New Perspectives: Learning - the next 25 years

Richard Millwood

Director, Core Education UK

Reader, Institute for Educational Cybernetics, University of Bolton

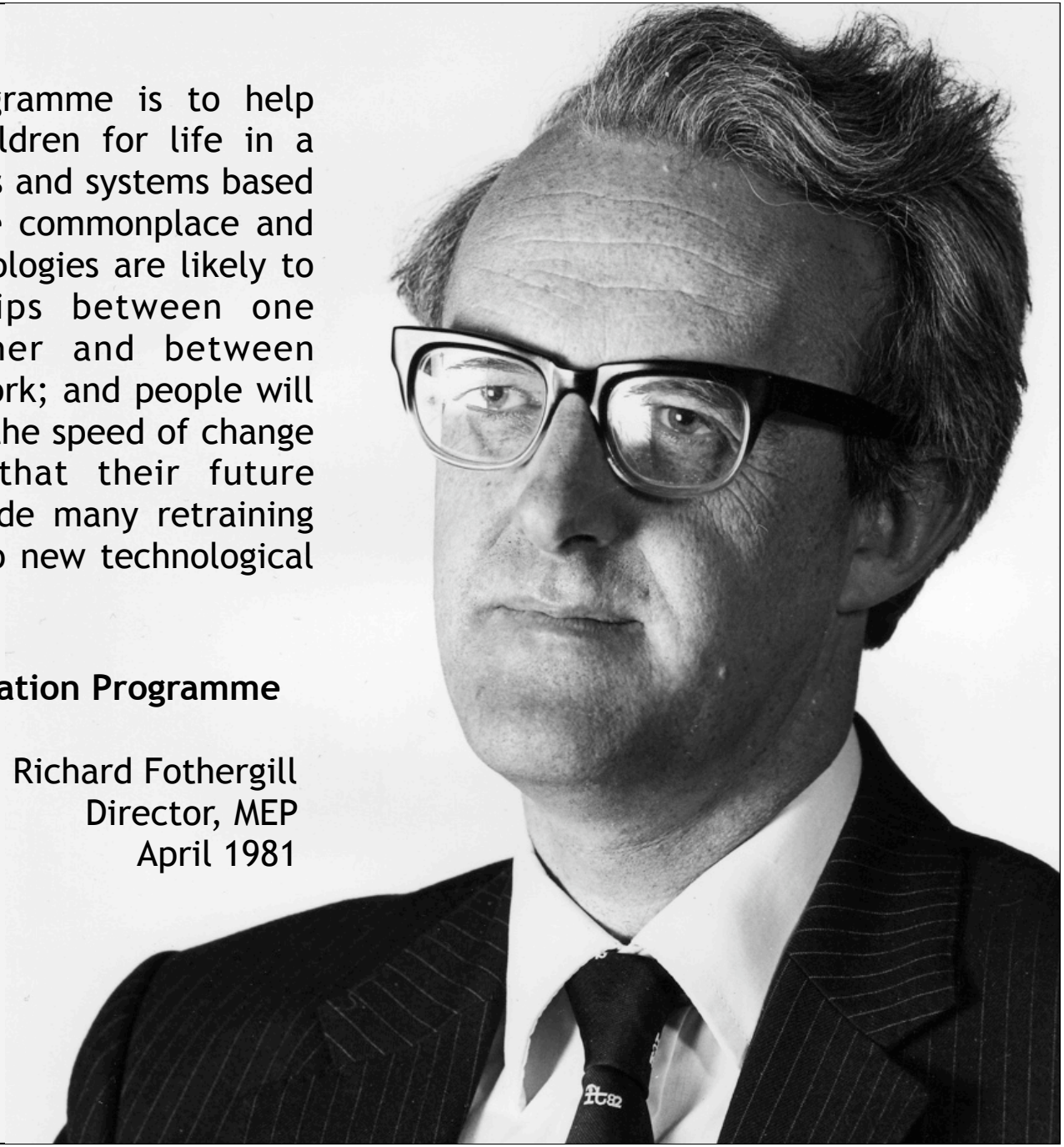
Ben 12 England

"Education is the same as it was fifty years ago, still using text books and writing and listening to teachers. And the answer to that is to use computers. But, if you use computers too much, how will you still keep social interaction which is a vital part of learning in all the students' lives?"

