

THEMES

Ireland's movement towards Europe
and away from the UK is a game changer.



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Impact of Brexit on Research and Education

Getting Brexit right



Jane Ohlmeyer

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Professor Jane Ohlmeyer looks at what Brexit will mean for research and education, and examines what are the risks and the challenges. She looks also at the opportunities and what needs to be done to avail of them.

For many of us Brexit is intensely personal. I suspect that my own story is fairly typical. Though Dublin is now my home, I grew up in Belfast during the 1970s and early 1980s, the darkest days of the 'Troubles'. I received my undergraduate education from St. Andrews University in Scotland and my postgraduate degree from Trinity College, Dublin. My younger son, an Oxford graduate, lives in London while my mother crosses the border, sometimes daily, as she divides her time between Counties Armagh and Donegal.

As an historian of early modern Ireland, I have spent most of my career studying the interconnected histories of 'these islands'. I also have close professional ties across them. For nearly a decade I taught at the University of Aberdeen and I am a fellow of Magdalene College, Cambridge. Every year I take a group of graduate students from Trinity College Dublin and Queen's University Belfast for a residential 'reading party' on the Clandeboyne Estate, near Bangor. I collaborate and co-publish with researchers based in the UK and recently submitted an EU grant application led by a colleague working in a Welsh university.

As chair of the Irish Research Council, I seek to forge strong institutional relationships with our sister agencies in the UK and do everything possible to secure existing research collaborations, as well as nurturing new ones. Through our various excellence-based schemes, especially our Government of Ireland and Laureate awards, we aim to attract to Ireland from all over the world outstanding researchers from across all disciplines. As co-chair of the Royal Irish Academy's Brexit Taskforce, I am part of a group of academics from across Ireland assessing the impact that Brexit could have on research and education on the island.

What is clear is that research and education know no national boundaries. Moreover we have seen how, especially over the past twenty years, they have served as powerful integrators and, as such, have played an important part in the Good Friday Agreement (1998). Research and education are also fundamental to Ireland's continued prosperity and competitiveness

Research and education know no national boundaries.

869,093 people living in Great Britain were born in Ireland.

in Europe and globally. International education contributes €1bn to the Irish economy per annum and lays the foundation for future global relationships.¹ Academics in Irish-based HEIs have helped to achieve national Horizon 2020 targets and have won 57% of Ireland's total drawdown (2012–2017), which equates to €221m in funding and hundreds of high end jobs.² More generally, the availability of talent and the existence of a mature research ecosystem is a key future differentiator for Ireland to win foreign direct investment (FDI).

What, then, will Brexit mean for research and education? What are the risks and challenges? What opportunities might Brexit afford and what needs to be done to avail of these?

The historic and human links between 'these islands' date back to the Middle Ages. Ireland was England's first colony and from the mid-sixteenth century 350,000 people – from England, Scotland and Wales – migrated to Ireland. By the early eighteenth century, society in Ireland was ethnically diverse with nearly one third (c.27 %) of the population of immigrant stock. People from Ireland have also been colonising the UK for centuries. The 2001 UK Census shows that 869,093 people living in Great Britain were born in Ireland and that roughly six million people living in the UK have an Irish-born grandparent. This figure exceeds the current population of Ireland (4.75 million) and equates to nearly 10 per cent of the UK population.

Given our shared history and language, the educational and research systems are closely interconnected. It comes as little surprise then that the academic community would prefer Brexit not to happen and is deeply apprehensive about the impact it might have. In July 2017 the Royal Irish Academy published results from a survey of 390 academics in Ireland and Northern Ireland on the *Impacts and Opportunities for Higher Education and Research on the Island of Ireland post Brexit*.³ Its results highlight significant concerns among the sector around the likely impact of Brexit on the ability of students and researchers to move freely for work and research on the island of Ireland and with the UK. Sixty-six per cent of respondents believe Brexit will have a negative impact on the Higher Education Sector in Ireland. This increases to 96% when asked this question in relation to Northern Ireland.

Retention of the Common Travel Area between Ireland and the UK was frequently cited as a way of overcoming some of these impacts, allowing Irish students and researchers to continue to study and train in UK universities on the same conditions as UK students and workers. Removal of these rights may mean for example, that Irish students in Northern Ireland and the UK would pay significantly higher fees (up to 100%) as 'international' (or non-EU) students. As someone who studied on both

1 International education money figure taken from Enterprise Ireland <https://www.enterprise-ireland.com/en/News/PressReleases/2016-Press-Releases/25-per-cent-increase-in-international-students-studying-in-Ireland-since-2012.html>. Includes EU students and those from Canada, Chile, Brazil, Russia, China, India, Germany, Malaysia, Nigeria and USA

2 Source: <http://www.horizon2020.ie/minister-halligan-welcomes-irelands-continued-success-winning-eu-funding-research-innovation/>

3 <https://www.ria.ie/news/policy-and-international-relations/royal-irish-academy-brexit-survey-results>

sides of the border, the prospect of anyone from Belfast paying an international fee, which is three or four times greater than the EU fee, to study in Dublin (or vice versa) is chilling.

The shared land border between Ireland and Northern Ireland was recognised as a unique and important issue: respondents frequently drew attention to the importance of an open border to allow academic and research staff and students to travel freely. Strong concern was expressed by survey respondents for future research collaborations north and south on the island of Ireland, and with the UK. Data demonstrates that the UK is our closest collaborator for research and higher education and a significant partner in successful bids for European research and innovation funding. The UK is also Ireland's number one collaborator on research papers.⁴ In addition, the UK has frequently been a strong ally for Ireland in policy discussions. While Ireland has a good track record in building coalitions with other countries, including smaller ones, the loss of our nearest neighbour at the table could affect future EU policy development.

The UK is a significant partner in successful bids for European research and innovation funding.

Little wonder then that 79% of respondents 'agreed' or 'strongly agreed' that collaborations between UK and Irish higher education institutions (HEIs) are very important in their academic/research field, highlighting the need to continue to facilitate such collaborations post-Brexit. Furthermore, 77% of respondents either 'agreed' or 'strongly agreed' with the statement: 'Brexit is likely to impact negatively on North-South collaboration in the medium to long-term'. In the event of a so-called 'hard' Brexit, Northern Ireland researchers were particularly concerned about losing access to European Union research and innovation, and structural funding, estimated as contributing significantly to the Northern Ireland economy. Equally, Irish researchers have been eligible for various UK-based funding programmes, including those by science-based foundations, such as: Wellcome Trust, the Arts and Humanities Research Council, and Economic and Social Sciences Research Council. If the UK decided to redirect its funding to UK-based researchers only, this could have knock-on consequences for Irish researchers.

Though we have not wished for it, Brexit does afford a unique set of opportunities for the Republic of Ireland. To avail of these and to protect Ireland's competitiveness, we need to do two things. First, to work with colleagues across the sector to make Ireland an attractive destination, a global hub, for the best students and researchers from around the world. Second, to maintain and develop further our educational and research relationships with the UK, Europe and rest of world.

In the global war for talent, we need to make Ireland the country of choice for the very best. International students are already voting with their feet. Recently the numbers applying to study in UK has dropped, with a corresponding increase in the number applying to be educated in Ireland. The anti-migrant sentiment in the UK is also deterring academics from moving there and encouraging those currently based there to relocate. There has never been a better moment to recruit these 'Brexit refugees'.

4 Reference to the chapter by Alun Jones and Liam Cleere.

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In the global war for talent, we need to make Ireland the country of choice for the very best.

It is time for Ireland to position itself as a tolerant, welcoming, and engaged multi-cultural country and leverage this to attract talent at all career stages and in all disciplines. We want to make Ireland the destination of choice for researchers keen to have an English-speaking partner in an EU H2020 research application. We want to support those eager to hold a highly prestigious and competitive European Research Council (ERC) grant at an Irish university or institute of technology. This might involve a researcher relocating to Ireland permanently or on a part-time basis, perhaps on a secondment from a UK university for the duration of the grant.

The challenge we now face — especially our politicians, government departments, universities and research agencies — is to realise these opportunities in a co-ordinated fashion and in a way that strengthens research relationships with the UK. And to do so without antagonizing our colleagues in Europe.

While we continue to be obsessed with Brexit, Europe has moved on. Hard though it is to shed 800 years of history, we need to recognise that Ireland's future lies with Europe. We need to encourage our young people to learn European languages and avail of study, placement and employment opportunities in Europe. We also need to enable researchers from Ireland to become more active in Europe, leaders in their fields drawing down even more EU research funding and collaborating more with European partners. The evaluation of EU bids is a complex and labour-intensive process and in the absence of UK evaluators, Irish academics need to step up to the plate. This will allow us to shape policy and future research and educational programmes.

At this exceptional moment, our government also needs to make significant investment to ensure that we benefit from the opportunities to position Ireland as a global hub for research, education and talent.

As the findings of the government's Expert Group on Future Funding Options for Higher Education (2016) and the evidence from university global rankings and current staff-student ratios demonstrate, Irish higher education institutions need immediate and significant investment if they are to address growing domestic demand for higher education on foot of demographic pressures, become the partners of choice for the best researchers, serve as the destination of choice for non-EU and other students and ensure that Ireland remains competitive in the attraction of FDI.

Moreover, if the c.11,000 Irish students currently studying in the UK, (never mind the 1000s of potential additional Erasmus students who will no longer be able to study in the UK) require provision here in Ireland – higher education institutions will need to deliver significant additional capacity (c.6%+). The sector can and will continue to play a role in this itself – as demonstrated by its success in growing alternative income streams via industry, philanthropy and international student recruitment. Nevertheless, growing capacity on the back of historical investment requires significant additional investment in physical and human infrastructure.

Investment in Ireland's research ecosystem is considerably below that of Ireland's European peers. In particular, public investment in research is falling well short in its support for basic frontier research – which is the type of funding most eagerly sought by world class talent as amply demonstrated by the success of the European Research Council. Only 4.3% of direct government funding in Ireland is invested in individual led frontiers basic research, in comparison with an average of 17% by other European Union (EU) member states. Put another way, the budget accorded to the agency that funds applied research in 14 priority areas (Science Foundation Ireland) is €167m; while funding for basic frontier research across 70 disciplines, awarded by the Irish Research Council is, €32m. The Government needs to move now to invest adequate funding to close this gap and ensure Ireland's future competitiveness vis-a-vis its EU counterparts.

Additional capital allocations are also required to support higher education and research. Consideration should be given to the reactivation of capital investment programmes such as the Programme for Research in Third Level Institutions to fund research infrastructure on a competitive basis across all disciplines in Ireland's higher education institutions.

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It is investment in the educational and research fabric of Ireland, together with bespoke, excellence-based programmes (like the Irish Research Council's Laureate awards), that will enable us to attract the best researchers. Without this they will relocate elsewhere in Europe or, more likely, to the US or other English-speaking countries where research, especially basic frontier research, is funded appropriately.

We must also work hard to do all we can to support the Peace Process, which, as recent political events highlight, is more vulnerable and fragile than some in Westminster care to acknowledge. Strand Two of the Good Friday agreement recognised education as a suitable area for all-island co-operation. Post-1998, research and education have helped to secure the Peace Process and contributed to economic competitiveness and social cohesion on the island of Ireland. The island of Ireland accrues significant benefits from the de facto all-island research system operating in sectors such as agricultural research, and from the social dividends arising from the cross-border flow of people to work, study and contribute to higher education and research.

It is thus critical that we do all we can to promote inter-community stability in Northern Ireland – via cross border education and research collaboration – and reinforce the Peace Process at this moment of intense instability and uncertainty. Now is the time:

- » To secure commitments as to the rights and entitlements of Irish citizens within the Common Travel Area.
- » To fund a bespoke suite of programmes for research and educational collaborations, including north-south, east west mobility and global mobility programmes to bring the very best research talent to Ireland.
- » To support critical pan-island bodies including the Royal Irish Academy and Universities Ireland in their endeavours to create meaningful all-island dialogue in respect of education and research.

We need to recognise that Ireland's future lies with Europe.

Brexit is occurring at a particularly sensitive time in the histories of these islands: as part of our 'decade of commemorations' (2012–22) when we remember key moments in the founding of the Irish state, including the 1916 rebellion, partition and civil war. Of course, commemorations occur in specific contexts. Thus the 50th anniversary of 1916, in 1966, formed the backdrop to the rise of republican nationalism in Northern Ireland and the outbreak of the 'Troubles' in 1969.

The political consequences of Brexit for Ireland could be very real. The securitization of the border with the North could negate many of the gains achieved as a result of the Peace Process. Sharing a common European agenda has provided Ireland, North and South, with great scope to work together, to find common cause and to play down our differences. It would take relatively little to destabilise Northern Ireland and the anxieties around Brexit could well fire up the nationalism, tribalism, sectarianism and inhumanity that characterised the 1970s and 1980s. If we have learned one thing from the study of Irish nationalism it is the way in which one generation of republicans passes the torch to the next. It is incumbent on us all to do everything possible to ensure that we create an environment in which peace, not physical force republicanism, continues to flourish. Here education and research have an important part to play.

