Chapter 3
Scenarios, international comparisons, and key variables for educational scenario analysis

by
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Jean-Michel Saussois presents basic features of scenarios as ideal types, looking at both the evolution of scenarios and their applications in the business world and their relevance for educational decision-making. He suggests that scenarios involve demanding assumptions which should be understood, especially when the exercise is one of international comparison. The chapter presents a two-dimensional framework within which to analyse the trends and futures for schooling: the shifting values about where schools belong in the social fabric and the delivery or supply function of schooling. These two dimensions are combined to give four new scenarios – conservation, survival, transformation, and market – with discussion of the forces that move educational systems from one to another.

Canonic scenarios

The scenario methodology comes from the private sector, mainly developed by large firms dissatisfied with available long-range planning methods. They sought a softer, less quantitative approach incorporating a greater number of assumptions and going so far as to include the insights derived from following hunches. The firms wanted to consider the long run

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as descriptions of possible futures and also as desirable futures i.e. those shaped so as to further their own advantage.

A basic scenario approach follows specific steps which can be summed up as follows:

- First: delimitation of the “object” to be observed.
- Second step: identification of key driving variables, both external and internal.
- Third step: matching these variables in a retro-analysis to identify “heavy tendencies” and an analysis of the actual situation to sort out weak signals of change and key actors.
- The fourth step – define strategies of the main actors.
- The fifth step is to propose scenarios…
- …and from these scenarios the final step is to propose action plans.

Among the first large firms to have developed such a scenario methodology was the worldwide oil company Shell during the 1960s, well before the 1974 oil crisis. Shell was one of the first companies to realise the importance of the geo-political dimension; it wanted to shape its environment instead of simply coping with it. In the 1980s, Shell continued using the scenario methodology; it set up, for example, a socio-political forecast study for Europe which identified two scenarios. One was “Europe as a Medieval Castle” resisting liberalism, the other was “Europe as a Common Market” with a governance structure loosely coupled across national levels. The study identified a set of key assumptions which were probabilised in order to identify strategies for the way the corporation could reorganise its European operations. Scenario 2, for example, got right into the question of what it is meaningful to do at the national level. So, the scenario methodology facilitates anticipation and is a tool of governance designed for taking action.

This methodology is not easy to put into practice. The first step of delimitating the object to be observed is often the most difficult – what is the appropriate focus? The corporate level? The firm? The industrial sector? Once the appropriate level is defined, others difficulties arise. The environment such as that for oil which Shell considered can be characterised in terms of the “nested box” or “Russian puppets” problem i.e. inside each “box” there is a smaller one. Each one is partly independent of, but constrained by, the shape of those within and outside it and the choice to focus on one specific box (or level) is not a neutral matter.
Establishing key driving forces – what will shape an industry – is not an easy task either. Concerning oil, driving forces can be tax laws, highway expansion, the internal combustion engine, taxes on pollution and so forth. In pharmaceuticals, the big threat for the American industry thirty years ago was the manufacture of drugs under generic names by small competitors (which arose in France only five years or so ago). Then the question raised was: how to react to this threat? Is the American pharmaceutical industry prepared for it? In sum, large firms have used this methodology as a tool for evaluating the future in terms such as the threats which can damage or destroy their interests.

Scenarios as ideal types and their use in education

While there are important differences between the situation facing education policy-making and decision-making in large firms, certain key issues and problems to be addressed are the same. For example, the education system can equally be conceptualised as a nested box: the level being addressed is highly relevant to any discussion and analysis, whether it is the school, networks of schools, the school district, the regional education department, the national level, etc. Which one should be the focus is not obvious, and resolving this question is not helped by the confusing term “system”. It is also necessary to be clear about whether the focus is on the primary or the secondary school levels because the stakeholders and players involved are not the same in each case.

