-specific rooms required in primary schools. Innovative areas or learning centres (other than classrooms) to enhance learning in particular clusters of subjects could be explored e.g. literacy/ numeracy activity zones; science/visual arts wet area.

- Irish primary teachers are *in loco parentis* in respect of daily supervision. In order to develop confident learners encouraging an atmosphere of mutual trust is a key aim of the most successful primary schools. Factors that create concerns about managing pupils and knowing where each pupil is at all times should be minimised to allow teachers focus upon creating successful learning. To achieve this, school designs should seek to make supervision less about restricting pupils' access to different areas of the school and more about enabling pupils to know that they are safe and cared for by facilitating as much line of sight as possible for teachers from their class bases. Pupils also should have as much line of sight as possible so they can see they are safe and minded, allowing their confidence to build.
- Greater connectivity with the outdoor space of the school, directly or indirectly, should facilitate learning and teaching externally more frequently. School grounds should be viewed as potential learning environments and not only for recreational purposes. High-quality perimeter security should allow pupils to learn more regularly outside the building and within the grounds and while engaged in this activity should facilitate pupils' safety and security. Movement between the internal and external environments should be facilitated as readily as possible, while at the same time considering the comfort levels in the building and energy usage.
- Successful school management teams lead innovation in curriculum delivery to support the implementation of the Primary School Curriculum and the professional development of teachers. This should be facilitated by introducing more visual transparency in the internal walls of school buildings.
- School design should be capable of meeting the expectations of teachers in terms of their current pedagogical practice but also enable teachers in extending that expertise naturally. It is therefore important that the design entices and empowers - rather than forces - teachers and pupils to use a range of places for learning and teaching. Teachers should be able to perceive that other spaces have great potential to be used for education. They should be able to readily see their peers and their peers' classes using them.
- Irish primary schools are inclusive schools in respect of special education provision. Some pupils are educated in mainstream classes with additional support provided in special tuition rooms and others in special classes, according to their degree of need.
- The Brief has a full special needs unit (SNU) included. The guidance document - Primary School Specialist Accommodation for Pupils with Special Educational Needs - is included in the competition pack.
- Special educational needs are defined in The Education for Persons with Special Educational Needs (EPSEN) Act (Ireland, 2004) as: "a restriction in the capacity of the person to participate in and benefit from education on account of an enduring physical, sensory, mental health or learning disability, or any other condition which results in a person learning differently from a person without that condition." Children with special educational needs are educated, wherever possible, in an inclusive environment with children who do not have special educational needs. The key principles to uphold in the design to ensure an inclusive environment are outlined in the SNU guide. An inclusive environment provides for integration of pupils with special educational needs in mainstream classes, and reverse integration - where pupils without special educational needs work and socialise with their peers in special classes.

- Special education tuition rooms are rooms of 15m² where pupils who have general and specific learning disabilities and English language needs receive additional tuition from support teachers, in addition to the support they receive from their mainstream teacher. Typically there would be a need for one support room for every four mainstream classroom bases. Innovative features should be sought for these rooms enabling connection with other potential areas for learning. Space should be used productively to allow for pair and small group learning, while acknowledging that they should also be calming places for the pupils. It is also anticipated that additional tuition for pupils with learning needs will also take place in the less formal locations for education in the school.
- The 16 mainstream classroom design has a staffroom of 50m². Teachers should be able to see that thought has been given to staffroom design. It should be a room worthy of professional dialogue. Consideration should be given to the potential of the space for professional discourse, not only rest. The potential of the space being subdivided to create breakout areas could be explored. There should be toilets for teachers nearby.

Classroom bases:

- It is important that the classroom bases fully meet the current expectations of Irish primary teachers, but that they can also anticipate developing pedagogical trends and teaching competencies. Good-size classrooms will continue to be required in primary school designs. More flexibility in how they are configured is welcomed and the concept of classroom as a fully self-contained cellular unit should be challenged. The classroom as a base for teaching and learning that facilitates access to other spaces is strongly encouraged. Completely open plan areas as the only area for teaching and learning for a number of classes should be avoided. Innovation can only be sustained and built upon if it emerges organically among staff. Teachers should feel comfortable in their classroom bases and be facilitated naturally to observe the potential in other educational spaces. Classroom bases should not be overly designed and should allow for teachers and pupils to make them their own. Storage should be fully recessed where possible.
- The display of illustrative materials and of pupils' work, giving learners ownership over their educational space, is important. Innovative solutions should be explored to maximise display locations, while at the same time optimising the use of glazing for day lighting, views and visual transparency in the external and internal walls of class bases.
- There are 16 mainstream classroom bases in the design brief for the competition. At the present time mainstream classrooms are, in reality, self-contained cellular units, with each having an overall area of 80m². However, the useable learning and teaching space for teachers and pupils in current classrooms is much lower at only 53m². It is intended to optimise that learning and teaching space in the classroom base to 58.5m². This provides for an increase in useable area and facilitates full disabled access. Areas at times underused in schools, such as the sink and wet areas, computer space, cloaks and access to ensuite toilets, are being released out of the classroom base into other parts of the school building design to optimise use for educational purposes. The classroom base should be capable of being used comfortably as a main base for learning for an average class size of 29 pupils. It should also be a springboard into adjacent spaces outside of the room, both inside the building and without: encouraging teachers and pupils to move into and out of these places to use them for learning.
- Each classroom base should incorporate an interactive whiteboard with a short-throw digital projector. Care should be taken in the selection of its location to minimise glare from natural light.