If we can get Brexit right, the benefits are real.

With Brexit negotiations underway, the clock is ticking down towards March 2019. If we can get Brexit right – and that includes making significant provision for research and education over the course of the next 18 months – the benefits are real. Income from international education, which already contributes €1bn to the Irish economy every year, will increase. As world-class researchers make Ireland their home, our drawdown of European funding will grow. We will begin to compete effectively with the Dutch, Swiss and Israelis for prestigious ERC awards. Investment in research and education will build global reputation for excellence and result in improved research performance. It will also lower staff-student ratios, which is one of the key drivers for the global university rankings, along with: how international we are, publication citations, and our reputation for excellent research. The position of Ireland's universities will be enhanced as a result. This, together with the greater availability of world class talent, will be a key future differentiator for Ireland to win FDI.

In other words, appropriate investment now in research and education will increase Ireland's global competitiveness at a moment of great uncertainty and help to build a stable platform for future growth.

Rethinking Foreign Language Proficiency

What the 'new' Irish can offer us



Pat O'Mahony

Education Research Officer, ETBI

Pat O'Mahony writes about the critical importance of foreign language skills for indigenous businesses as well as for multinationals. In view of Ireland's need for significant numbers who speak world languages fluently, the author suggests that in this regard young people from non-English-speaking homes can become one of the country's greatest assets.

Foreign language skills are in high demand in the employment market. This is hardly surprising, given the extent to which Ireland's prosperity depends on its capacity to sell products and services in the global marketplace. In fact, language skills are as critical to indigenous businesses as they are to multinationals because, to do business off-shore, a firm must be able to communicate fluently with customers and prospective customers in their own language.

Up till now, English has been the common means of communication for speakers of many different first languages across the globe. But its relative importance to our future is waning as the balance of economic power moves east and south. Today Ireland needs fluent speakers of virtually every international language if it wants to guarantee its prosperity and social cohesion, which depend on economic growth. The problem is that our schools have tended to concentrate on teaching French and German and, to a much lesser extent, Spanish. Language teaching here has also had a written rather than an oral focus, so a young person with a good Leaving Certificate in a language is often not well equipped to communicate fluently in it.

Producing workers who can speak fluently with non-English speakers in their own language has a significant lead-in time – at least four years, assuming the necessary aptitude and commitment. There is also the need to produce workers fluent in a wide range of languages, and ideally each cohort would need to comprehend people from a range of disciplines – business, engineering, science, and so on. If we want to engage with the Chinese about electronic engineering, we need electronic engineers who speak fluent Chinese. In this context, someone with even an A in higher-level Chinese in the Leaving Certificate (if we had reached that point in embedding Chinese in the curriculum) would be of little use. So what, if anything, can be done?

For a start, we need to be realistic. There is little point in the finger-wagging that many commentators engaged in last year when PayPal announced it would have to 'import' 500 employees from abroad to staff

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Ireland should make it as easy as possible for children to develop heritage-language competence.

its new customer support office in Dundalk. PayPal's operation will require workers fluent in up to twenty languages, and it is unrealistic to think we could offer a school curriculum that is anywhere near meeting this kind of demand for business fluency. We also need to acknowledge that many PayPal jobs are essentially entry-level, as Richard Eardley (managing director of Hayes Ireland) recently pointed out in the Irish Examiner, and people working in them tend to move employment before long.

While a basic capacity to communicate in a foreign language will be beneficial in many work situations, we ultimately require significant numbers who speak these world languages with absolute fluency – irrespective of whether they are working in call or support centres, or engaging with foreign-language-speaking professionals at home or abroad. It would certainly be good if PayPal and the like could employ mainly Irish residents, but this will not be possible unless we radically rethink how we can produce enough workers with the requisite language skills. Beating ourselves up about why we are not achieving the impossible will not help.

The 2011 census figures show significant numbers of people resident in Ireland who are fluent in many of the languages we need in order to build economic prosperity. Table 1 shows the numbers of Irish residents, by age group, who speak English proficiently and are native speakers of languages that might be relevant to Ireland's economic development. It is possible to obtain similar statistics for virtually every world language from the census. Interestingly, over half a million (514,068) Irish residents live in homes where English is not the first language.

The benefit of teaching foreign languages to young Irish people from homes where English or Irish is the first language is widely acknowledged. However, the advantage of helping young people who already speak a language other than English at home to acquire full written fluency in their heritage languages has been unrecognised, to a significant degree, by the education sector, the State, and the media.

Some national groups, in particular the Polish, make valiant efforts to ensure their young people acquire written fluency in their heritage language, but they get little if any support to do so. Even gaining access to school buildings for their weekly classes can be problematic. The prevailing view seems to be that, while such classes are in the interest of families likely to return to their countries of origin, they are of little benefit to Ireland.

True, it is important that the offspring of immigrants from non-English-speaking countries develop excellent literacy skills in their heritage tongue so they are not disadvantaged if returning home. On that basis alone, Ireland, given its history of emigration, should make it as easy as possible for those children to develop heritage-language competence. As a former emigrant, I can attest to how much the vast majority of migrants cling to the idea of returning to their homeland one day – even if only some realise that dream.

It is not only ‘newcomers’ who can gain from such an approach: the Irish economy has even more to gain. Young people from non-English-speaking homes can become one of our greatest assets. If we help them acquire native-standard written competence in their heritage languages, we will be going a significant way to meeting our need for workers fluent in both English and a foreign language.

It should ensure we have not only entry-level workers in call and support centres, but also highly qualified professionals across disciplines who can communicate confidently with their colleagues around the globe, especially in Europe and the BRIC countries. These bilingual (and in a sense bicultural) workers will have a significant advantage over what we might term native Irish workers who are bilingual. Their roots in their families’ country of origin could provide business, cultural, and even political connections that would take non-natives a long time to develop.

In 2012, thousands of young people took a foreign language in the Leaving Certificate: French (25,977), German (6,787), Spanish (4,330), Italian (384), Portuguese (63), Dutch (20), Russian (269), Czech (14), Polish (794), Latvian (87), Lithuanian (262), Hungarian (33), Romanian (109), Japanese (239), and Arabic (149)¹. These statistics, however, are misleading for a few reasons.

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Firstly, many students’ main reason for taking French, German, or Spanish is to satisfy a requirement for entry to university rather than to acquire linguistic competence. This is borne out to some extent by the relatively high percentage who sit the ordinary level paper in French (47%), German (36%), and Spanish (42%).² Ordinary-level competence after five years’ study is not a good basis for proficiency in a language.

Secondly, our workers require not Leaving Certificate higher-level standard but native-speaker proficiency. And this is the standard among those who come from homes where English is the second language.

Thirdly, it is not just three or four languages we need proficiency in, but thirty. Admittedly, the numbers needed in any particular language depend on its relative economic importance to us. For example, we need many more people proficient in BRIC-country languages than in Dutch or Swedish, where English is widely spoken.

As mentioned, some national groups make a big effort to ensure that their young people develop proficiency in their heritage language. But Polish and other groups need our assistance if they are to ensure native-standard written and oral proficiency, to their benefit and to Ireland’s.

The support they require has several dimensions. They need free access to suitable buildings to accommodate their language classes. Ideally, our school buildings should be made available, and if there is a cost, it is in the State’s interest to bear it. National groups should not have to beg for

1 See: <http://www.examinations.ie/index.php?l=en&mc=st&sc=r12>.

2 <http://www.examinations.ie/index.php?l=en&mc=st&sc=r12>.

Could the NCCA... develop comprehensive curricula in these heritage languages?

teaching facilities; instead, the schools system should be proactive in making them available.

Availability of facilities for extracurricular classes can only achieve so much, however. We need to look at how teaching heritage languages can be integrated into the school curriculum, from Infants to Leaving Certificate. Given that the number of students with a heritage-language background in any school will be small, it will require real proactivity and creativity to achieve this.

What might be done? Could the NCCA, working with the departments of education in Poland, Lithuania, India, China, Portugal, and so on, through their national embassies and consulates, develop comprehensive curricula in these heritage languages? Certainly anyone who attended the annual conference of the network of Polish schools in Ireland at UCD last November could see the Polish Embassy's willingness to assist with programmes aimed at developing the Polish language skills of first-generation Irish from Polish backgrounds.

We would also need to develop a full suite of e-teaching and e-learning programmes, from Infants to Leaving Certificate, capable of online delivery. Within the next 18 months, most first- and second-level schools will have access to 100-megabit broadband. Learners would merely need access to a computer and headphones. This way, primary school students could devote time each day to learning their heritage language, without interfering with their classmates' learning. This should also be possible at second level, though with some added challenges.

Would the availability of high-quality distance-learning programmes in heritage languages encourage [native Irish] students to take up these languages?

Since the aim is to develop native-speaker proficiency, the language curricula should be aligned with those that apply in, for example, Poland or Lithuania. Similarly, examinations and accreditation would need to be set explicitly at this level. Could students taking Polish, for example, sit the Matura in Polish rather than the Leaving Certificate exam? To incentivise students to achieve a high standard in heritage languages, might we consider giving bonus CAO points for results in, say, the Polish Matura?

Would the availability of high-quality distance-learning programmes in heritage languages encourage other students, from 'native' Irish backgrounds, to take up these languages? Might we consider pointing students with an aptitude for learning languages in the direction of these programmes? Could third-level colleges make provision for students in any discipline taking on a heritage language as an optional part of their programme? The curricula developed for school students could be extended or adapted for third-level students, depending on their prior knowledge of the language.

One thing seems obvious: the efforts of our education system to date leave a lot to be desired when it comes to developing significant numbers of workers able to speak even French, German, or Spanish – not to mention the array of heritage languages we need to master. Also, recent initiatives to introduce Chinese in transition year and the new Junior Cycle, while

welcome, are unlikely to contribute in the medium term to generating a cohort with proficiency in Chinese.

We need to adopt more radical approaches. The arguments set out here are intended to catalyse radical thinking in this area. As W.L. Bateman noted, ‘If you keep on doing what you’ve always done, you’ll keep on getting what you’ve always got.’

We live in a globalised world, where our products can be sold in every corner of the earth. We can attract visitors and students from around the globe. The key to doing this, however, is the extent to which we develop the capacity to communicate proficiently in foreign languages. Our historical dependence on trade and tourism with the English-speaking world has left many of us convinced that because we speak English, we don’t need to worry about other languages. But to guarantee our prosperity and cohesion, we must disabuse ourselves of this view and do something effective to ensure we can communicate with people in their own languages.

Table 1: Persons usually resident in the State who speak a language other than English or Irish at home – classified by age group, place of birth, language, and how well English is spoken ³

	Total	English Spoken		English Spoken (0-4 years)			English Spoken (5-12 years)			English Spoken (13-18 years)		
		V. Well	Well	Total	V. Well	Well	Total	V. Well	Well	Total	V. Well	Well
German	27,342	19,923	4,773	1,056	535	239	1,975	1,620	231	5,232	3,606	1,041
Yoruba	10,093	8,374	1,171	440	237	115	2,170	1,774	200	924	800	77
French	37,800	26,640	5,322	1,769	818	488	3,372	2,551	418	11,046	7,305	2,136
Italian	3,624	2,866	409	466	227	105	524	440	50	279	210	43
Dutch	3,522	2,868	554	56	18	15	236	189	43	179	153	22
Russian	18,850	6,612	7,491	201	25	42	1,187	729	342	1,046	809	199
Rumania	16,613	5,785	7,196	187	17	30	1,044	637	262	101	752	240
Arabic	8,958	4,201	3,310	212	18	47	822	496	204	732	548	142
Turkish	1,180	656	371	14	4	4	66	47	17	58	46	9
Urdu	6,726	3,784	2,230	87	20	27	598	441	118	562	462	81
Vietnam	705	149	224	14	7	3	22	11	9	37	18	15
Chinese	12,503	3,318	5,677	42	9	13	202	99	72	402	191	165
Japan	837	435	277	31	12	7	76	53	15	46	34	9
Portuguese	11,902	4,864	4,205	628	174	147	1,028	699	221	688	429	166
Spanish	21,640	14,981	4,313	1,170	515	295	1,846	1,472	209	3,226	2,139	679
Lithuanian	31,635	8,731	12,422	2,449	239	384	3,412	1,995	1,035	1,884	1,311	471
Polish	119,526	33,811	49,322	10,451	847	1,446	10,527	5,292	3,646	4,834	3,261	1,284

³ The data included in this table is extracted from Table CDD46 of the Census 2011 reports. See: <http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=CDD46&PLanguage=0>.

Artificial Intelligence in Education

What is it, where is it now, where is it going?



Brett A. Becker

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Artificial Intelligence holds significant promise to revolutionise our educational systems, but are our educational systems ready for a revolution? Brett Becker explores current advances of AI in education and provides a forward-looking view on how AI might affect our educational systems in years to come.