“The aim of the Programme is to help schools to prepare children for life in a society in which devices and systems based on microelectronics are commonplace and pervasive. These technologies are likely to alter the relationships between one individual and another and between individuals and their work; and people will need to be aware that the speed of change is accelerating and that their future careers may well include many retraining stages as they adjust to new technological developments.”

Microelectronics Education Programme - The Strategy

Richard Fothergill
Director, MEP
April 1981



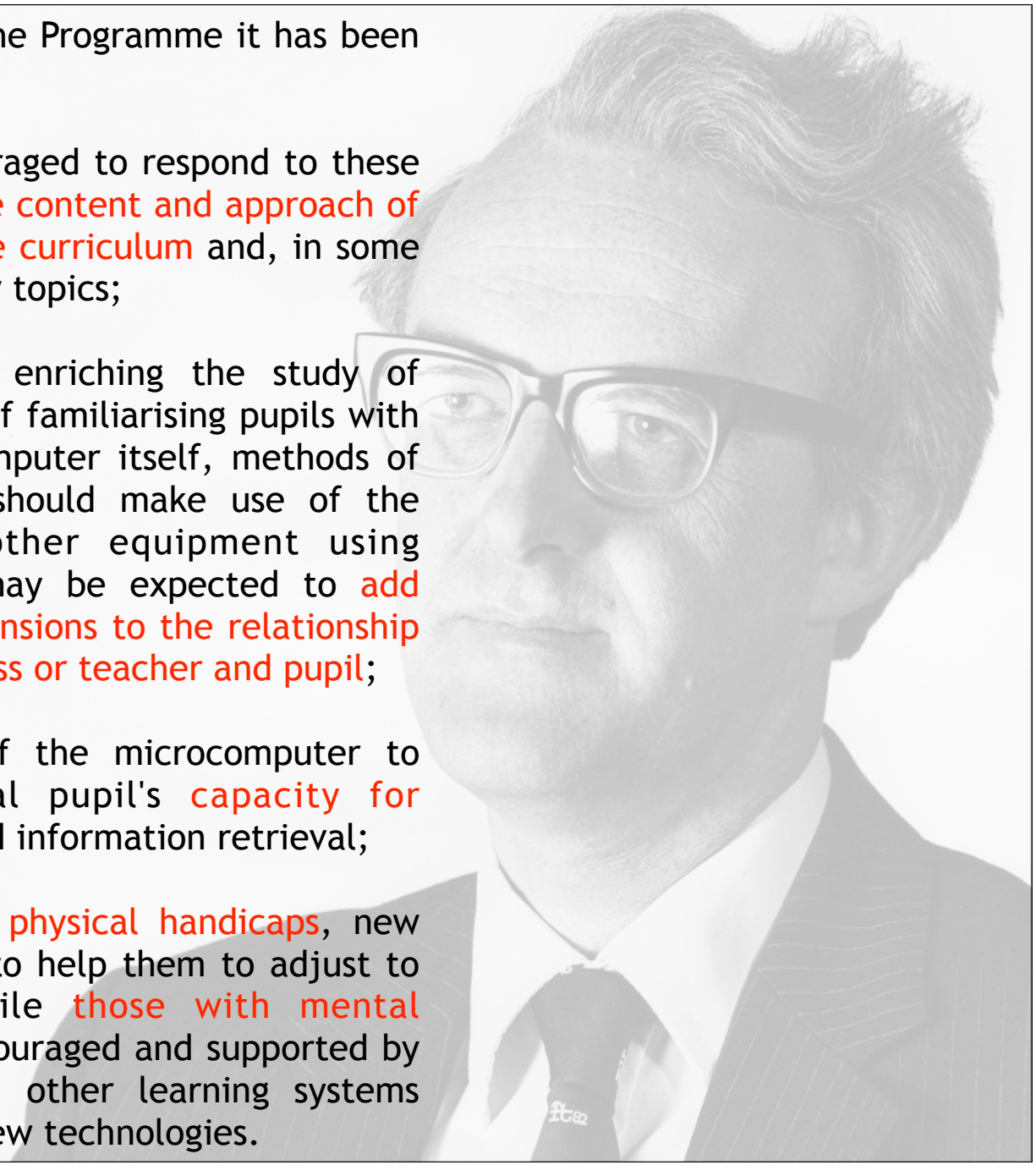
In developing a strategy for the Programme it has been assumed that:

i schools should be encouraged to respond to these changes by amending the content and approach of individual subjects in the curriculum and, in some cases, by developing new topics;

ii with the dual aim of enriching the study of individual subjects and of familiarising pupils with the use of the microcomputer itself, methods of teaching and learning should make use of the microcomputer and other equipment using microprocessors. This may be expected to add new and rewarding dimensions to the relationship between teacher and class or teacher and pupil;

iii use should be made of the microcomputer to develop the individual pupil's capacity for independent learning and information retrieval;

iv for those children with physical handicaps, new devices should be used to help them to adjust to their environment while those with mental handicaps should be encouraged and supported by computer programs and other learning systems which make use of the new technologies.