- It is envisaged that most ICT use in future primary school builds will be facilitated through wireless infrastructure with tablets and laptops and complemented by a few computer points in shared areas. The space for five desktop personal computer points in each classroom is not necessary.
- Current classroom layout provides for an ensuite toilet block within each classroom. Designs should consider the option of toilet solutions outside of classrooms shared by pairs or more classes. En-suite toilets may continue to feature in classrooms for infant pupils. Alternatively, other innovative solutions very close by may also be considered. Toilets should be separate for boys and girls. To allay teacher anxieties about supervision and to minimise unnecessary disruption to lessons and the school day, pupils' access to toilets should be within view of the teachers at all times. To allay pupils' anxieties about being away from the care of their teacher and fears about potential bullying toilets should be close to their class base. Wash hand basins may be off circulation and adjacent to toilets.
- Cloakrooms or storage for coats should not generally be within the classroom base. Their location should be carefully considered and close to entrances and exits for the purposes of dressing for external play and education. Supervision of the space should be easy.
- Access to the external school environment should be rendered as easy as possible by the design. The importance of the connection between internal and external learning spaces should be clear from the design.

Less formal spaces for education beyond classrooms:

- Current research shows that mainstream classrooms continue to be the areas in schools most used for teaching and learning. The current configuration of circulation space as corridors mostly operates to move teachers and pupils to and from self-contained cellular classrooms. These circulation spaces should be re-envisioned as potential teaching and learning spaces. These spaces should enable pupils to work collaboratively engaging in knowledge-building and group discussions, or as a place for quiet reading and reflection, supporting pupils' literacy development. Less formal areas outside of the classroom base could include spaces for wet play or science experiments, infant play, exploration of the arts and quiet areas for reflective activity. Designers may wish to employ any supplementary float area to contribute to these less formal areas.
- Less formal learning spaces should have potential for multiple uses: for small group teaching, small group work with children working together with their peers or with pupils younger and older than them, research, quiet ICT work, space for reading on their own or in a group etc.
- The use of these spaces should also facilitate simple everyday social experiences that lead to a child's development but where the care and attention of the teacher is not far away. The aim is to enable the child build responsibility and independence from a young age.
- Less formal learning spaces beyond the classroom base should 'invite' teachers to use them: visual supervision should be possible. Furniture provided within these spaces should provide for active learning approaches and collaborative approaches among pupils.
- Notwithstanding the need for overall line of sight, less formal learning spaces should provide for semi-private nooks where pupils independently or in small groups can reflect, test and respond to new knowledge in comfort and safety.

- All education spaces, both internal and external, including the classroom bases should be readily accessible to the principal as the instructional leader in the school.
- The energy profile of the school building and the sustainability of the design should be considered carefully to ensure that the design constitutes an appropriate exemplar for primary school pupils. In further developing pupils' awareness of the environment the design should act to illuminate the importance of energy conservation and use of sustainable materials.

External school environment:

- Architects should give as much thought as possible to the design of the external environment surrounding the school building as a potential site for high-quality learning.
- In the design of external spaces architects should consider the breadth of the Irish primary school curriculum, not just the physical education curriculum, in exploring how learning its various subjects, where appropriate could be facilitated in the environment surrounding the school buildings.
- Due recognition should be given to the inclement Irish weather in seeking to maximise the use of the external environment for both recreation and learning.
- External recreation areas for pupils should encourage group and team play on a range of surfaces.
- The orientation, aspect and active and passive supervision of play space should be considered carefully.

Other spaces:

- In the context of developing pupils' literacy skills the library should continue to feature prominently in the design of the primary school. It should inspire reading and love of books and other media. In the context of this competition there may be potential to look afresh at how we locate and design the library in schools.
- The 16 mainstream classroom design has one large general purpose room of 195m² typically used for physical education, but increasingly for other subjects, and for performances and gatherings. Innovative solutions for the use of this room are welcome. Storage should be maximised. This area should be accessible to the community when the school day is ended, with toilets nearby and capable of being used independently of the main body of the school.
- The acoustic profiles of all spaces need to be very carefully considered. Guidance in this regard can be found in the Acoustic Performance in Schools document included in the competition pack.