BACKGROUND OECD PAPERS: THE SCHOOLING SCENARIOS
This document brings together different papers that have been prepared on diverse aspects of the schooling scenarios – Box 1 in the Toolbox diagram. With the exception of Document 3, they have been drafted by David Istance, of the OECD/CERI Secretariat. They include results from the 1st Forum held in Poitiers (Document 4). One of the seven (Document 2) is based on extracts from an OECD publication and another will be published in substantial part in Spanish (document 7); the rest are unpublished papers. They aim to inform discussion of the scenarios.

The papers respond to particular factors that have arisen in discussion as warranting a more detailed focus: teachers, ICT, leadership, economy and society, differences in the scenarios by level of schooling, and methodological issues. They do not add up to a definitive reworking of the original scenario formulations but they provide a substantial body of reflection to help undertake that process.

The papers in this collection are:

1. The Schooling Scenarios in Brief: this outlines the schooling scenarios in bullet-point format. It follows the revised categorisation whereby the “meltdown” scenario is included in “Attempting to Maintain the Status Quo”, which differs from the original 2001 classification (see also Document 7).

2. Governance, Management, Leaderships and Networks in the Schooling Scenarios: Extract from the 2003 OECD “Schooling for Tomorrow” publication Networks of Innovation: towards new models for managing schools and systems, elaborating these dimensions of the six scenarios. [Certain authors and chapters in that volume are referred to in the text.]

3. The Role of ICT in the OECD/CERI Schooling Scenarios (Pedro Hepp, Hugo Martinez, Magdalena Claro, J. Enrique Hinostroza, Ernesto Laval, Celia Alvariño). The Chile team gives more systematic attention to ICT in each of the six scenarios than did the original 2001 scenario formulations, under four headings: ICT Infrastructure and Resources in Schools; Learning and Organization; Management and Governance; Teachers.

4. Using the Scenario Hexagon - Results from the Poitiers Forum and Methodological Reflections

This paper presents findings from the Poitiers Forum workshops that used the hexagon as a device for participants to assess where their systems are now, and it contrasts these assessments with where they report they would like to be. It also presents and discusses alternative hexagon formulations and applications.

5. Differentiating Primary and Secondary Schooling in the CERI Scenarios: Six "Composite" and Three "Pure" Scenarios

By differentiating the scenarios by age and level of schooling, the note introduces the distinction between ‘pure’ and ‘composite’ scenarios. While ‘composites’ may well be too
complicated for many purposes, they permit more plausible alternatives, especially relating to de-
schooling, to be considered.

6. The Broader Context of Education – Relating the OECD Schooling Scenarios to the
Economy, Society and Culture. This tackles the relationship of the broader economic, political, social
and cultural environments in which the schooling scenarios might be found. It develops a methodology for
doing this, distinguishing between “hard” and “soft” variables. It describes what those broader
environments could be like, and identifies the variables that seem best to discriminate the different
scenarios.

7. The OECD Schooling Scenarios, their Broader Environments and the Teaching Force. This
presents the six scenarios and, in brief, their possible broader social, economic and cultural environments.
Its interest in this collection is both because it gives specific attention to the role and profile of the teaching
force in each scenario and because it adopts a re-classification, re-ordering and new set of titles for the
scenarios.
The Schooling Scenarios in Brief

1. ATTEMPTING TO MAINTAIN THE STATUS QUO – school systems seek to resist pressures to change

Scenario 1.a: "Bureaucratic School Systems Continue"

- Powerful bureaucratic systems, resistance to radical change.
- Schools knitted together into national systems within complex administrative arrangements.
- Political and media commentaries are frequently critical in tone; despite the criticisms, radical change is resisted.
- No major increase in overall funding. The continual extension of schools' duties further stretches resources.
- The use of ICT continues to grow without changing schools' main organisational structures.
- A distinct teacher corps, sometimes with civil service status; strong unions/associations but problematic professional status and rewards.

Scenario 1.b "Teacher exodus – The 'meltdown scenario'"

- A major crisis of teacher shortages, highly resistant to conventional policy responses.
- Crisis triggered by a rapidly ageing profession, exacerbated by low teacher morale and buoyant opportunities in more attractive graduate jobs.
- The large size of the teaching force means long lead times before policy measures show tangible results on overall teacher numbers.
- Wide disparities in the depth of the crisis by socio-geographic, as well as subject, area.
- Different possible pathways in response to “meltdown” - a vicious circle of retrenchment and conflict or emergency strategies spur radical innovation and change.

2. RE-SCHOOLING – major reform and renewal of schools

Scenario 2.a "Schools as Core Social Centres"

- Schools enjoy widespread recognition as the most effective bulwark against fragmentation in society and the family. Strongly defined by collective and community tasks
- Extensive shared responsibilities between schools and other community bodies, sources of expertise, and tertiary education.
- A wide range of organisational forms and settings, with strong emphasis on non-formal learning.
- Generous levels of financial support - to ensure quality learning environments in all communities and high esteem for teachers and schools.
- ICT used extensively, especially for communication and networking.
- A core of high-status teaching professionals, with varied arrangements and conditions but good rewards for all - many others around the core.
Scenario 2.b "Schools as Focused Learning Organisations"

- Schools revitalised around a strong knowledge rather than social agenda, in a culture of high quality, experimentation, diversity, and innovation.
- Flourishing new forms of evaluation and competence assessment.
- Large majority of schools justify the label "learning organisations" - strong knowledge management and extensive links to tertiary education.
- Substantial investments, especially in disadvantaged communities, to develop flexible, state-of-the-art facilities. ICT used extensively.
- Equality of opportunity is the norm, and not in conflict with "quality" agenda.
- Highly motivated teachers, favourable working conditions. High levels of R&D, professional development, group activities, networking, and mobility in and out of teaching.

3. DE-SCHOOLING – widespread disestablishment of school systems

Scenario 3.a "Learning Networks and the Network Society"

- Dissatisfaction with schools and new possibilities for learning leads to schools being abandoned. Learner networks as part of the broader "network society".
- Networks based on diverse parental, cultural, religious and community interests - some very local in character, others using distance and cross-border networking.
- Small group, home schooling and individualised arrangements become widespread. A substantial reduction of existing patterns of governance and accountability.
- Exploitation of powerful, inexpensive ICT.
- Specific professionals called "teachers" disappear. Demarcations - between teacher and student, parent and teacher, education and community - blur and break down. New learning professionals emerge.

Scenario 3.b "Extending the Market Model"

- Market features are significantly extended as governments encourage diversification and withdraw from much of their direct involvement in schooling, pushed by dissatisfaction of "strategic consumers".
- Many new providers in the learning market, with radical reforms of funding structures, incentives and regulation. Diversity of provision but schools survive.
- Key role of choice - of those buying educational services and of those, such as employers, giving market value to different learning routes. Strong focus on cognitive outcomes but also possibly of values.
- Indicators and accreditation arrangements displace direct public monitoring and curriculum regulation.
- Innovation abounds as do painful transitions and inequalities.
- New learning professionals – public, private; full-time, part-time - are created in the learning markets.
GOVERNANCE, MANAGEMENT, LEADERSHIPS AND NETWORKS IN THE SCHOOLING SCENARIOS

1. "Attempting to Maintain the Status Quo"

Scenario 1.a: "Bureaucratic School Systems Continue"

This scenario is built on the continuation of powerfully bureaucratic systems, strong pressures towards uniformity, and resistance to radical change. Schools are highly distinct institutions, knitted together within complex administrative arrangements. Political and media commentaries are frequently critical in tone, but despite the criticisms, radical change is resisted. Many fear that alternatives would not address fundamental tasks such as guardianship and socialisation, alongside the goals relating to cognitive knowledge and diplomas, nor deliver equality of opportunity. This is the model that Barber suggests in Chapter 7 predicts has had its day and will wither through its inappropriateness for 21st century circumstances. It may, however, prove to be considerably more robust than this.

Governance: As education is such an important feature of national sovereignty, the nation - or the state/province in federal systems - remains the main locus of political authority. Considerations of efficient administration and accountability lead to experimentation with varying patterns whereby authority is distributed across the different levels. National sovereignty is nevertheless being squeezed by a variety of factors: decentralisation to schools and communities (despite efforts of central authorities to maintain countervailing powers); growing corporate and media interests in the market opportunities that education represents; and globalising pressures, whether through international comparisons or trans-national decision-making/funding. The model of governance developed by Glatter in Chapter 4 that best corresponds to this scenario is "Quality Control", that he characterises as "bureaucratic", with a central role played by the education authorities, detailed forms of assessments and control, and contractual accountability within hierarchical structures.

Leadership and management: Leadership in this scenario calls for strong administrative capacities to handle the bureaucratic demands. It needs abilities to manage competing vested interests that come together in the place called school, especially in the light of limited resources. Not only are there no significant new resources - financial or human - for established tasks, but new tasks are continually added to the remit of schools. Accountability pressures are strong, and occupy a great deal of management time and energy. There would be a wide diversity in the quality of buildings and facilities, and the necessary investments would continue to struggle in the face of intense competition with the alternative calls on resources. This scenario is demanding, therefore, of educational management and leadership.

Networks: Networks will be a feature of this scenario, particularly established by motivated individuals and groups communicating to share solutions. Diverse pilot programmes will often be based on networking structures, and receive additional financial support. There would be tensions, however, between the hierarchical nature of the bureaucratic system and the functioning of networks. The levels of motivation needed to sustain networking would not be universal, and the networks dependent on additional funding would often disappear with the programme's end. Roldãu's chapter on innovation in Portugal describes just such tensions: experimental and innovative developments emerging alongside a system with many prescriptive hierarchical features, while making little tangible impact on it. Relating to Śliwka's observations in Chapter 3 about the fragility of networks, innovation may be highly dependent on support provided by essentially centralised and bureaucratic systems, with a tendency to evaporate when that support comes to an end.
Scenario 1.b "Teacher exodus – The 'meltdown scenario'"

There would in this scenario be a major crisis of teacher shortages, highly resistant to conventional policy responses. It is triggered by a rapidly ageing profession, exacerbated by low teacher morale and buoyant opportunities in more attractive graduate jobs. The large size of the teaching force makes improvements in relative attractiveness costly, with long lead times for measures to show tangible results on overall numbers. Wide disparities in the depth of the crisis are found by socio-geographic, as well as subject, area. Very different outcomes could follow: at one extreme, a vicious circle of retrenchment and conflict; at the other, emergency strategies spur radical innovation and collective change.

Governance: The position of the national authorities is strengthened in the face of crisis, as they acquire extended powers. Their position weakens, however, the longer crises remain unresolved. Communities with no serious teacher shortages might seek to protect themselves and extend their autonomy from national authorities. Corporate and media interests in the learning market could intensify. Internationally, co-operation increases between some countries where initiatives develop to "lend" and "borrow" trained teachers, including between North and South; it declines the more generalised the shortages and where several countries are competing for limited pools of qualified staff. As a worst case scenario of attempting not to change, this scenario does not correspond to any of the ideal type models outlined by Glatter (Chapter 4).

