Maintaining Futures Expertise Report

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Executive summary

In 2009, Futurelab delivered a three-year research programme that explored the future of education beyond 2025: Beyond Current Horizons[1]. The aim was to help the British education system develop an ongoing and sustainable response to the challenges it faces as society and technology rapidly evolve. Part of the project was a 'futures review' which provided an introduction to a range of approaches in futures thinking and identified some organising questions with the aim of provoking discussion about the relationship between futures work and education[2].This report seeks to give an updated overview of some of the major issues related to futures work in education in 2010.

The report is informed by expert interviews with 7 futures practitioners, who agreed to confidentially share their views, and by desk research. We are not able here to provide an exhaustive overview of the futures field. We aim instead to give an introductory overview of futures work and we offer some common ways of categorising it.

The report covers the following areas:

- First, it provides an introduction to the field of futures studies, giving an updated overview of the main methodological approaches and the related issues.
- Second, it draws on the themes which emerged from the interviews to sketch a picture of futures studies as a professional practice, defined by a complex relationship with commissioners and peculiar forms of commercial pressure.
- Third, it discusses the role of futures studies in the wider policy context, exploring how a futures perspective can influence strategic decisions.
- Finally, it explores the role of futures studies in the educational context, exploring the implications for policy and looking at how a futures approach can influence practical issues of curriculum and pedagogy.
- The report also includes an appendix listing organisations carrying out relevant futures work in the UK in 2010.

Before attempting a taxonomy of futures approaches and discussing the implications for the education sector, it is important to keep in mind how wide-ranging, extensive and diverse a field this is. Futurists see their work as relevant to almost every human discipline, and there are many possible reasons for looking systematically at the future. Some may need to plan a corporate strategy for a business or produce a policy document which aims to support the technology capacity of the UK, for example. Others may want to inspire people to act now to combat the effects of climate change or to produce a military strategy. Others may perceive a value in thinking about the future as a discipline in its own right, as well as one which can support the development of resilience, reflexivity and flexibility in the face of change. Still others may simply wish to create an educational or political system that is able to engage with the future.

1 See www.beyondcurrenthorizons.org.uk
2 Sandford, R., & Facer, K. (2009) Futures review: looking at previous global futures. Available online at www.beyondcurrenthorizons.org.uk

Introduction: Thinking about futures

There are several possible ways to think and talk about the future, each with precise historical roots and each based on specific epistemological assumptions. Assumptions, that is, as to what we can know about events that are yet to occur and how we can achieve such knowledge. Ultimately, the way we think about the future is very much dependent on how we represent reality and the role of our agency within it.

We can think of the future as dominated by supernatural forces which cannot be completely understood, and yet offer signs and omens that can be interpreted through a wide range of culturally-specific ritualistic practices, also known as 'divination' practices. We can think of the future as a domain completely removed from empirical observation and from present choices, a distant horizon enveloped in randomness and unpredictability. The philosopher Herbert Simon captured this view in his notion of 'bounded rationality'[3], according to which our relative inability to ponder the distant future reflects our limits in forecasting the consequences of our present actions beyond a short timeframe. According to Simon, the constraints of our cognitive system and the complexity of social dynamics seriously compromise our attempts to make safe long-term predictions; therefore, we have to rely on heuristic, often non-rational, processes of decision making.

We can also think of the future as an open and undetermined space, shaped and influenced by actions in the present. Still a domain of uncertainty, but one that has several entry points and is connected to very real, observable and tractable options in the present. This last category is the one that really interests us, and which offers the greatest potential to those concerned with the aims of education and its role in modern and future society. Futures work falling into this category aims to support people to engage constructively and systematically with the future. It can encompass a number of approaches, reflect different concerns and aim at diverse outcomes.

[3] Simon, H.A. (1997) Models of Bounded Rationality, Vol. 3. MIT Press.

Types of futures approaches and their methodological implications

The categories discussed in this section are often used to map out the futures field; they are also a simplification and cannot capture the complexity of the topic. Furthermore, there could be many differences between the work of individual (or organisational) futurists that could be included in each category. Indeed, the way that these categories have been regarded and constituted has changed over the years and is likely to change in the future. Yet, they are useful in providing an organisational or conceptual framework. The categories are based on three partially overlapping 'taxonomies' of futures work, the first describes the motivations for carrying out futures work, the second emphasises the aims and the outcomes of futures work, the third stresses the methodological and epistemological assumptions.

Most motivations for looking at the future will fall somewhere in an area which is marked out by its three extremes of the **purely academic, activist and corporate arenas**. Depending on its main concerns, an individual piece of futures work may be closer to one or more of these extremes. In the corporate arena, futures work can often take the form of consultancy funded by particular businesses and may either look at the factors affecting a particular market or may have a wider application. Futures work in the activist arena can range from large-scale policy concerns to individuals agitating for a particular cause. Indeed, most futures work is likely to include the desire to create some kind of change and may therefore have an activist element. The academic arena is most likely to feature extensive reflection on the practice itself of looking systematically at the future.

An alternative way to categorise futures work may focus on its aims and outcomes, which leads to the following categories:

Futurology - Often used to refer to the approaches that were popular in the early years of futures work (1940s/50s). Futurology commonly aimed to predict the future and could be deterministic and technology-driven. It was partially influenced by themes derived by science fiction, often US-centric and not usually orientated towards action or decisions.

