

constitutive

to constitute to interpret, to make sense of, to put a construction on
in exploring a constntial, commonly, interest, with the
of 2 sentences centered interpretive impact of change

DIAGRAM

learning language is about learning social construction
conventions of language

Context - how language is being used
+ what context it is being used in

Principle of diagram

Set up an interactive artifact
with some configuration of
observables, dependencies & agency

expt with
exercise the interaction
artifact to develop
explore
interpretations

↓
refine int. artifact

English language lesson - Science & technology ??
education

WORLD Roadway

Computer as a tool for implementing computations
based on mathematical algorithms!
know the rules

Roadway practicing a deep form of learning - and science
Could a robot scientist discover electromagnetism?

human interpreter uses computer as an instrument
computing is conceptually lacking & technically immature

2) Qn 1 key factors?
narrow view of science & technology

Computationalism
great subject with amazing possibilities
quantification
"qualitative"

BUT That is more
SHOULD human judgement
NOT
DISPLACE

Qn 2 Technological support for science education?
interactive learning activities
of openness of Faraday's learning in the world
no right answer for language construct.

'beware of the app'
function pre-specified

Qn 3 Challenges in Finland to export?

active learning in online framework
Finland has made v significant contributions
to both - the online technologies + active learning
BUT challenge to be met of -MTO
assessment / feedback
understanding extracting with learn content
digital artifacts taking precedence over text
BUT danger of incoherence

Qn 4 Challenge to Ministry?

CS education of Nat Curriculum office in UK
need to promote alternative to algorithmic thinking
dissolving the dualism between science & humanities
accommodating learners like Faraday
who don't come to science thru 'mathematics'
& rules.