Very few subjects in science and technology today are causing as much excitement, and as much misconception, as Artificial Intelligence (AI). It seems that everyone from Obama to Putin and Bezos to Zuckerberg are commenting on both the possibilities and the problems that AI could bring to humanity. In the past year Stephen Hawking and Elon Musk have both made global headlines voicing their concerns over the ramifications of AI. Also this year, Google's AlphaGo program beat Ke Jie, the world's number one Go player. This represents a significant AI milestone as Go is extremely complex, significantly more so than chess, and only 20 years ago some doubted that AI could master chess until IBM's Deep Blue beat world-champion Gary Kasparov in 1997.

An important distinction between the AI that Hawking and Musk are concerned with and the AI that powers AlphaGo and Deep Blue is that the latter are examples of narrow (sometimes called weak or domain-specific) AI – non-sentient AI that is focussed on a specific problem. The AI that Hawking and Musk warn of is strong (or general) AI – AI with the ability to perform so-called general intelligent action. It is important to remember this distinction when discussing AI in educational settings as we will soon see.

It is not only the different types of AI that make discussions on the topic fraught with misconception. The interdisciplinary nature of the field and the myriad definitions of AI complicate matters further. Even experts can find it difficult to define AI succinctly. In fact it could be said that AI suffers from a self-fulfilling misconception crisis, as Nick Bostrom, a leading AI expert from Oxford University, explains: "A lot of cutting edge AI has filtered into general applications, often without being called AI because once something becomes useful enough and common enough it's not labelled AI anymore".¹

What is Artificial Intelligence?

Quite generally, AI is programming a computer (or any device) to perform a task that traditionally is only possible with human intelligence due to its complexity. Complexity is the key word in the previous sentence. Summing the numbers between one and

one trillion isn't complex, but it is tedious and would be incredibly slow for a human to accomplish, however computers excel at this kind of task without the need for AI. What about grading thousands of online multiple choice tests? Again, tedious and slow for a human, straight-forward and fast for a computer. Still, because this task is not necessarily difficult for a human, it also would not require AI to be accomplished by a computer. If we increase the complexity more, and talk about grading a 10,000 word essay on one of Shakespeare's works, we enter the realm of tasks that are complex enough to require real human intelligence. Regardless of how tedious and time-consuming this task may be, it is the complexity that makes this task one that traditionally only a human could perform. To have a computer do so (properly, reliably, and perhaps not for just one specific work of Shakespeare, but any) would require AI.

AI affects most of us every day. If you talk to Amazon's Alexa or to your phone (not just through it) the software that interprets your voice is powered by AI. The reason that your inbox (hopefully) has a lot less spam than it did a few years back is probably due to AI. When you tag someone in a photo on Facebook, AI is used to identify that person in other photos. But what changes has AI had on education, and what effects will it have in the future? Before we answer these questions, we need to inspect today's educational practices and problems a little more closely.

Ireland happens to be global leader in AI, with dozens of companies and research centres focussing on AI highlighted in a recent article titled "Why Ireland is the AI Island".² These include companies such as IBM, whose Irish operations have a strategic focus on the Watson AI platform discussed later, and research centres such as CeADAR, the Centre for Applied Data Analytics, where as a collaborator, I have personally witnessed a remarkable increase in AI activity recently.

Artificial Intelligence in Education

Picture a phone from 30 years ago and compare it to the one in your pocket today. The one in your pocket is quite different: it is not tethered to the wall with a wire; it has fewer buttons; it has a camera; it is a conduit to most of mankind's cumulative knowledge; it may be able to recognise your fingerprint or your face. It's also in your pocket! Now picture a classroom from 30 years ago and compare it to today's typical classroom. There are probably few striking differences: perhaps the colour of the board the teacher writes on; perhaps the classroom from 30 years ago has no projector, but maybe it does. Perhaps there are more computers in today's classroom. Perhaps the biggest difference is that everyone has a phone in their pocket! Nonetheless, that says more about the phone than the classroom. Either way, you probably pictured people in a room – a room with many students and one instructor. The students are probably sitting facing the instructor. Indeed, the typical classroom system has changed very little from that of 30, or even 60 years ago. Why is there so little fundamental change? This question reminds me of a quote from Henry Ford: "If I had asked people what they wanted, they would have said faster horses".³ To effect a big change, as did Ford, we need a revolution – that revolution could be the application of artificial intelligence to education. For more on breaking free from our 19th century factory-model education, see.⁴

Ireland happens
to be global
leader in AI.

Luckin et al. describe Artificial Intelligence in Education (AIEd) as investigating learning wherever it occurs, in traditional classrooms or in workplaces, in order to support formal education as well as lifelong learning. It brings together AI, which is itself interdisciplinary, and the learning sciences (education, psychology, neuroscience, linguistics, sociology, and anthropology) to promote the development of adaptive learning environments and other AIEd tools that are flexible, inclusive, personalised, engaging, and effective.⁵ At the heart of AIEd is the scientific goal to “make computationally precise and explicit forms of educational, psychological and social knowledge which are often left implicit”.⁶

The two-sigma Problem

In 1984, educational psychologist Benjamin Bloom, best known for his taxonomy of learning domains, sought to determine if there were concrete adjustments to the traditional classroom format that would have positive impacts on student performance.⁷ He found that a mastery learning approach (a category of instructional methods which establishes a level of performance that all students must master before moving on to the next unit) helped students by more than one standard deviation. When combined with personal tutoring this increased to two standard deviations, a so-called ‘two-sigma’ effect on performance. The major takeaway is this: the notion of categorizing students as “high” or “low” achievers was almost entirely incorrect. Students who perform in the 50th percentile in a traditional classroom could effectively perform in the 98th percentile with mastery learning plus one-on-one support.⁸

Had Bloom achieved the educational panacea? Not quite. Personalised tutoring and mastery learning are both problematic. The former is extremely financially expensive and the latter is extremely temporally expensive. Thus, the ‘two-sigma’ problem was born: What could be done efficiently, at scale, and be as effective as mastery-based personalised tutoring? For much of the last 25 years, the AIEd community has been focusing, to a large degree, on solving the two-sigma problem, moving towards creating systems that are as effective as human one-on-one tutoring.⁹

Where is AIEd Today?

In the last decade, artificial intelligence and adaptive technologies have matured, making both mastery learning and one-on-one instructional methods more scalable than Bloom ever could have imagined [8]. However, these technologies have yet to coalesce into widely adopted systems to facilitate teaching. To a large extent, this is because our existing educational models and systems are still stuck in their traditional forms, hindering the true adoption of AI systems. There have however been major strides in technologies to help teachers currently teaching in traditional models, particularly in freeing up their time so that they can tend to tasks for which human intelligence is still required. AIEd is well placed to take on some of the tasks that we currently expect teachers to do – marking and record keeping, for example. In my research area of computer science education, I have personally witnessed an increasing interest in AI in recent years, particularly to gain insight from the vast

To effect a big change... we need a revolution - that revolution could be the application of artificial intelligence to education.

We see a future in which the role of the teacher continues to evolve and is eventually transformed.

amounts of data that students are producing during their learning, and to automate educator tasks.

As a specific example, Korn¹⁰ reported on the work of Ashok Goel, a professor of computer science at Georgia Tech who last year used an AI program as one of the teaching assistants in his Artificial Intelligence class. The program replied to students' email queries regarding assignments. The program was given the moniker Jill Watson – a nod to the fact that 'she' runs on IBM's Watson AI platform.¹¹ Georgia Tech researchers began creating Jill using nearly 40,000 postings on a discussion forum, training her to reply to similar questions based on prior responses. Most students were surprised when they were told that Jill was a computer program. Goel explained that Jill only replies when she has a confidence level of 97%, which distinguishes her from customer-service chatbots used by airlines and other industries. He said "Most chatbots operate at the level of a novice... Jill operates at the level of an expert".¹⁰ Goel estimates that within a year, Jill will be able to answer 40% of all the students' questions, freeing his human teaching assistants to tackle more complex technical or philosophical inquiries.

This is an example of AIEd that does not necessarily replace the teacher, but frees up time for those in teaching roles, akin to what Luckin et al. foresee: "Crucially we do not see a future in which AIEd replaces teachers. What we do see is a future in which the role of the teacher continues to evolve and is eventually transformed; one where their time is used more effectively and efficiently, and where their expertise is better deployed, leveraged, and augmented".⁵

The Ethics of AIEd

No discussion on AIEd would be complete without mentioning the ethics of incorporating AI into our educational systems. A complete discussion of this is beyond the scope of this article, but as Luckin et al. point out, we have a new responsibility to ensure that society as a whole has sufficient AIEd literacy – that is, enough to ensure that we use these new technologies appropriately, effectively, and ethically.⁵ The interested reader is guided to¹² for a comprehensive view on the ethics of AI.

The Future of AIEd

As for the future of AIEd, some see AI technology not just augmenting the roles of teachers as Jill Watson does at Georgia Tech and as Luckin et al. foresee, but replacing at least some of their traditional roles altogether. Sir Anthony Seldon, vice-chancellor of the University of Buckingham, former master of Wellington College, historian, and well-known political commentator, sees intelligent machines taking over the inspirational role of teachers completely.¹³ Certainly, in order for this to be the case, strong (general) AI must become a reality, and whether or not this will ever happen is debated. Keeping within the confines of narrow (domain-specific or weak) AI, Luckin et al. offer several predictions for the next phase of AIEd, noting that it will soon: help learners gain 21st century skills, support a renaissance in assessment, embody new insights from the learning sciences, and give us lifelong learning partners.

AIEd-driven assessments will be built into meaningful learning activities, such as games and collaborative projects...

Luckin et al. see AIEd helping learners gain 21st century skills by helping us develop reliable and valid indicators that will allow us to track learner progress on the skills and capabilities needed to thrive in the coming decades, including characteristics such as creativity and curiosity that are notoriously difficult to measure. It will also help us develop a better understanding of the learning contexts and teaching approaches that allow for these skills to be developed.

They also see AIEd techniques complementing existing learning analytics by providing just-in-time information about learners' successes, challenges, and needs which can be used to shape their learning experiences. For example, AIEd combined with learning analytics will allow us to identify changes in learner confidence and motivation while learning foreign languages, or complex mathematical concepts. This information could then be used to provide timely interventions to help students, perhaps in the form of individual attention from a teacher, technology-assisted support, or some combination of the two.

Luckin et al., also see data gleaned from digital teaching and learning experiences providing new insights that are difficult or impossible to ascertain from traditional assessments. For example, datasets could be analysed to help teachers understand how the learner arrived at their answer, not just if they selected the correct one. This data could also help us understand more fully the cognitive processes such as remembering and forgetting, and the key roles that these have on learning. AIEd analysis might also identify if and when students become bored, confused, or frustrated, to help teachers adapt to and enhance learners' emotional readiness for learning.

AIEd will help us do away with the stop-and-test approach that pervades assessment today. As described by Luckin et al, instead of traditional assessments which rely upon testing small samples of what students have been taught, AIEd-driven assessments will be built into meaningful learning activities, such as games and collaborative projects, and will assess all of the learning taking place, as it happens.

AIEd will provide learners with lifelong learning partners.

AIEd will also embody new insights from the learning sciences to allow us to better understand the learning process and build more accurate models that can predict and influence learner progress, motivation, and persistence. Luckin et al. highlight the work of Paul Howard-Jones, Professor of Neuroscience and Education at the University of Bristol whose work suggests that learning can be improved when it is linked to uncertain rewards, differing from traditional models that apply rewards consistently.¹⁴ AIEd techniques could, for example, tailor the provision of uncertain rewards, calibrating them to a learner's individual reactions and behaviors, and increasing the effectiveness of such techniques even more.

Finally, Luckin et al. claim that AIEd will provide learners with lifelong learning partners. Although the concept of computer-based 'learning companions' is not new, the next generation of learning companions should offer much greater potential. These cloud-based systems will benefit from learner information gleaned not only from educational contexts but from all contexts: social, recreational, etc. Rather than

“Within a decade, AI will have transformed school and university life and given the biggest boost to social mobility our society has ever seen.” Sir Anthony Seldon

encompassing all subject areas, these learning companions may solicit specialist AIED systems or subject-specific expertise from humans where required. In addition, such systems could focus on helping learners to become better at learning through developing a growth mindset¹⁵ or an impressive array of 21st century skills. Because of the adaptability of these systems, learning companions can be as suitable for struggling learners as they are for the most accelerated and high-achieving learners.

The examples given here are only a small subset of the many ways that AIED could transform the future of education. In this section, guided by Luckin et al. – which is highly recommended for more information – I have focussed on those that are quite feasible in the next decade or so. It promises to be an important decade according to Sir Anthony Seldon, who said: “Within a decade, AI will have transformed school and university life and given the biggest boost to social mobility our society has ever seen”.¹⁶ Beyond this, AIED does have the potential to tackle some of the biggest challenges we have in education today, such as addressing achievement gaps, enhancing teacher expertise, as well as addressing teacher retention and teacher shortages.⁵ Eventually AIED may lead to a complete reform of, perhaps even a revolution in, our educational systems.