Forecasting – Refers to an approach which is usually economically driven and uses statistical methods to produce forecasts. Forecasting often makes claims to scientific knowledge about the future and although these claims are usually heavily qualified, their guiding assumptions may not always be questioned.

Foresight and strategic foresight – Foresight and strategic foresight give people a structured and systematic way to engage with possible futures using a variety of methods. They aim to increase strategic awareness about the future consequences of present actions. These approaches are often policy-orientated but are also used by businesses and may engage with issues relevant to either corporations or society more widely.

Futures studies and critical futures studies – These are two versions of an academic discipline which seeks to engage in rigorous and in-depth thought about the future. In its more critical stance, it may consider the relationship between power and the future and ask 'who decided these futures are possible.' It also commonly examines its guiding assumptions and its own practice, is reflexive and clear that claims about the future are always partial and contingent and is informed by theories of society.

Sociology of the future[4] – An academic approach which adopts a sociological view to analyse how we think about the future. Its aim is to look at questions such how certain ideas of the future came to be dominant, how we understand time and the history of thinking about the future.

Another alternative typology may emphasise the methodological assumptions which underpin different approaches. This leads to three approaches.

An output oriented approach - This is based on a rational and analytical attempt to build evidence-based images of the future. The main problem of this approach is that the future cannot be safely predicted no matter the amount of evidence we can mobilise, and the very notion of evidence is highly problematic in the context of futures studies. The risk is a naive, or worse disingenuous, reliance on the appealing power of 'sound' and 'robust' methods which yield discrete outputs, but whose assumptions are rarely questioned and critically analysed. In fact, within this approach there is a plethora of 'rigorous' predictive models often wrapped in the convoluted language of systems theory and complexity theory; a situation which tends to obfuscate the uncertain theoretical and epistemological ground upon which such models inevitably rest. The main methods used in this approach include: horizon scanning, scenario planning (in its more formalised version, which often involves use of systems theory and convoluted feedback loops) back-casting (systematic analysis to prioritise current options and actions working retroactively from an ideal, or less-than-ideal future scenario), and more quantitative techniques like modelling or simulations.

A process oriented approach - Process oriented futures work can be viewed as an exploratory process which involves participants in strategic conversations about the future; something akin to a pedagogical (and andragogical) process to help people ask questions about the purpose, the methods and the implications of futures thinking from their perspectives (personal, historical, political and so forth). This approach can enable people to make sense of the future, and appreciate the many complexities and interrelationships involved. The risk with this approach is that it may become entangled in a purely process-oriented dynamic, paradoxically more inward looking than future-facing, which would struggle to provide relevant strategic insights. The main methods used in this approach include more participative and discursive techniques such as workshops, citizens' juries, and sometimes gaming.

A reflective approach - This approach favours the in-depth exploration of the ethical and epistemological assumptions behind different ways to think and talk about the future. It interrogates the role of scientific knowledge and the influence of social, historical and economic factors in different representations of the future across history and in modernity. The main methods used in this approach include historical analysis and methods of social critique derived from different currents in sociology and economics, supported by theoretical and philosophical engagement with the subject matter.

[4] See, for instance, Adams, B., & Groves, C. (2007) Future Matters. Action, Knowledge, Ethics. Leiden & Boston: Brill.

As already mentioned, the three taxonomies proposed here are not mutually exclusive as they are meant to reflect the complexity and the diversity of futures work. They could be used interchangeably depending on whichever aspect needs to be emphasised when talking about futures. It is also important to reiterate that there is no commonly agreed upon model in futures work. This is largely because there are so many ways of thinking about the future and no one method or approach exists that will suit all stakeholders, all purposes and all objectives.

In general, then, good futures work may be motivated by corporate, academic or activist influences and it may resonate with more of the areas above. But it usually

> "involves systematic and explicit thinking about alternative futures... It aims to demystify the future, to make possibilities for the future more known to us, and to increase human control over the future. In the broadest sense, futurists hope to inform people's expectations of the future and to help make their efforts to shape the future to their worthy values and purposes more effective"[5]

We can extrapolate from the above discussion one final and overarching comment about the role of 'evidence' in futures studies. Despite all the uncertainties and the complexities that surround the notion of evidence when applied to the future, it is undeniable that there are events and trends which can be observed systematically as they unfold in the present, and which offer real opportunities for analysis and data gathering. Investigating the future is not the prerogative of fortune tellers and diviners, but it is important that the limits and the scope of the available empirical data is realistically acknowledged, and mitigated by a critical concern for the circumstances – political and socio-historical - in which futures work is being carried out.

[5] Bell, W. (2003) Foundations of Futures Studies. History, Purposes and Knowledge. New Brunswick and London: Transaction Publishers. Vol 1: 2

Futures work as a professional and political practice

A great deal of futures work, in the UK and internationally, presents all the features of a typical professional practice. Practice, as suggested by some[6], creates epistemic cultures in which individuals feel connected to each other because they are engaged in similar endeavours, and share common views about the nature and the aims of their work. From the in-depth interviews carried for this report it emerged rather clearly that futures work shares many of the dilemmas of consultancy. The most common element within the epistemic culture of consultants is the irremediably ambivalent and 'political' relationship with the client. This ambivalence often leads to frustrations and tensions that are amplified by the complex and daunting nature of futurists' very peculiar topic: the future, or more appropriately a range of futures and their present, and very real and pressing, implications.