Leadership and management: the leadership and management features of scenario 1.a are found here too, but in this case summed up in the term "crisis management". This would extend from those running systems to individual local managers and school leaders. In socio-geographical areas where problems are most acute, the shortages among those willing to take on these jobs could well be greater even than among classroom teachers. A fortress mentality would be widespread in those areas saved most from the "meltdown". It would be likely that investments in school facilities would be very badly squeezed, as funds switch increasingly into salaries in an effort to attract more teachers. If the meltdown were to lead only to further retrenchment and conflict, so would the predominance of "crisis management". If instead national emergency strategies began to succeed through innovation and change, a whole new cadre of school managers, leaders and energy might be created.

Networks: Networking and partnerships will emerge in this scenario by force of necessity; there will be burgeoning pooling arrangements to cope with shortages. While highly innovative, the networks themselves may be less focused on the sharing of professional knowledge, given the sheer pressure of crisis management, and more on survival. Which direction emerges for this scenario - retrenchment or dynamism - will define the place of networks: marginal in the former case, critical in the latter.

2. "Re-schooling"

Scenario 2.a "Schools as Core Social Centres"

The school here enjoys widespread recognition as the most effective bulwark against social, family and community fragmentation. It is now heavily defined by collective and community tasks. This leads to extensive shared responsibilities between schools and other community bodies, sources of expertise, and institutions of further and continuing education, shaping not conflicting with high teacher professionalism. Generous levels of financial support needed to meet demanding requirements for quality learning environments in all communities and to ensure elevated esteem for teachers and schools. The Netherlands government has seen this type of future as a likely and desirable one: "An important issue is the position of the school in the community. The number of community school initiatives is increasing rapidly. Three-
quarters of Dutch local authorities wish to set up between one and five such schools within the next few years”. (Chapter 8)

*Governance:* The local dimension of action and decision-making would be substantially boosted in this scenario. But, this could only take place if supported by strong national frameworks, particularly in relation to communities with weak social capital and infrastructure. This would unlikely be simply moving powers up or down existing hierarchies of authority, but would create new forms of governance, giving various groups, enterprises etc. a greater voice. A big question remains how "macro" steering would occur. While international awareness and exchange is a prominent feature of this scenario, supra-national control is exercised more through guiding frameworks than in detailed regulation. The clear correspondence with the governance models outlined by Glatter in Chapter 4 is with "Local Empowerment", though perhaps some mix of this with "School Empowerment" more nearly expresses the thrust of this scenario.

*Leadership and management:* Management would be complex in this scenario. The school would be the centre for a dynamic interplay of community groups and players, with open doors and low walls. Integrating the formal learning programmes with a wide range of other activities would present considerable challenges. At the same time, leadership would also be more widely distributed and collective, and less would be expected of hard-pressed individuals. With well-developed frameworks of support, locally, nationally and internationally, there would be a rich vein of resources available to facilitate the undoubtedly challenging nature of management in such a scenario, including the management of infrastructure. But, major investments in facilities would be expected, in part aimed at improving the quality of the premises and equipment in general and in part at extending the range and quality of social functions that the school would serve.

*Networks:* Community interests - linguistic, cultural, professional, geographical - find very strong expression in this scenario using the school as the focal point. Schools would be allowed a great deal of room to respond to, and promote, these interests. Networking and co-operation would therefore flourish, both as an expression of different communities of interest (as in Scenario 3a) and as a mode of governance (as in Scenario 2b).

**Scenario 2.b "Schools as Focused Learning Organisations"**

In this scenario, schools are revitalised around a strong knowledge agenda, in a culture of high quality, experimentation, diversity, and innovation. New forms of evaluation and competence assessment flourish. ICT would be used extensively alongside other learning media, traditional and new. Knowledge management is to the fore, and the very large majority of schools justify the label "learning organisations" (hence is equality of opportunity the norm), with extensive links to tertiary education and diverse other organisations.

*Governance:* Decision-making would be rooted strongly within schools and the profession. This could not, however, be exclusive or protective, given the powerful involvement of parents, multi-national as well as national companies, and tertiary education in schooling. There would need to be strong guiding frameworks and support facilities, especially in relation to those communities with weakest social resources. The international networking of students and teachers would be the norm. Countries moving furthest towards this scenario might well attract considerable international attention as "world leaders". If there is a correspondence in one of the Glatter models from Chapter 4, it would be "School Empowerment", though an empowerment qualified by extensive partnerships and perhaps based on groups of schools rather than the individual institution.

*Leadership and management:* Professional leadership would replace the administrative thrust of the bureaucratic scenarios. With schools being "learning organisations", hierarchy structures are typically flat,
with teams and networks taking over much of what currently would be shouldered by particular individuals. Quality norms and conventions would also typically replace the more punitive forms of accountability, with arising problems of quality being resolved through various forms of professional mediation, at local or higher levels. As with the previous scenario, extensive structures of support would be available and widely accessible to all those engaged in schooling. For there to be a burgeoning of state-of-the-art facilities, major investments are to be expected, in part afforded through partnerships with the corporate sector. Blurring boundaries with tertiary education might well lead to more diversity in educational plant and in ownership and leasing arrangements.

**Networks:** Networks of expertise, including among teachers, would be an essential feature of this scenario. Bureaucratic and hierarchical models would give way to the flatter, collaborative arrangements of networks arrangements, and there would be numerous partnerships involving the different stakeholders. The very management and governance of schooling arrangements would come to rely heavily on networks, with all the positive features of professionalism and dynamism this implies, but also the potential problems of instability and patchiness.

3. "De-schooling"

**Scenario 3.a "Learning Networks and the Network Society"**

Dissatisfaction with institutionalised provision and expression given to diversified demand leads to the abandonment of schools in favour of a multitude of learning networks, quickened by the possibilities afforded by powerful, inexpensive ICT. The de-institutionalisation, even dismantling, of school systems would be an important feature of the emerging "network society". Various cultural, religious and community voices are powerfully to the fore in the socialisation and learning arrangements for children, some very local in character, others using distance and cross-border networking.

**Governance:** This scenario assumes a substantial removal of existing patterns of governance and accountability, as community players and media companies are among those helping to "disestablish" schools in national systems. The local and international dimensions are strengthened at the expense of the national - for instance, new forms of international accreditation might emerge for elite groups. Bridging the "digital divide" and market regulation become major roles for the public authorities, as well as overseeing the remaining publicly provided school sector. Groups of employers may become very active if these networked arrangements do not deliver an adequate skills base and if governments would be unwilling to re-establish schools. This scenario is almost defined by lack of governance structures, and so does not correspond closely to any of the "ideal type" models outlined by Glatter in Chapter 4.

**Leadership and management:** As the system becomes transformed into inter-locking networks, so does authority and leadership become widely diffused. Much now organised by education authorities and schools would be taken over by particular individuals, groups and interests in society, developing their own educational projects and methods for bringing these to learners. Far from simplifying the management of education, it would be extremely complex. The removal of the established visible structures would place demanding expectations on all those involved in the education of the young to be able operate "mini-systems" - capable of teaching, facilitating, organising community resources, engaging in professional development, managing infrastructure and finance, and so forth. The dismantling of the system would imply substantial reduction in public facilities and institutionalised premises, their place taken by diverse market arrangements as in scenario 3.b, and community and private facilities would also play an important part. One issue would be how existing premises would be dealt with and used, and whether sold off altogether.
**Networks:** Networks define and characterise this scenario in all its features, but they are relevant to all the scenarios, albeit taking different forms and shaped by different forces. Hence, not all the arrangements discussed in this report would find a prominent place in this scenario, such as the linkages between schools, teachers and tertiary institutions that depend on the established educational system. This scenario is *par excellence* about non-formal/informal groupings and arrangements, not formal educational structures.

**Scenario 3.b "Extending the Market Model"**

Existing market features in education are significantly extended as governments encourage diversification in a broader environment of market-led change. This would be fuelled by the dissatisfaction of "strategic consumers" in cultures where schooling is commonly viewed as a private rather than a public good. Many new providers are stimulated to come into the learning market, encouraged by thoroughgoing reforms of funding structures, incentives and regulation. Flourishing indicators, measures, and accreditation arrangements come to displace direct public monitoring and curriculum regulation. Innovation abounds but so too do painful transitions and inequalities.

**Governance:** Consistent with the market model, there would be a substantially reduced role for central providers and public education authorities. They may well have a role in overseeing market regulation, but much less direct involvement through "steering" and "monitoring" that would otherwise distort market operations. Funding arrangements, including the absolute levels of available resources, are critical in shaping new learning markets and their outcomes. International providers and accreditation agencies might well be expected to emerge, though there would be strong players, many private, operating at all levels - local, national, and international. There would be greater diversity of stakeholders with a major voice in educational governance. This finds an obvious correspondence with the "competitive markets" model presented by Glatter in Chapter 4, although that analysis is based on the continued central unit of the school, albeit operating in highly competitive environments. This scenario, on the other hand, supposes an important degree of dismantling of schools themselves and the creation of a wide range of other learning providers for the young.

**Leadership and management:** Whereas the administrative mode of management and leadership would be to the fore in the first set of scenarios, and professional modes in the second, entrepreneurial modes would now be much more apparent. But, management would not reduce entirely to entrepreneurship, as all the features of previous scenarios could be expected to feature prominently in the market model - administrative acumen, crisis management, community involvement, flat hierarchy and team-working, professional leadership, and multi-skilling. The settings wherein management and leadership would be exercised would be extended, given the key role of information and guidance, indicators and assessments, and the need to develop the dynamic interplay between educational supply and demand. A wide range of market-driven changes would be introduced into the ownership, leasing, and running of the learning infrastructure. While very innovative solutions could be expected, widening inequalities might well mean flourishing educational resources in some places contrasting with decaying infrastructure in others.

**Networks:** The variety of arrangements under this "de-schooled" scenario would most likely bring a flourishing of networks and partnerships. Some would be international, some national or regional, some highly local. They would be found in areas suffering most from "market failure" just as in those enjoying healthy development. Particularly in the latter, however, participation in networks could be expected to be driven by the perceptions of competitive advantage to be gained, rather than for more altruistic or educational reasons.
THE ROLE OF ICT IN THE OECD/CERI SCHOOLING SCENARIOS

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Introduction

This paper has been prepared by a team in Chile “brainstorming” on the OECD schooling scenarios and the role that ICT might play in each. For each scenario, these reflections have been organized under four headings:

- ICT Infrastructure and Resources in Schools;
- Learning and Organization;
- Management and Governance;
- Teachers.

1. ATTEMPTING TO MAINTAIN THE STATUS QUO

Scenario 1.a “Bureaucratic School Systems Continue

ICT Infrastructure and Resources in Schools

In this scenario, ICTs will be in “resource centres,” along with textbooks, teaching materials, etc. They will not form the usual resources for academic work, nor is it likely that they will be used extensively in classrooms. No major investments will be made to update and improve ICT infrastructure, and funds from sources outside schools will be required for adequate maintenance. The younger, less experienced teachers will be responsible for running the laboratories, with these resources used and managed independently from the general management of the schools’ educational resources.

Specific classrooms will be available for students to complete their homework and conduct data searches on the Internet which, at certain points in time, will turn into veritable information centres taken over, in the case of high schools, by the students.

Learning and Organization

The basic purpose of computer rooms will be to achieve digital literacy, and therefore students will mainly be learning how to use ICTs efficiently and effectively. The Internet will primarily serve as the means to disseminate educational programmes, whose contents and associated standardized teaching methods are for classroom use by teachers.

