**Teachers’ Union of Ireland**

**Response to New Digital Strategy for Schools (February 2014)**

**February 2014**

Given the extent and pace of developments in technology constant revision and renewal of the government’s strategy, priorities and investment is critical to enabling teaching and learning for 21st century skills and competences. Therefore the TUI, which represents close to 15,000 teachers and lectures, welcomes the opportunity to contribute to the dialogue on advancing a new national digital strategy for schools.

TUI acknowledges that advances have been made since the establishment of earlier Strategy, Advisory and Steering Groups on ICT in schools and the reports that emanated from these. It however, remains disappointed with the overall level and pace of progress across all schools. In particular, it is disappointed with the level of support and resources available to develop and improve ICT infrastructure, facilities and services (administrative and educational) and to support its integration into teaching and learning across all subjects and programmes. Careful and immediate attention to these realities is necessary if all schools and students are to be afforded fair opportunities and become real beneficiaries of government policy on, and investment in, ICT.

The UNESCO Framework for ICT Policies to Transform Education is indeed a useful tool to support discussion and critique in terms of priorities for development in the coming years, as is the NCCA Framework designed in consultation with education partners. A critical issue, however, will be government commitment to developing evidence based and practice informed policy, having special regard to the Irish experience. This commitment must embrace a co-ordinated, integrated approach to the implementation of policy and, most importantly, must make provision for adequate resources to enable schools translate policy into practice.

The TUI response is summarised below under the questions posed by the Department, followed by a more extensive narrative in which TUI perspectives are developed in more detail.

***What is your vision or expectation for the use of ICT in supporting teaching and learning in schools in the next 5 years?***

TUI envisions a greater integration of ICT into teaching and learning across the curriculum. This comprehends ICT as a basic teaching and learning tool interchangeable with a host of other tools, as a research and experiential tool for teachers and students and as a sophisticated teaching tool to support, with ease, engagement, creativity and imagination in classrooms.

School spaces and organisation should be more cognizance of how ICT can support teaching and learning and promote different teaching approaches e.g. team teaching, integrated projects, independent learning.

Teacher competence to use ICT equipment, mediums and resources as a normal, everyday part of teaching and learning should, in general, have reached an advanced level. On-going development and renewal opportunities should be available -cost neutral to teachers – to ensure they can embrace, with ease, new ICT developments and resources. If neglected or underdeveloped teacher competence will inhibit potential development.

In tandem, student competence to use ICT mediums and devices should be well developed. In this regard every student should have access to direct tuition in digital literacy through an appropriate means e.g. foundation and refresher courses. It is not enough to assume that students are digital natives and therefore do not need a basic foundation in ICT related skills – evidence is emerging that students are often limited in how, and for what purpose, they engage with ICT.

***What opportunities do you feel ICT in primary and post-primary education can offer?***

ICT provides the opportunity:

* to make knowledge and ideas more accessible
* to introduce an interactive, visual, stimulating mediums
* for teachers and students to access a wider range of knowledge and ideas and to
* for teachers and students to network to share ideas and information and learn from each other
* to promote project and integrated learning
* to develop student research skills
* to promote independent and group learning
* to promote and develop effective 21st century skills among students.

The success of each or all of the above to enrich the learning environment will be dependent on a number of factors as identified below.

***What do you think the priorities for schools in relation to ICT should be?***

Priorities must include:

* Building and strengthening teacher expertise and competence
* Ensuring adequate teacher and student access to basic infrastructure (broadband, connectivity), basic equipment, appropriate hardware etc.
* Accessing, developing and managing software which will involve a mix of external agencies, teachers and student (relative to context)
* Ensuring safe access and ethical, appropriate use of ICT by teachers and students
* Planning for and providing adequate technical support at local/school/classroom/ individual teacher level in a manner that guarantees appropriate and timely support and ensures teachers are not distracted from their core function as facilitator of learning
* Ensuring all students have reasonable opportunity to develop and revisit basic digital literacy and competence and engage in advanced learning. This will be significant in building a strong capacity to appreciate and use ICT as a learning tool and ensuring its potential is not unduly compromised or inhibited
* Organisation and/or re-organisation of learning spaces and time in a manner that embraces, more fully, the potential of ICT to support and enhance the teaching and learning process.

The above will only be obtainable if there is adequate investment by government at school and system level.

***What do you see as the challenges for ICT implementation in schools?***

The essential challenges are:

* Ensuring a minimum level of access to and use of ICT in all schools and classrooms. This includes accessing the right expertise, building capacity and maintaining and developing that capacity on an on-going basis. Capacity here includes infrastructural capacity, human capacity (student, teacher) and resource capacity (teaching resources, technical support etc.)
* Keeping abreast with how and what is evolving in ICT and remain responsive to changes. The speed at which new devices, mediums, packages are developed requires on-going renewal and development. This infers on-going high level investment in ICT –very challenging in an environment of in a time of budgetary constraints.
* Accessing adequate time, expertise and resources to respond to ICT developments and incorporate them in a timely manner into teaching and learning and school life.