There are two main elements of potential instability in the relationship between the futures consultant and the commissioner of futures work. Each has important consequences for the quality and the scope of the work that can be carried out.

The first element of instability stems from the possibility that the client and consultant may have divergent perspectives regarding the time frame in which they are operating. A short-term perspective is usually prevalent amongst commissioners, where futures work requires a longer temporal frame in order to effectively explore events and trends. This tendency reveals a lack of understanding, perhaps unwillingness to engage with the more problematic assumptions of futures thinking, and it is often buttressed by elements of 'magic thinking', by which many clients unconsciously (perhaps consciously) believe that commissioning futures work might affect the actual likelihood of certain events occurring, rather than the simple awareness that they might occur.

The second element is the equally problematic tendency to develop 'tool dependency', a process by which the clients' demand for discrete and measurable outputs, be they scenarios, predictions, forecasts and so forth, meets with the commercial offer of faddish methods and tools, often not supported by a sufficiently critical analysis of the underlying theoretical assumptions. One of the futures experts interviewed specifically pointed to the creeping up of commercial short-cutting in the professional practice:

> "Futures work is not something you do to the client, it's something you do with the client – not everyone does this."

This tendency is related to the terminological balancing acts frequently performed by futures consultants to increase 'buy-in'. For instance, the emphasis on scenarios that characterised much futures work from its beginnings is now giving way to a more business driven and taut language that privileges definitions like 'strategic foresight'.

As for the people commissioning futures work, the interviewees made a clear distinction between corporate and policy sectors; while industry

> "is more engaged than it might appear",

the relationship with policy makers was depicted as a complex one; challenging but at the same time offering invaluable opportunities for supporting key strategic decisions. The main challenge is probably that, as politicians are subjected to the tyranny of the electoral cycle, they are not always ready to consider the more critical implications of alternative futures, especially when these implications challenge the priorities outlined in official policies.

According to one of the interviewees:

> "The electoral cycle affects the appetite for engaging with alternatives (...) securing the initial funding and support for a two-year project, means getting about ready to report at the politically sensitive time if in sync, regardless of the fact that there is good chance that the news-grabbing quality of the subject that initially secured the interests will have faded by then."

[6] Knorr Cetina, K. (1992) The couch, the cathedral, and the laboratory: On the relationship between experiment and laboratory in science, in Pickering, A. (Ed.). Science as practice and culture, pp. 113-137. Chicago: University of Chicago Press.

This might explain the tendency within many policy circles to prefer the more reassuring language of political science to that of futures studies. There are some similarities between the two[7], but in most cases political science tends to operate in a near time frame with some immediate policy in mind, while futures studies typically have a longer time frame. Concerning their differences and their respective roles in the political arena, Wendell Bell points out that:

> "There is a possible source of conflict between policy scientists and futurists. Futurists aim to open up the futures, to make virtue out of the uncertainty of the future for the purpose of empowering people to achieve futures better than the past and the present. (...) Policy scientists to the contrary often aim to 'de-futurise' the future by increasing security. Through technology, law, policy and insurance, policy scientists hope to secure the future by taking its uncertainty away. This may explain partially why the policy sciences have flourished more than has the futures field. Security is comforting to people. Change, even desirable change, has its costs because it often causes both uncertainty and stress."[8]

As also one of our interviewees suggested:

> "What's futures for if not to be a little heretical?"

The above claims obviously reflect a rather partisan view. This needs to be acknowledged as it is not the aim of this report to advocate the superiority of futures studies over other absolutely legitimate approaches to inform strategic planning and decision making. In fact, in this instance we are only attempting to document and discuss how eminent futures thinkers, as well as practitioners, position their professional practice in relation to other practices, competing for cultural capital and recognition.

The next section will explore the role of futures work in the educational context. Looking in further detail at the relationship between futures studies and policy, and discussing ways through which decision making can be supported at the broad level of wider policies, as well as at the more specific level of strategic decisions involving local communities.

[7] De Leon, Cited in Bell, 2003: 55
[8] Ibid: 55.

Futures work in education

Although we do not seek here to evaluate different approaches to futures studies, it is important to note that some futures approaches reflect particular ways of thinking about the world that may be more aligned with the concerns of educationalists. After all, as pointed out by the futurist Richard Slaughter, "by their very nature schools are already in the futures business."[9]

Futures work of interest to educationalists and educational researchers is likely to be based on those approaches that address multiple futures rather than THE future. It is action-orientated, whether that be in terms of creating change in a particular area or in terms of giving people the tools to engage with the complexities of the future and the space to think about possible, probable and preferable futures[10].

To begin with, given the intensely value-laden nature of education and its connections with many other spheres of social and economic life, futures work in this area requires a positive appreciation for reflective enquiry, and a commitment to close examination of its own starting and guiding assumptions. Therefore it is fundamental, as the Beyond Current Horizons (BCH) experience shows to a significant degree, to keep acknowledging and nurturing the elements of continuity between futures work and other fields of academic research, drawing on expert knowledge from established scholarly communities. This can help contextualise futures work in the main socio-technical, scientific and geopolitical challenges education is facing. At the same time, this can provide grounds for critical argument and discussion, helping to avoid the pitfalls of unquestioned assumptions and tool-dependency.