The OECD “Schooling for Tomorrow” scenarios can be considered as ideal types in the Weberian sense following the sociologist Max Weber (1904, 1946, 1947). He applied this approach to the analysis of bureaucracy and identified eight fundamental categories which characterise a configuration or a set of intertwined dimensions of rational legal authority: 1) a continuous organisation of official functions bound by rules; 2) a specified sphere of competence which involves a unit exercising authority as an administrative organ; 3) the organisation of offices follows the principle of hierarchy whereby each lower level is under the control and supervision of the higher one, with a right of appeal and statement of grievance from the lower to the higher; 4) the rules which regulate the conduct of an office may be technical rules and norms – it is thus normally true that only those who have demonstrated an adequate technical training are qualified to be a member of the administration staff and eligible for appointment to an official position; 5) it is a matter of principle that the members of the administration staff should be completely separated from ownership of the means of production; 6) there is an absence of appropriation of their official positions by the incumbents; 7) administrative acts, decisions, and rules are
formulated in writing even in cases where oral discussion is the rule; 8) legal authority can be exercised in a wide variety of forms.

Weber’s definition of pure bureaucracy is an attempt to capture all the forms of organisations relying on rationality rather than tradition, and includes dimensions by which a large private firm or a ministry might be characterised. For instance, such organisations may well be characterised by reliance on expertise (point 2), and also they might well recognise that rules and regulations bind managers as well as employees (point 4). So bureaucracy in this sense it can be found to some extent in the private sector, especially regarding dimensions 2, 4 and 7. “Bureaucracy” does not mean “a public system”.

The pure form is never met in reality. For one thing, members of organisations continually hide behind the rules while favouring their own interests; the condition that they should operate in the organisation’s interests is normally only partially met. For another, the ideal form falls short when rapid changes of the organisational tasks are required. But the purity of the design serves to reveal the nature of the bureaucratic reality through departure from the ideal form – imprecise rules often not observed, areas of autonomy built up in order to resist control procedures, external supports to balance internal pressures. Alternative organisational forms are responses to the limitations of bureaucracies, such as lack of adaptability and the stifling of individual initiatives and spontaneity but they do not usually fundamentally challenge the important dimensions of bureaucracy to do with hierarchy, standardisation and control.

The strength of the scenario approach lies in establishing distance between an intellectual fiction and complex realities as a means to acquire a better understanding of commonalities and differences between “real” organisations (firms, schools, hospitals, churches, and non-profit organisations) and an intellectual design. As regards bureaucracy, this methodology provides useful insights on the different forms it may take and the degree to which it is present. The OECD “Schooling for Tomorrow” scenarios can be understood as a kind of ideal-type methodology which seeks to describe in words what could happen to the education system under different proposals on specific dimensions – using the if ... then rationale. The scenarios are social constructions devised by individuals able to design from scratch several models built on the same dimensions. They are the product of an ex post rationalisation and their fruitfulness lies in their capacity to provoke.

Different questions can be asked of the scenarios. They may be a tool to discuss which futures are preferred or disliked, or are likely or unlikely (Hutmacher, 2001). Such a tool may help to pin down the direction of
observable trends towards or away from the different scenarios (as dealt with in workshops in the Poitiers 2003 OECD “Schooling for Tomorrow” Forum). However, answers to such questions as “how near to or far away from each scenario is your school system?” or “with which scenario are current educational policies in your system most and least consistent?” depend on the status of those within the education structure giving the answers. Any particular perception is a point of view which comes from a particular location in the structure: the views of teaching staff, for example, are not the same as those of the managers. Hence, the varying perception of possible future evolutions may well mean that this use of scenarios is more revealing of patterns of viewpoints than of a general consensus regarding the future. The variety of meaning comes also from the experience, as well as the situation, of those being asked to react to the different models. Piaget long ago labelled this approach constructivist. “School” as a word only makes sense through experience and acquires a value because it is collectively shared, rather than in a more objective sense. Different stakeholders develop different, perhaps conflicting, interpretations filtered through their experiences of schooling, and their own values as former students or as parents observing their children.

