Increasing the quality of primary and secondary education with the use of electronic testing

NUCEM International Conference

Bratislava

October 2015

Using technology to enhance assessment

opportunities, challenges and risks

Professor Patricia Broadfoot
University of Bristol, UK

‘Our existing assessment system was designed in an era when it was difficult to capture and circulate information about a person. The next two decades are likely to usher in a period in which we are able to produce massive amounts of data about the individual on an ongoing basis, in which we are able to analyse that data intelligently and provide continuous feedback. In this setting, the annual ritual of exam halls and sporadic high-stakes testing, rather than constant on-going observation and feedback on practice in the context of people and resources, will be hard to sustain.

Facer (2011):130

New world...

old practices....

- Accountability? Evidence?

- Many argue we have become preoccupied with qualifications and narrow achievements

- Continuing focus on individual, despite obvious requirements for team working and collaborative endeavours in workplace

- Assessment practices often outmoded and not in step with other theoretical, social and cultural aspects of learning.

'21st century skills'

- problem-solving
- complex decision-making
- creativity and innovation
- collaboration
- global awareness
- digital and media literacy
- communication skills
- the ability to be self-motivated.

Transforming education through ‘TEA’

- Has TEA the potential to transform examinations?
- Can TEA enable a wider range of achievements to be assessed?
- How can the barriers to implementing TEA be overcome?

The Potential of TEA:

a research review

http://www.bris.ac.uk/education/research/sites/tea/publications/index.html

Assessment in a Digital Age:

A research review

Alison Oldfield, Patricia Broadfoot, Rosamund Sutherland and Sue Timmis
Graduate School of Education, University of Bristol

The potential of TEA

- Able to evaluate complex skills.
- Can provide real-time feedback.
- can support collaborative learning.
- can engage students more through richer activities.
- Increased flexibility in timing and location.
- Can integrate formative and summative assessments.