***What strategies should be deployed to improve the impact of ICT?***

The most important strategy must emanate from government and the Department of Education and Skills. Their strategy must commit to fair and meaningful access to ICT for all schools and students and a level of investment that:

* ensures all schools have a minimum level of ICT infrastructure, hardware, equipment and devices, relevant software and materials at whole-school, classroom, teacher and student level
* provides, as necessary, for additional grants to schools to reach and/or maintain a minimum level in respect of the point above; such grants must be renewable given the pace at which ICT is evolving
* supports appropriate, on-going access for teachers to up-skilling and development on evolving ICT mediums and materials
* makes provision for financial incentives and supports to ensure teachers and students and their families can purchase and maintain the necessary equipment, devices and materials
* makes adequate and meaningful provision for access to technical expertise and support for schools and teachers
* enables schools put in place a co-ordinator (more than one in a large school) to drive and sustain development.

***What do you see as the critical success factors in the integration of ICT in teaching and learning i.e. the elements that are vital for the integration to be successful?***

Critical success factors in the integration of ICT clearly link to the strategies outlined above. These include:

* Universal access to broadband ,connectivity, equipment and devices at home, in school and in local communities
* Development by external agency/agencies of appropriate software and materials that are relevant, meaningful, age appropriate, tailored to address curriculum objectives and easy to access and use in a classroom context
* Access to an appropriate and adequate technical support and expertise in schools and classrooms and by individual teachers. This could include a mix of on-site and off-site support which must be available in a manner that guarantees appropriate and timely support and ensures teachers are not distracted from their core function as facilitator of learning
* A designated co-ordinator (in larger schools more than one) at school level to drive development and provide a constant stimulation for on-going development at school, programme and subject level
* Responsible and ethical practice and use by teachers and students
* Teacher and student competence in using ICT mediums and devices
* Designated budgets to schools to upgrade infrastructure, equipment and resources, build teacher capacity, provide or co-support the purchase of basic devices for students and teachers.

***What key actions do you think should be undertaken to ensure ICT integration is achieved in schools?***

Key actions must include:

* Allocate designated annual budgets to schools for ICT development -these must be in addition to the student capitation grant and equipment grants to enable schools plan for on-going development and remain up-to-date in respect of ICT equipment, devices
* Provide grant aid or support to students for the purchase of devices (which are currently more expensive that books)
* Resource an appropriate and effective technical support service to include access to a blend of on-line and off-line support, onsite and off-site support. This must be available in a manner that guarantees appropriate and timely support, ensuring that teachers are not distracted from their core function – teaching and facilitating learning
* Provide an effective , high speed broadband service in every school, community and home broadband
* Ensure connectivity throughout every school
* Build on work to date and further develop ICT resources and web-based materials
* Negotiate with ICT companies for more favourable pricing in respect of equipment, devices and resources, the development of communication networks that are sustainable and the development of administrative systems that are manageable
* Revisit the idea of an ICT advisor(s) or co-ordinator(s) in each school – important to drive development , support teacher engagement and development and promote teaching and learning across the school and curriculum on a daily basis
* Explore the possibility of organising a comprehensive system of college placements so that all schools or a cluster of schools have access to a student for a period of time each year, bringing fresh thinking and a valuable link between third level colleges and schools.
* Ensure all initial teacher education programmes include a focus on digital literacy skills and ICT for teaching and learning in their programmes.

**Further commentary on TUI perspectives**

As an initial engagement in the dialogue towards a new digital strategy TUI wishes to focus on a number of key levers.

* **Broadband and Connectivity**
* **Equipment and Devices**
* **Technical and Development Support**
* **Curriculum, Pedagogy and Assessment**
* **Teacher Professional Learning and Development**
* **Design and Organisation of Learning Spaces**
* **Specific Resources and Annual Budgets**

These levers are vital in supporting the more extensive and effective integration of technology into teaching and learning in classrooms and in schools generally. The following sections set out the TUI perspective in more detail.

**Broadband and Connectivity**

The government has already committed that all post-primary school will have access to high speed broadband (100mgb) within a short timeframe – another two or three years. Considerable advances have been made with respect to broadband access in schools and this must remain a priority. It is, however, not enough in itself:

* Access to high speed broadband must be consistent across the school
* The router base must be capable of dealing with the maximum level of activity at any given time.
* Wireless systems will be critical to supporting general engagement with ICT throughout schools, building general capacity and promoting the use of flexible learning hubs or spaces, group based activity and independent study.
* Connectivity to a wireless network throughout a school (each classroom, the library and general areas etc.) will be essential to enabling effective integration and use of ICT in teaching in learning across the curriculum.