The richness of the scenario approach is in its capacity to reveal changing situations and to make explicit hidden variables or implicit assumptions. Take the OECD’s “re-schooling” scenarios. They embody an implicit view of organisational forms which builds on the sociological thesis about emerging new mechanisms for co-ordinating and controlling different sectors of the economy. According to this thesis, organisational structures that are large and centralised and have relied on control and communications channels are vanishing because they are ineffective. Such vertically-integrated structures are implicitly the “bureaucratic scenario”, another of the OECD set. In line with the thesis, they are dinosaurs: ill-adapted to a changing environment and a growing variety of unstable demands, including those of a knowledge-based economy.

Evidence is lacking with which to evaluate the performance of the emergent new forms of organisation underpinning “re-schooling”. The existence of routines should not be confused with “red tape” – organisational theories have shown that routines can actually generate innovations. One needs to distinguish two types of innovation: one devoted to exploring new frontiers, the other about continuous efforts for doing, exploiting or renewing existing procedures. Within an organisation, these two dimensions of exploration and exploitation are not given equal weight, with exploitation typically more important than exploration.
The methodological challenge of international comparisons

There are also methodological difficulties with establishing fruitful international comparisons of the scenarios. Even if comparisons are widely developed by international organisations (such as through the PISA surveys of student achievement), they actually make demanding theoretical and methodological assumptions giving rise to challenging questions. What is the specific objective, explicit and implicit, of the international comparison? How to deal with the societal dimension? Can there be a “culture-free” approach?

Different approaches to international comparisons are:

- **As societal facts considered as universals** which can be identified. This approach is implicit in building indicators such as of reading literacy or mathematics achievement levels. These indicators are useful for comparing different types of countries but dramatically reduce complexity. Even such a standard indicator as level of female employment covers a very wide range of factors: in order to compare country A with B, it is important to know what are the access tracks for women to enter the labour market, types of existing services for child-care, the extent of family involvement and support for salaried mothers, tax arrangements in relation to child-care costs, and so forth.

- The second approach is a cultural or anthropological one, and consists of identifying unique characteristics with which to specify a society taken as a whole. This approach focuses on unique features which “sum up” a mode of social relations, such as hierarchy versus contractualisation. This approach facilitates comparison and avoids misleading interpretations of indicators. For example, using indicators to compare cultural policies in France and the United States, it is necessary to take account of private foundations enjoying tax expenditures for the United States while public funding is dominant in France.

- The third approach can be labelled as “institutional”, and focuses on the national institutions embedded in historical tracks. OECD has analysed national systems of innovation, for instance, and this approach reveals a path dependency specific to each country in analysing public innovation policies. Turning from innovation to education, national institutions have their own definition regarding “education” or “schooling” – each country develops its own answer and invents its proper organisational tool for achieving common goals.
What are the consequences of this variety of approaches for the scenario methodology? The first approach is implicitly “culture-free” and implies an underlying common set of relationships but with the education system itself considered as a “black box”. This conception allows the performance of one system to be compared with another one with the challenge being to identify appropriate indicators for this purpose. Differential performance may be explained by pointing to cultural traits (which are at the heart of the second approach). Once the “black box” is opened, however, the anthropological dimension comes to the fore meaning that a public activity like education has then to be understood in terms of values and norms. The institutional approach allows for “equi-finality” – that two countries might obtain the same results using different organisational models – and avoids the assumption that there is “one-best” way.

The normative and socio-technical dimensions

A challenge facing the OECD “Schooling for Tomorrow” project using scenarios is to match the map and the territory. The map is a transcript. To design a scenario is to act as a map-maker where each scenario is a map in itself which builds up an image of what an education system might be in the future. A map is clearly different from the territory it portrays, just as at a restaurant the menu (transcript) is not the same as the food we are served. One strength of the scenario methodology is that it can initiate a process of feedback from the users of “maps” to the “map-makers” who designed them whereby the user can help identify inconsistencies and inaccuracies.