1 The views reflect those of the authors, and are not necessarily those of either the OECD or of any national authorities.
People will become disappointed with the original promise offered by ICTs in that they would be used to improve learning results in traditional schools, implying that to improve education on a mass scale, there would be a “return to the basics”, not innovation in state-of-the-art pedagogy. Technology will be viewed as an expensive ornament in the classroom, which has no major impact and so will not enjoy significant funding in the traditional teaching of the curriculum.

In affluent areas, learning of ICT will be much more intensive than in those that are less well off: children will have access to technology at home and it will be updated periodically. This will create a disadvantage for the poorer sections of society, whose children will only have access to older technology at home, and they will be unable to maintain the level of investment that accelerated modernization of technology requires. Schools will be seen as potentially the means to equalise access to technology for the lower income groups but they will not be able nor motivated to invest at a level that would allow the poorer students to maintain their involvement in the culture of technology as do their more affluent contemporaries.

**Management and Governance**

ICTs will be actively used to manage establishments and teachers. They will underpin standardized reporting systems, control efficiency, maintain centralized grading systems, and collect indicators on learning performance to support accountability mechanisms. Schools will provide information in digital formats to both the authorities and the Ministry, as well as to the students, and will integrate these methods into their data management systems.

**Teachers**

Most teachers will use ICTs to respond to the control mechanisms, prepare their classes, update information related to their courses, and exchange “best teaching practices” (modelling) with other colleagues. The intensive use of ICTs will be more closely associated with particular individuals, such as the young teachers described in Scenario 1.b, rather than with institutions. There will be a constant turnover of these educators as they search for better job opportunities and working conditions.

**Scenario 1.b Teacher Exodus – the Meltdown Scenario**

Insofar as this scenario is likely to take place, the “exodus” would more likely occur in more developed countries and sectors, which have better living standards and provide a broader range of job alternatives to the teaching profession. Poorer countries and areas are less likely to see this mass exodus of teachers, so that their educational systems would continue as described for Scenario 1a. Given that the scenario is more likely to occur in societies that already have a high level of economic and technological development, access to technology, a technological culture and its use for everyday human activities will be natural in homes and in environments outside school.

**ICT Infrastructure and Resources in Schools**

Families will be responsible for technologies while schools will only provide the basic communications infrastructure for wireless access.

**Learning and Organization**

As in the 1980s, ICTs will be considered as a “life-saver” for education, with a strong market profiting from this crisis by offering products aimed at guiding learning, simulation and virtual reality devices, intelligent tutors with good learning and evaluation models, etc. Integrated learning systems (ILS) will be broadly used to supplement teachers’ activities. Efforts will probably be made to compensate for insufficient educational coverage by
providing teaching material and high quality distance learning and interactive television. Self-diagnosis and online evaluation systems will be available, and will prove effective for providing training in technical activities and for students with the intellectual level sufficiently developed to make good use of them. In more isolated rural areas, considerable resources will be invested in high-speed networks and in the production of specialized educational material to compensate for the lack of teachers.

The gap between areas with different levels of cultural capital will be larger than in the preceding scenario, given that an important part of education will take place at home, and will be dependent on the individual parent’s own training and involvement.

Management and Governance

The Internet will be used as a fundamental instrument of support for solving the management problems generated by the lack of teachers: co-ordination, communication, leadership, exchange of information. To these ends, management and virtual communication tools will be developed and made available.

Teachers

Many teachers will take distance courses so as to reach larger groups of students and thereby compensate for the shortage of teachers. Intelligent tutors and communication tools will be crucial to this task.

2. RE-SCHOOLING

In these scenarios, ICTs will be a fundamental support tool to allow educational establishments to comply with their central social function. In both scenarios, we there will exist a highly developed understanding of the potential and uses of ICT and no-one will question its key role in schooling.

Scenario 2.a Schools as Core Social Centres

ICT Infrastructure and Resources in Schools

Technologies will form part of the basic infrastructure of schools, which will be transparent “resource centres” open to the community, operating under a management structure geared to organising teaching and learning activities for and with the community.

ICTs will be used in different ways for everyday school activities. There will be reconditioned PCs in theme classrooms to promote creative writing; terminals in some classrooms for consulting and searching for the information required by students for their homework and projects; mobile and wireless devices for developing defined and structured curricular activities; and sophisticated environments for creative musical activities, visual arts and remote communications.

Learning and Organization

Learning the use and application of technology will be part of the activities that are focused on creation, discussion and reflection. Students will develop projects with teachers, not merely guided by them, as part of an educating community; to this end, they will use the technology available in the school to present their arguments, communicate their ideas, search for information and develop products in a co-operative way.
ICTs will play a fundamental role in socialization and the students’ contact with the world. Internet discussion groups at different levels (courses) will be a prominent feature of different national and international establishments, creating open spaces in which other society members will be able to participate. ICTs will help broaden the horizon of experiences and actors involved in learning and education of students.

**Management and Governance**

Schools will be considered as spaces that are subject to physical boundaries but open in virtual terms to the community and the world, strongly supported by ICT, creating networks of schools, projects, people, and families. This will be possible through quasi-instantaneous and very broad transmission bands that are ubiquitous, invisible, specialized, and hyper-medial. ICT will be so integrated that it will not appear as an explicit element of the schools resources and methods of work.

Automated processes based on information systems will support the management of learning establishments. Remote access to these tools will be available not only for the community (access to students’ scores, school agendas, communications with teachers, participation in consultations and debates, etc.), but also for the teachers. They will have virtual and customized desks, with the usual working tools and access to personal files and documentation. Teachers will become members of virtual associations, which will organise, develop and evaluate projects with students from different places. ICTs will facilitate periodic contact between teachers and parents, who will be able to observe part of what is going on in schools from afar, and thereby participate actively in the education of their children.

**Teachers**

One or more teachers will be responsible in each school for managing these resources and the methodological support for their use by the other teachers. In general, these educators will be required from the moment of hire to have the necessary skills for accessing these tools, and the competencies to use ICT well.

Teachers will use the available network communications and resources during their professional lives and will act as consultants to many institutions and virtual groups. They will be able to carry out a substantial part of their duties from their homes although, in this scenario, their presence in school continues to be essential. Teachers will continuously upgrade their skills by means of on-line courses offered by a broad and diverse e-learning market made up of private and public institutions. Revaluation of the teachers’ role will encourage changes in faculties of education, and strongly promote the use of ICTs by teachers - inside and outside the classrooms - including senior teachers.

**Scenario 2.b Schools as Focused Learning Organisations**

**ICT Infrastructure and Resources in Schools**

The infrastructure and resources implications will be very similar to the preceding scenario: diverse and flexible ICT use as part of the everyday activities in schools.

**Learning and Organization**

Technologies will be present in different teaching and learning environments, both as access stations to networks, and as tools for information or data analysis and processing. They will be used in broadly common ways across disciplines to maximize results (tools for analysis, development, processing, etc.), and they will have more specific roles in the learning process. They may allow the exercise of competencies and the application of
knowledge in simulated situations, while at other times they may permit assessments, or self-evaluations, to diagnose competencies. They will also provide efficient tools for drawing up reports, portfolios and the presentations of research results and projects, etc.

Educational institutions will specialise in specific disciplines, and students will have access to a range of local or distance institutions, either in person or through the networks. Technology will be strongly used as in knowledge-building “professional” institutions (universities, scientific communities, etc.) Students and teachers will be able to communicate with their peers, have access to quality databases, and publish in digital educational academic magazines. Competition to excel academically will be fierce, with technology serving to achieve and demonstrate excellence.

Management and Governance

The purpose of schools will be different from traditional systems, as they will be more focused on knowledge-building as joint activities between teachers and students. In this respect, working networks - with other schools and also with higher education institutions - will become very common. Teachers will be members of virtual associations, organising, developing and evaluating projects with students from different countries. In addition, records on students’ learning activities will be kept as a basis for re-designing educational programmes and methodologies.

Technology will play an important role in communications support and knowledge management through shared databases, to which participants may contribute with data, hypotheses and questions through which to generate arguments and validate proposals. In establishments in this scenario, there will be a constant risk of saturation with regard to the use of technologies. Thus, educators will be subject to periodic evaluations and reviews of the ICT models used, and the lessons learned will be incorporated into subsequent practice.

Teachers

Teachers will use communications and resources available in the networks to make themselves specialists in teaching specific subject matter. They will actively explore what, how and when they should use ICT in their respective subjects, and share good practices in virtual learning communities. They will perform some of their work from home, and act as consultants to similar institutions and virtual groups.

3. DE-SCHOOLING

In these scenarios, ICTs will play a crucial role. They will be the platform that will determine the way in which decentralized and personalized education will take place. It will be essential for teachers and students to remain connected, and to have the necessary skills to manage these systems for access to resources, contents, communications, etc.

ICTs will facilitate participation in learning processes guided by institutions offering assistance through networks, with curricula globally available through virtual means. There will be the powerful presence of new ICT learning tools - super simulators, super virtual realities, intelligent tutors, etc. Families will require learning plans of some sort for their children, and they will need to enrol in these types of arrangements. Students will gather in cyberspace communities with no geographical boundaries.
Scenario 3.a Learning Networks and the Network Society

**ICT Infrastructure and Resources**

ICTs will be powerful and indispensable in this scenario; bandwidth and processors with a high graphic and multimedia capacity will be preferred and will simultaneously be able to execute different tasks. Participants in such virtual arrangements will be asynchronously connected with their teachers, work teams and resources in contexts of global ubiquity. Progress will be made towards more visual solutions to include the Internet, such as the former webtv, strongly strengthening learning outside schools. In this scenario, the 1960s utopia of the “school without walls” will become a reality.

**Learning and Organization**

The tools to be developed will allow groups of students from different cultures, languages, and even school calendars to work together, undertake complex assignments, evaluate their learning, customize their working pace, share resources, etc. Learning communities, co-ordinated through networks, will be created. Socialization and affective development will take place in community organizations, where people will achieve co-ordination through ICTs. Society will no longer question “distance” learning as inadequate; instead, these models will have been greatly refined together with sound certification, evaluation systems, and better learning models.

Technologies will be present in all homes, thereby granting learners access to a variety of courses and resources through the networks. Internet discussion groups from different national and international sources and different school levels (grades) will predominate, generating at the same time the creation of interest groups among young people. These will also be the basis for establishing friendships.

**Management and Governance**

The state will continue to play a supervisory role through the ICTs. It will have on-line information on each student’s progress and on the results of the different suppliers of education products. Grants will be established to finance these services, which will also include technological resources for access to virtual platforms and environments.

The responsibility for education will fall increasingly to parents and students rather than to teachers. Therefore, “family” systems for recording the teaching and learning activities of each student will be kept, while, at the central level, the supply of courses will be certified and students’ results will be qualified. In this scenario, there is also a high risk of increasing the digital gap, because learning will essentially take place within the home and in virtual environments. It thereby assigns a determining role to the family’s cultural capital in the child’s development.

**Teachers**

Teachers will use ICTs to carry out from home an important part of their usual teaching activities. They will acquire new skills and competencies, such as “distance educational design”, “evaluation assisted by means of remote communication networks”, “distance tutorials and follow-up”. There will be different pedagogical roles where a group of teachers will design and participate in multi-disciplinary teams for building platforms, while others will act as tutors or participate in “educational calling centres”.