United Nations
Educational, Scientific and
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UNESCO High Level Group of Visionaries on Knowledge Acquisition and Sharing

Kronberg, Germany, 22-23 June 2007

Deutsche UNESCO-Kommission e.V.
German Commission for UNESCO
Commission allemande pour l'UNESCO

Questions

1. What are the long-term strategies to efficiently harness the enormous potential of new communication and information processes and technologies for developing new approaches to knowledge acquisition and sharing?
2. What needs to be done to effectively integrate these strategies into forward looking and sustainable policy making?
3. How can we harness the potential of ICT to develop knowledge societies that are people-centred, inclusive and development oriented?

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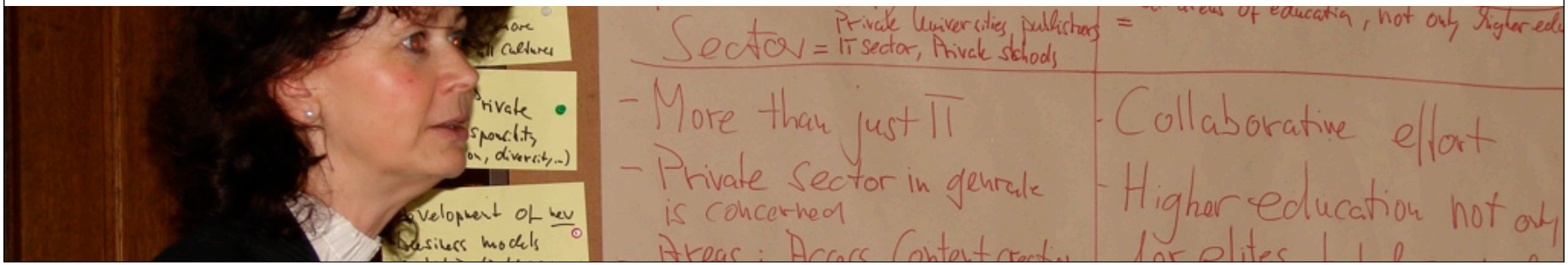
Aims

To identify:

1. The role of knowledge acquisition and sharing to build a world in which peace, development and human rights prosper;
2. The contribution of information and communication technology to this process;
3. The evolution of knowledge acquisition and sharing over the next three decades;
4. Political and institutional changes that are needed to address these challenges.