**Equipment and Devices**

Given the pace of technological advances there is now enormous variety in the type, nature and range of ICT equipment and digital devices that schools can select. Accessing to devices and equipment that support teaching and learning operates at a number of levels:

* the school level i.e. what should be available is some and all classrooms and other learning areas
* the teacher level i.e. what is appropriate for individual subject teachers and for all teachers
* the student level i.e. what devices and resources are appropriate and necessary depending on age, level, subject area etc.

The management, review and upgrading of systems, devices and equipment can add further layers of complexity to day-to-day operation in schools. Particular areas of concern include:

* *Storage of data and security* - ‘Cloud’ is now commonly advanced as a solution to the effective management of these issues but much has to be explored and tested in this regard.
* *Expert advice* - School management and staffs need access to expert advice on a wide number of issues including balancing financial management with good decisions about educational needs and day-to-day operation.
* *Technical support* – School staffs will also need access to appropriate technical support and internal co-ordination (see point below) to ensure effective development and smooth operation on a daily basis.

**Technical and Development Support**

***Technical Support:* Schools and teachers need support to manage technology effectively and efficiently for educational and administrative functions. In this regard TUI notes that:**

* Access to technical support, experts and specialists will be crucial
* The level of support required will depend on the nature and extent of the issue to be addressed and resolved
* Support must be appropriate, responsive and timely
* A blend of on-line and face-to-face support and access to on-site and off-site specialists will be necessary
* As with broadband, connectivity and equipment issues specific, additional budgets must be made available to schools to meet technical support costs.

TUI advocates that local businesses with adequate expertise and capacity be eligible to complete installation work and provide technical support to schools as this builds local relationships which are often invaluable. However, external support and guidance should be available to schools in managing procurements, tenders, selection, installation, upgrading etc.

***ICT advisors/co-ordinators:*** **TUI considers that ICT advisors at school level must be re-instated.** Like many curriculum and pedagogical initiatives, the development and promotion of technology in teaching and learning will be best served by an ambassador (more than one in larger schools a person). Such a person would dedicate specific expertise and time to developing and building other teachers’ capacity in their independent and shared endeavours. The decision in 2008 to discontinue ICT advisors was short sighted. It should be reversed, especially in the context of the significant reduction in senior management posts in schools since 2008. Day- to-day on site guidance and development support is important to grow capacity within schools among staffs. Someone (or more depending on school size) needs to have dedicated time on a day-to day basis to focus on sustaining development, bringing new ideas to attention of staff and supporting the general integration of ICT in schools on an on-going basis.

**Curriculum, Pedagogy and Assessment**

***Curriculum and Pedagogy:*** A primary aim of post-primary education is to strengthen students’ foundation skills (literacy, language, communication, numeracy, maths etc.) and further develop skills such as critical thinking, problem solving, collaboration, information management and higher order thinking. Emphasis on a blended, integrated approach is advised where a variety of teaching and learning approaches, methods and tools are drawn on and complement each other in supporting student engagement and development.

TUI accepts the key role of ICT in the learning process and acknowledges that many aspects of the curriculum will be enhanced through the use of digital and technological tools and mediums. It is clear from research and practice that the use of ICT to support pedagogical practice is still somewhat limited. However, a school or teacher that ignores the potential and centrality of these mediums to learning in a global society will be remiss in their responsibility to contextualise content and subject matter in the world around us and prepare students for later learning and work. In this regard TUI emphasises:

* The need for continual investment in the development of appropriate ICT materials and resources which complement and support the suite of subjects and learning programmes across the curriculum. Considerable work has already been undertaken by the NCTE and NCCA but energy and investment must be sustained.
* All teachers must have access to a basic level of resources and materials which are relevant, age appropriate and moderated.
* Teachers will also draw on other material and resources. As ICT mediums, tools, devices and platforms become more embedded in the school system there will a growing need for support and guidance in sourcing and moderating materials at teacher and school level and managing the wider ICT environment in the classroom context.
* Storage and management systems to ensure that materials and resources are easily accessible and manageable for teachers and students inside and outside the classroom will be important.

However, central as technology may be, it would be misguided to see it as the main plank on which god teaching and learning rests. Teacher capacity to facilitate and guide the learning process must remain the core reference point in the classroom.