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Scenario 3.b  Extending the Market Model

ICT Infrastructure and Resources in Schools

We see this as having the same implications as for 3.a (see above).

Learning and Organization

ICTs will offer a range of virtual curricula, some based on traditional educational values, others addressed to specific niches, (such as skills development, learning for religious groups, etc.), supported by highly specialized software and hardware. There will be mechanisms to allow students to move from one system to another at will, as education will represent a very large market with community-inspired grass-roots organizations. The state will offer an alternative curriculum targeted to low-income groups.

Students in this scenario, through these powerful networks, will be active consumers; with state support they will be able to select their education provider based on their interests, the learning conditions offered, quality of additional services, etc.

Management and Governance

In both “de-schooling” scenarios (but especially in 3.b), there will be vast opportunities for those who have the management skills and teaching qualities that allow them successfully to compete in the unregulated and highly competitive environment. They will take advantage of technologies’ most powerful features to perform efficiently. There will be an emphasis on developing the ICT competencies of all students, whether by learning at school or through self-teaching at home and institutional certification; well-trained teachers with clear models on the use of educational technology (i.e. simulations, tutorials, support software for classroom teaching) will make good use of it, but in a mixed and diverse manner - there are no standard models.

However, schools that lack the necessary resources to compete, through poor management capacity or teacher training, will become even more deficient and probably stagnate; they may then disappear, generating quality problems or poor coverage in less competitive areas. Many institutions could find themselves in this impasse - investing in the socially expected infrastructure and technology use but with neither a sound basis nor the necessary support to use it effectively.

Teachers

Teachers will become “members” of an institution and develop a “professional career” there. They will periodically upgrade their skills through further training and certifying their newly acquired knowledge in order to be more competitive in the educational market.
THE SCENARIO HEXAGON – RESULTS FROM THE POITIERS FORUM AND METHODOLOGICAL REFLECTIONS

This paper considers the use of the hexagon, constructed by placing each of the six scenarios at each corner, as a device for initiating discussion of the future of schooling and for reporting results. This has been stimulated in particular by workshops at the Poitiers Schooling for Tomorrow Forum in February 2003. The hexagon (Figure 1) is simply a vehicle for presenting all the scenarios together in diagrammatic form. It permits the visualisation, not just description, of developments and comparisons. It allows all six scenarios to be in the frame at once rather than giving each attention in turn. The hexagon can be put to different uses, as discussed in this paper.²

Figure 1: The Scenario Hexagon

Its heuristic value notwithstanding, however, the hexagon is also problematic. Questions arise particularly because it does not define a figure with linear space within its boundary and because results can be particularly sensitive to the order in which the scenarios are placed around the circumference. These are discussed in this paper, with possible solutions suggested.

² Different colleagues on the Schooling for Tomorrow project have contributed to these devices and uses – in particular, Walo Hutmacher, University of Geneva; Bill Mulford, University of Tasmania; John Cogan, University of Minnesota; Tom Bentley, Director of the Demos Think Tank, London; Riel Miller, CERI/OECD.
Where are School Systems Now?

Participants in the Poitiers Workshops were asked to locate the current situation of their education systems on the hexagon. Figure 2 reproduces approximately the responses that emerged from four workshops.

*Figure 2: Poitiers Workshop Results – “where are school systems at present?”*

The broad pattern of assessments was clear. Most judged their systems to be dominated still by heavy bureaucracy, whatever the language of reform in their countries. One participant placed the mark squarely on the corner. Others, who judged that their systems were not entirely stuck on the left hand side of the figure, placed their mark somewhat away from 1a in two directions – either towards the features of “meltdown” (scenario 1b) or towards systems operating as “focused learning organisations” (2b). Despite the enthusiasm of many educators for the revitalised and flexible schools represented by 2b, few believe that their systems have reached even half way, and in no case did participants judge this to be close as a characteristic of most schools (rather than individual cases). Only one participant placed a mark, and then only just, in the bottom half of the hexagon suggesting trends towards “de-schooling”.

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3 They were also asked to identify the direction of change over the next 15-20 years and where their systems might end up, on-going trends continuing. This paper does not include the results of this exercise but they may be incorporated into future versions of this paper.

4 The mark furthest to the right on the diagram was made by a leader of an innovative school referring to that school and is thus not comparable.
The findings about where leading educators assess their systems to be are in marked contrast with where ideally they would like them to be. At the November 2000 Rotterdam conference for instance, international participants overwhelmingly judged “Re-schooling” to be the most desirable. 82% scored ‘Core Social Centres’ 2.a as ‘highly or rather desirable’ and 85% believed ‘Focused Learning Organisations’ 2.b ‘highly or rather desirable’. Yet none of the Poitiers participants judge them yet to be close. 52% and 21% respectively endorse the Learning Networks and Extended Markets Scenarios as at all desirable, and only just over a quarter (27%) of Rotterdam participants lent any support to the Bureaucratic Status Quo Scenario. Yet this is the one that, the workshop results indicate, is where many in education believe that schooling is firmly stuck.

It is in seeking to interpret these broad-brush assessments that some of the shortcomings of the hexagon become apparent. The space defined by the hexagon is very far from linear and may be better understood as divided into clearly-separated segments. Related futures may, simply by the arbitrary ordering given by the original classification, be on opposite sides of the hexagon and thus give the impression of polar opposites. Very different futures, on the other hand, find themselves side by side. For instance, the bureaucratic model and focused learning organisation future are opposites in the diagram whereas in both schools are strong and distinct, within a powerful public sector. On the other hand, “meltdown” is next to “schools as core social centres” – in the one case, systems are disintegrating, in the other they are pillar institutions of communities and societies. Similarly, “Schools as Focused Learning Organisations” is next to “Learner Networks in the Network Society”, the latter being a radical disestablishment of the institution called “school” altogether.

These disjunctures are given expression in Figures 3 and 4. If the scenario clusters are highly distinct, it might thus be more appropriate to represent the hexagon not as a whole but as three triangles making up only half the total area of the hexagon, with the empty triangles between marking the clear gaps.

Figure 3: The Hexagon decomposed into the three Scenario Clusters

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5 See Hutmacher’s chapter in “What Schools for the Future”, OECD 2001; the “meltdown” scenario developed as part of the Rotterdam workshop discussions and so do not appear in these results.
But, this is “unrealistic” to the extent that the middle area of the hexagon empties to a single point while the extremities are well covered – the opposite of what might best represent actual complex situations and systems involving a mix of developments rather than “pure” scenarios. An alternative is to re-draw the hexagon instead as a star, as in Figure 4.

However worthy these alternative pursuits of accuracy, however, they introduce a degree of complication into the simple hexagon device that probably outweighs any gains.

*Figure 4: The Hexagon translated into a 3-cluster, 6-pointed Star*

Also problematic is comparability of the scenarios themselves, which becomes exposed when each is given its own corner and sector in the hexagon on equal value to the others. The “Meltdown” scenario [1.b] in particular raises problems. It was added to the set as the last of the six, and has proved to be the most politically effective. Yet, by focusing on a single main variable – the adequacy of teacher supply to meet demand – it is also the most partial of the six. It does not define a stable future and is probably best regarded as a point on a trajectory leading to one of the other scenarios. This instability has been reflected in its shifting categorisation over the course of the Schooling for Tomorrow project: from being classed as a “de-schooling” scenario in the earlier reports to being grouped latterly with the bureaucratic as one - relatively extreme - outcome of attempting not to change (with the reclassification meaning it changed places with the market model).

One way forward that addresses a number of these questions is to reorder the scenarios around the hexagon while still maintaining the existing three clusters. The rationale for the reordering is that proximity of the scenarios to each other should be in terms of the (un)importance of established schools: Figure 5 redraws the hexagon to this effect, and seeks to relocate the workshop findings presented above in Figure 2 in the new space that this reordered hexagon defines.

With the reordering found in Figure 5, “meltdown” (1b) may still be seen as a consequence of “attempting to maintain the status quo” but nevertheless is a move towards “de-schooling”. It thus changes places with 1a, and lies next to the “de-schooling” scenarios. “Schools as Focused Learning Organisations” (2.b) is clearly distinct from strong bureaucratic systems, but in both cases institutionalised schooling is strong and
underpinned by a powerful government role. They are not, therefore, at polar extremes (as suggested by the original ordering). “Schools as Core Social Centres” (2a) represent a more radical alternative than 2.b – with the lowering of schools walls and the embracing of a whole set of new learning and community roles – and hence it moves further around the hexagon to be located next to “de-schooling” for it shares with those scenarios a powerful emphasis on diverse, non-formal sources of learning. The “de-schooling” scenarios also change places. While many in education might find the “network” scenario less unpalatable than the extended market model, it is in fact a more radical “de-schooling” future as it is predicated on a total de-institutionalisation of schooling. In the case of Extended Markets, on the other hand, many schools would continue to exist as would institutionalised provision, albeit often in privatised forms. Thus, “core social centres” and the “extended market” are more logically located in neighbouring positions in the hexagon space.

**Figure 5: Re-defining the Hexagon according to the importance of established Schools**

As regards the actual findings relating to “where are we now?” – the dots - they are now redistributed within the hexagon. Given that the centre of gravity is perceived to be Scenario 1a, with the main tendencies away from this either “meltdown” or “focused learning organisations” which are both now neighbouring on either side in the figure, the responses are now re-clustered in the top left-hand of the figure.
“Where are we now?” – an alternative approach

Another Poitiers workshop group, conscious of the shortcomings of the hexagon as discussed above, decided on an alternative approach. They chose to produce a figure in which each participant could locate their system in relation to each of the six scenarios in turn, not place a single dot in the figure. In this way, they felt able to give a more nuanced picture that more accurately mixed the different scenario features. The results are shown in Figure 6. For the purposes of this paper, the actual placing of the dots is less at issue than the methodology adopted.

Figure 6: Poitiers Workshop results – “where are we now?” in relation to each scenario

As might be expected, six choices for each participant permit more, as well as more nuanced, information to be conveyed but the approach brings its own problems. It is, if anything, even more sensitive to the ordering of the scenarios and it is particularly hard to interpret the meaning of a dot being more to the right or left of each component triangle. Figure 7 seeks to resolve these issues by redefining the hexagon as a series of axes or “spokes” emanating from the centre, not a space bounded by a six-sided figure.

This appears to be a useful device for using the scenarios, alongside or instead of the hexagon. In this form, it no longer suffers from the difficulty of interpreting the space within each triangle and within the composite hexagon that combines all six. Nor is it sensitive to the ordering of the scenarios or “spokes”, as each is scored separately and does not depend on its “neighbour”. Its drawback, apart from the sheer detail (only 5 participants, for example, generate 30 readings) is the loss of visual impact. Figure 7 thus takes the device a step further by joining the readings for each participant on each spoke. Each participant thus defines a unique figure which may be a useful way of visualising the similarity and differences in the perceptions of a number of respondents as regards each scenario.
Figure 7: Re-locating the Findings (dots) on Scenario Axes, not in Triangles

Figure 8: Joining the Points on the Axes – Each Respondent defines a Unique Figure
Mapping Dynamics – Showing Pressures for Change

This final section reports a different approach to the hexagon and scenarios that was developed by Tom Bentley and Riel Miller in their contribution to the English National College of School Leadership Think Tank in 2002 and reported to the Poitiers Forum. Instead of using the hexagon as a device for describing and analysing the centre of gravity of school systems, now or in the future, it is here deployed as a means of “mapping dynamics”. In addition to giving a framework for understanding change within education systems, it allows for the representation of the impact of major changes in the wider environment of education.