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Outcomes

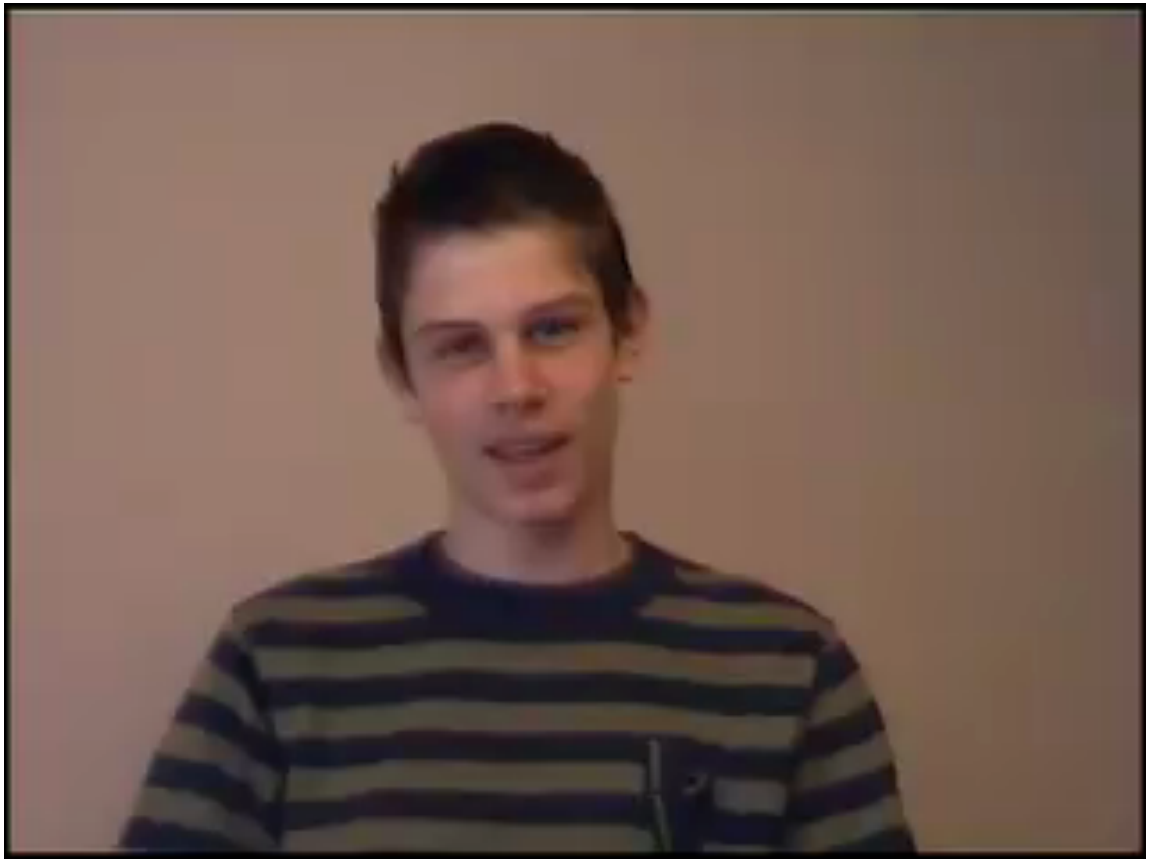
1. Expert statement using analysis and questions as starting point
2. Report evaluating the event and its outcomes
3. Published podcasts from experts and youth voice (gathered prior to the event)
4. Pattern for future repetition, locally and globally

Youth Voice

Martyn 17 The Netherlands

"I saw a small classroom with sixty students in it and they were sharing books. How can we improve their resources in the future?"

Jason 15 The Netherlands



"Why can't I learn English from an English teacher out of England? And Maths from a Maths teacher out of England? Why does it has to be someone from your own country?"

Joshua 14 The Netherlands

"I like Instant Messenger, YouTube and MySpace - how can I use them for my education?"

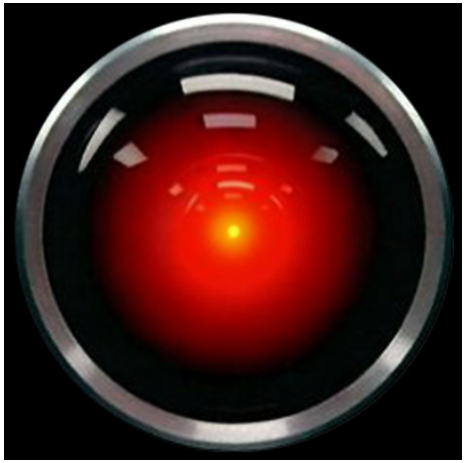
Perspectives

Technology & Environment

Regional & Global

Organisational & Social

Individual & Interpersonal



networking

Moore's law

information processing

Technology & Environment

cost

multimedia & multimodal

www

communication

digital divide

buildings

classrooms

mobility

(Perspective of content, technologies, tools and infrastructure)

World peace

Cultural enrichment

Wealth generation

Citizens

Regional & Global

BUT
based on what's actually tested in examinations, society appears to need people who:

Work alone

Use memory, don't search

Only write, with pen on paper

Sit, still, in silence

Forget!

Extract from Saturday Night Live's
Father Guido Sarducci
played by Don Novello
in 'Gilda Live!' (1980) Warner Studios.

(Perspective of the government)

Simon 15 The Netherlands

"I find very much that our education is based around assessment and therefore we are given what is required to pass these exams at the highest possible ability. We might even be given the syllabus of what is expected. Therefore, Would it not be better to be given a greater depth of knowledge and a more true knowledge than just given what is required to do well in exams?"