Fullan & Donnelly describe three forces that must be combined if we are to deliver on the promise of technology to catapult learning dramatically forward: pedagogy, technology itself, and system change.¹⁷ It is hard to resist the conclusion of Luckin et al.: The future ability of AIED to tackle real-life challenges in education depends on how we attend to each of these three dimensions. That is, we need intelligent technologies that embody what we know about great teaching and learning in enticing consumer-grade products, which are then used effectively in real-life settings that combine the best of human and machine.⁵

Ultimately, combining the best of human and machine for the benefit of the learner is the true goal of artificial intelligence in education.

FOOTNOTES

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IT Sligo Opens Constance Markievicz Building



The €7m refurbished school of Business and Social Sciences at IT Sligo was officially opened in November 2017 by Minister of State for Higher Education, Mary Mitchell O'Connor. The school is named after Constance Markievicz, one of Ireland's most influential female historical figures and one who had a deep association with the North West. The name was chosen following a poll of students and staff at IT Sligo.

Pictured here at the official opening of the 4,400 square-metre facility are Actor Maura Logue in the part of Constance Markievicz with Minister of State for Higher Education Mary Mitchell O'Connor.

Leadership and Teacher Autonomy

Sharing authority



Jacinta Kitt

Professional Development Facilitator and part-time lecturer at Trinity College Dublin

In this article, Jacinta Kitt explores three basic psychological needs - competence, autonomy and relatedness - necessary for motivation, effectiveness, job satisfaction and well-being.

Teaching is one of the most important and influential jobs that a person can undertake. Great teachers enrich the lives of those they teach by inspiring them to reach their personal potential. Through their enlightened attitudes, behaviours and methodologies, teachers also help students to develop an affinity for learning and to appreciate their self-worth and the worth of others. How often have we heard great achievers in a wide range of disciplines modestly acknowledge the contribution that their teachers made to their success?

Teaching, however, is not an easy job. It can be very demanding and stressful. In order to gain, maintain and enhance their commitment and enthusiasm and ensure they are the best they can be, teachers require conditions that foster and sustain high levels of personal motivation. This might sound like a contradiction, because effective teachers are usually considered intrinsically motivated and, as such, find their jobs interesting, enjoyable and challenging (Ryan & Deci, 2000). But intrinsic motivation, which manifests in a person being energised and performing well, does not occur in a vacuum. It arises when a person has their three basic psychological needs for competence, autonomy and relatedness fulfilled (Deci & Ryan, 2000).

Competence and relatedness as basic psychological needs

The fulfilment of basic needs is essential for staff effectiveness, job satisfaction and well-being (Deci et al., 1996; Deci & Ryan, 2000). In a school context, when the need for competence is met, a teacher has a sense of self-efficacy. They feel able to develop and apply their abilities and skills to achieve their goals and do the job well (Aldrup et al., 2016). A teacher's sense of competence is conditional on being provided with regular feedback and acknowledgement, and opportunities for continuous learning and professional development.

When the need for relatedness is met, a teacher feels connected to others and part of a community in which they care for others and are cared for themselves

To be isolated in a classroom without collegial interactions... is not the intended spirit of autonomy.

(Deci & Ryan, 2002). Teachers' sense of relatedness is conditional on their capacity and that of others in the school to:

- » engage in positive and open discourse and interactions
- » build and maintain healthy interpersonal relationships.

Notwithstanding the self-determination theory context for the psychological needs fulfilment discussion, Deci and Ryan (2000) are clear that the satisfaction of basic needs depends on a person's social context.

Autonomy as a basic psychological need

Autonomy as a basic need may be considered the odd one out, in its lack of a social dimension. If this view is prevalent, it is probably due to some theoretical and traditional definitions of autonomy, which equate it to individualism or independence. It may also be due to the long-standing practice of teachers working in isolation in their classrooms, where they were neither expected nor encouraged to consult or collaborate with colleagues or to give or receive collegial help, support or guidance. In this environment, many teachers felt helpless and powerless, particularly in staying motivated. On the other hand, some valued and guarded their autonomy in its self-reliant, self-sufficient and independent form. Some resented any encroachment into their domain and regarded questioning of any aspect of their practice as an infringement on their professionalism.

Conceptions of autonomy as isolation, alienation and independence are untenable in a context where collaboration and collegiality are becoming key (Vangrieken et al., 2017). As Fraser and Sorenson write, 'To be isolated in a classroom without collegial interactions and meaningful feedback is not the intended spirit of autonomy' (1992, p.40). It is vital that focus shift from independence to interdependence in the pursuit of fulfilling the essential psychological need for autonomy. It is worth reminding those who reject this that 'a school is not a formal organisation; rather, it is a community of people, inextricably linked and bonded together by the task of caring for, and teaching, the students' (Kitt, 2017, p. 142).

Independent people who do not have the maturity to think and act interdependently may be good individual producers but they won't be good leaders or team players.

Markus and Kitayama (1991) coined the term 'self-construal', which is generally thought to refer to how people regard themselves as being predominantly independent or interdependent. Those with an independent self-construal see themselves as self-sufficient and not dependent on others for their effectiveness, while those with an interdependent self-construal see themselves as connected to others and recognise that these relationships are integral to their effectiveness and competence. They like to work as part of a team and are able and willing, when appropriate, to change their behaviours and opinions in response to group discussions.

Covey (1992), in his seminal work outlining seven habits of highly effective people, writes about the maturity continuum from independence, described as inner-directed and self-reliant, to interdependence, described as a combination of our own efforts and those of others to achieve our greatest successes. He proposes that 'independent people who do not have the maturity to think and act interdependently may be good individual producers but they won't be good leaders or team players' (1992,

pp. 50–51). He further suggests that as they work away independently, they are denied the levels of good communication and collegiality that constitute effectiveness. By contrast, intellectually interdependent people realise that to be effective they need the best thinking of others to join with their own.

Vangrieken et al. (2017) distinguish between a reactive and a reflective autonomy attitude, in unravelling the confusion between autonomy as independent or interdependent. Those with a reactive attitude to autonomy perceive it as, for example, freedom from governance, non-reliance on others, and the promotion of individualism. Those with a reflective attitude to autonomy perceive it as, for example, freedom to self-govern, interdependence, and the promotion of connectedness.

In the spirit of true autonomy, it is never going to be about doing your own thing on your own.

Autonomy continues to be widely associated with discretion, choice and freedom as opposed to coercion and control. However, there is increasing awareness that those conditions are neither unfettered nor unlimited. They are always destined to be curtailed by departmental and managerial regulations, guidelines and structures. Outside of these constraints, teachers' discretion, choice and freedom have to be guided by best-practice standards. When these standards have been agreed after consultation with all staff members, and are outlined in the school's vision and mission statements, then they have the best chance of being adhered to in people's ideas and practice.

In the spirit of true autonomy, it is never going to be about doing your own thing on your own. It inevitably involves having the power to take initiatives and instigate innovative practices and changes. However, it also involves working with others in forming and realising those initiatives. It is important to see autonomy as having collective as well as individual components.

Structural empowerment and autonomy

The key to autonomy is empowerment – a term bandied about indiscriminately in organisational and leadership language. It is generally understood to involve the authority or power given to someone to do something. Hoy and Miskel (2005) define teacher empowerment in terms of delegating authority to teachers. Rosabeth Moss Kanter, who has written extensively on structural aspects of empowerment, argues that for people to be empowered in a workplace, they must have access to the levels of information, resources, support and opportunities required to enable them to grow and develop (Kanter, 1993). They must also be able to participate in all aspects of their work, including decision-making and professional development (Short, 1994).

Autonomy is enabled and facilitated when individuals are empowered (Pearson & Moomaw, 2005). It can be presumed, therefore, that autonomous teachers have been given power – but by whom? Power can only be given by someone with power, not in a 'passing the parcel', abdicating way, or even in a 'lending the parcel', delegating way, but rather in opening the parcel and sharing its contents. Principals are the main source of power in schools. Where autonomy is facilitated, genuine empowerment is not associated with principals giving power to teachers

Servant leadership focuses on fostering followers' empowerment... and well-being by satisfying their needs.

to do what they like with it. Rather, it is given with a responsibility to use it positively and effectively in students' best interests. Decentralising and sharing power are important aspects of structural empowerment (Kanter, 1993), but for autonomy needs to be truly met, teachers also require psychological empowerment.

Psychological empowerment and autonomy

Psychological empowerment is a person's sense of self-efficacy and self-determination and a sense that the work they do has meaning and impact (Thomas & Velthouse, 1990). It is a cognitive state that can fluctuate and dissipate, depending in part on the person's self-esteem and locus of control, but more generally on the organisational conditions described above. When psychological empowerment is enhanced, it can have a very positive influence on teachers' attitudes, behaviours and performance. Autonomy and the ability to instigate innovative changes and improvements are necessary for psychological empowerment (Spreitzer, 1995; Ramamoorthy et al., 2005). Teachers' psychological empowerment is widely agreed to be influenced by the empowering behaviours of others in the school, especially the principal. Good school leaders recognise and support human potential and do everything they can to empower people and the school (Day, 2000). The question is, what leadership style or philosophy should principals use to empower the autonomy needs of their staff, given that this need is the most important one to be satisfied for intrinsic motivation to be present (Gagne & Deci, 2005; Ryan & Deci, 2006)?

Autonomy – supportive leadership styles (servant leadership)

Many leadership styles have been endorsed and propagated over the years. The two associated most consistently with meeting basic psychological needs are servant leadership and transformational leadership. Servant leadership focuses on fostering followers' empowerment, growth, integrity and well-being by satisfying their needs (Gagne & Deci, 2005; Liden et al., 2008). Greenleaf (1998), the father of servant leadership, outlines it as a leader believing in the value and potential of those they work with and providing the environmental conditions necessary to liberate that potential. There is obvious merit in that aspect of servant leadership in fulfilling a person's autonomy needs. Similarly, the empowering dimension of servant leadership, which entails encouraging and facilitating a person's ability to take on responsibilities and handle difficult situations (Liden et al., 2008), can also enhance autonomy.

More generally, however, it might be considered naïve to think that the levels of selflessness required by servant leaders would become prevalent among leaders, even among those who seek to meet the autonomy needs of colleagues. A degree of altruism and selflessness are essential to effective leadership and evident in many school leaders. However, being able to consistently put others' needs before their own (Greenleaf, 1977), a requirement of servant leadership, might prove challenging for some. Also, despite increasing recognition of servant leadership's legitimacy as a mainstream leadership theory (Mayer et al., 2008), and the positive organisational outcomes associated with it, it is also reasonable to suggest that elements of servant leadership that incorporate the personal

development of staff might be beyond the scope and remit of school leaders.

Transformational leaders are proponents of developing individual staff members but they are equally focused on achieving organisational goals.

Transformational leadership

Transformational leaders are also proponents of developing individual staff members. But they are also equally focused, perhaps understandably, on achieving organisational objectives. In the context of that dual aspect, and in line with self-determination theory, transformational leaders focus consistently on meeting the needs of their staff. Transformational leadership is considered especially relevant to the need for autonomy, because of its emphasis on developing and encouraging staff (Bass, 1997) and because it focuses on giving staff choice and decision-making opportunities (Hetland et al., 2010). Transformational leadership is about empowering followers. Not surprisingly, it is increasingly acknowledged – especially in educational leadership – to be the most effective and successful leadership philosophy in encouraging and promoting staff engagement.

Autonomy-supportive dimensions of transformational leadership

Fulfilling teachers' autonomy needs is facilitated by each component of transformational leadership. The four 'I's', as they are called, constitute the four primary behaviours of transformational leadership: idealised influence, inspirational motivation, intellectual stimulation and individualised consideration (Avolio et al., 1991). Complex as they sound, their relevant elements can be discussed in clear and accessible terms, to provide guidance to school leaders on what is required to promote teacher autonomy. Idealised influence, for example, involves school leaders behaving in an ethical and moral way, thus gaining the trust of their staff. In that trusting context, they can encourage teachers to gain authentic interdependent autonomy, by aligning their personal values and interests with organisational objectives (Avolio & Bass, 2002). The main element of inspirational motivation is the provision of meaning and challenge to the work of teachers (Avolio & Bass, 2002). Meaningful work, combined with having decision-making possibilities, encourages teacher autonomy, which is manifested in taking initiatives and being creative.

Transformational leadership is increasingly acknowledged to be the most effective leadership philosophy.

Intellectual stimulation provides a range of incentives for staff to be creative and innovative. For example, ideas from staff are sought and shared, and staff members are encouraged and supported to try new approaches (Bass, 1990; Avolio & Bass, 2002). Finally, individualised consideration gives priority to the feelings and needs of individual teachers, and provides them with opportunities for growth and achievement (Avolio & Bass, 2002).

Transformational school leaders facilitate those opportunities by encouraging teachers to reflect on their practices and by emphasising the importance of participating in professional development initiatives. They also consistently outline the school's 'expectations for excellence, quality and high performance' (Leithwood & Jantzi, 2006, p. 373), so that teachers can marry their practice to those expectations.