The hexagon used in this way permits the representation in one figure of complex alternative pressures and dynamics, as well as initiatives of policy and practice. The blue (darker grey) arrows give examples of concrete English programmes and indicate how they can be interpreted in the space defined by the six scenarios. The red (lighter grey) arrows show major education trends, as well as those in the broader environment of schools, and how they push towards or away from the different scenario models. By including in the figure the space around the hexagon, it is also able to convey comparisons of dynamics that are internal to school systems with those exerted from outside. As with the other examples reviewed in this paper there may well be further refinements, modifications, simplifications and additions to be made to this particular formulation.
DIFFERENTIATING PRIMARY AND SECONDARY SCHOOLING IN THE CERI SCENARIOS: 
SIX “COMPOSITE” AND THREE “PURE” SCENARIOS

The suggestion has often been made that it would be useful as part of the Schooling for Tomorrow scenario work to be able to differentiate between the levels of education, especially between primary and secondary. The argument is for recognition of the important differences in the dynamics at work regarding the education of children aged, say, 6 years old compared with organised learning for 16-year-olds. This was underlined in the workshops in the 1st Schooling for Tomorrow Forum when various participants sought to distinguish between primary and secondary levels.

The result of permitting different broad futures for schooling at the primary stage compared with secondary gives “composite” as well as the “pure” scenarios. Were all six scenarios in the frame, the resulting number of composites would be simply unmanageable and confusing. Taking instead the three main clusters – “attempting to maintain the status quo”, “re-schooling”, and “de-schooling” (under one nomenclature); “Schools as uniform organisations within enclosed heavily bureaucratic systems”, “diverse, dynamic schools after fundamental system reform”, “extensive alternatives to schools develop as systems disband or disintegrate” (under another) – gives the manageable number of nine altogether: three “pure” scenarios, where both primary and secondary share the same future, and six composites, which foresee radically different futures for these two levels. The titles offered are intended to be suggestive, not literal, as a way to convey what such combinations might look like.

The Three Scenario Clusters Re-stated

_Enclosed heavily bureaucratic systems:_ This assumes the continuation of powerfully bureaucratic systems, with strong pressures towards uniformity, and resistance to radical change (despite frequent criticisms). Systems have and maintain their own powerful equilibria. The direction of decision-making is hierarchical, and while there is some influence of “outsiders”, the system is organised primarily to its own internal logic within national or regional contexts.

_Re-schooling/Diverse, dynamic schools:_ this future would see major investments and widespread recognition for schools and their achievements. The same applies to the professionals responsible for teaching and learning. Schools would be diverse but enjoy very equal status – equality and quality both enjoying a high priority. A wide variety of partnerships would be typical. The boundaries between the local, regional, national and international are highly permeable.

_De-schooling/Alternatives to Schools:_ Rather than high status and generous resourcing for schools, the dissatisfaction of a range of key players leads to the dismantling of established school systems, to a greater or lesser degree. A whole variety of new providers and learning consultants come into play, networks of learners are established, and IT is used extensively. Schooling becomes more network- and market-oriented. The boundaries between the local, regional, national and international are not clearly drawn.

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6 The division between primary and secondary is only an approximation and the line need not be drawn to correspond to precise age or structural boundaries that currently mark the transition between younger school-age children and older young people. The “composite” scenarios outlined in this note would put in question precisely these current boundaries.
“Pure” and Composite Scenarios – primary and secondary schooling on similar and divergent paths

“Pure” Scenario 1: “Back to the Future: the Bureaucratic System Dominates”. In this scenario, the powerful bureaucratic systems are features of both primary and secondary schooling, as described above.

“Pure” Scenario 2: “Thorough-going Reform and Schooling Revitalisation”. The re-schooling/dynamic schools futures, with both a social and a strong knowledge management focus, are realised at both the primary and secondary levels.

“Pure” Scenario 3: “School Systems Dismantled”. This is a very radical scenario for it envisages the major dismantling of school systems as described above for children and young people of all ages.

Composite Scenario 1+2: The bureaucratic system is here the norm for education at the primary level up to age 12/13 years, with radical reform towards re-schooling/revitalisation for lower and upper secondary schooling. The lines between secondary and tertiary blur substantially. “Playing Safe to Start followed by Radical Reform” might well capture this composite, perhaps implausible, scenario.

Composite Scenario 1+3: In this scenario, primary education continues to be organised along strongly bureaucratic lines. The degree of dissatisfaction with what is available leads to the wholesale withdrawal of students at the secondary level into a wide variety of “de-schooled” alternatives and the collapse of much existing secondary provision. Less radical but more plausible than “pure” Scenario 3, it might be dubbed the “Consumer Dissatisfaction Model – front-end extension put into reverse”.

Composite Scenario 2+1: Primary schooling leads the way to major re-schooling/revitalisation but secondary schooling fails to follow suit and remains organised along strongly bureaucratic lines. Existing divides between the two become drawn even more starkly. This could be characterised as “School Reform – as far as it goes”.

Composite Scenario 2+3: In this scenario, there is major reform and school renewal for young people up to the age of 12/13, followed by system dismantling thereafter into networks and markets. The “front-end” dominance of organised education is reversed, but the foundation laid by primary schools for lifetimes of learning is strong. It might be described as the “Lifelong Learning Model”.

Composite Scenario 3+1: In this scenario, the organised primary school system largely collapses to be replaced by a variety of “de-schooled” alternatives. There is still a perceived need for schooling and educational certification at the secondary level and the state seeks to ensure conformity through organising this along bureaucratic lines. One way of describing this is as the “Low Trust Scenario”.

Composite Scenario 3+2: A wide variety of home schooling and other network and private options are the norm for primary age children in this scenario but the organised education that follows for young people is reformed and revitalised. This could be described as the “Alternative Schooling Scenario”.

Advantages and uses of the composite scenarios

Whether the composite scenarios are a useful extension of the existing scenarios depends on the task in question. For the task of helping to stimulate thinking beyond current realities, the original six scenarios will often be more than sufficient. This applies particularly for those unfamiliar with the scenarios as the complication that comes with composites may well outweigh any benefits.
A problem with the original six, however, is that the “de-schooling” futures can too easily be dismissed as unrealistic - few people seriously predict that OECD countries are on the point of wholesale dismantling of their school systems from start to finish, top to bottom. The participants at the Poitiers Forum clearly foresaw little prospect of this, as shown when they situated their countries on the hexagon representing the six scenarios (see Document 4) With this perception of implausibility from those closest to the educational world, the value of range offered by six alternative futures is straightaway reduced to four; reflection moves quickly – too quickly - on to the question of how to get on the trajectory that leaves behind “bureaucracy” and embraces “re-schooling”, while avoiding “meltdown” along the way. Such reflection forecloses consideration of more radical, and potentially challenging, options suggested by the “de-schooling” scenarios. Thus, the value of the scenario tool to consider alternatives may be significantly compromised.

The risk that the scenarios simply reinforce existing desires without challenging them is lessened with the composites. The “de-schooling” futures cannot be so readily dismissed when they refer to part rather than all of schooling for the young. The four composite scenarios that include “de-schooling” – the “Consumer Dissatisfaction Model”, “Lifelong Learning Model”, “Low Trust Scenario”, “Alternative Schooling Scenario” – can all be seriously considered either as desirable or as plausible (whether desirable or not), reintroducing the range that is lost when only a “pure” de-schooling future is available. This advantage reinforces the point made at the outset – the dynamics will often be different at primary and secondary levels and those using the scenarios may well wish to have a tool that recognises these differences.
THE BROADER CONTEXT OF EDUCATION – RELATING THE OECD SCHOOLING SCENARIOS TO THE ECONOMY, SOCIETY AND CULTURE

Introduction

The analytical work on the Schooling for Tomorrow Toolbox is now coming round to address scenario indicators. How might we tell with greater precision whether OECD societies are moving towards or away from any of them? This endeavour is resulting in a new wave of scrutiny and conceptualisation of the original formulations, and offers an opportune moment in the Schooling for Tomorrow project for addressing the broader contexts in which schooling takes place that goes beyond the reflections of What Schools for the Future? drafted in 2000-1. This paper sets out a framework for doing so, beginning with the nature of the task, continuing with a framework of the broader variables that have emerged through discussions in the Schooling for Tomorrow project, and concluding by discussing their relationship to the six scenarios.

The Schooling Scenarios and the Broader Environment

We chose deliberately to develop the six scenarios through the CERI project on Schooling for Tomorrow project in terms of education and learning systems, not to be one of defining broad futures for society, culture, the economy and governance through which to determine schooling arrangements that would be consistent with each. This decision was made for at least the following basic reasons:

- The challenge and complexity of defining different coherent scenarios for the whole of society/economy was beyond the range of the CERI project;
- To start with broad futures for the economy, society etc. as the basis for drawing up schooling scenarios would have been essentially deterministic, assuming little specific to education beyond these major sources of influence;
- The value of the CERI scenarios to many of the “users” has been precisely that they are drawn in terms that they, as educational professionals and decision-makers, can relate to.

However justifiable this approach, it has left two related questions unresolved, which questions have been repeatedly asked in the course of the Schooling for Tomorrow project:

i. What might societies and economies look like in which these schooling scenarios would unfold? Imagining what such schooling futures might be like, and whether they are probable or desirable, is difficult when divorced from consideration of the broader environment in which such futures might be located.

7 The ‘possibility space’ futures developed by Riel Miller has taken a different starting point in identifying the single embracing ‘21st Transition’ scenario relating to technology, economy, society, governance and the learning society. The focus then turns on schools and schooling to ask what transitions will be needed to move along the trajectory towards this radically different broad future. This is clearly distinct from constructing different broad future scenarios, and then asking how schools would feature in each.
ii. How do the scenarios relate to trends and driving forces? The original 2001 analysis contained an analysis of the current “big picture” (Chapter 1), but this chapter was intended to inform rather than define the resulting scenarios in precise terms. It sought to introduce the challenges for the future through a particular statement of currently visible issues; it did not identify “neutral” factors in the wider environment of schooling that might evolve in different ways into the future. To relate the scenarios more precisely to trends and driving forces thus requires additional analysis.

The further scenario analysis of which this is part will lead to refinements and additions and, therefore, to some significant reformulations of the original scenarios. The variables that follow represent a first attempt to pin down important dimensions in the broader environment of schooling as raised during reflections in the Schooling for Tomorrow project.

A Framework of Broader Contextual Variables

The headings suggested below, developing the earlier “context” statement and discussions held since the 2001 publication, are not meant to capture exhaustively that environment. How far they will need to be further reduced relates to their intended use. As a means of stimulating discussion in country Toolbox activities, a more inclusive list may be useful. To amplify and distinguish the schooling scenarios may best be achieved through as short a variable set as possible, including only those variables that differentiate the scenarios rather than the “scenario-neutral”.