Sustaining the business

Maintaining quality & standards

Defining the curriculum

Transforming organisational culture

Developing the staff

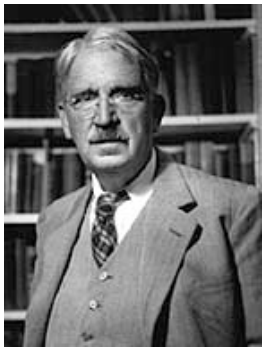
Relating to government, private and public sector

Balancing pure & applied, discipline & vocation

Organisational & Social

Meeting the needs of new millennium learners

(Perspective of the leader of business, institution or community)



"In sum, I believe that the individual who is to be educated is a social individual and that society is an organic union of individuals. If we eliminate the social factor from the child we are left only with an abstraction; if we eliminate the individual factor from society, we are left only with an inert and lifeless mass. Education, therefore, must begin with a psychological insight into the child's capacities, interests, and habits.

John Dewey
from 'My Pedagogic Creed'
School Journal
vol. 54, pp. 77-80
(January 1897)

Individual & Interpersonal

(Perspective of the lifelong learner)

Aged 15 The Netherlands

"How will I be able to learn in my way, and my friends to learn in other ways? We like to learn in different ways, how are you going to solve that problem?"

Renee 15 The Netherlands

"When I'm studying on my own, how do I get help? If the expert is in another country how can I reach him? And how do I know If I’m doing well?

skills
creativity
inquiry
pedagogy
technology tools
mental-models
facts
memory
intelligences
bio-technology

3 Process

teachers
parents
peers
stakeholders
costs & finance

4 Community

buildings & equipment
internet
mobility
timetable
lifelong
access

5 Environment

authority
multimodality
user-generated
intellectual-property
universality
global-local
language & culture

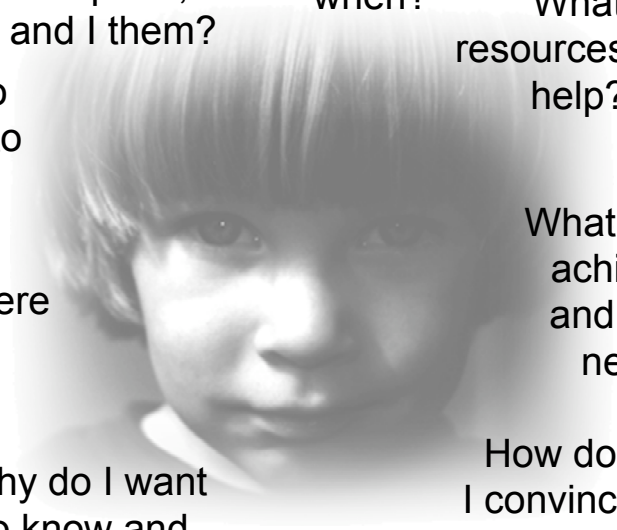
6 Source

Who can help me, and I them?

Where and when?

What resources can help?

How do I come to know?



What have I achieved and what next?

What is there to be known?

Why do I want to know and share?

How do I convince others?