Supporting autonomy

Keeping teachers empowered involves a continuous focus by school leaders on innovation, change and improvement, and a simultaneous discouragement of isolationism, fatalism and maintenance of the status quo. Kitt (2017) says it is important not to allow the fatalism and negativity of a small minority of teachers to silence the more innovative and positive members of staff when they present new ideas. The ‘tall poppy syndrome’, where ‘those who stick their heads up risk being cut down to size’ (Jumani & Malik, 2017, p. 30), still prevails in some schools. Indeed, in a worst-case scenario, a teacher voicing an alternative point of view can be regarded ‘as a declaration of war’ (Kitt, 2017, p. 19). Autonomous teachers need the constant support of the principal to remain autonomous. In that context it is worth reiterating that a key feature of transformational leadership is the ability to meet the needs of teachers, in particular their autonomy needs.

Shared leadership

Linking various styles and philosophies of school leadership to the fulfilment of teachers’ autonomy needs provides valuable insights. However, it cannot be ignored that fulfilling autonomy needs requires from leaders, more than anything else, the ability to relinquish some of their power and to encourage and support others to become leaders also. Harris and Muijs (2002) write about the notion of collective leadership through which teachers can develop expertise. This is a highly unlikely scenario in schools where the principal’s leadership model is predominantly top-down. Unfortunately, even with widespread approval of forms of power based on collaboration and cooperation (Perrow, 2009), the notion of relinquishing power remains an alien concept to some school leaders.

Senge (1999) summed it up when he said it seems strange in this age of empowerment that we are still asked to accept the singular power of leaders. This insular attitude to power, while diminishing in schools, is still adhered to by those who perhaps cannot see the myriad benefits of engaging in a more contemporary form of leadership – where it is not about retaining power but rather about developing others to become accountable, productive and autonomous leaders in their own right (Jumani & Malik, 2017). Kanter (1993) suggests that leaders should always focus on providing opportunities rather than constraints.

Conclusion

The role of school leaders is extensive and demanding. They cannot do everything on their own. They need the help and support of highly motivated, competent and enlightened teachers. They also need self-awareness, self-confidence and a good sprinkling of humility (Kitt, 2017) to enable them to recognise that the quality of their leadership depends on their ability to share power with others. Extending autonomy to teachers is conditional on school leaders’ confidence and trust in the professional judgement of teachers (Blasé & Blasé, 1998).

Building positive relationships with staff and creating a positive, supportive school environment have emerged as a key theme at conferences and professional development initiatives during 2017. Teachers’ psychological well-being has also been prioritised as a key element of effectiveness

The notion of relinquishing power remains an alien concept to some school leaders.

Building positive relationships... has emerged as a key theme at conference during 2017.

Fulfilling autonomy needs requires from leaders the ability to relinquish some of their power.

in schools. Empowered and autonomous teachers are committed and enthusiastic. They are not prone to emotional exhaustion, cynicism, disengagement or other manifestations of burnout (Maslach, 2003). Rather, they are associated with creativity, imagination and originality (Sayles & Strauss, 1986). They are both challenged and satisfied in their jobs and are major contributors to the ongoing success and reputation of the school. They make the job of the school leader less demanding and less stressful. Facilitating teacher autonomy should surely be a top priority for all school leaders.

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Blackrock College of FE Graduation Ceremony



Blackrock College of Further Education (Dublin) held its graduation ceremony for its class of 2016-2017 on 1 Dec 2017 in the O'Reilly Hall UCD. Pictured here are l-r: Brian Mooney, Chairperson of the Board of Management Blackrock College of FE, Minister for Higher Education Mary Mitchell O'Connor and Deirdre Hamany, Principal, Blackrock College of FE.

Social Media in Education

Technology-Enhanced Learning



Brendan Maguire

Teacher, Blackrock Further Education
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Drawing on the theories of Prensky, Oliver, Poore and others, along with the Digital Strategy for Schools (2015–2020) published by the Department of Education and Skills, the author builds a picture of the capacity of social media to radically impact the teaching and learning process, and – when used effectively – to enhance and enrich it.

Introduction

What do you think of when you hear the term ‘social media’? For most people it brings to mind channels like Facebook and Twitter or sharing photos with friends and family. However, social media is a complex and much broader area which is often misunderstood.

Technology-Enhanced Learning (TEL) has become a catch-all term to describe all aspects of technology use in the classroom. The use of social media in education can therefore be classified as a TEL initiative. The momentum behind this area is growing enormously: last year SOLAS produced a strategy for TEL in the Further Education sector, and the Department of Education and Skills published the Digital Strategy for Schools (2015–2020) to encourage the integration of ICT into teaching, learning, and assessment practices.

When investigating Technology-Enhanced Learning, it is important to remember that it is not a new field. In 1922, Thomas Edison wrote:

The motion picture is destined to revolutionise our educational system and in a few years, it will supplant largely, if not entirely, the use of text-books.

This quotation, which predicted the demise of textbooks due to changes in technology, provides both insights and warnings for contemporary educators and teachers. It is interesting that even one hundred years ago, people were debating the use of technology in the classroom; while Edison’s prediction clearly did not come to pass, there was a feeling that persists today that technology can and should enhance students’ learning experience.

Edison failed to recognise that motion pictures, and even the later technologies of the 20th century, all lacked the ability to interact with the learner. While social media will not replace the textbook, it can make learning a more dynamic, collaborative, and engaging experience. This article will explore this potential.

When it comes to study and research, many students prefer to go online than pick up a textbook.

Digital natives and digital literacy

In 2001, educational author and consultant Marc Prensky coined the term ‘digital natives’ to describe people who grew up in the digital age and are highly literate in the use of digital media. In his 2001 article, Prensky criticised American educators for failing to understand the needs of modern students. He believed that digital natives, who were raised in a digital-saturated world, needed a media-rich learning environment to hold their attention. Later, he introduced the concept of ‘digital wisdom’. He says it is no longer a question of whether to use the technologies of our time, but rather ‘how to use them to become better, wiser people’ (Prensky, 2012).

Oliver (2014), in his study of students’ day-to-day engagements with technology, discusses how their learning strategies have changed and developed over the years with a huge emphasis on online material. He calls this ‘digital literacy’. This is a slightly different interpretation from many, but Oliver’s research reinforces what we all suspect: when it comes to study and research, many students prefer to go online than pick up a textbook. His research focused on third-level students. An interesting observation from it was how students organise and study: some see the physical library as ‘irrelevant’, and for them the bigger problem is ‘information overload’ (Oliver, 2014).

Approaches to the use of social media in education

In education, there are three broadly accepted theories of learning:

1. Behaviourism: Learning is largely a product of the stimulus response and can be achieved through reinforcement and repetition.
2. Cognitivism: Learning occurs in learners’ minds as they process information internally.
3. Constructivism: Learning occurs both internally and as part of a collaborative, interactive process in which individuals create knowledge and meaning through experience and incorporate them into their existing frameworks for understanding.

Learners can draw upon their own knowledge and experience to create new or different understandings of the world. (Poore, 2012)

Poore (2012) believes that while social media can support all three theories of learning, it lends itself more to the constructivist approach because it can support collaboration and interactivity. By using it to deliver, support, or enhance traditional teaching content, ‘learners can draw upon their own knowledge and experience to create new or different understandings of the world’ (Poore, 2012).

Social constructivism holds that social relationships and social interaction are key components of learning. According to Dr Derek Muller, a teacher, lecturer, and creator of the YouTube channel Veritasium (which as of September 2017 has over 4.3 million subscribers and a combined view figure of 380 million):

Education is not a commodity to be delivered to students and is not just the delivery of information. The way our brains work is that we interact with other people, we engage with our friends, with our families; we tell stories to each other. And through those stories, through those experiences, through those activities that we conduct together,

we form memories and our understanding of the world. Fundamentally education is a social process. (Muller, 2016)

A core principle of the Digital Strategy for Schools is to have ‘a Constructivist Pedagogical Orientation underpinning the embedding of ICT in schools’, in which ‘learners are actively involved in the process of determining meaning and knowledge for themselves’ (Department of Education and Skills, 2015).

This centring of the learner is fundamental, and is reinforced by multiple experts. Prensky (2012) says his vision for education is ‘bottom up – it begins with the students – what they need and how we can give it to them’. Muller (2016) believes:

Social media will transform the future of education, not in the delivery of information to the students, but what the students themselves will do with social media. Social media is a tool to enable students to develop content.

Prensky says his vision for education is ‘bottom up - it begins with the students - what they need and how we can give it to them.

Teacher Training

The Digital Strategy for Schools advocates that teachers should engage in more ‘collaborative, project-based learning activities that go beyond the classroom’ (Department of Education and Skills, 2015). Prensky (2012) writes:

Reflecting on technology’s role in education led me – despite my being a strong proponent of using digital technology for learning – to the distressing conclusion that our educators, in their push to get our classrooms and educators up to date, too often add technology before the teachers know, pedagogically, what to do with it.

Prensky’s observations highlight the importance of training for teachers, not just on the technologies but on the pedagogy and approaches to how these tools should be used in the classroom. Poore (2012) suggests teachers should use ‘scaffolding techniques’ to help students understand what is required of them. These include:

- » explaining how the social media tool links to the curriculum and learning objective
- » having clearly defined goals for the task
- » describing the tool and its features
- » providing examples of good practice.

Social media: pedagogical approaches

There are many negative perceptions of social media use in education. The first one to be challenged is the belief that it only relates to channels such as Facebook, Twitter, Instagram, and Snapchat. These channels do form a large part of the social media landscape, but it also includes activities such as blogging, wikis, recording podcasts and videos, and so on.

Poore (2012) identifies the following characteristics of social media:

- » Participation
- » Collaboration
- » Interactivity
- » Communication
- » Networking
- » Creativity
- » Community-building.

When we break down social media into these characteristics and qualities, we start to see its potential educational value.

Wikis

Poore (2012) writes that wikis ‘have an architecture that coerces the social construction of knowledge, and social networking explicitly encourages the sharing of information’. Wikis are websites which allow for creation and collaborative editing of their content. Wikipedia needs no introduction, but teachers and classes can create their own wikis for free using websites such as <http://wikia.com> or <http://pbworks.com>. Whether it be for a history project on the Renaissance, or a science experiment, the student, by linking articles and content, can identify the relationships of these various elements in a deeper and more meaningful way.

This type of project will also support multiple types of learning, as follows.

Active learning

Active learning involves students in the learning process more directly than other methods. The scope for active learning on a wiki project is obvious, with students directly participating and creating content for a digital medium.

Peer learning

Collaborating on a wiki project facilitates peer learning, which again places students at the centre of the learning activity. A group wiki project requires students to work together in joint learning activities which promote collaboration and co-operation.

Social bookmarking projects

Social bookmarking enables students to identify, collate, and share content from the web. Social media sites such as <http://pinterest.com> provide the facility to create boards on topics or projects which can then be populated by either websites, images or videos associated with that topic. Pinterest is associated especially with pictures but can also be used to bookmark videos, infographics, and even blog articles. In addition to active learning, social bookmarking projects help to facilitate discovery learning.

Discovery learning

Poore (2012) writes that discovery learning ‘is constructivist in nature because it reinforces the idea that it is the meaning that learners create for themselves that is important in the learning process’. Social media can facilitate problem-solving and independence: activities such as

Wikis have an architecture that coerces the social construction of knowledge, and social networking explicitly encourages the sharing of information. (Poore 2012)

Poore identifies multiple motivational benefits to using social media tools in the classroom.

The scope for active learning on a wiki project is obvious, with students directly participating and creating content.

blogging and bookmarking can be used to foster exploration, discovery, and research.

Blogging

Blogging is an interactive form of publishing content to the web. In a similar way to wiki projects, it can facilitate active learning, peer learning, and discovery learning through the creation of a website. While WordPress remains a popular blogging tool, free online sites such as <http://weebly.com> and <http://wix.com>, which use a drag-and-drop interface, provide much easier solutions for creating blogs. These could be reflective diaries, science experiment journals, digital portfolios, or collections of essays and stories.

Motivational benefits

Poore (2012) identifies multiple motivational benefits to using social media tools and blogs in the classroom:

- » Control, ownership, and increased effort: By developing their own blogs, students will be motivated to work harder, especially as the work will be visible to a larger audience.
- » Responsibility, self-publication, and creativity: Through blogging and self-publishing, students feel more responsible for their content. They may also be able to express themselves in a more creative way through the use of videos, images, and rich content.

Conclusion

The beginning of this article discussed Edison's quote on the use of technology in the classrooms of 1922. Now ask yourself: Until recently, how much did classrooms actually change since the 1920s? Blackboards may have been updated to smartboards with interactive features, but how often do you use these features?

The standard 'chalk and talk' method is no longer sufficient. As educators we need to adapt, innovate, and look at how we can incorporate new technologies into the classroom – logistically, technically, and pedagogically.