A common way to map possible trajectories is through using the spaces defined by two cross-cutting dimensions. Below I outline what I think are key dimensions, before combining them to create scenarios. One deals with normative contents and expectations about schooling and can be labelled the “value line”; consistent with the map metaphor we can say it runs north/south. The other “east-west” dimension is the socio-technical aspect of schooling – the “supply line” – which is the delivery function for a school considered as a system.

The value line – the “social to individual” authority dimension

This line seeks to capture the range of values within which schooling is evolving. The north pole is the strong societal orientation and at the south is the strong individualistic orientation. In reality, schools are embedded within a society somewhere between the extreme poles. To the north, education is socially oriented and schools are aimed at cohesion, equity and reproduction. The south side is individualistically oriented, and schooling
increasingly geared to its clients as consumers. These two poles express a range of values of how people are bound together in social arrangements in which schools are an integral part. This dimension is essentially about authority and its impact on values (Figure 3.1).

**Figure 3.1. From north to south – societal to individualistic orientations towards schooling**

![Diagram showing societal to individualistic orientations towards schooling](source)

What is specific to the teaching function is the management of authority, which sociologists refers to as the “transmission function” of education – how people come to the values and norms which define society, citizenship, and behaviour. Schools produce images of the world as do families and the other strategic institutions which produce and reproduce society. The teacher is transmitting a public image of humanity, of space (geography) and time (history). As Norbert Elias (1998) puts it:

> Under the cover of what adults think and plan, the relationship that forms between them and the young has functions and effects in the latter’s personalities which they do not intend and of which they scarcely know.

This can be characterised as an “institutional programme” – with a strong state and stable institutions which produce a framework of social statuses well understood by individuals. The teacher is an active part of this process and the school a key part of the social fabric. Values are internalised
within this specific space – and in a limited time period, crucial if children and youngsters are to be moulded before they reach adulthood.

Moving beyond the dimension itself to look at on-going trends, one can observe a weakening of the authority dimension of schooling. This is manifest in the decline of the institutional programme i.e. a movement away from the north end of the values dimension, though the decline is happening in different ways and at different speeds among OECD countries. The daily reproduction of social norms and symbolic signals is more and more under the scrutiny of interest groups advocating the right to deliver their own values for their children. Religious groups are an obvious source of the change but also certain ethnic communities or even just disappointed parents who want to educate their own children with their own values. These groups challenge the monopoly and legitimacy of schools to distil social values, as they do the objectivity of schools and the scientific approach of teachers.

The general trend is towards the disappearance of consensus about schooling in parallel with declining belief in marriage as an institution or the norms surrounding seniority: it is the individual who is in charge of his/her own life without referring to social norms diffused through institutions. The institutions meanwhile are slowly melting down. Schools are working out how to evolve in the cultural era of rational choice i.e. the southern pole of the value line. Individuals are making decisions and acquiring knowledge through different networks, through newspapers or the television, or the Web. Opinions are formed through informal discussion with parents and friends rather than recourse to an external scientific authority: “my opinion is as worthwhile as the teacher’s”.

This trend helps to explain why the idea of national education as an institution is less and less understood, not only by parents but by students, who assess themselves through their own subjectivity and their own ways of thinking and feeling. The consequence of this move down the values dimension is to reduce teaching to a matter of competence only, not competence and authority. The teacher is then simply the provider of services, and parents expect from the school a service delivery to fulfil their child’s needs which – by definition and in their own eyes – are very specific. Each child has a potential to be discovered by the teacher. For parents, it is the future of their offspring that matters and whether this is met privately or publicly is not a major concern so long as their ends are achieved. The relationship between ends and means is weak and the best structure is one which deals most effectively with the needs of the student. If the private sector performs better, it will be chosen on grounds of its performance. The more that societies move south along the axis, the more the struggle between the private and public sectors is over.
The supply line – from closed to open systems

A system is a recognisable entity into which different types of resources are the inputs and out of which come products or services. This is represented on this axis which can be labelled as the “supply line”. The west pole defines services delivered within closed system thinking; the east pole is producing services within open system thinking on a much more piecemeal basis (Figure 3.2).