communication
judgement
planning
progression
continuity
testing
specialisation

7 Assessment

culture
tradition
discipline
ethnicity
society
literacy

2 Importance

1 Motivation

fulfilment
enjoyment
relevance
curiosity
economics
expectation

8 Recognition

reward
accreditation
standards
qualification
portfolio
employment
portability

Individual & Interpersonal

responsibilities **rights**

Perspectives

<hindsight >insight< foresight>

Technology & Environment

Regional & Global

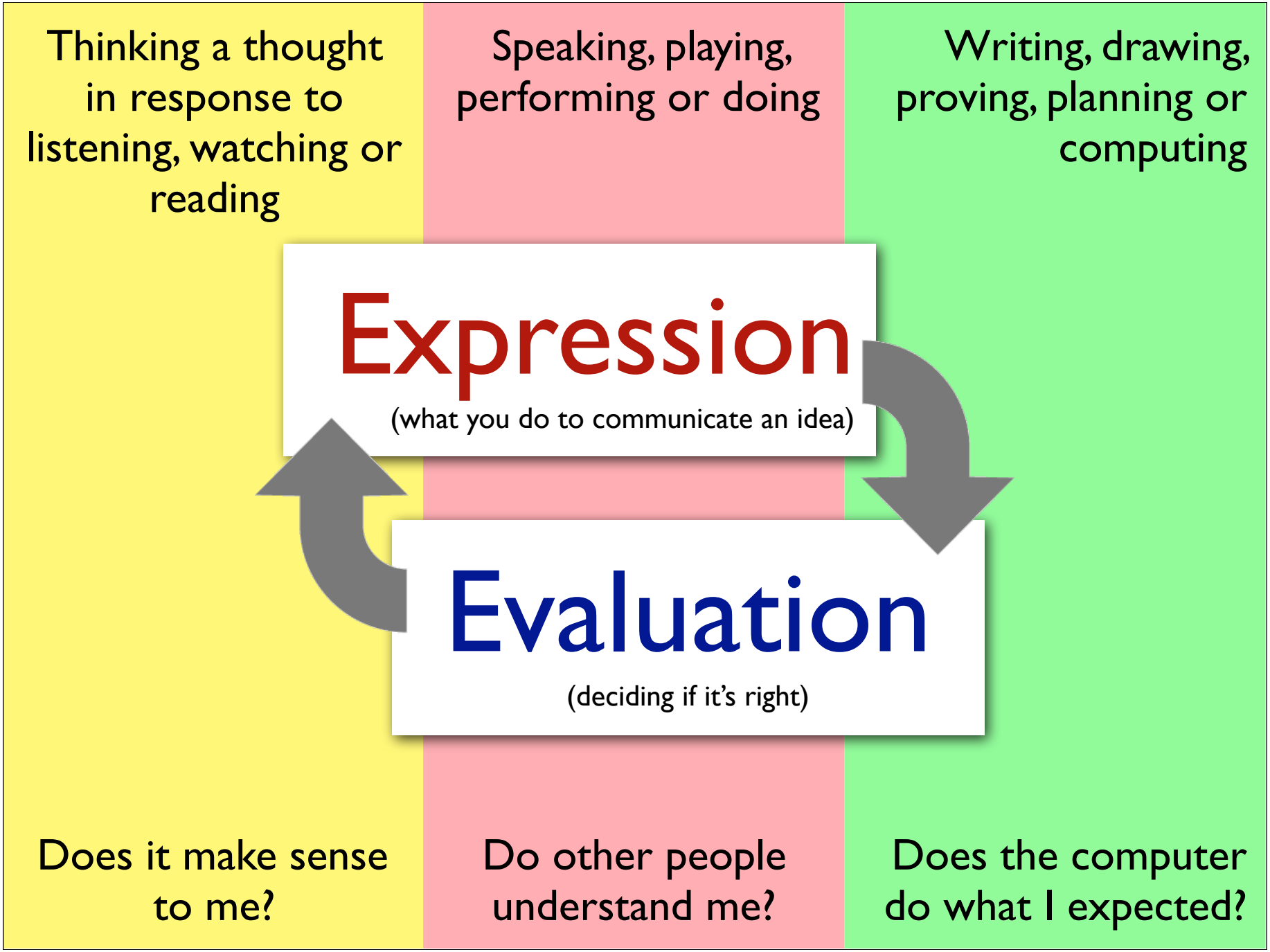
Organisational & Social

Individual & Interpersonal

2030

?

responsibilities **rights**


Thinking a thought in response to listening, watching or reading
Speaking, playing, performing or doing
Writing, drawing, proving, planning or computing
Expression
(what you do to communicate an idea)
Evaluation
(deciding if it's right)
Does it make sense to me?
Do other people understand me?
Does the computer do what I expected?

ICT can:

- Enhance expressive creativity
- Empower evaluation

Two tests for learning with ICT

and through delight:

- Inspire motivation to start the loop
- Support perseverance to continue

delight

Appreciation	**the love of aesthetic form**	“The emotions of a fulfilled imaginal sensibility are of a range and subtlety that outstrip the power of language to symbolize them. Hence they are conveyed by the non-discursive symbolism of drawing, painting, sculpture, music and dance.”
Interest	**the love of knowledge**	“When the need to understand is realized, we experience interest, extending into curiosity and fascination, the passion for truth, excitement in intellectual discovery, pleasure in the clear communication of ideas.”
Zest	**the love of action**	“The emotions involved in the fulfilment of free choice and effective action” including “relish, gusto, exhilaration, achievement and work satisfaction.”
Conviviality	**the love of company**	“The pursuit of ‘co-happiness’ & mutual fulfilment interpersonally & collaboratively, the pleasure of others’ smiles, laughter and contentment.”
Recognition	**the love of achievement**	“The pleasure in communal and societal valuation arising from achieving real outcomes, surpassing goals and exceeding expectations.”
Controversy	**the love of dissent**	“The rush of realisation that there is another view that may provoke personal enrichment and realignment.”