To conclude with the vision outlined by the Digital Strategy for Schools:

To realise the potential of digital technologies to enhance teaching, learning and assessment so that Ireland's young people become engaged thinkers, active learners, knowledge constructors and global citizens to participate fully in society and the economy. (Department of Education and Skills, 2015)

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Travellers and Education

Respect and Engagement



Deaglán Ó Briain

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Recognition of Travellers as a distinct ethnic group, and the education actions in the new National Traveller and Roma Inclusion Strategy call on schools and teachers to respond positively to the challenging needs of this small minority that has drifted further to the margins of society in the face of modernisation, the collapse of the economic basis for their traditional life, and the parallel growth of prejudice and discrimination.

Education is the key preparer and enabler to unlock every child's potential.

ESRI research commissioned by the Department of Justice and Equality¹ and published in January 2017 explored the high levels of disadvantage experienced by Travellers in four areas: education, employment, housing, and health. On education, the research found:

- » Travellers are more likely to have left school early and much less likely to have reached Leaving Certificate level: only 8 per cent of working-age Travellers, compared to 73 per cent of non-Travellers.
- » Levels of education have been increasing for Travellers and non-Travellers since the 1960s, but the improvement over time has been less for Travellers. While most non-Travellers aged 25–34 have completed second-level education (86%), less than one in ten Travellers in this age group have done so (9%).
- » 1 per cent of Travellers have a degree or higher qualification, compared with 30 per cent of non-Travellers.

Census 2011 indicates that Travellers are just under 30,000 people, or 0.6 per cent of the population. They are predominantly young (53% under 15, compared with 22% of non-Travellers), and families are typically large (51% with 6+ children, compared with 3% for non-Travellers).

Anecdotal evidence reported by Traveller community groups suggests that the level of retention of Traveller children in school had improved up to 2008, but disimproved again during the years of financial crisis.

The ESRI found that Traveller children's negative experiences in school are likely to be among the reasons for leaving school early. Traveller children (along with immigrant children and those with a

¹ Dorothy Watson, Oona Kenny and Frances McGinnity (January 2017). *A Social Portrait of Travellers in Ireland*. ESRI Research Series no. 56. ISBN 978-0-7070-0415-0. Available at: www.esri.ie/pubs/RS56.pdf.

Census 2011 indicates that Travellers are just under 30,000 people, or 0.6 per cent of the population.

disability) are significantly more likely to report being bullied at school. The 2010 All-Ireland Traveller Health Study² pointed to a reluctance to continue in mainstream education, as Travellers feel it is not associated with any positive outcomes because of the high level of discrimination they face when seeking employment. We also know that in 2012 over two thirds (67%) of Traveller children lived in families where the mother had no formal education or only primary education.

Commencing in 2015, the Department of Justice and Equality co-ordinated a comprehensive public consultation on the drafting of a new National Traveller and Roma Inclusion Strategy. Personal accounts by Traveller parents of their children's bad experiences in school – bullying by children and teachers, and inadequate responses by management – featured strongly in the public meetings held as part of the consultation.

The Strategy was published on 13 June 2017, following the Taoiseach's announcement on 1 March of formal recognition of Travellers as a distinct ethnic group of the Irish nation. Travellers had conducted a decades-long campaign to have their identity, culture, and unique position in Irish society recognised and valued by formal State recognition as a distinct ethnic group. Recognition is without prejudice to Travellers also being part of the Irish nation, and self-identifying as such.

The intention is that State recognition of Traveller ethnicity will help effect transformative change for the Traveller community. While it is not a legal or legislative issue, such a symbolically important gesture of respect by the State should also empower Traveller leaders to call on the community to rise to the challenge of transformative action on important issues, in partnership with the State.

The key argument for ethnic recognition was that recognition of Travellers' distinct heritage, culture, and identity, and their special place in Irish society, is hugely important symbolically to Traveller pride and self-esteem, and to overcoming the legacy of economic marginalisation, discrimination, and low self-esteem with which the community struggles.

This is not to ignore the real problems that Travellers face. But this recognition by the State creates a platform for the Traveller community and the government together to seek sustainable solutions to those problems based on respect and honest dialogue.

Ethnic recognition can create the circumstances for the Department of Justice and Equality and other departments and agencies to engage with Travellers on an action plan to tackle key problems facing the Traveller community – and Traveller leaders can credibly call on their community to participate.

It is also important to consider the position of the Roma community in Ireland. Ireland has a small population of Roma, mainly EU citizens from central Europe and the Balkans and their Irish-born children, who have

2 Our Geels: All Ireland Traveller Health Study. Available at: <http://health.gov.ie/blog/publications/all-ireland-traveller-health-study/>.

More focused interventions are needed to retain Traveller and Roma children.

established a community here in recent decades. Some Roma are among the most deprived and marginalised people in our country. The new National Traveller and Roma Inclusion Strategy addresses that community's needs, as will a Needs Assessment of Roma in Ireland, which is being finalised by Pavee Point partnering with the Department of Justice and Equality and will be published towards the end of 2017.

Arising from the consultation, the following ten overall themes were identified as central to the success of the new National Traveller and Roma Inclusion Strategy³:

- » cultural identity
- » education
- » employment and the Traveller economy
- » children and youth
- » health
- » gender equality
- » anti-discrimination and equality
- » accommodation
- » Traveller and Roma communities
- » public services.

Implementation of the Strategy is overseen by a steering group on which Travellers, relevant departments, and key agencies are represented. The group is chaired by Minister of State David Stanton TD and will publish annual progress reports. The education theme includes five high-level objectives and 14 commitments for action. Among the key commitments in the new Strategy are:

Education – investment by the State in community-based support mechanisms to ensure earlier access and greater retention of Traveller and Roma children and youths in the education system.

Action no. 17 reads:

The intention is to pilot an agreed intervention in four to five areas, beginning in early 2018.

The Department of Justice and Equality will fund Traveller community groups to implement community-based supports to assist retention of Traveller and Roma children in the education system. The intervention and the supports to be provided will be designed in consultation with the Departments of Education and Skills; Children and Youth Affairs/Tusla, and Traveller interests.

This work is being taken forward by a subcommittee of the Inclusion Strategy steering group. The intention is to pilot an agreed intervention in four to five areas, beginning in early 2018. As I wrote above, Traveller outcomes have not kept pace with national improvements in school attendance and completion rates, including in other disadvantaged communities. More focused interventions are needed to retain Traveller and Roma children. An integrated approach and co-operation across organisational boundaries by a range of government departments and

3 Available at: www.justice.ie/en/JELR/Pages/National_Traveller_and_Roma_Inclusion_Strategy_2017%E2%80%932021. Education actions are on pages 25–26.

agencies, and Traveller and Roma groups, are required to make a real impact.

A key finding from decades of community development and area-based interventions is that success in any social policy intervention requires full engagement and participation by people with lived and first-hand experience of the issue. Therefore, we recognise the importance of Traveller and Roma involvement in designing a successful intervention and, at local level, in the ongoing work of supporting attendance, participation, and school completion by children in the pilot areas.

The key partners for this pilot intervention are the Departments of Education and Skills (DES); Children and Youth Affairs; and Justice and Equality; Tusla Educational Welfare Services; and Traveller and Roma groups at national and local level in the pilot areas.

It is envisaged that each area will have a dedicated team comprising an Educational Welfare Officer (EWO) employed by Tusla, a Home School Liaison Coordinator (HSLC) funded by the DES, and two to three Traveller or Roma education workers drawn from the local communities and employed by local Traveller community projects. The Tusla Integrated Services Manager will oversee the pilot in each area.

Success of the pilot intervention will need schools and teachers also to rise to the opportunity and respond positively.

Empirical evidence of improved outcomes will be important in determining whether the pilots are successful, and can be extended to other areas where concerns exist about Traveller and Roma children's school attendance and completion. Baseline statistics will be compiled for each pilot area before beginning, and attendance and completion will be monitored and reported on annually. The Inclusion Strategy steering group subcommittee will monitor progress and evaluate the pilot.

Success of this pilot intervention – and indeed of all of the education actions in the new Strategy – will need schools and teachers also to rise to the opportunity and respond positively to the challenging needs of this small minority that has drifted further to the margins of society in the face of modernisation, the collapse of the economic basis for their traditional life, and the parallel growth of prejudice and discrimination.

JP McManus Scholarship

Recipients, Leah Lyne, Killarney Co. Kerry, Milan Kovacevic, Knocknacarra Co. Galway, Lucy Doyle, Belfast Co. Antrim and Germain Mosilevski, Balbriggan Co. Dublin with President of Ireland, Michael D. Higgins and JP McManus.



Towards the Era of Lifelong Learning

A History of Irish Education 1800–2016

written by John Coolahan, published by IPA

REVIEWED BY

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This welcome volume spans the period 1800 to the present and is divided into three sections: Irish Education, 1900–1960; Educational Developments, 1960–1980; and Towards the Era of Lifelong Learning, 1980–2016. It develops much of the material in Coolahan's *Irish Education: History and Structure* (IPA, 1984) and provides a welcome overview of developments in the last 25 years, which Coolahan was often closely associated with, particularly the policy developments of the 1990s.

Unsurprisingly, given his involvement, Coolahan moves with aplomb through the period from the early 1990s to the present, rehearsing the almost bewildering array of policy announcements, papers, and plans. The period witnessed a striking increase in levels of political and public engagement with education at all levels. The National Education Convention of 1993 and the subsequent White Paper *Charting Our Education Future* (1995) reflected a culture of widespread consultation and engagement, combined with political ambition to make improvements in provision. The book discusses the context and challenges facing all parties as they attempted a significant reshaping of the school system, particularly at post-primary level, in areas such as curricular reform, management, and access. Some of the improvements became victims of the economic crash; Coolahan's noting that Pavee Point estimate that 'specific education supports for travellers were cut by 86.6 per cent' (p. 183) between 2008 and 2013 is but one disheartening example.

This book covers a vast period of educational change. Inevitably, much of the content is succinct and driven by macro changes, particularly those emanating from government. Especially useful are those sections dealing with technical and vocational education, although the work of Marie Clarke is a notable omission. Chapters on adult and early childhood education are welcome, as these represent more recent areas of scholarly interest in the history of education in Ireland; for those coming to the field for the first time, Coolahan presents a comprehensive and accessible overview of developments.

He is also engaging on the evolution of Further Education and Training (FET), although too reticent in his treatment of the demise of the VECs and their replacement with Education and Training Boards. Developments in further education across the sector are dealt with throughout the book, as are contemporary discussions on the status of non-university institutions. A particularly useful chapter on the Inspectorate and the Department of Education and Skills provides an overview of the work of the latter and how the former is now concerned with the evaluation of schools, particularly post-primary, in a way almost unknown when Coolahan's *Irish Education* was published.

For anyone making their first foray into the complex evolution of education in Ireland, this book is an invaluable resource. Though it does not fall within the field of history of education as presently understood and practised, it is nonetheless a detailed outline of educational policy. Given the author's long involvement in this arena, this is perhaps inevitable, but the strength of Coolahan's experience is also a weakness, as too often policy is presented as inherently beneficial and progressive. His claim, for example, that Irish universities benefited from the University Act of 1997 is highly contentious, as is the assumption throughout the book that educational provision and the economy are and should be closely linked, undermining notions of education as inherently valuable and standing apart, as Michael Oakeshott held, from the exigencies of the marketplace.

Given Coolahan's long service to education in Ireland, the reader would have benefited greatly from a chapter that sought to make sense of the changes he traces, particularly those in the modern period. What, for example, was the impact of free education on teachers and schools, and how did the teaching profession react to it? Post-primary teachers fiercely debated the possible outcomes, and the period Coolahan describes as 'a watershed in Irish education' was condemned in *The Secondary Teacher* in 1977 as 'mercenary' and one in which the 'educational economist was king' (vol. 6, no. 4, 24).

In this respect, *Towards the Era of Lifelong Learning* frustrates, because one senses that Coolahan, insightful and reflective as we know him to be, has decided not to commit his thoughts to paper. This is to be regretted, because a primary obligation of the historian is not simply to tell us what happened (itself highly contested) but why, to try to make sense of change, and to offer, if not judgement, then at least a considered view.

Nonetheless, this volume will serve as an excellent introduction to the discipline for students and as an invaluable source for general readers and academics alike. Nowhere else is the full sweep of Irish educational policy captured so succinctly. The depth of expertise in *Towards the Era of Lifelong Learning* is matched only by Coolahan's tireless commitment not only to recording educational change in Ireland but to being at the heart of it – a rare achievement for any historian.

The Transformation of Irish Education Policy

Professor John Coolahan

This article contains the full text of the address by John Coolahan at the launch of his book 'Towards the Era of Lifelong Learning: A History of Irish Education 1800-2016' at the O'Callaghan-Davenport Hotel, Dublin 2, on 13 September 2017

A major feature of recent Irish education policy has been the extent and range of the education reforms which have been undertaken, and the manner in which the reforms have been conducted. Central to the new reform process was a strongly consultative approach, accompanied by official documents setting out proposals, or new lines of development, for a wide spectrum of the education system. The Clive Hopes Report of 1990 and the OECD Review of Irish Education, in 1991, gave valuable external perspectives on the need for reform. During the 1990's the state took up the challenge.