In this respect, one of our interviewees commented that in education like in other policy contexts,

> "People want the tool, not the struggle (...) what is missing is not a tool, it's a relevant understanding of the world."

Moreover, futures work in education poses specific challenges for the relationship with the policy makers commissioning such work. It could be argued that the high level of public interest in education may put even more of a strain on such relationship, and commissioners might not be ready or willing to accept the uncertainty that often accompanies 'good' futures work, leading to reluctance to commit additional resources and funding. One possible course of action when dealing with the uncertainties of futures work is to follow the BCH example, and focus only on those events and trends whose occurrence would require a particular response from education over the next few decades. This would leave aside the 'discontinuities', that is, those paradigm-shifting events that can catalyse and precipitate change on a large and dramatic scale: pandemics, catastrophic events and so forth. As the BCH final report points out, these events would certainly have an immediate impact on schools, but they would not necessarily influence the aims of education[11]. Furthermore, the unpredictability and the dauntingly wide implications of such 'wild-card' (low-probability, high-impact) occurrences make them very hard for policy makers to respond to.

More about futures and educational policy

Keeping within the boundaries of comprehensible events and trends, futures work can effectively inform planning and strategic decisions in educational policy. However, we cannot stress strongly enough that this will not be achieved by producing simple predictions, or by giving the illusion that individual decision makers can always pick from a range of possible choices to make things happen, or to prevent them from happening.

Using a futures perspective to inform educational policy requires two crucial types of awareness. In the first place, we need to be aware of the limits of prediction in such a complex and multi-actor domain, where decisions are often affected by a great number of people and intervening factors. Secondly, we need to accept that there are pre-existing historical, economic and social conditions which impact on the agency of individual policy makers, limiting their freedom to take strategic decisions.

[9] Slaughter, R.A. (Ed) (1988). Studying the future: an introductory reader. Melbourne: Commission for the Future and Australian Bicentennial Authority: 14.

[10] This tripartite classification was initially proposed by Wendell Bell (2003) as a way of categorising futures work.

[11] Facer, K. (2009) Educational, social and technological futures: a report from the Beyond Current Horizons Programme. Available online at www.beyondcurrenthorizons.org.uk

In this report we have been rather critical of quantitative approaches that provide predictions based on mathematical models, despite some evidence that these approaches seem to 'get it right', albeit under very specific circumstances[12]. These circumstances are usually characterised by small numbers of people negotiating over very contentious decisions. It is not a coincidence that a very successful approach to game-based predictions[13], has mostly confined itself to very specific foreign policy issues involving no more than 40 or 50 'players' haggling over a limited number of possible outcomes[14]. It is telling that one circumstance in which this method's predictions were completely wrong concerned a problem of domestic health care policy in the US in 1992[15].

This suggests that when strategic interactions take place in the context of checks and balances that characterise 'normal' democratic politics, then the number of factors and key people increases exponentially, and many hard to quantify elements come into the picture potentially affecting the outcomes, eg shifts in public opinion and media coverage. This is precisely the case of educational policy. Therefore, the influence that a futures perspective can exercise on education policy is mainly an ethical and perhaps a 'pedagogical' one, in the sense of facilitating a reflective process of social learning. It is about exploring relevant trends, seen as trajectories to several possible images of the future, and then engaging decision makers and stakeholders in a debate about the factors and the choices that might empower or frustrate such trends. A futures perspective can influence policy by opening up a space for action rather than by recommending action.

An important part of this may be asking the relevant questions and presenting the related challenges[16], refraining from providing answers and recommendations: something that perhaps should remain a prerogative of traditional policy-orientated empirical research.

This more facilitative approach can be useful at the macro level of broader educational policies, but it can also help strategic decisions at a more localised level. For instance, futures work can be used, and in many cases is already being used, to engage stakeholders involved in capital programmes like BSF[17]. Again, this is akin to views of futures work as a form of social learning[18], or anticipatory action research: a collaborative and inherently democratic process in which stakeholders are involved in shaping collective and individual responses to future challenges[19].

Inspiration for this approach can also be found in case studies like the 1999-2004 Georgia Basin Futures Project, whose goal was to engage residents of the western Canada region in a public debate about how to achieve a desirable sustainable future[20]. Another interesting, now classic, example is the Honolulu Electronic Town Meeting (ETM) in 1982, in which TV, local radio stations and newspapers all worked together to help citizens shape images of the future in response to economic and social trends[21]. The Honolulu ETM is an early example of convergence of e-democracy (the programme made use of methods of opinion gathering like televote, at the time very innovative) and futures perspective, which aimed to increase citizen participation in governmental decision making.

12 Ray, J.L. and Russett, B. (1996) The Future as Arbiter of Theoretical Controversies: Predictions, Explanations and the End of the Cold War. British Journal of Political Science. 26:441-470.

13 Bueno de Mesquita, B. (2006) Game Theory, Political Economy, and the Evolving Study of War and Peace. American Political Science Review. NOV; 100 (4): 637-642 .