Hans headteacher The Netherlands

"I think one of the biggest challenges we have in education at the moment is to get teachers out of the classroom, working together, finding new methods of teaching, new didactics, to solve problems and make education more attractive for students, co-operative, a way of learning that is from this time."

CURRICULUM NOW

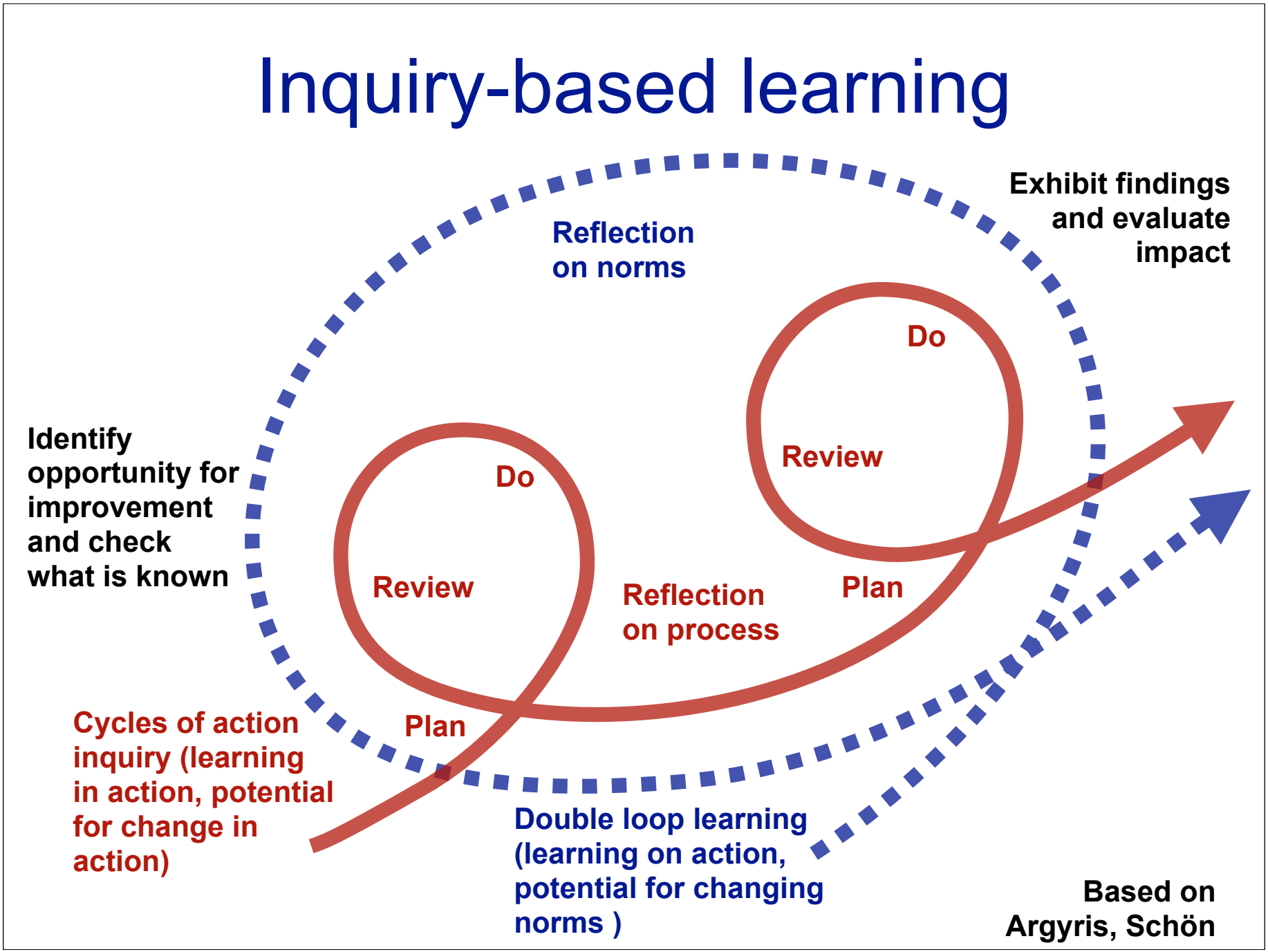
1
What are we trying to achieve?