Demographic, Social, and Economic Variables – the “hard” indicators

The broad context can most easily be grasped in terms of “hard” variables, though certain of these demographic, economic, social and political fields cannot be easily measured, still less cross-nationally.

A. Demography and Diversity
   A.i Youth-dominated or ageing society?
   A.ii Diversity of ethnic and cultural mix – homogeneous or heterogeneous?
   A.iii Population fluidity and international mobility in/out of the society – high or low?

B. The Family - the strength of kinship structures to provide out-of-school education

C. Nature of Residential Communities - (in)equalities in local social capital resources

D. Socio-economic conditions and resources
   D.i High or low inequality of income and wealth
   D.ii High or low poverty

E. Level of national wealth – affluent economies? Impoverished?

F. Comparative international prosperity – diverging or converging?

G. The ubiquity and intensity of technology applications in:
   Gi. Work
   Gii Households and leisure

H. Workforce knowledge and skills levels – few unskilled? Many?
I. Nature and scale of governance
   i  Nature of governance – hierarchical vs. participatory decision-making
   ii  Size of public sector – big or small?
   iii  Scale of government regulation – provincial, national, international

J. Catastrophes - widespread destructive conflicts/epidemics or widespread peace/health?

Culture, Values and Learning Systems – “soft” indicators

The “soft” areas relating to culture, attitudes and values are fundamental to the future of schooling and to the scenarios. They were less fully discussed in the 2001 publication, which drew extensively on OECD evidence. The “soft” areas are, by definition, harder to operationalise quantitatively but this should not mean they are left out of consideration. Certain features of the learning system have been included, features that extend well beyond schooling and hence have not been an integral element in the definition of the scenarios to date.

K. Support for Public Values
   i  Trust in public institutions – high or low?
   ii  Consensus on equity values – weak or strong?

L. Nature of Dominant Culture
   i  Strong or weak demarcation between élite “highbrow” and popular culture?
   ii  Strength of religious beliefs – growing vs. diminishing activity?

M. Internationalism – extent of travel, range of linguistic competence, and awareness of events in other countries?

N. Meritocracy and accreditation of competences – dominant or weak role for educational diplomas in social selection and labour market promotion?

O. Lifelong learning (LL) systems:
   i  Extent of LL participation – universal regular participation in diverse programmes? Highly unequal participation?
   ii  “Front-end” vs. “lifelong” model – extensive, highly distinct formal system vs. seamless initial and continuing arrangements.
## Matching Contextual Indicators to the Scenarios

<table>
<thead>
<tr>
<th>Broader Context Variables</th>
<th>SEEKING STATUS QUO</th>
<th>RE-SCHOOLING</th>
<th>DE-SCHOOLING</th>
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<tbody>
<tr>
<td></td>
<td>Scenario 1a “Bureaucracy”</td>
<td>Scenario 1.b “Meltdown”</td>
<td>Scenario 2.a “Core Social Centres”</td>
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<td>A.i Youth/Ageing Y( #), A(*)</td>
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<td>Aii Population - Homogeneous (#)/ diversel (*)</td>
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<td>Aiii Population fluidity(#) stability (*)</td>
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<tr>
<td>B. Kinship basis for education – Strong (#) A#weak (*)</td>
<td></td>
<td></td>
<td>* *? #?</td>
</tr>
<tr>
<td>C. Local social capital – equal (#)/ unequal (*)</td>
<td></td>
<td></td>
<td>* *</td>
</tr>
<tr>
<td>D.i Personal incomes: high equality (#), inequality (*)</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>D.ii Poverty Low (#), high(*)</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>E. National wealth H(#) L(*)</td>
<td>#??</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>F. Internat’l economic gaps converge (#) diverge(*)</td>
<td></td>
<td>*?#?</td>
<td>*?</td>
</tr>
<tr>
<td>G.i Technology in work: H(#) L(*)</td>
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<td>#</td>
<td>#</td>
</tr>
<tr>
<td>G.ii Technology in homes: H(#) L(*)</td>
<td></td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>H. Workforce skills : H(#) L(*)</td>
<td></td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>I.i Governance: hierarchical (#)/ participatory(*)</td>
<td></td>
<td>* *</td>
<td>*</td>
</tr>
<tr>
<td>I.ii Scale of public sector. H(#) L(*)</td>
<td></td>
<td># #</td>
<td>?</td>
</tr>
<tr>
<td>I.iii Scale of government regulation H(#) L(*)</td>
<td></td>
<td># #</td>
<td>#</td>
</tr>
<tr>
<td>J. Global catastrophes H(#) L(*)</td>
<td></td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>K.i Trust in</td>
<td></td>
<td></td>
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</tbody>
</table>
This is only a first assessment of the “match” between these broader factors and the six scenarios. There will be need to probe further the notion of “match”. It can mean “consistent with”, as a descriptive extension of the schooling scenarios; it can mean “likely to cause” or “likely to result over the even longer term”; it can mean “a pre-condition of”. These can be very different; future iterations of this analysis will seek to reflect these differences. The use of the interrogation mark “?” indicates possibly contradictory influences, some of which will be discussed below. The neutral symbols “#” and “*” have been preferred over + and - . This reduces implied value judgements and helps to avoid the ambiguity over whether + would imply more and – less of the variable itself or the strength of its presence in each scenario. The blank cell suggests that there is no clear relationship between the scenario and the variable, which in this case is “scenario-neutral”.

This presentation permits the reading down each column to suggest what the broad social, economic and cultural context for each scenario might be like. This is necessarily suggestive rather than precise. It may be that in certain operational “toolbox” activities it will be useful for participants to do their own assessments of likely associations between these (or a set of these) variables and the scenarios.

**The Contextual Environments of the Schooling Scenarios**

1. **ATTEMPTING TO MAINTAIN THE STATUS QUO**  
Scenario 1.a: "Bureaucratic School Systems Continue"

Summing the first column, there are more empty cells than with the other scenarios. This means that the bureaucratic model may well be consistent with quite diverse contextual environments. In Darwinian
terms, it is very robust! There are consequently relatively few strongly defining aspects of this environment: in the list of 24 variables and sub-variables the following stand out - styles of governance that rely on hierarchical forms of decision-making; “heavy” government and regulation; the recognition of competence and social worth that remains heavily dominated by the visible diplomas of education systems; and a very clear demarcation between the initial “front-end” education system and the continuing formal and non-formal learning arrangements. A number of other features of this broader environment might be: inequality in incomes and communities; the strong influence of an elite culture; and the remaining power of national identity and sovereignty.

One might also posit that this scenario is consistent with a relatively positive societal trust of public institutions and a degree of consensus on equity. For both reasons, the powerful state system is preferred over the risks inherent in diversity/autonomy or the unstructured play of market forces.

As with the other scenarios, it is difficult to “call” the match with a youthful or ageing society. High fertility and numbers of young people may well reinforce bureaucratic solutions; similarly, an ageing population may wish to avoid radical innovation and so fall back on the tried and tested.

Scenario 1.b “Teacher exodus – The ‘meltdown scenario!’”

The main reason so many “?s” appear in this scenario is that the ambiguity in the notion of “match” that is raised more starkly here than with the other scenarios – does it refer to the conditions likely to foster “meltdown” or does it describe societies once the “meltdown” has occurred? Certain variables have been scored as potentially fostering the conditions, such as high population fluidity and consequent diversity that might make teaching more difficult and hence unattractive. Others more reflect its potential effects – such as highly unequal local social capital or low participation in lifelong learning after the school system has collapsed. High poverty might underpin perceptions of the unattractiveness of teaching in certain geo-social areas, but even more marked gaps might be expected to emerge if “meltdown” gathered pace but unevenly.

This ambiguity reflects the partial nature of the scenario that has focused particularly on one, albeit critical, factor (teachers). It also reflects its instability, for such collapse would likely lead to further change - whether towards more bureaucracy, more re-schooling or more de-schooling. This creates difficulty in relating the scenario to such features as trust in public institutions or equity, though it is assumed that at the time meltdown occurs it will cause such trust to evaporate.

Would meltdown occur in affluent, high-skill or in poor, unequal societies? Probably it would be the former, as teachers tend to enjoy high status in the latter and teaching is an attractive source of employment. Yet, if meltdown started in rich societies, it could easily lead to an exodus of trained teachers from poorer countries in a booming international market, language barriers permitting. It could emerge in relatively unequal societies, as they become transformed into the more wealthy and high-skilled and so have rapidly growing alternative employment for graduates but relatively limited state resources to respond to the exodus. There is no association marked above with global catastrophes, such as generalised wartime destruction or the further drastic spread of disease and shortage: educational meltdown might reflect general social breakdown but it might also be a feature of societies experiencing calm and affluence.

As with the other scenarios, the demographic ageing factor is difficult to “call”. A shrinking number of young people makes for a potentially lower demand for teachers, in quantitative terms at least, and hence reduces the likelihood of chronic shortages. An ageing society, on the other hand, brings a higher exodus through retirement, with fewer young people coming into teaching in the first place.
2. RE-SCHOOLING:

Scenario 2.a "Schools as Core Social Centres"

The defining features of this scenario have been identified above as ones of stability, trust in public institutions and belief in equity, and high levels of participation in learning by all in society at all ages with relatively fluid boundaries between schools and other forms of education and learning. Poverty is low, and populations relatively diverse. In contrast with the hierarchical decision-making of the bureaucratic model, governance is participatory. This scenario does not assume small government, and there may well be a flourishing public sector and possibly extensive regulation as well.

Societies experiencing this scenario are affluent, but this may depend on widening gaps with other countries. Without the affluence, there may not be sufficient resources to devote to schooling in this form. There is no obvious relationship with level of religious activity as this model is compatible with both religious and secular societies. Such is its dependence on harmony and shared beliefs in the value of education, however, that it is not likely to emerge in religious societies defined by conflict, nor in secular societies defined by highly privatised views of merit and advancement.

For schools to enjoy such a pivotal role may assume the erosion of alternatives such as the family or community to provide the basis for education; hence variables B and C can both be counted as “weak”. Yet, for the scenario to be a coherent possibility on a wide scale, not just in pockets here and there enjoying community dynamism, probably depends on schools as a whole being able to rely on ample family and community support; hence it can also be counted as “strong”. (These contradictions have been indicated with “?s”.) Addressing this contradiction assumes a powerful state role, backed by a highly supportive public; whether this can be achieved without engendering bureaucratic government is another question.

Scenario 2.b "Schools as Focused Learning Organisations"

The differences between this scenario and the previous one are more of emphasis than of substance. The school is open to, but not such an integral element of, the community as in 2.a, and so it is less dependent on strong family and community ties. This scenario too assumes an affluent high-skill society, and schools reflect the nature of organisations in general as learning organisations. There would be a great deal of public activity and trust in these institutions, with a strong sense of equity. Lifelong learning is fostered, while competence recognition and accreditation may or may not be dominated by the education system. While this scenario assumes a measure of social stability, it may be somewhat less disrupted by the event of global catastrophe.