A Green Paper on the overall education system was issued in May 1992, which gave rise to nationwide meetings and discussions among stakeholders. Then, in October 1993, the National Education Convention proved to be a major event in genuine consultation, in which all key parties engaged. This writer (John Coolahan) and an independent Secretariat ran the Convention and published its report. The Report of the Convention was warmly welcomed and a great deal of consensus was achieved. This paved the way for the White Paper on Education, which won wide endorsement when published in June 1995. This was followed by Ireland's first comprehensive University Education Act in 1997 and Ireland's first comprehensive Education Act in 1998, which were landmark events for Irish education.

In 1998, the focus was put on early childhood education, with the establishment of the National Forum for Early Childhood Education. It was designed on the same consultative lines of the National Convention, with John Coolahan and a Secretariat, and proved equally successful. It led to the White Paper on early childhood, Ready to Learn, in 1999. This focus for early childhood education was further nurtured by the OECD Report in 2004 and a National Education Social Forum (NESF) Report in 2005. A Professor of ECE is now being appointed in the DCU Institute of Education. Early childhood education is now a formally structured part of the education system, with state provision for two years of pre-schooling.

Ireland had the EU Presidency in 1996, and it took the opportunity of proposing a strategy document for the Year of Lifelong Learning, and was warmly welcomed by the EU officials. Ireland convened a major international conference on the theme led by John Coolahan. Adult education came under new policy scrutiny. At the request of the Department of Education and Science, two academics, Tom Collins and John Coolahan prepared a Green Paper on Adult Education in 1998, and followed with a White Paper, *Learning for Life*, in 2000. In subsequent years adult education got increased attention and, in 2013, the Education and Training Boards Act was passed, institutionalising the Further Education and Training Sector (FET). The establishment of SOLAS created a new momentum for the Further Education and Training Area.

Other areas also got focused reform attention. A number of well-researched and authoritative reports led to improvements in the provision of various dimensions of special education. In 1999, a new primary school curriculum was published, which for the first time, was authored by a majority of primary teachers. The curricular content, methodology and assessment of the primary school continue to benefit from continuous appraisal and renewal.

At post-primary level, decisions have been made to reform the Junior Cycle, which is already underway. Transition year is well established, and the Leaving Cert Applied and the Leaving Cert Vocational operate alongside the traditional Leaving Cert. Furthermore, the points system for selection to higher education has been adjusted to reduce pressure on students.

Higher education experienced a remarkable range of changes in the modern period. This included huge expansion in undergraduate and post-graduate student numbers, structural and administrative changes, new emphasis on teaching and learning, qualitative reviewing structures, a massive increase in research activity in association with research councils, increased role of the HEA, including more strategic planning and expanded international partnerships. There are moves afoot to enhance co-operation and collaboration between individual higher education institutions, so as to maximise their contribution to contemporary societal, cultural and economic development. Among their roles, the Universities, Institutes of Technology and the FET institutes are making huge contributions to Lifelong Learning and CPD.

In 1997 and 1998 a Technical Working Group and a Steering Committee were established to advise on the provision of a Teaching Council. The Steering Committee's Report eventually led to the establishment of an Irish Teaching Council which became operative in 2005. The Council is a huge landmark for the teaching profession. In the context of major reforms in the conception of, duration of and qualitative changes in teacher education, the Council is implementing the lifelong learning concept of teacher education – initial, induction, and continuing professional development. Furthermore, teacher education institutions are in the process of forming more collaborative and co-operative units in the interests of greater synergies, qualitative changes and greater

research promotion. To date, this process has been most marked by the establishment of the DCU Institute of Education.

A further very valuable agency which evolved over these years was the National Qualifications of Ireland Authority (NQAI/QQI, 1999). This agency provides the framework for recognition of academic awards and facilitates the realisation of the era of lifelong learning, which Ireland now incorporates in its education system.

Another significant reform of the system, which incorporated a consultative approach, was the reform of the school inspectorate. Following its statutory establishment by the Education Act of 1998, the inspectorate has re-shaped and re-designed itself on best practice international lines. It has established new partnership relationships with schools, parents and relevant public agencies, and has withdrawn from the multifarious activities which frequently distracted it from its core professional role, so as to focus on its policy, evaluative and accountability roles.

A somewhat similar process, but of great significance was the re-structuring and redesigning of the role of the Department of Education and Science. A range of reports such as the Hopes Report, the OECD 1991 Report, the Green and White Education Papers, the La Touche Report and the Cromien Report, through the nineties, clearly highlighted the need to reform the work of the Department. It was urged to change its traditional role which tended to engage it in a hands-on-approach to a largely undifferentiated range of engagements and activities. The way forward in recent years was the establishment on a statutory basis of a range of agencies who took responsibility for specific functions such as the state examinations, special education, school welfare, and allowed the Department to focus more on policy, strategic planning, accountability and quality assurance. In a sense, a quiet revolution has been underway, to the great benefit of a system in a reforming mode. The key elements of which are seen to be progressing in constructive partnership.

To summarise, unlike previous eras, the 1990s ushered in a new approach to educational policy. In the course of the 1990s, two Green Papers and three White Papers were issued, all of which were well-focussed on a spectrum of policy reforms. As part of the consultative policy approach, four public consultative fora were convened – the National Education Convention (1993), the International Conference on Lifelong Learning (1996), the National Forum on Early Childhood Education (1998) and the Forum on School Patronage and Pluralism (2011). As well as this, a range of specialised reports were commissioned to guide good practice in various areas such as special education. The Universities' Act (1997) and the Education Act (1998) were of landmark importance to the modern Irish education system. These measures were followed by an unprecedented sequence of statutory measures establishing a range of specialist agencies. These included; the National Qualifications Authority of Ireland (NQAI) (1999), the National Psychology Act (1999), the Education Welfare Act (2000), the Teaching Council Act (2001), the Secondary Education Commission Act (2003), the National Council for Special Education Act (2004). As well as clarifying many aspects of the role of key stakeholders, the legislation had major impact on the Department of Education and Skills and on

the inspectorate. These agencies took the opportunity of major restructuring and reform, to the great benefit of educational policy and practice.

Thus, one can conclude that over a short period of years, in the recent past, through the agency of a consultative approach and informed planning guidelines, the Irish education system has been transformed. It has adopted the paradigm of being a lifelong learning system for the whole age spectrum, from early childhood to old age.

Ireland has benefitted from its international educational links with the OECD and the EU in recent times. The system has a rapidly growing student population at all levels. It is noteworthy that 90 per cent of boys and 92% of girls complete second level education which places us 2nd in the OECD. Over 60 per cent go on to higher education, which places it in the top third of 28 OECD countries. It is noteworthy that Irish people in the age group 25–34 years who have completed higher education amount to 49 per cent, well ahead of the EU average of 37 per cent and the OECD average of 39 per cent.

It may also be worth noting how Irish school pupils have been performing in the international tests PISA, PIRLS and TIMSS as the following pattern reveals.

PISA 2015 (15-year olds)

- » **Reading:** significantly above OECD average
- » 3rd out of 35 OECD countries, seventh out of all participating countries
- » **Mathematics:** significantly above OECD average (though not among high performing countries)
- » 13th out of OECD countries, 18th out of all participating countries
- » **Science:** significantly above the OECD average and significantly better than 2006 when science was first tested
- » 13th among the OECD countries, 19th out of all participating countries

PIRLS 2011 (Reading at primary level, 4th grade)

- » Irish students scored significantly above international average
- » Ranked 10th out of 45 participating countries
- » Students in only five countries scored significantly better

TIMSS 2015 – Primary

- » **Mathematics:** 9th out of 49 participating countries
- » **Science:** 19th out of 47 participating countries

TIMSS 2015 – Post-primary

- » **Mathematics:** 9th out of 39 participating countries
- » **Science:** 10th out of 39 participating countries

Evidence from international research also indicates the contemporary quality of Irish researchers' engagement. The international citation of Irish research findings for 2015 was recorded as 53% above average. Eleven Irish researchers are listed among the top one per cent of researchers currently practicing worldwide. As a country overall, Ireland is now listed in ninth place on the most recent Thomson-Reuters Indices Global Scientific Rankings.

In conclusion, one considers that there has been an underestimation of the range, extent and quality of the reforms which have taken place in Irish education in the recent past. There would also seem to be an undervaluation of the consultative and collaborative process within which the reform process was conducted. It is quite clear that so much significant reform could not have been achieved without the goodwill and the efforts of key stakeholders. So much sustained work was put in by the various sectors that, perhaps, the broad picture has been somewhat missed as concentration was focussed on specific concerns. One considers that the time is ripe for greater recognition of what has been achieved and how it has been achieved. One suggests that a sense of pride and ownership of the reforms in the public arena would not be out of place.

In this context, it is gratifying that the current Minister for Education and Skills, Mr. Richard Bruton in his Action Plan for Education 2016-19, sets out the vision "that the Irish Education and Training system should be the best in Europe over the next decade" – "Education has been central to Ireland's transformation over recent decades. It will be central to our ambitions as a nation (economic, cultural and social) over the coming decades. It will allow us to lead on innovation. It will help us to achieve social inclusion."

In my view, this is the spirit that should prevail, not based on wishful thinking, but on hard evidence of achievement, and the sustained, combined efforts of key stakeholders. Let us go forward as one of the highest achievers in education of the most developed countries.

Celebrating Education at the Heart of European Union Policy

Shaping an exciting future for our young people building on the solid foundations of our diverse, complementary education systems



Patricia Reilly

Patricia Reilly is Deputy Head of Cabinet of Commissioner Tibor Navracsics, the European Commissioner with responsibility for Education, Culture, Youth and Sport.

Heads of Government discuss the future role of education – as one of the foundation stones of Europe as a cultural community, with shared values, a sense of belonging together and an ability to respond effectively as a community when we are faced with global challenges.

Sixty years ago, a group of courageous and visionary Europeans resolved to lead their countries beyond conflict, protectionism and fear. They envisaged a union that would work together towards openness and trust, underpinning economic and social stability and enabling mutual understanding that was unimaginable to most people in post-war Europe. Starting with six members, the Treaty of Rome marked the beginning of Europe's most significant political project; one which has evolved on the basis of consensus to serve over 500 million European citizens today.

But from these lofty ideals, what has come of the European project? Is it all about free trade, food quality and banking? A complex animal, the European Union does indeed have a legislative role in many areas of our daily lives – we benefit from open markets and common standards in areas from air traffic control to environmental protection and consumer rights. What began as a largely transactional project, has gradually stretched out to cover more fundamental aspects of being European. Beyond competition policy and state aid rules, there is another layer of activity at European level that arguably has a more powerful, long term impact on people's day to day lives; activity in areas like research, culture and education.

Education was not mentioned in the Treaty of Rome that established the European Economic Area (which would become the European Union in 1992 following the Treaty of Maastricht). Member States were cautious; unwilling to cede control over a policy area they knew was about much more than imparting knowledge for the purposes of employment. They understood very well that a country's education system is inextricably linked to its citizens' culture, values and identity.

In 2002, Erasmus celebrated 1 million student exchanges.

Internationalisation should be about much more than driving up numbers.

Yet Jean Monnet, one of the EU's founding fathers, saw the importance of education from the outset, saying that he wanted European children to be *"untroubled from infancy by divisive prejudices, acquainted with all that is great and good in the different cultures"*.

So in an early example of how European partners found compromise and new ways to cooperate without encroaching on national autonomy, this sector put the principle of subsidiarity into practice long before the concept had been fully developed¹. Education has since moved to the heart of European policy and is now enshrined in Articles 165 and 166 of the Treaty on the Functioning of the European Union².

The EU can, and does, do a lot to support individual students, teachers and researchers, as well as education policy makers and institutions across Europe, primarily through the Erasmus+ and Horizon 2020 programmes, which many of you know very well.

In this year of anniversaries, we are celebrating 30 years of Erasmus, the core European education instrument and probably the EU's best-known and most successful flagship. Built on a small pilot aimed at encouraging university student mobility, Erasmus was launched in 1987, enabling 3244 European students to travel abroad to study. Ireland was there from the very beginning, and remains one of the most active participants. In the early days,

Erasmus students were rare creatures – usually language or law students who got lucky with a tutor who had heard about this new idea.

By the late 90's, Erasmus had opened up to EU candidate countries, enabling Western European students to learn alongside and understand the cultures of their peers in Central and Eastern Europe. In 2002, Erasmus celebrated 1 million student exchanges, and by 2009, this number had doubled.

In 2014, the programme underwent a major overhaul and got a significant financial boost. Erasmus became Erasmus+, merging and streamlining a plethora of other programmes³, expanding to cover youth activities, volunteering and sport and introducing more tailored, demand-driven supports to policy-making.