***Assessment:*** In pursuing ICT for assessment purposes above all we must be careful to ensure that the focus of assessment is not diminished or restricted to a limited range of knowledge, skill and competence that fit neatly with computer packages. TUI advises that:

* Considerable investigation, including a review of practice in other jurisdictions and at other levels of education and an interrogation of where and when the use of ICT could be a valuable tool, is necessary.
* Advancement in the use of ICT to support the assessment process (summative and formative) must be cognizance of the range and type of knowledge, skills and competence that is desirable, appropriate or necessary to assess.
* In exploring the use of ICT for assessment we must be mindful of, and honest about, the extent to which its use (through appropriate mediums or devices) could lead to more or less’ effective or efficient’ assessment processes and practices.
* The capacity to manage ICT for assessment purposes at student, teacher, school and system level must be thoroughly examined and operational and educational issues must be audited and appropriate solutions, including resources, identified.

***Importantly***, while TUI will be open to exploring new approaches it will guard against and resist additional workload and responsibility for teachers without additional resources (time, staff allocations, administrative support/systems).

**Teacher Professional Learning and Development**

Classrooms, and the student learning and development therein, are about building and enhancing relationships, attitudes, understandings and perspectives; computers, digital and online devices, tools and programmes are not equipped to do this profoundly human work. Instead , responsibility for the essence of what going on in schools and classroom rests in the hands, hearts and mind of the school staff , especially the classroom teacher; a role the can never be replaced by even the best technology.

Technology is but another tool to aid teaching and learning. Albeit, important it should not completely displace other teaching aids and tools - quite the contrary, technology should complement and enhance other teaching supports and the teachers’ expertise to varying degrees depending on the context, emphasis and content etc. The important thing is that teachers are supported in understanding, accessing and using ICT as one of many tools in the teaching and learning process and managing it well. TUI considers that:

* Teachers need on-going access to timely and responsive professional learning and development opportunities as ICT and digital mediums evolve.
* A mix of basic and advanced courses and associated resources will always be necessary; ICT is ever evolving (with speed!) and teachers will come to the learning at various stages of development and with various levels of prior knowledge and understanding.
* While there will be a strong focus on the ICT mediums or digital devices and their capabilities there must also be a strong and appropriate focus on curriculum, pedagogical and assessment practices.
* A minimum level of courses, seminars, materials and equipment must be available, cost neutral, to individual teachers and schools. Some teachers may commit to further engagement depending on interest and relevance.
* Courses must be accessible in terms of timing, time involved and location.
* A blend of on-line and face-to-face approaches will be important – appropriateness will be dictated by a number of factors e.g. themes, prior knowledge, time available.
* Off-site opportunities will be important to encourage wider face-to face networking and exchange of practice and ideas. On-site opportunities will enable whole-school collaboration and development and lead to internal efficiencies at school level.
* Principal teacher should have flexibility in enabling teachers to pursue off-site learning programmes and seminars and supporting whole-school or subject department activities.

**Design and Organisation of Learning Spaces**

ICT mediums have the capacity to shift the manner in which we access and engage with information and knowledge considerably. They also have real potential to promote collaborative activity, integrated learning projects, independent learning, team activity, interactive learning and a greater level of self-directed and self-managed learning. All of this, undoubtedly, challenges the current organisation of learning space and time.

Mindful of the potential of ICT to provide very different and varied opportunities to support teaching and learning the union advises that specific consultation be carried out with the education partners on what adjustments and adaptations to the organisation of space and time might be desirable and/or appropriate. In suggesting this TUI emphasises that ICT is but another tool that, used effectively, will enhance and facilitate learning. The union will not contemplate ICT becoming a mechanism by which student access to teachers or face-to-face tuition time is reduced, although it accepts that some reconstruction of this may be appropriate. Disappointingly, the potential ICT offers to re-organise learning space and manage it differently is not reflected in any significant in the design of new schools or rebuilds. TUI advises that this be considered as a matter of urgency in order that new school buildings can truly support and demonstrate more effective use of ICT for teaching and learning.

In conclusion, TUI emphasises that **s*pecific resources and annual budgets will be essential*** to support schools in developing and maintaining capacity to maximise ICT mediums as quality teaching and learning tools and resources which truly enhance student engagement and learning. All schools should have access to a minimum annual budget (above and beyond the standard capitation, equipment or operational grants that are already under pressure in meeting a myriad of other costs) to support development and implementation of an ICT strategy. Given the varying status of schools (size, stage of development, physical condition, location etc. ) some schools should be eligible for additional budgets relative to their need to purchase, install and up-grade basic ICT infrastructure, equipment and devices, access technical support and promote teacher competence - each of which underpin quality, ICT supported teaching and learning .

The unions look forward to an opportunity to participate in face to face dialogue in order to develop the above points in more detail.

Ends

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