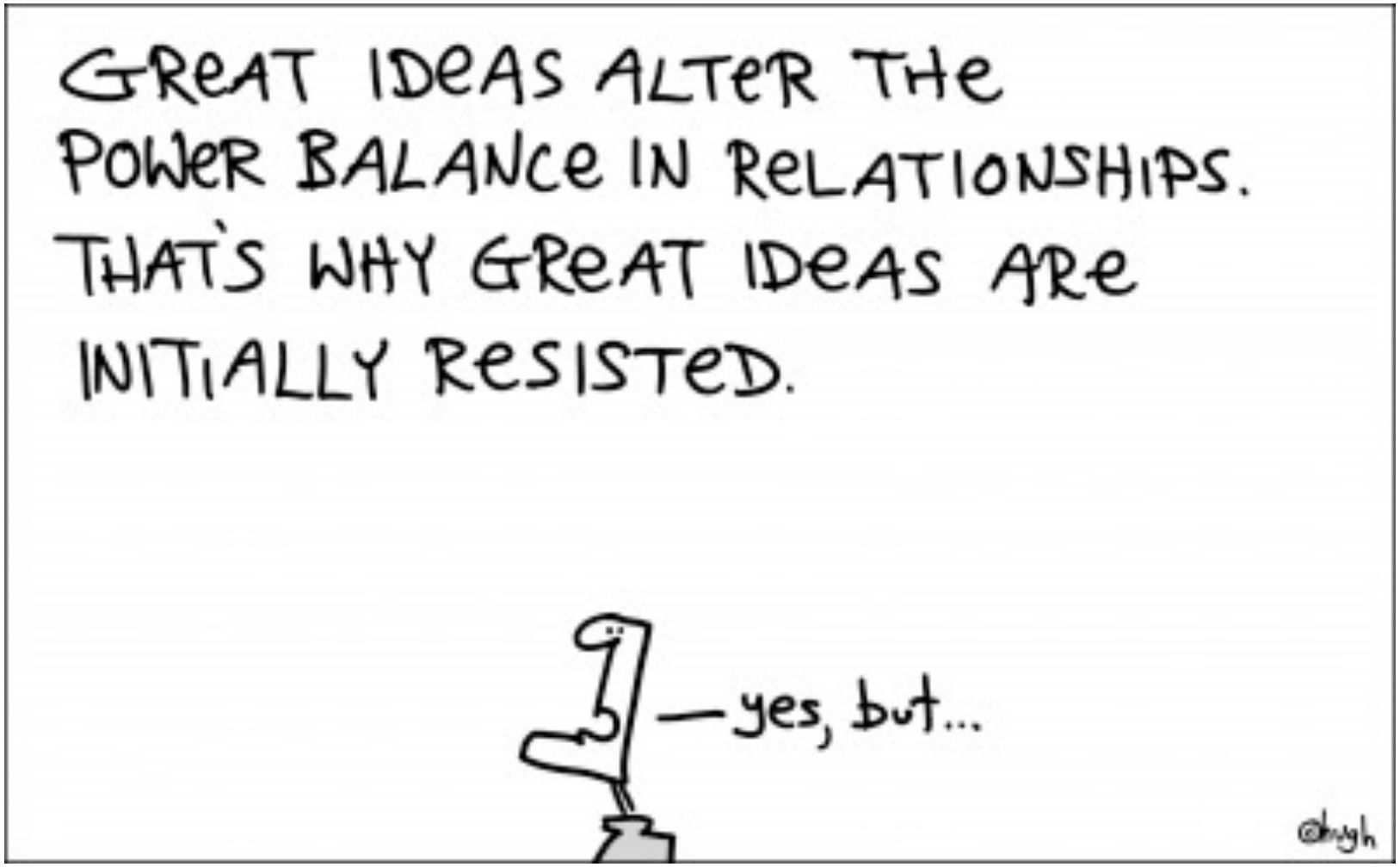
2
How do we organise learning?

3
How well are we achieving our aims?

Qualifications and Curriculum Authority - Futures in Action

Inquiry-based learning





<hindsight >insight< foresight>

National Archive of Educational Computing

www.naec.org.uk

CURRICULUM NOW

www.curriculum-now.org

Future Knowledge

www.futureknowledge.org

core UK

www.core-ed.org.uk

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inter-disciplinary inquiry-based learning

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action! >