new forms of representation

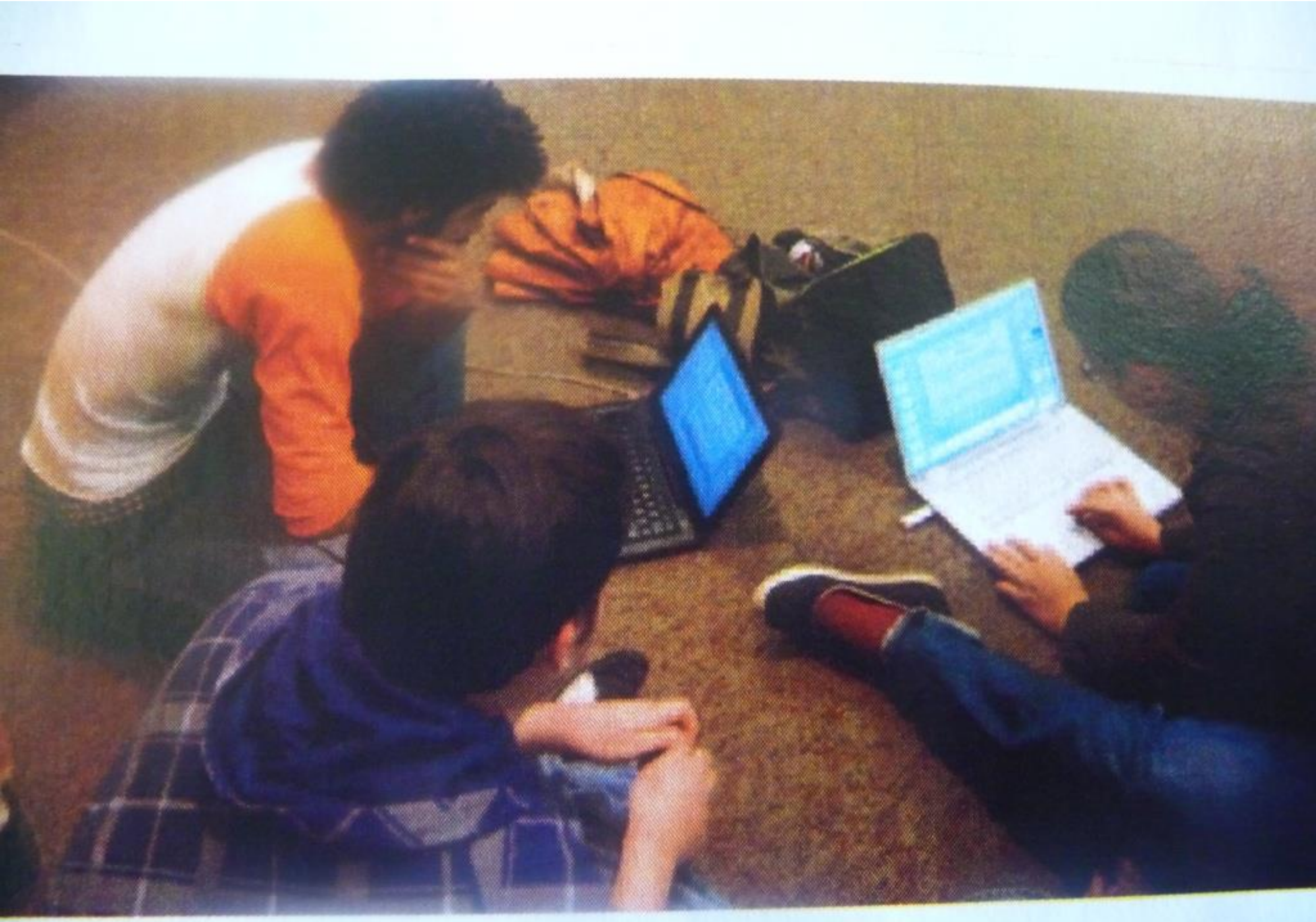
Case study
E-Portfolios

Case study:

E-portfolios

supporting and enhancing collaboration

case-study PEER



capturing complexity

case study:

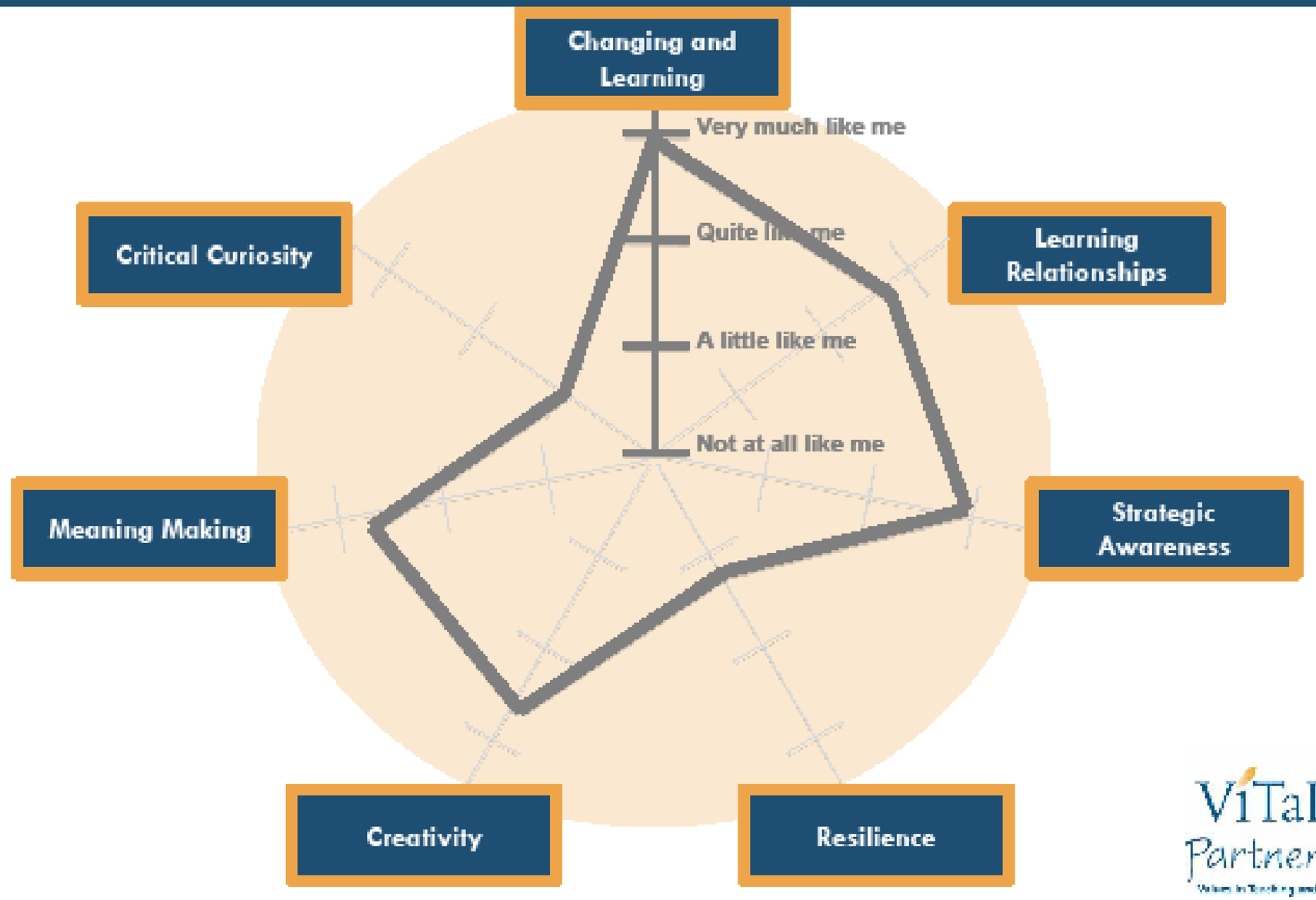
Quest Atlantis

enhancing feedback

Case study

ELLI

Your Individual Learning Profile



ViTaL Partnerships

new ways to record achievement.

Case-study:
Mozilla Open Badges

mozilla

Open Badges

mozilla

ABOUT | ISSUER | EARNER | DISPLAYER | FAQ

what are OPEN BADGES?

Learning today happens everywhere. But it's often difficult to get recognition for skills and achievements that happen online or out of school. Mozilla Open Badges helps solve that problem, making it easy for any organization to issue, manage and display digital badges across the web.

*Take the **Badges 101** quiz—and earn your first badge*

get started ›

visit your Mozilla Badge Backpack ›

Learn more about the DML Badge Competition!

learning analytics
case-study:
Course Signals

National Standards and TEA

- For international comparisons.
- For monitoring national standards.

- Case study:
- National Testing in Denmark

Case study:

National testing in Denmark

Barriers to implementation

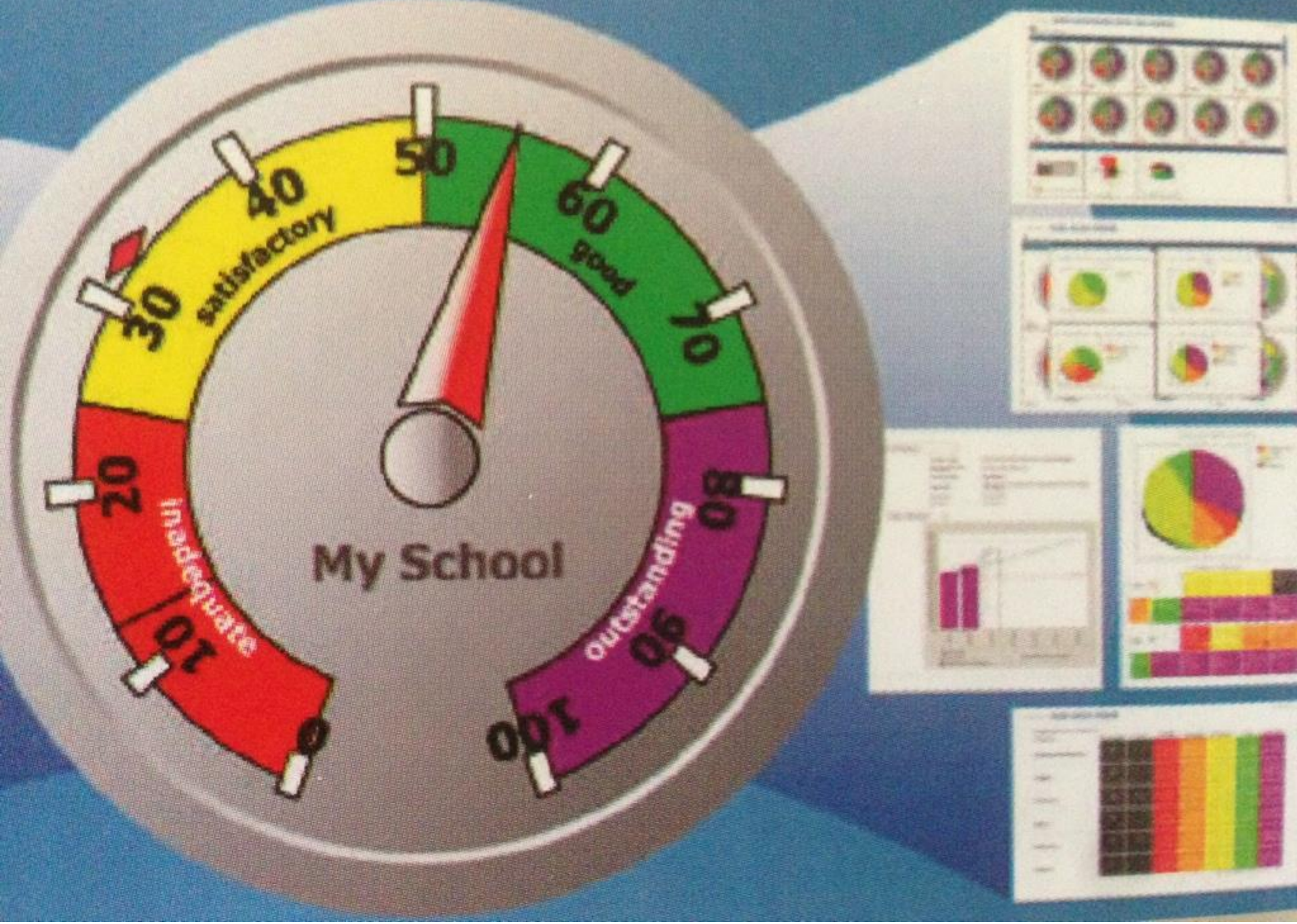
- Increased risk of plagiarism and security issues?
- Lack of practical and robust techniques.
- Need for teachers to be trained in TEA.
- Cost of investing in necessary hardware and software.
- Other practical constraints e.g. space.