Whether an ageing society would promote or discourage this scenario is difficult to predict: smaller cohorts of young people would ease the quantitative strains on resources and permit more small-group teaching and investment in state-of-the-art facilities; larger cohorts of older people may decide on priorities other than education.
3. **DE-SCHOOLING:**

**Scenario 3.a  "Learning Networks and the Network Society"**

In its disestablishment of school systems into networking, this is the most radical of the scenarios. It shares with the “social centre” scenario, 2.a, that a high number of the variables are associated with it; like that scenario therefore it is not “robust” in the face of alternative social and economic futures. The widespread replacement of schools by networks based on various family, community and religious interests assumes that these interests are strong enough, in breadth and depth, to form the basis of learning networks on a universal basis. As with 2.a, this scenario is more likely to be associated with conditions of stability and the absence of catastrophe – although a less demanding version of this scenario, with the powerful presence of informal networks but not on a universal basis, might precisely be best fitted to situation of global conflict and destruction. It assumes small government and the rejection of organised public institutions.

It is difficult to envisage such a disaggregated model being workable in conditions other than affluence, with low poverty, in high skill and technology-intensive societies. The extent of networking across boundaries suggests that international inequalities might be diminishing and internationalism growing. With its dependence on affluence and basic equality, however, it may be difficult to achieve except in a small number of highly privileged societies.

This is the scenario of the six where the boundaries between initial education and continuing learning would be least, given that all learning for young and old takes places through various non-formal and informal arrangements. It is unlikely to be compatible with a strong elite “highbrow” culture, but would be tolerant of a wide range of cultural and philosophical approaches. The education system as such will have lost its pre-eminent role in social selection and the recognition of merit/competence.

**Scenario 3.b "Extending the Market Model"**

As a “de-schooling” scenario, this shares many common features with the previous one. It assumes that families and communities are strong enough to be compatible with large-scale deinstitutionalisation of learning, although is less demanding in this than 3.a. Technology would be ubiquitous, and education systems will have lost their dominance. What are the main differences with the “network” society? These most concern the nature of governance. In the network society, large-scale government will have been transformed into “small-is-beautiful”. Whereas the scale of the public sector will be much diminished in the market model, and trust in public institutions is low, this does not mean that government itself is small nor that regulation has disappeared. Indeed, a high degree of regulation – setting terms of entry into the “learning market” and quality assurance – may the conditions on which a major extension of the market model is possible. If that is the case, it would be more the nature of governance than the scale of government that will be different from the bureaucratic and “re-schooling” futures.

The most controversial aspect of markets solutions in education is their potential inequality, as ability to purchase becomes paramount and with the state withdraws from a direct role in provision and decision-making. It is thus natural to associate this model with high levels of income inequality and poverty. The contrary argument, however, is that thorough-going market solutions will only be realistic in conditions of affluence and general equality; otherwise the glaring lack suffered by large sections of the population will call a stronger government role into existence. Hence it may be that this model should be associated with high levels of equality but a weakly developed shared public sense of equity.
Identifying the most “scenario-sensitive” variables

The final row in the above table includes those variables that were counted as particularly associated with each scenario, whether high or low (indicated by ## or **, and without a ?).

|---|---|---|---|---|---|---|---|

- B. The Family - the strength of kinship structures to provide out-of-school education
- C. Nature of Residential Communities - (in)equalities in local social capital resources
- D.ii High or low poverty
- E. Level of national wealth – affluent economies? Impoverished?
- G. Ubiquity and intensity of technology applications in work
- G.ii Ubiquity and intensity of technology applications in households and leisure
- H. Workforce knowledge and skills levels – few unskilled? Many?
- Ii Nature of governance – hierarchical vs. participatory decision-making
- Iii Size of public sector – big or small?
- Iiii Scale of government regulation – provincial, national, international
- J. Catastrophes - widespread destructive conflicts/epidemics or widespread peace/health?
- K.i Trust in public institutions – high or low?
- K.ii Consensus on equity values – weak or strong?
- L.i Strong or weak demarcation between élite “highbrow” and popular culture?
- N. Meritocracy and accreditation of competences – dominant or weak role for educational diplomas in social selection and labour market promotion?
- O.i Extent of participation in LL – universal regular participation in diverse programmes? Highly unequal participation?
- O.ii “Front-end” vs. “lifelong” model – extensive, highly distinct formal system vs. seamless initial and continuing arrangements.

In terms of their capacity to distinguish the different scenarios, the key variables appear to be those concerned with affluence and poverty, the ubiquity of technology, the nature of governance, global catastrophes, levels of trust in public institutions and the value of equity, the system of skill recognition and accreditation, and the spread of lifelong learning in general. The distinctiveness of each scenario in terms of the differences in strongly associated variables as revealed in the final row of the above table.
This paper presents the six scenarios in brief, describing their main features and some insights about them gathered from project discussions, and describes possible broader social, economic and cultural environment that might be consistent with each scenario. Particular attention is then given to what teachers might look like – their profile, career patterns and the nature of their work. The six scenarios are grouped into three clusters, which have titles that have also evolved over the lifetime of the project. This paper has adopted the terminology of “diverse, dynamic schools” and “alternatives to schools” (as opposed to “re-schooling” and “de-schooling”), relating these to the nature of systems. The “meltdown” scenario has also been moved from earlier classifications which had it as an example of “attempting to maintain the status quo” and is now an example of school systems disbanding or, in this case, disintegrating. The re-ordering of the scenarios within the second and third scenario reflects the analysis contained in the paper on the hexagon (Document 4) based on the strength of formal institutionalised schooling in each scenario.

1. Schools as Uniform Organisations in Heavily Bureaucratic Systems

The "Bureaucratic School Systems Continue" Scenario

Despite the fact that many of us committed to educational reform hope that the future will be different from the present, when asked to assess likely futures in terms of different scenarios many admit that it might turn out to be depressingly similar to things as we know them. That conclusion emerges from discussions held during the OECD Schooling for Tomorrow project: many in education from different countries believe that our school systems are still stuck in the past and moving only slowly away from it. This scenario assumes the continuation of powerfully bureaucratic systems, with strong pressures towards uniformity. There is resistance to radical change, despite public and media discourse often dominated by criticisms, for systems have and maintain their own powerful equilibria. The direction of decision-making is hierarchical, and while there is some influence of “outsiders”, the system is organised primarily to its own internal logic within national or regional contexts.

What of the broader environment? It is plausible to suggest that the bureaucratic model is consistent with a world which continues to rely on hierarchical forms of decision-making and the maintenance of national [or provincial] sovereignty over education as compared with the rise of either more international or more local forms of decision-making. Social selection and recognition of competence would continue to be heavily dominated by the visible diplomas of formal education systems, with the clear demarcation maintained between the initial “front-end” system and continuing education and training. Such a scenario might also depend on the underpinning of a strong elite culture. Such a characterisation will not appeal to the reformer or radical, though it may to the conservative. On the more positive side, this scenario is consistent with a relatively positive societal trust in public institutions and a degree of consensus on equity: for both reasons, the powerful state system is preferred over what are perceived to be the risks inherent in diversity/autonomy or the unfettered play of market forces.

What might teachers look like in this scenario? Consistent with the enclosed nature of schools and systems described above, there would likely be the continuation of a distinct teacher corps, sometimes with civil service status, and relatively strong unions and associations. These are features intended to protect and promote teacher interests, and indeed teachers’ fears about change would be among the factors reinforcing
this scenario. Yet, professional status and rewards are actually problematic in many countries, with many teachers perceiving a loss of status even when this is not supported by the evidence of sociological measurement. There is ambiguity between the pursuit of high-level professional status, on the one hand, and forms of organisation and action that promote the image of teacher as “worker”, on the other. There is similar ambiguity in the way that teacher work is organised: the continued predominance of the single, often isolated, teacher as the key educational agent can be regarded as both the root of their individual autonomy and as preventing the emergence of new forms of collective organisation of teaching and learning. Addressing this bureaucratic, fragmented organisation would be a feature of the two scenarios outlined in the next section.

2. Diverse, Dynamic Schools after Fundamental System Reform

These scenarios express the futures that inform many of the reform agendas in education. To some, they are utopias; to others, they are essential to the very survival of public school systems. Two variant scenarios are outlined below; what they share is the continued strong role of schools as linchpin institutions for society and education. They would enjoy the recognition and support consonant with such a pivotal role and the same would apply to the professionals responsible for teaching and learning. The uniformity of the bureaucratic models would be replaced by much greater organisational diversity. But for this not to bring with it yawning gaps in opportunities and results, schools in these scenarios would need to enjoy a very real equality – of status, conditions and prospects. Flourishing partnerships with other stakeholders and organisations would be typical, and the boundaries between the local, regional, national and international are highly permeable. It is perhaps not surprising that the various soundings among the educational leaders taking part in OECD/CERI events show these scenarios to be regarded as much the most desirable among these six alternatives.

The "Schools as Focused Learning Organisations" Scenario

While the features of this scenario, imbued with the language of reform and knowledge management, are relatively familiar in terms of the expressed aims of many current policies, they are nevertheless highly demanding. They are demanding especially in terms of how widespread would be the change in educational practice, the extent of diversity, and the tolerance of innovation, for this scenario to come about. Schools would be revitalised around a strong knowledge agenda (compared with the strong social emphasis of the next scenario), in a culture of high quality, experimentation, diversity, and innovation. Despite this being the rhetoric of many current reforms, such features might well sit uneasily with the pressures also evident in many systems for greater accountability, often blamed for stifling innovation and seen as more in keeping with the previous bureaucratic scenario. In the “Schools as Focused Learning Organisations” scenario, the large majority of schools would justify this label. They would enjoy substantial investments, especially in disadvantaged communities, to develop flexible, state-of-the-art facilities and ICT would be used extensively, both as a medium of teaching and learning and as a tool for institutional management. There would be flourishing new forms of evaluation and competence assessment closely reflecting the aptitudes and achievements of all learners in schools.

This scenario may not only be idealistic as regards the state of education but it is also highly demanding of the broader social and economic environment that would allow it to emerge. It could well assume an affluent high-skill society, whereby schools specifically reflect the nature of enterprises in general as learning organisations. There would be a great deal of public activity and trust in these institutions, with a strong sense of equity. Lifelong learning is widely accepted as the norm. Whether an ageing society would promote or discourage this scenario is difficult to predict: smaller cohorts of young people would ease the quantitative strains on resources and permit more small-group teaching and investment in state-of-the-art facilities; larger cohorts of older people may decide on priorities other than education. Similarly, it is not
obvious what social mechanisms would bring it about. On the one hand, it may well assume a large measure of social stability, providing the environment of high trust and support; on the other, it might need disruptive events to break the mould of the traditional school systems.

What kind of teaching profession would be consistent with this scenario? To be sustained, teachers would in general need to be highly motivated. Conditions would be highly favourable, including with small learning groups and a strong emphasis on R&D, continuous professional development, group activities, and networking. ICT would be used extensively alongside other learning media, traditional and new. Teaching would need to be a high status profession with generous staffing levels. But it would also call for a substantial degree of flexibility. The bureaucratic model outlined above is consistent with little inflows in either direction, especially not inflows mid-career from other sectors. These dynamic school scenarios, on the other hand, assume quite substantial flows, around a possible core of teachers that would guarantee continuity and high levels of professional expertise to manage the other learning resources and professionals that would be at the disposal of schools. So, along with diversity of organisational forms might well be diversity of teacher career patterns and flexibility regarding movements in and out of the profession.