14 Examples are whether or not North Korea's supreme leader, Kim Jong Il, would dismantle his nation's nuclear arsenal, or how a land-for-peace formula could work in the Israeli-Palestinian conflict.

15 Source: The predictioneer: Using games to see the future. New Scientist. 17 March 2010 by Sanjida O'Connell. Magazine issue 2752.

16 The challenges identified in the BCH programme are good examples: should education continue to be organised around the unit of the individual learner? Should 'the school' retain its dominant position in assumptions about educational futures? Should preparation for competition within a knowledge economy remain a primary goal for education?

17 One of Futurelab's main remits is to develop free resources to support stakeholders in their 'futures thinking' and long term planning in various educational contexts, like curriculum re-design and school capital programmes. See www.futurelab.org.uk/resources

18 Robinson, J. (2003) Future subjunctive: backcasting as social learning. Futures 35: 839–856.

19 Inayatullah, S. (2005) Anticipatory action learning: Theory and practice. Futures 38: 656–666.

20 See Robinson, 2003 for an account

21 See Bell, 2003 for an account

Categorising further the field of educational futures

Marcus Bussey and Sohail Inayatullah, two leading futures thinkers, proposed an interesting way of categorising the field of educational futures, each with specific priorities and each with different assumptions about the role of human agency[22]. The first approach has mainly negative connotations, whereas the second and the third can make, according to them, valuable contributions.

THE future of education - This is a normative approach to futures studies, which aims mainly to maintain the status quo by serving implicit or explicit agendas of power groups and elites. It is driven by images of THE future which are usually informed by dominant discourses of imperative economic growth and technological pervasiveness.

> "When futures studies are brought into the curriculum in this context it appears in its most timid genotype - quantitative trend analysis, images of the techno-utopian, with texts on how students and ministries must adapt to THE future"[23]

Education for the future - This approach has a strong focus on educating for sustainability, often warning about the disastrous future consequences which might derive from present inaction. Education for the future involves a strong ethical, sometimes spiritual, commitment to a "neohumanist stance which speaks for the silent majority: past, present and future."[24]

Alternative futures of education - This is a more critical and non-normative approach. It presupposes a pedagogical philosophy that aims to increase uncertainty, rather than deny it, by analysing the choices available now that can have an impact on a range of futures. The main assumption behind this approach is that people make the future now, and although safe predictions are impossible, there are possible alternatives that can be envisaged, some more worth pursuing than others.

The idea of using alternative futures as a pedagogical strategy to increase critical thinking has been mainly explored by Richard Slaughter[25] , who draws on the philosophy of Jürgen Habermas and, in particular, on what Habermas called 'emancipatory interests', that is, those interests that lead individuals and groups to look beneath the surface of social phenomena and trends, to unearth problematic dynamics like inequalities in the distribution of power and resources, and the institutional limits imposed on individual agency[26].

Slaughter's approach rests on the assumption that "the possession of a high-quality forward view fundamentally changes the way people and organisations operate in the here and now."[27] Pockets of educational futures practice that have been recorded around the world have largely followed this emancipatory agenda. For the sake of objectivity these should be regarded as particularly politicised forms of practice that conform to a more Leftist or 'progressive' agenda of ensuring social and environmental improvement.

Based on his analysis of such futures education practices around the world since the 1960s, Slaughter has usefully summarised the desirable outcomes of educational futures developments in five categories:

- **Familiarity with symbolic and methodological aspects of futures**: understanding how different futures are produced and examined.
- **Enhancement of futures or 'foresight' literacy**: using futures concerns as the source for projects and other creative responses.
- **Encouragement of constructive and empowering attitudes**: exploring the origins of popular visions of the future of society and shifting negative attitudes towards more constructive futures goals. ~

[22] Bussey, M., Inayatullah, S. (2008) Pathways: alternative educational futures, in Bussey, M., Inayatullah, S. & Milojevic, I. (Eds) (2008) Alternative Educational Futures. Pedagogies for emergent worlds. Sense Publishers: 1-9.
[23] Ibid:3
[24] Ibid 2008: 5
[25] Slaughter, R. (2002) Futures studies as an intellectual and applied discipline. In Dator, J.A. (Ed) Advancing futures: futures studies in higher education: 91 -107.
[26] Habermas, J. (1972) Knowledge and Human Interests, Beacon Press, Boston.
[27] Slaughter, R. (2004) Futures Beyond Dystopia. London: RoutledgeFalmer: 188.

- **Development of skills like proactive thinking and leadership**: engaging in dialogue about what directions, processes, structures and destinations may be required to achieve futures ambitions.
- **Support for 'big picture' thinking**: developing an overview of processes of continuity and change[28].

From these analytical perspectives and futures practices, the future becomes an 'epistemological space'[29] where a more critical knowledge about the world can be constructed, and where important issues and challenges that affect people on a collective, and individual, scale can be turned into topics of exploration, learning and action. This can be useful in a policy context as well as in actual educational practice.

Futures studies in the curriculum

The idea of the future as an epistemological space presents a number of challenges but also offers real opportunities to those interested in actual pedagogical practices in real learning contexts. Talking about futures is obviously hard, but with the right support and guidance it needs not be something removed from the learners' experiences, but a very real arena where they are afforded the freedom to explore the consequences and the boundaries of their present choices. Talking about futures could become, in other words, an opportunity to engage in what Henry Giroux called 'border pedagogy'[30], a pedagogy where the arbitrary disconnection between the present and the future is renegotiated, creating an opportunity to discuss how choices and actions have critical consequences beyond the short, limiting time frames within which we usually live our lives[31].