Today, a semester or an academic year abroad has become part of the third level experience; more often than not, you will hear students planning their Erasmus year within weeks of starting third level studies, and for

1 The history of European cooperation in education and training Europe in the making – an example. http://biblioteka-krk.ibe.edu.pl/opac_css/doc_num.php?explnum_id=301

2 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT&from=EN>

3 Including Leonardo da Vinci, Comenius, Grundtvig, Jean Monnet, Erasmus Mundus, Alpha, Edulink, Youth in Action and Sport.

many, their student exchange proves pivotal in their personal, academic and professional development.

The impact of Erasmus has grown exponentially. Since the first, experimental phase, we have reached a total of 9 million beneficiaries of the Erasmus programmes. And in the period 2014–2020 alone, with a budget of €16.7 billion, Erasmus+ will offer opportunities for 4 million people across Europe in all fields of education, training, youth and sport. One important feature of the range of Erasmus+ actions is mobility, but in fact it goes beyond travel opportunities for individual people. Erasmus+ offers opportunities for education systems and individual schools and colleges to internationalise in many ways, including internationalisation at home. There are compelling and different reasons for developing internationalisation strategies. Some are obvious academic and scientific reasons; developing linkages and strengthening partnerships improves quality for all involved. There are broad societal and economic reasons, including for instance developing human resources capacity. And of course countries use their education policies as ‘soft power’ – part of their diplomatic policy, where education can help to influence the international agenda and build allies.

Countries use their education policies as ‘soft power’.

A good example of this is Iran. Despite fraught relations on most fronts for the last decade, Iranian and EU universities continue to cooperate in Erasmus+ and the Marie Skłodowska-Curie Actions, and Iranians are the 16th most represented nationality in Erasmus Mundus. Since the diplomatic relationship with Iran was ramped up a few years ago, we have increased the EU budget for Iran in Erasmus+ to more than €5 million over 2 years, expanding the possibilities for Iranian higher education institutions to participate in European programmes. Crucially, the Erasmus+ programme is now open to Iranian nationals, with the very first exchanges between Iran and 33 European ‘Programme Countries’ starting this semester, and the jointly organised EU–Iran Higher Education & Research Event in Tehran in July 2017, with participation from over 250 Iranian and European universities, paved the way for further cooperation.

This is very much reflective of the growing importance of internationalisation globally, and numbers are increasing everywhere, bringing with it the challenge of increasing quantity while maintaining and building on quality.

The challenge of striking this balance worries me – internationalisation should be about much more than driving up the numbers. The success of internationalisation strategies is often measured in terms of ‘how many students went abroad’, and ‘how many publications did the mobile researchers produce’, driving a culture of internationalisation as a goal in itself and of course more and more courses delivered in one language.

I would like to draw on the work of Professor Hans de Wit, Director of the Centre for Higher Education at Boston College, who was among the

first to develop internationalisation as a concept and strategy, and who rather provocatively now talks about the end of internationalisation. The end, not because the concept is dead, but because he is concerned that internationalisation has just become a buzzword, with little real depth or meaning⁴.

He [Prof Hans de Wit] is concerned that internationalisation has just become a buzzword, with little real depth or meaning.

De Wit exhorts us to think about the context – why develop an internationalisation strategy? What is the context? Look at the external and internal factors. What are you actually trying to achieve. And what does an internationalisation strategy comprise. I am completely convinced of the unique value of Erasmus+ and the Marie Skłodowska-Curie Actions; mobility is, and always will be a cornerstone of international education policy. I would encourage any third level student or academic to take any opportunity they get, to study or work abroad, and we continue to work on mutual recognition of qualifications. But realistically, mobility is only a reality for very few.

There is much more to internationalisation than mobility. In fact, experts would argue that essential as it is, there is far too much focus on mobility, and we should invest much more policy activity in bilateral, multilateral and strategic partnerships across borders, and in the development of curricula for ‘internationalisation at home’.

There is a steady growth in mobility of degree-seeking students. In the 15 years 1999–2014, the number of mobile students more than doubled from 2 million to 4.3 million. But the total number of students also grew in that period, so in absolute terms, the overall proportion of mobile students remained steady, with no more than about 4% of students getting the chance to be part of the Erasmus Generation. And relatively small numbers of sending and receiving countries account for most of the flow.

Mobility is, and always will be, a cornerstone of international education policy.

Even the most dominant destination countries – France, Spain, and Germany, only 10% of students are international. Interestingly, despite the success of Erasmus, intra-EU mobility accounts for 25% of mobile students in Europe – 75% come from elsewhere, and this figure is skewed towards post-graduate students.

And there are significant imbalances within these figures – Ireland being a good example, where far more students are received than are outgoing; the picture is similar in the UK. For example, in the academic year 2012–13, over 6000 students were incoming, while fewer than 3000 left to study abroad. Susan O’Shaughnessy from DIT has done a very good piece of work on their student figures, highlighting the very low levels of outward mobility in particular faculties such as engineering⁵.

4 'What is an International University?' <http://www.universityworldnews.com/article.php?story=2015031910180116>

5 An Insurmountable Gap: Can We Balance Incoming and Outgoing Erasmus Exchanges Among Engineering Students? https://arrow.dit.ie/cgi/viewcontent.cgi?referer=http://www.google.be/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKewiCqKblid_XAhXEBFAKHcweDJMQFggoMAA

When marking the celebration of 30 years of Erasmus earlier this year, and the 9 millionth beneficiary, European Commission President Jean-Claude Juncker said *“Every euro that we invest in Erasmus+ is an investment in the future — in the future of a young person and of our European idea. I cannot imagine anything more worthy of our investment than these leaders of tomorrow. As we celebrate the 9 millionth person to take part, let’s make sure we are 9 times more ambitious with the future of the Erasmus+ programme⁶”*.

Of course we will be fighting for a dramatically increased budget, but even if it is tripled in the next financial programming period, we would still only be able to fund mobility for fewer than one in ten European students.

This is partly why I agree with those who believe that even if we expand mobility programmes hugely, they should not be regarded as the only useful instruments of internationalisation. So how do we go beyond mobility?

If our educational institutions really want to internationalise, they need to look at their curricula.

If our educational institutions really want to internationalise, they need to look at their curricula. When designing a course, it is important to look at how it relates to your overall internationalisation strategy. What do you want for your students? By focusing on ‘internationalisation at home’, students can benefit from your outward-looking strategy, even if they cannot afford to spend time studying abroad for personal or financial reasons.

‘Internationalisation at home’ was defined by Beelen and Jones in 2015 as *“the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments⁷”*.

The rationale of curriculum internationalisation should be ensuring outcomes that enhance the quality of education and research. But going beyond mobility is not a simple task. It requires careful curriculum design, incorporating aspects of a study area from other cultural or geographic perspectives, inviting international guest lecturers or speakers from different cultural backgrounds. And it means encouraging students to connect with their peers in other countries through digital learning and on-line collaboration – this can happen from primary school onwards. Full internationalisation involves the whole ethos of a school or higher education institution, impacting on life across the campus and on external connections, partnerships and relationships.

Of course this is easier said than done, especially in some disciplines.

&url=http%3A%2F%2Farrow.dit.ie%2Fcgi%2Fviewcontent.cgi%3Farticle%3D1008%26context%3Dst2&usg=AOvVaw2G5SQ3wBXfaqaATgKe3sES&httpsredir=1&article=1008&context=st2

6 http://europa.eu/rapid/press-release_IP-17-1574_en.htm

7 Defining ‘internationalisation at home’. <http://www.universityworldnews.com/article.php?story=20151202144353164>

Only education can equip people with the skills needed by a resilient society and workforce.

But it is undoubtedly worthwhile, and not just from the perspective of mobile employability – though that’s important too. Just a few weeks ago, European Heads of State and Government met in Gothenberg for Europe’s first ‘Social Summit’ since 2002, where political leaders got together with social partners, to discuss the way forward for a more social Europe; a Europe that supports fairness across labour markets and social protections systems. A Europe that is more tolerant; where different peoples understand and appreciate each other and are more engaged in society at local, regional, national and European level.

One key aspect of their discussions was the future role of education – as one of the foundation stones of Europe as a cultural community, with shared values, a sense of belonging together and an ability to respond effectively as a community when we are faced with global challenges. This is not about creating a single European identity. Quite the opposite. It is about nurturing and respecting each other’s own unique identities and finding unity in diversity.

Europe is experiencing a range of important developments, many of which can be described as both challenges and opportunities. For example, digitisation has been with us for some time, and is increasingly pervasive, bringing with it advancements in automation and artificial intelligence. We are really only beginning to come to grips with what this might mean for the next generations.

There is no doubt that we need more cross-cutting skills. Young people need much more than single-discipline knowledge. And as the demand for skills changes more quickly than ever, core abilities like creativity, analytical skills and ability to work in inter-disciplinary, inter-cultural teams, become increasingly important.

Europe has always been about overcoming borders.

Our societies are changing. Existing populations are ageing and we need to fully integrate our migrant populations.

We have new patterns of communication and sources of information from sources worldwide at the click of a keyboard. It is essential that students fully understand their digital environment, and are able to distinguish anecdote from evidence; facts from fake news. And linked to that, we see a worrying flaring up of populism and xenophobia. I read with horror about blatant displays of racism in towns and cities across Europe, and while the numbers involved are small, it is deeply troubling that anyone at all thinks it’s acceptable to whip up xenophobic fear and loathing. Education must be at the heart of tackling these challenges and indeed in taking full advantage and leading on the more positive developments.

Education is the basis for a creative, productive population – driving research and innovation, and driving (rather than following or reacting to) new technical and digital developments. Only education can equip people with the skills needed by a resilient society and workforce – people

and social systems that can deal with the shocks thrown at them by natural, economic or cultural shocks – enabling them to recover but also to transform into something better.

Education and culture make Europe an attractive place to live, study and work. In free societies that share common values, education forms the basis of active citizenship, helping to temper populism and prevent xenophobia and violent radicalisation.

We are very lucky here in Europe. As a union that largely embraces diversity, we can travel, work and share ideas freely. Europe has always been about overcoming borders, and the internal market is a reality for goods and the free movement of people. However, there are still obstacles to cross-border cooperation in some areas, notably in today's context, in education.

One real
challenge is
competence in
languages.

That is why the European Commission set out an ambitious shared agenda for the future of education which formed the basis of discussion in Gothenberg⁸, and we expect the main points to be endorsed at the December Council of Heads of State and Government. We want to help Member States and individual Higher Education Institutions to work together more closely and easily, with automatic recognition of qualifications, from school diplomas upwards. At the Member States' demand, we will continue to support mobility for both academic staff and students through Erasmus+ and its successor – hopefully with an increased budget.

But we will also support actions that help European universities to 'internationalise at home'. One real challenge is competence in languages. Increasingly, high quality jobs require people to speak more than one language very well, and while English is often regarded as the language of research, those who are multi-lingual have a richer experience and deeper understanding of their collaborative partners.

Yet, almost half of EU citizens only speak and understand their mother tongue. The Commission aims to support measures that by 2025, will enable all Europeans leaving secondary school to have a good knowledge of two languages in addition to their mother tongue. This will be more of a challenge for some than others, and I'm thinking of my own educational background, and that of my nieces and nephews who are at school in Ireland today.

Internationalisation can start earlier than third level, and the Commission already has a major, successful programme called eTwinning⁹ for teachers at primary and secondary level. eTwinning allows for collaborative, online international learning, where teachers link with their peers in another country, and their classes get together virtually. They work on projects,

8 https://ec.europa.eu/commission/sites/beta-political/files/communication-strengthening-european-identity-education-culture_en.pdf

9 <https://www.etwinning.net/en/pub/index.htm>

eTwinning allows for collaborative, online international learning.

but they also learn about each other. Children in Galway can develop an understanding of what it's like to be a student in Tallin or Athens. They get to know a little of each other's cultures, and lay the foundations for life as European, as well as Irish, Estonian or Greek citizens. We plan to boost our support for eTwinning and also increase support for the teachers using the system, aiming to reach 600,000 users by 2020.

I can't predict with certainty the ambition with which the EU will be able to support Member States into the future – it will largely depend on the budgetary decisions made by our political leaders in the coming year or two. But the political signals are good; at the 60th Anniversary celebrations of the Treaty of Rome earlier this year, Heads of State and Government said *“We want a Union where citizens have new opportunities for cultural and social development and economic growth. [...] [We] pledge to work towards [...] a Union where young people receive the best education and training and can study and find jobs across the continent; a Union which preserves our cultural heritage and promotes cultural diversity¹⁰.”*

I look forward to building the solid foundations of our diverse, complementary education systems, and helping to shape an exciting future for our young people. A future that equips them to grow and learn as part of a diverse, tolerant and forward-looking Europe.

10 (Rome Declaration, 25 March 2017) - <http://www.consilium.europa.eu/en/press/press-releases/2017/03/25/rome-declaration/pdf>