Figure 3.2. From west to east – closed to open systems of delivery

Source: Author.

Schools considered as closed systems means they are sufficiently independent as to allow most of their services to be analysed by reference to internal structures, ways and means: e.g. time management of teachers aimed at the optimisation of their presence on the site, the allocation of scarce budgetary resources for additional activities, or the application of standard operating pedagogical procedures. The “core competence” for teaching is certified through a university degree, the pedagogical techniques are taught, and trainee teachers prepared by trainers or on the job. A teacher is not just a capacity to transmit codified knowledge efficiently and indeed it is common to refer to the “art of teaching”. Different kinds of knowledge are needed to make teaching effective: knowledge why, knowledge what, knowledge how. The “knowledge how” to teach is the most difficult to acquire and defines a “good teacher” for the parents and students. Hargreaves (2000) uses the expression “tinkering” to illuminate this aspect of the job. Students are not ignored in the closed system but they are internal factors within it, managed in terms of flows from grade to grade. The assessment procedures are available for all without distinction. Schools distribute rewards and punishments through specific rules and internal committees. Tight integration, co-ordination, and control aim to ensure stability, which become ends in themselves rather than means to an end. There is concentration on the principles of internal organisational functioning.

Schools in an open system recognise the “equi-finality” principle – that there are more ways than one of producing a given outcome. Teaching remains an art but the open system needs considerably more organisation
and management in the classroom. Why? Because the variety of demands has to be matched by a variety of the supply of education through different pedagogical exercises, workshops, lectures, timing, etc. The autonomy of schools in an open system allows initiatives coming from both the inside and the outside without the constraints of controls from a central authority. Schools are open from early in the morning to late at night to allow for continuing education, with classrooms redesigned for these purposes. Continuous feedback is at work i.e. schools adjust for their own malfunctioning and cope with changes in their environments. In terms of services provided, schools offer a piece-meal service around a compulsory core of courses. Options or electives do not come from the supply side (i.e. the teachers who propose to open electives in the discipline they are familiar with) but from a consensus of all the stakeholders.

The four quadrants as scenarios

If these two lines are crossed – the “values” line and the “supply” line – the quadrants of these dimensions combined give four new scenarios, which can be used to understand the path dependency which makes schools move from one quadrant to another and the implications of so doing (Figure 3.3).

The NW quadrant can be labelled the conservation scenario, corresponding to the “Status quo” of the OECD scenario set. To conserve a position does not necessarily mean to stand still as there is asymmetry between changing and not changing. Political forces or policies advocating change need to justify these to those who resist, such as strongly-unionised teachers. Why change? What are the new goals? Change for what, for whom? A variety of self-defensive mechanisms may come into play in this quadrant in order to ensure either no change or that the change which takes place is only cosmetic.

The SW scenario can be labelled the survival scenario. Institutions always seek survival and so they will accept some change if threatened so long as it does not damage internal structures. Typically, it might be seen in the reinforcement of coaching for specific students unable to follow the rest of the class or the increased use of ICT to allow each student to progress at its own speed – teachers are giving up some of their authority and new personnel are being brought into the educational function. Teacher’s unions become more focused on fringes and benefits and not stuck in ideological positions. The rhetoric about the educational function of schooling declines compared with that regarding the linkage between school and employment.

The NE quadrant can be labelled the transformation scenario. The authority function of teaching is maintained through the recruitment of new
teachers eager to maintain this function while the school is receptive to outside influences as it is an open system. The result is a change to a more complex structure. Schools learn how to map their environment and how to select and shape their organisational and managerial responses such as through creating new services, involving parents in the decision-making process, and strengthening leadership and the autonomy of the school as a unit.