A concern for possible, probable and preferable futures can help incorporate local and global sensibilities in formal school subjects, contributing to the development of more relevant, and possibly more engaging, learning experiences. This could raise amongst students a critical awareness of the personal and social implications of the contents and the form of their compulsory education, and could lead to the development of a more critical knowledge where meanings intersect, and where present relevance and future consequence become driving forces of learning.

An example of how a futures perspective can be integrated in the school curriculum is the 1988 Australian Bicentennial Futures Education project[32] , in which 12 'lighthouse schools' were officially supported to explore how notions and methods derived from futures studies could be applied during lessons. In fact, three Australian states (South Australia, Queensland and Tasmania) explicitly cover futures in their curricula. Tasmania, in particular, makes an interesting distinction between personal futures and world futures. As the definition suggests, personal futures are involved with the development of a personal identity and the ability, often the resilience, to deal with future changes. World futures are concerned with understanding that the "social, natural and constructed world is made up of a complex web of relationships or systems."[33]

In the UK context, it is worth reminding that the English national KS3/4 curriculum states among its aims, enabling young people to become "responsible citizens who take into account the needs of present and future generations in the choices they make."[34]

[28] Ibid: 190
[29] Bussey & Inayatullah, 2008: 3
[30] Giroux, H. (1992) Border Crossing. London: Routledge.
[31] According to Giroux, the category of border is a theoretically powerful notion with metaphorical implications spanning across culture, space and, it could be argued, time. Separations, divisions, distinctions, boundaries and other variations on the notions of border can all be seen as manifestations of those symbolic lines that help categorise reality, as well as crystallise it through symbolic fences (like the view of the present as an eternal state completely detached from future consequences). Consistent with these theoretical assumptions, Giroux argues for the creation of pedagogical conditions that allow learners to critically recognise and eventually cross the symbolic boundaries that surround them and which in some cases they have contributed themselves to create.

[32] Lloyd, D & Wallace, J. (2004) Imaging the Future of Science Education: the Case for Making Futures Studies Explicit in Student Learning. Studies in Science Education, 40:1, 139-177
[33] Tasmanian curriculum, Outcomes and Standards, p .16 available online at www.education.tas.gov.au/curriculum
[34] English National Curriculum, see curriculum.qcda.gov.uk

Similarly, the curriculum offers a framework for education for sustainable development as a cross-curricular theme:

> "Education for sustainable development enables pupils to develop the knowledge, skills, understanding and values to participate in decisions about the way we do things individually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future. There are opportunities for pupils to develop their understanding of sustainable development within the school curriculum, in particular their work in geography, science, PSHE and citizenship."[35]

In the UK, David Hicks[36] has been responsible for a number of programmes concerned with developing educational futures practices. He also provides a taxonomy of aims for futures practice as a form of pedagogy:

- **Pupil motivation**: supporting children to develop clear images and expectations of the future to stimulate motivation, behaviour and achievement in the present.
- **Anticipating change**: developing children's skills of flexibility and anticipation at a time of uncertainty, and equipping them with skills of initiating (rather than only responding to) change.
- **Critical thinking**: the ability to weigh up information when considering trends and alternatives and realising the contradictions between how the world is now and how one would like it to be.
- **Clarifying values**: identifying value judgements and value assumptions, and understanding how to make appropriate choices between alternatives in a democratic society.
- **Decision making**: awareness of trends and events which are likely to influence one's future, as well as the consequences on others of one's own actions, in order to make thoughtful decisions in the present.
- **Creative imagination**: envisioning a range of preferable futures, from the personal to the global, through critical thinking and thoughtful decisions.
- **A better world**: developing a sense of vision in respect of more just and sustainable futures and the preserving and improving of society.
- **Responsible citizenship**: critical participation in democratic life through the development of political skills and active and responsible citizenship.

Other educational scholars have argued that a futures dimension is important in understanding the purposes and practices of curriculum and pedagogy. Ivor Goodson, for example, suggests that highly routinised classroom pedagogies and a prescriptive curriculum are "utterly unsuited to the new society of risk, instability and rapid change in which we now live"; he argues against "habits and routinised learning" and instead favours "breaking away from pre-digested prescriptions of curriculum and moving to the definition and ownership and ongoing narration of our own curriculum." Goodson's argument is that if learners are enabled to develop greater ownership of their own curriculum, seeing it as part of their own personal life project in relation to their own social contexts as well as to broader social, national and global trends, then they will have greater capacity to engage in purposeful and passionate life planning for their own social futures.[37]

[35] Ibid

[36] Hicks, D. (2002) Lessons for the Future. The Missing Dimension in Education. NY and London: RoutledgeFalmer; see also Sugrue, C. (Ed) (2008) The Future of Educational Change: International Perspectives. NY: Routledge.

[37] Goodson, I. (2008). Schooling, curriculum, narrative and the social future: 123-135, in Sugrue, C (Ed). The Future of Educational Change: International perspectives (London: Routledge).

