International global capital: perspectives on competences, attitudes, dispositions, and powerful knowledge

Principles for curriculum development and curriculum control

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Distributing responsibility for producing public goods of education

- Discipline-specific knowledge, skills and understanding in broad range of disciplines
- Orientation to learning, 'learning to learn'
- Physical and mental well-being
- Personal and social identity
- Personal capitals
- Social capitals
- Cultural capitals
- Moral, civic and political understanding, including international awareness

- Facility in technology
- Facility in foreign language(s)

Distributing production of public goods across the key elements of the curriculum

- Taught curriculum – subjects
- Taught curriculum – cross curriculum elements
- 'Taught' curriculum – extra-curriculum elements

- Extra-curriculum elements – guided (school trips etc) and unguided (student clubs etc)

- Institutional participation – student councils etc, learner voice
- Support elements – IAG etc

- Ethos – values and value-driven practices
- Culture – lived experience of the institution

Distributing responsibility for different facets of the curriculum

Aims	Central Government
Content	Government Agency (eg Ofsted)
Pedagogy	Local Government/intermediate bureaucracy
Assessment	Governing Bodies
Evaluation	Head teachers
	Middle tier management
	Teachers and assistants
	Other staff
	Pupils
	Parents
	Other organisations – health organisations, police etc
	Exam boards and assessment organisations

Aspects of curriculum and the controlling instruments: England

General duties	Curriculum Aims Safeguarding Ethos, behaviour codes, etc (parenting, early cancer recognition)
Entitlement: detailed core outcomes	National Curriculum primary specifications in science, maths and English including subject aims
Broad and balanced	Less detailed National Curriculum specifications in other subjects including aims statements, non-National Curriculum subjects and enrichment elements

The Zeitgeist and context in 2007

Performativity culture – increasing elaboration of accountability measures – refinement and extension

High support and high expectations

Very high level of centralised innovation and direction through non-statutory instruments

Constant underlying shift in the locus of control

A reduction of 'curriculum thinking' to 'qualifications thinking' – 'syllabus to 'specification'

The National Curriculum 1995

Science - key stage 3

Materials and properties

Chemical Reactions

i. that when chemical reactions take place, mass is conserved;
j. that virtually all materials, including those in living systems, are made through chemical reactions;
k. to represent chemical reactions by word equations;
l. that there are different types of reaction, including oxidation and thermal decomposition;
m. that useful products can be made from chemical reactions, including the production of metals from metal oxides;
n. about chemical reactions, *e.g. corrosion of iron, spoiling of food,* that are generally not useful;
o. that energy transfers that accompany chemical reactions, including the burning of fuels, can be controlled and used;
p. about possible effects of burning fossil fuels on the environment.

National Curriculum 2007

Chemical and Material Behaviour

In their study of science, the following should be covered:

a. chemical change takes place by the rearrangement of atoms in substances;
b. there are patterns in the chemical reactions between substances;
c. new materials are made from natural resources by chemical reactions;
d. the properties of a material determine its uses.

A contrary view of the demarcations regarding autonomy and of content decisions

The 'powerful knowledge' thesis

Empirical evidence on personal and social capitals

Transnational comparisons of the focii of national curricula and the implicit and explicit imperatives in education

'***Could do better***' Cambridge Dec 2010

OECD elaboration of the relation between autonomy and high performance

Initial examination of the issue was appropriated by commentators as 'autonomy is a route to/feature of high performance'

Andreas Schleicher at the launch of 'Unleashing Greatness' Jan 2013: complex relation between autonomy and high performance, where systems and culture exist for formation and sharing of good practice

The importance of understanding *mechanisms*, and *patterns of cause*

Stand out element - size

Singapore	4,839,400 (world bank)
Finland	5,313,399 (worldbank)
Hong Kong	6,977,770 (worldbank)
Mass	6,593,587 (uscensus)
Alberta	2,974,807 (finance and enterprise Alberta)
England	**51,460,000** (office for national statistics)
Japan	**127,800,000** (world bank)
South Korea	**48,747,000** (world bank)

Control factors

1 curriculum content (national curriculum specifications, support materials, etc)
2 assessment and qualifications
3 national framework for qualifications
4 inspection
5 pedagogy
6 professional development
7 institutional development
8 institutional forms and structures (eg size of schools, education phases)
9 allied social measures (linking social care, health care and education)
10 funding
11 governance (autonomy versus direct control)
12 accountability arrangements
13 labour market/professional licensing
14 allied market regulation (eg health and safety legislation; insurance regulation)

Oates T 2010 Could do better: using international comparisons to refine the National Curriculum in England Cambridge Assessment

Curriculum control

A system must **exercise control**, it is not that individual agencies should **take control**:

'…our purpose in introducing alternative ways to govern curriculum…is not to advocate one approach or another. As analysis by Cochran-Smith and Fries (2001) indicates, disagreements about teaching and, by implication, curriculum, often divides along ideological lines, an outcome that occurs no matter how pragmatic the veneer. A functional approach, by specifying in advance the criteria that an effective curriculum-governance system must meet, lessens the tendency to judge these systems in terms of the political values they represent (eg regulation vs deregulation, public interest vs private interest…'

Schmidt W & Prawat R 2006 p656

A responsible approach to transnational comparisons Explanatory factors

Character and structure of the National Curriculum (size, focus, underpinning theory, and design principles)

Curriculum coherence – content, pedagogy, assessment, support materials, drivers and incentives

Teacher quality and teaching quality

Demarcations between national requirement and school autonomy – locus of control

School ethos and balance between National Curriculum elements, taught elements and untaught elements

Family culture and national social culture

General attitude to innovation

Investment in education

Case #1
Singapore

The aims diagram
Textbooks
Tutoring
Innovation
The importance of curriculum aims
'White space'

Case #2
Finland the illusory nature of contemporary autonomy

Textbooks
National curriculum
Digiriste control in the 1970s and 1980s
Investment in highly selective, long-duration, twin-track teacher education

learning culture, home learning

Stand out element – focus on powerful knowledge

In Primary, fewer things in greater depth

'…Concentration on a small number of attainable goals, mostly of an academic variety or concerned with the individual's relationship to society, rather than a spread of effort across many academic, social, affective and moral goals…'

Reynolds and Farrell 1996

Key dimensions of policy

Curriculum coherence

Curriculum control

Subtle management of relations

Understanding explanatory and control factors which provide restriction

International benchmarking

Empirical evidence on educational and individual progression