The SE quadrant can be labelled as the market scenario. The competence function dominates over the authority function through the recruitment of new teachers who focus on pedagogical techniques and student results on whose support they depend. Schools manage private funds from fees and public funds from vouchers. Parents and local authorities are key actors in managing the schools, recruiting teachers through ad hoc committees. Private companies sponsor the education market and supply textbooks and pedagogical materials.

**Figure 3.3. The four scenarios of the quadrant analysis**

Source: Author.
Moving around the quadrants – what makes for change from one scenario to another

Each of the quadrants or new scenarios represents a stable position in terms of these two key dimensions. Movement between them indicates strategic change and it can then be asked: what are the social forces which stimulate such moves?

**Shifting down the values axis**

If an outside pressure – from politicians, parents, international benchmarks, scarcity of resources, and so forth – successfully breaks into the closed system it is a form of “environmental intrusion” making possible a move from the NW (conservation) to the SW (survival) quadrant. Such a pressure to bring about a survival response might be, for instance, new requirements for students to pass or succeed within shorter time horizons. Another example could be coaching at home increasing the pressure of private competition on the public system from parents expecting good marks for their children. Attrition of human resources may also be a signal for change. The technocracy would not want to lose its pre- eminent position in setting rules and procedures for the periphery, and would bow to pressure if it felt this position was threatened. Teachers unions may also support the move in this direction if they judge that it will be less threatening than the conceivable alternatives, and so might fall in line in order to keep basic structures, contracts and privileges in place.

Another move down the axis, this time from NE (transformation) to SE (market) may be triggered by stakeholders eager to transform radically the organisation and management of schools. Such stakeholders as local politicians, parents, or firms may not agree to a compromise in which school becomes an open system but not within terms and values they share. They believe that change has not gone far enough, and may perceive the resistance to come mainly from the educational workforce. To move down this part of the value line thus supposes weak teachers unions unable to resist to the pressures exerted and isolated from public opinion and the media. As the move takes place, schools turn out into networks of contracts, outsourcing maintenance, control activities, and teaching. Teachers are recruited on a short-term basis and periodically evaluated by their peers and parents.

**Shifting along the supply axis**

The move from west to east is quite conceivable today through the public pressure of opinion which does not believe that in a changing
environment schools should be in a closed system. The situation might well be different were the system efficient but international benchmark surveys such as PISA show that performance is not well correlated with mechanistic structures consuming heavy financial resources. There is not an organisational optimum for producing results.

This move can be triggered by politicians eager to radically overhaul the administrative structure without changing the recruitment process of teachers, who are mainly civil servants. Why such a move? It may come from the allocation dilemma between tertiary and secondary education. It may be agreed that public money must be spent as a priority on the tertiary sector for competitiveness reasons, leading to the pursuit of alternatives for the schools. It could also be due to the pressure coming from young, demanding parents. The move along this axis can be seen as a re-engineering of the central administrative procedures through massive decentralisation. Decision-making processes are re-designed and the school comes up more and more as an autonomous unit of management headed by professional managers. A trade-off may be negotiated between the unions and the policy makers – increased variety and a new type of organisation vs. stability in the recruitment through meritocratic competition and seniority rules. The direct move from the SW quadrant (survival) to the SE (market) seems improbable because it would be such a wrench; the pathway instead might be SW to NE (transformation) and then possibly to the SE once the system has been opened up.

This map or quadrant tool facilitates the understanding of the dynamics of transformation of the school system by moving around the quadrants horizontally and vertically. Transversal moves indicate the scope of change of the throughput – different modes of co-ordination, recruitment of teachers with different profiles, teachers vs. coaches – while the values about national education are maintained. Vertical moves indicate the transformation and reorganisation of the public image of the schooling system, which is changing through the pressure coming from different “external” stakeholders such as parents, service providers, mass media, and employers.
References