Conclusions

This report attempted to sketch the landscape of futures studies, exploring the complexities as well as the opportunities in the area of education. As mentioned at different points, the report builds on the experience matured within the Beyond Current Horizons project, and draws on interviews carried out with seven experienced futures practitioners who agreed to confidentially share their thoughts, sometimes their concerns, about this sensitive and complex area of research and consultancy. In this final section we will draw some conclusions, summarising why we believe it is important to maintain a degree of futures expertise for education and educational research.

A futures approach provides a critical and temporal perspective – allowing policy makers and practitioners in education to step back and adopt a more critical stance.

Engaging people in conversations about the future can be seen as a learning process in itself, through which images of possible, probable and preferable futures act as catalysts for reflection and action, raising issues and concerns that can resonate with individuals on a very personal level.

However, we need to reiterate that futures studies are a varied field with plenty of conflicting views. The one we favour here is one possible take, which appears to be more suited to the peculiar nature of education: public, value-laden and deeply political. This is because it advocates alternative and plural futures, as opposed to normative representations of THE future, seen as a linear march toward an idealised, often utopian, individual and collective transformation. Perhaps more realistically, 'our' view assumes that the future is not inevitable but made in the present, and leaders as well as lay people can be supported in pondering the consequences of their choices and encouraged to act accordingly, thus shaping their own futures.

It could be argued that this theoretical position has much in common with action research; like action research, this particular strand of futures work aims to create the situational conditions that make reflection possible, often through a participatory process of enquiry and communication that can increase self-awareness and readiness to action[38].

A futures perspective can help develop resilience and planning.

The dangers of short-termism should never be underestimated. In fact, it can be argued that short-termism is a concomitant cause of much trouble and unnecessary misery on an individual and collective scale. Not only it compromises the willingness to plan effectively, but it also affects the ability to cope with shocks and setbacks. Many research studies illustrate the importance of resilience as an attribute of individuals, communities and entire societies, especially in uncertain times characterised by many sources of instability. For example, an ambitious, recently published report about the 'unmet needs' of British society explores why some people can cope with uncertainties and disappointments, while others can't. The report shows the importance of resilience as a positive force affecting attitudes and access to networks of support, and implies that a futures perspective can help teach 'adaptive resilience'. This type of resilience is mainly the ability to connect to new opportunities, by engaging in conversations about how to respond, individually and socially, to likely patterns and trends which include constraints on public spending, an ageing population, a generation of young people facing increasingly difficult transitions into the job market, and the effects of global phenomena like climate change and rising energy and food prices[39].

In another thought-provoking study, researchers explored why young offenders in deprived urban areas tend to pursue high risk behaviours associated with immediate rewards, which include crime and violence. The data they collected pointed to a sense of 'futurelessness' shaped by early exposure to violence and protracted instability, which confirmed the commonsensical view that when young people believe they have no future, they tend to live 'in the moment' and feel they have little to lose by engaging in antisocial and criminal behaviour[40].

[38] Atweh, B., Kemmis, S. & Weekes, P. (1998) Action Research in Practice: partnerships for social justice in education. London, Routledge.

[39] Young Foundation (2009) Sinking and Swimming. Understanding Britain's Unmet Needs. Copyright: Young Foundation.

[40] Brezina, T., Tekin, E. & Topalli, V. (2008) Might Not Be a Tomorrow: A Multi-Methods Approach to Anticipated Early Death and Youth Crime. NBER Working Paper No. 14279 August 2008.

A futures perspective can support us in thinking about the purpose of education, its goals and aspirations.

There are some fundamental assumptions underlying state-funded, inclusive education in the UK which we take for granted, and which for all intents and purposes date back to the first ever piece of legislation to regulate school provision, the 1870 Education Act[41]. Many things have obviously changed over such a long time; for example, the emphasis on non-denominational schools without religious affiliations has decreased due to a rising openness to faith and spirituality. Moreover, very significant free market elements have been introduced in the education system to encourage independence and accountability. One thing that arguably has not changed since 1870 is the belief that education is crucial to maintaining the competitive edge of the country. Underpinning this belief is the idea that education's main purpose is to ensure all young people are sufficiently equipped to be productive citizens and workers. In the 19th century this meant being part of an industrial society based on manufacturing; nowadays it means being 'knowledge workers' in a post-industrial, globalised economy.

A futures perspective can help uncover such deep-seated assumptions, by proposing empirically informed images of the future in which things might appear less inevitable. As one of the experts interviewed for this report suggested, presenting people with compelling and plausible scenarios can support reflection and can help unearth unquestioned assumptions about an unchanging reality. For example, a discussion about age and demographic trends could afford different stages of engagement:

- At first, people might think of the implications for social care.
- Then they might think of pensions and insurance.
- This could lead to a discussion about the changing nature of work, for example exploring workplace trends in an increasingly older society, which might lead to health-care being the largest single area of occupation in the future.
- Eventually, they will realise that the issue touches all aspects of life, and this will present specific challenges for education.

At this point, the interviewee suggested that "futures work is like a Pandora's box." From an interdisciplinary perspective that brings together academic, corporate and political concerns, futures work has the potential of uncovering complex interrelations between social phenomena and trends: it can be an eye-opener.