Risks of TEA

- technologically-driven change
- misuse of data
- ethical issues

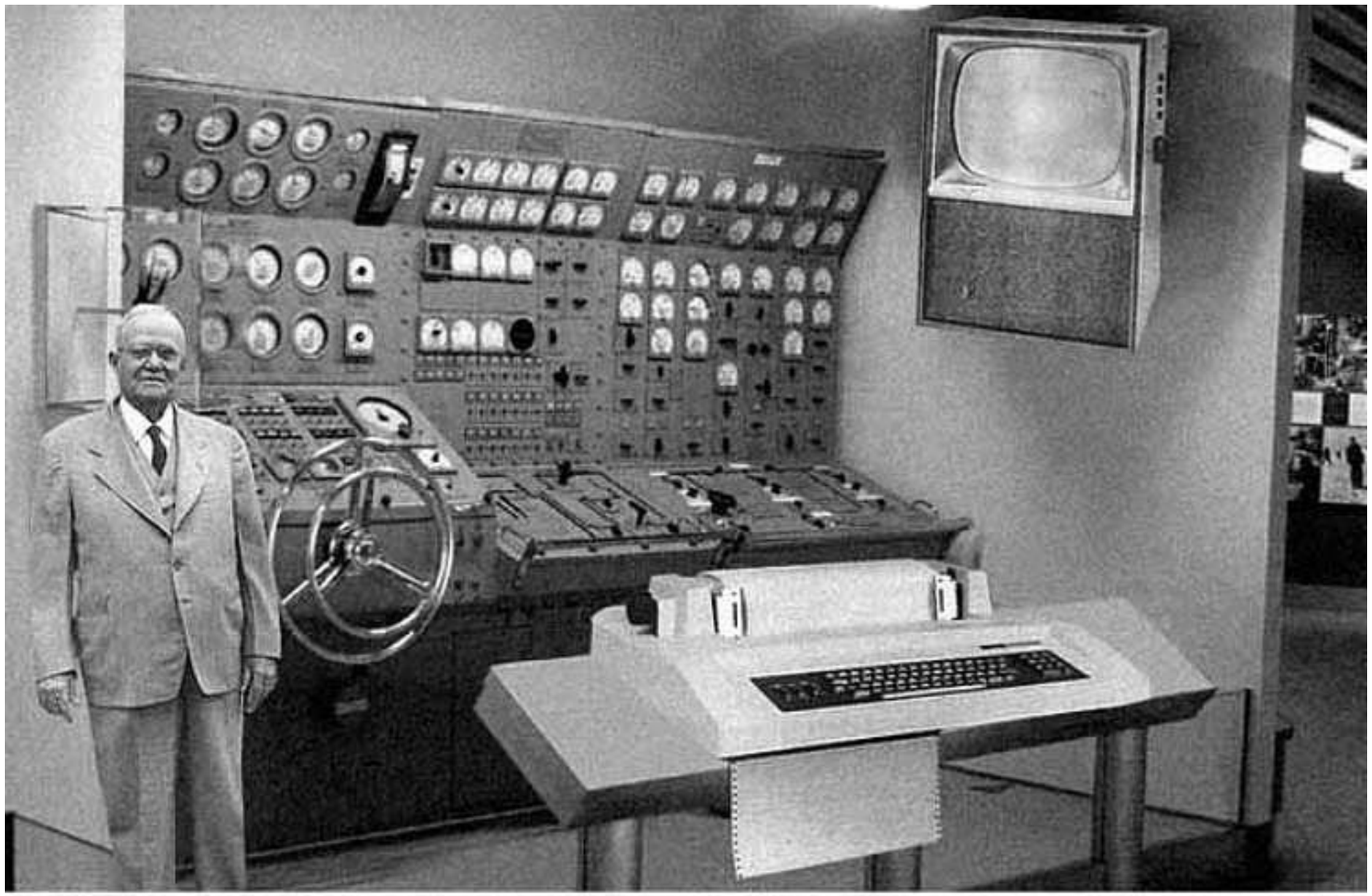
Of particular concern are the ethical issues of....

- ‘Big data’. Will TEA lead to new social and educational divisions?
- The proliferation of digitised assessment data.
- Using social software for assessment.
- Assessing young people’s informal learning.


0
10
inadequate
20
30
satisfactory
40
50
60
good
70
80
outstanding
90
100
My School

Key Recommendations

- Bodies to pool efforts to bring assessment into the digital mainstream.
- Disseminate existing R and D projects.
- Governments to invest in TEA to address barriers to implementation.



Scientists from the RAND Corporation have created this model to illustrate how a "home computer" could look like in the year 2004. However the needed technology will not be economically feasible for the average home. Also the scientists readily admit that the computer will require not yet invented technology to actually work, but 50 years from now scientific progress is expected to solve these problems. With teletype interface and the Fortran language, the computer will be easy to use.

ATTRIBUTED TO: – *Popular Mechanics*, 1954

thank you!