The "Schools as Core Social Centres" Scenario

This scenario is even more demanding of change than the previous one. In it, schools enjoy widespread recognition as the most effective bulwark against fragmentation in society and the family. As the social capital and cohesion traditionally offered through the family, work, residential community, and the church come under increasing strain, education moves still more to the fore as the primary source of social integration. Schools would be strongly defined by collective and community tasks, with correspondingly extensive shared responsibilities between schools and other community bodies and sources of expertise, including tertiary education. What the places called “schools” would look like would be harder to define as they would take a wide range of organisational forms in a wide range of settings. They would place a strong emphasis on non-formal and experiential learning. Education would enjoy generous levels of financial support to ensure quality learning environments in all communities, rich and poor. ICT would be used extensively, especially for communication and networking – between student and student, student and teacher, schools and parents/communities, community and community, country and country. Schools would be strong but a great deal more would be taking place within them than the formal education of the young; similarly many more would be involved in teaching and learning than the designated professionals called “teachers” and the young people called “students”. Why this scenario is so demanding is not because of the difficulty of creating individual community schools (of which many examples exist), but because it would be the norm for schooling everywhere.

The lines of demarcation between schooling and its broader environment would be substantially blurred, and this scenario might well depend on stability, trust in public institutions, and belief in equity. There would be high levels of participation in learning by all in society at all ages with relatively fluid boundaries between schools and other forms of education and learning. In contrast with the hierarchical decision-making of the bureaucratic model, governance is participatory but the scenario does not assume “small government”, and indeed may depend on a flourishing public sector and possibly extensive regulation as well. While the scenario is neutral between religious and secular societies, its dependence on harmony and shared belief in education’s value makes it unlikely to emerge in situations of religious conflict or in secular societies defined by highly privatised views of merit and advancement. Above, it was suggested that education might come to enjoy such a pivotal role in the wake of the fragmentation of family and community life. By the same token, however, such conditions might serve to undermine it as such wide-open school doors and low school walls may well only be possible when there is ample family and community support. A problem with this scenario might thus be contradictory assumptions about social capital; addressing this contradiction may call for a very powerful role for the state backed by a highly
supportive public. Whether that is can be achieved without taking us back to the first scenario – the dominance of the bureaucratic model - is a moot question.

What would the teaching force look like in the "school as social centre" scenario? It would probably depend on a core of high-status teaching professionals in relatively stable teams of committed teachers. These would not necessarily be in lifetime careers and there may well be more varied contractual arrangements and conditions of employment, albeit with good rewards for all. Around this core there would be many other professionals, community players, parents, and organisations. Leadership would thus be complex in this scenario. The school would be the centre for a dynamic interplay of community groups and players, with open doors and low walls. Integrating the formal learning programmes with a wide range of other activities would present considerable challenges. At the same time, leadership would also be more widely distributed and collective, and less would be expected of hard-pressed individuals.

3. Extensive Alternatives to Schools Develop as Systems Disband or Disintegrate

This cluster of possible futures is very different from the previous ones: in these scenarios formal systems, whether by design or necessity, disband or disintegrate. Naturally, for many who are engaged in education these futures – to a greater or lesser degree depending on the scenario in question - are undesirable. But not all observers find them so unpalatable. Some commentators have long been heralding the demise of organised education, expressed most memorably in the title of 1970s book: “De-schooling Society” by Ivan Illich. To date, the putatively outmoded institution of school is proving far more resilient than those commentators have supposed but it is always possible that this is about to change. The driving factor behind “de-schooling” might be the dissatisfaction of a range of key players (especially parents) with what schools offer. Other driving factors might well be the general overhaul of public sector policies, the “privatisation” of credentials, or the burgeoning use of educational ICT applications. A further key factor defines the third of the three scenarios presented here: a crisis of teacher supply that ultimately leads to school system “meltdown”.

The "Extending the Market Model" Scenario

This is the future that, for ideological reasons, many in education find the least palatable. In this scenario, market features are very significantly extended as governments encourage diversification and withdraw from much of their direct involvement in schooling, pushed by dissatisfaction of "strategic consumers". Many new providers move into the “learning market” encouraged by radical reforms of funding structures, incentives and regulation but it might be expected that some schools as we know them, both public and private, manage to survive. A key role in this future is played by choice - of those buying educational services and of those, such as employers, giving market value to different learning routes. Such an enhanced play of consumer choice will often be made in terms of the cognitive outcomes associated with different providers but it may also focus strongly on their role in educating certain values. Indicators and accreditation arrangements come to play a critical role as the “currency” of the markets. Innovation abounds as do painful changes and inequalities, especially during the transition.

As a “de-schooling” scenario where education systems will have lost their dominance, this scenario shares some common features with the following “network” model as regards the wider society and economy. Technology, for instance, would be ubiquitous as the medium through which much of the market operates. Both assume that a generalised disenchantment with public provision will have set in. The nature of governance need not be the same, however. In the network society, large-scale government will have been transformed into “small-is-beautiful”. But whereas the scale of the public sector and trust in public institutions will be much diminished in the market scenario, this does not mean that government itself is necessarily small: regulation – setting terms of entry into the “learning market” and quality assurance –
may indeed be the condition for the market model to expand. The most controversial aspect of market solutions in education, of course, is their potential inequality, as the ability to purchase becomes paramount and as the state withdraws from provision and decision-making. It is thus natural to associate this model with high levels of income inequality and poverty. The contrary argument, however, is that thorough-going market solutions will only be realistic in conditions of affluence and general equality; otherwise the glaring lack suffered by large sections of the population will call a stronger government role back into existence. Hence it may be that this model should be associated with high levels of equality but only a weakly-developed shared sense of equity.

The teaching force would look very different under this scenario compared with the previous ones. There would be a less distinct teaching force as a wide range of new professionals with diverse profiles – public, private; full-time, part-time - are pulled in to service the market. Given the play of market forces, flourishing training arrangements and accreditation for these new professionals would spring up, bringing a great deal of innovation but also clear risks relating to teacher quality and to marked variations until the new markets become more firmly embedded. There are also inequality risks stemming from the new “teaching professionals” being in ready supply in areas of residential desirability &/or learning market opportunity but otherwise in marked shortage. The diversity of teacher careers would match the diversity of the market itself, and indeed there would no longer be a clear notion of a teacher career at all. It might be expected that the international teacher market – already growing in the English-speaking world at least in response to teacher shortages – would become still more highly developed.

The “Learning Networks and the Network Society” Scenario

In its disestablishment of school systems into networking arrangements, this is the most radical of the scenarios. The combination of dissatisfaction with schools and new media for learning leads to schools being abandoned. The exploitation of powerful, inexpensive ICT is critical but by no means the only defining feature of this scenario: learner networks form an important part of the broader “network society”, based on diverse parental, cultural, religious and community interests. Some of these would be very local in character, others would be characterised by distance and cross-border networking. Small group, home schooling and individualised arrangements would become widespread, as is already visible in some countries (notably the United States). There would, of course, be a very substantial reduction in existing government involvement in education and public accountability. While this scenario may turn out to be no more than a more radical and anarchic version of the market scenario the language and rhetoric associated with it are nevertheless quite distinct - in markets, the watchword is “competition”, in the network society it is “co-operation”.

The widespread replacement of schools by networks based on various family, community and religious interests assumes that these interests are strong enough, in breadth and depth, to form the basis of learning networks on a universal basis. As with the “social centre” scenario, this future as a matter of public choice may well assume social stability and the absence of catastrophe; counter to this, the powerful presence of local informal networks might arguably be best fitted to the chaos of global conflict and destruction. The network scenario assumes small government and the rejection of organised public institutions. As a universal model, it is most likely dependent on conditions of affluence, with low poverty in high skill and technology-intensive societies - a small number of highly privileged societies – but features of networking and informal learning are also well-suited to poor societies. This scenario would have the least visible boundaries between initial education and continuing learning, given that all learning for young and old takes places through various non-formal arrangements. It is unlikely to be compatible with a strong elite “highbrow” culture, but would be tolerant of a wide range of cultural and philosophical approaches. By definition, the education system as such will have lost its pre-eminent role in social selection and the recognition of merit/competence.
As regards teachers specifically, with learning for the young no longer conferred in particular places called “school” so does it no longer rely on particular professionals called “teachers”. The demarcations between teacher and student, parent and teacher, education and community, all tend to blur, perhaps breaking down entirely. Learning networks bring different clusters together according to perceived needs. To service these networks, new learning professionals emerge. Some of these would be employed by the major media and ICT companies were they to become active in the learning networks, operating via surgeries, various forms of “help-line”, and home visits. Education would become far less formal and organised, with the demise of the classroom, and would be assured through numerous different routes in different settings with a much greater role played by community-based and experiential learning.

**The "Teacher exodus and system meltdown" scenario**

The final scenario is all about teachers. In this, a major crisis of teacher shortages develops which is highly resistant to conventional policy responses. It is triggered by a rapidly ageing profession, and exacerbated by low teacher morale and buoyant opportunities in more attractive graduate jobs. The large size of the teaching force implies long lead times before the scale of the crisis is recognised and again before policy measures might have chance to show tangible results on teacher numbers; during these lags conditions worsen. Wide disparities in the depth of the crisis might be expected by socio-geographic, as well as subject discipline, area. As a scenario constructed around one main parameter, it has always been open to the criticism of being the most partial and least coherent of the scenarios. It is certainly fair to say that it would unlikely define a stable future but might be the trigger, as suggested below, to further change rather than a stable end-point. But it has also proved to be one of the most effective of the scenarios for galvanising debate in places facing genuine problems of teacher shortage. It has proved to be a valuable tool, therefore, even with its partial analytical basis.

Would meltdown occur in affluent, high-skill or in poor, unequal societies? Probably it would be the former, as teachers tend to enjoy high status in the latter and teaching is an attractive source of employment. Yet, if meltdown started in rich societies, it could easily lead to an exodus of trained teachers from poorer countries in a booming international market, language barriers permitting. It could emerge in relatively unequal societies, as they become transformed into the more wealthy and high-skilled and so have rapidly growing alternative employment for graduates but relatively limited state resources to respond to the exodus. Similarly, it is difficult to suggest whether this kind of “meltdown” would be more or less likely to be associated with global catastrophes, such as generalised wartime destruction or the drastic spread of disease and want: educational meltdown might reflect general social breakdown but it might also be a feature of societies experiencing calm and affluence. In short, it is difficult to describe clear social and economic environments that might foster this scenario.

As regards teachers themselves, at the first signs of a major crisis, it is likely that in general rewards would increase in the drive to tackle shortages. It is imaginable that the distinctiveness of the teacher corps and role of unions/associations would increase in proportion to their relative scarcity but it is also plausible that established arrangements and career structures would erode in the face of "meltdown". As the crisis gathers pace, however, the conditions of teaching would worsen as numbers fall, with problems acute in the worst affected areas. Strenuous efforts to bring trained, especially retired, teachers back into schools might bear only disappointing results, particularly in the crisis areas. As the teacher exodus takes hold and the scale of the “meltdown” crisis is recognised, potentially very different outcomes could be part of this scenario. At one extreme, a vicious circle of retrenchment, conflict, and decline sets in, exacerbating the inequalities and problems further. At the other, the teacher crisis provides the spur to radical innovation and change, with different stakeholders joining forces behind far-reaching emergency strategies. Other more evolutionary responses could lie between the two extremes. Which of these lines of response is adopted would clearly make a substantial difference to the position of teachers.