Finally, a futures perspective can give a meaningful contribution to the chronic, self-sustaining public debate on whether education 'is working', whether young people are being given the best opportunities to fulfil their potential, and whether the expectations laid on inclusive education should be reviewed. The Beyond Current Horizons project is an example of this challenging, forward-facing approach, based on asking relevant questions which anyone with an interest in education should be aware of, especially in the light of observable and widely documented global trends which are likely to alter significantly the socio-economic fabric of our society.

[41] Information about the act is available online at www.parliament.uk/about/livingheritage/transformingsociety/school/overview/1870educationact.cfm

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Appendix

List of organisations carrying out relevant futures work in the UK in 2010.

Note: This list is partial as a great deal of futures work is carried out outside of the public domain, often for corporate clients seeking specific support for their strategic planning. Furthermore, some of organisations on this list have a UK focus but the scope of their futures work is global.

IFF - International Futures Forum: not-for-profit organisation which carries out work on education, arts and culture, health and on individual and collective responses to global socio-economic trends. Clients include the NHS, the Arts Council and the Scottish Parliament.
www.internationalfuturesforum.com

The Foresight Programme: a publicly funded programme active since 1994 that seeks to identify ways in which science and technology could address future challenges for society. Their projects focus mostly on high profile areas like: flood and coastal defence, the effects of climate change, medical science and health-related issues like human cognition and obesity. They have a track record of successfully influencing policies and were the object of an independent evaluation in 2006[42]
www.foresight.gov.uk

The Technology Strategy Board: a public organisation sponsored and funded by the government through the Department for Business, Innovation and Skills (BIS). They have a very strong business focus, and much of their work is "spreading knowledge, understanding policy, spotting opportunities and bringing people together to solve problems or make new advances." Their main mission is to support innovation and competitiveness in the business sector. Main areas of focus: energy, transport, science and technology, sustainable business.
www.innovateuk.org

Energy Futures Lab: a centre for multidisciplinary energy research at Imperial College London, looking at how to address future challenges in the area of energy supply and sustainable development. For example, one their projects (Planet 2050) is a joint initiative with the Grantham Institute for Climate Change, and will explore the possible ways in which the UK can reach its target of reducing greenhouse gas emissions by 80% by 2050.
www3.imperial.ac.uk/energyfutureslab/about

Shell: the global energy firm has a long tradition of engagement with futures work, in particular scenario planning. Their 'Global Scenarios to 2025' released in 2005 aimed to "develop an enhanced, robust methodology that addresses a broader range of strategic and planning needs across the whole spectrum of relevant time horizons and contexts." Their latest effort, released in 2009, focuses instead on their traditional business area, proposing energy scenarios in 2050.
www.shell.com/home/content/aboutshell/our_strategy/shell_global_scenarios/dir_global_scenarios_07112006.html

Forum For the Future: a not-for-profit organisation that supports organisations and public bodies in outlining strategies to achieve sustainable development. They work with corporations as well as local authorities, regional organisations and central government, helping decision makers "develop inspiring visions and scenarios to ensure key strategies and projects are fit for purpose."
www.forumforthefuture.org.uk

Outsights: a private futures consultancy, established in 1996, which focuses on strategic facilitation, horizon scanning, scenarios and leadership development. They are involved in the corporate sector and have been partners in publicly funded projects like the Foresight 'Tackling Obesities: Future Choices Project'.
www.outsights.co.uk

[42] Available online at www.foresight.gov.uk/General%20Publications/Foresight_Evaluation_Final_Report_June_2006.pdf

Strathclyde Centre for Scenario Planning and Future Studies: part of the University of Strathclyde Business School. They have mainly a corporate focus, helping "managers make sense of the increasingly puzzling world in which their organisations have to find their way."
www.strath.ac.uk/management/cspfs

PricewaterhouseCoopers: one of the world leading management firms. They provide a wide range of professional services, including futures consultancy. Some of their work is self-funded, like their study on the future of work to 2020, in which they used scenario methodology to explore workplace trends and the related implications for people management. They also looked at the futures of banking and the health care industry.
www.pwc.co.uk/pdf/managing_tomorrows.pdf

Fountain Park: specialists in web-based opinion gathering for the futures community. They are based in Finland but have carried out work in the UK, in particular for BT.
www.fountainpark.com/en/company

The UK Government Strategy Unit: it cannot be considered an organisation as it is an integral part of the Cabinet Office. It has been included in this list as evidence of the UK Government's will to engage with futures thinking during the last 10 years. The unit was set up in 2002 to provide a cross-departmental perspective on the major strategic opportunities and challenges facing the UK. It reports directly to the Prime Minister who takes final decisions about the Unit's work.
www.cabinetoffice.gov.uk/strategy.aspx

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About Futurelab

Futurelab is an independent not-for-profit organisation that is dedicated to transforming teaching and learning, making it more relevant and engaging to 21st century learners through the use of innovative practice and technology. We have a long track record of researching and demonstrating innovative uses of technology and aim to support systemic change in education – and we are uniquely placed to bring together those with an interest in improving education from the policy, industry, research and practice communities to do this. Futurelab cannot do this work on its own. We rely on funding and partners from across the education community – policy, practice, local government, research and industry - to realise the full potential of our ideas, and so continue to create systemic change in education to benefit all learners.

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