Changes in Higher education: scenarios and experiences

Scenario planning to guide the adoption of learning technologies in education

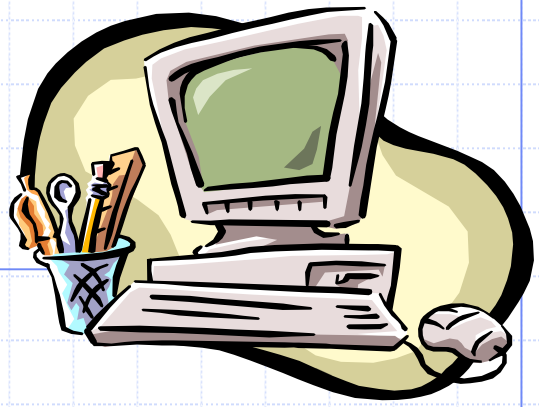
HEFCE, Centrepoint, London

26th November 2003

Wim de Boer

Outline

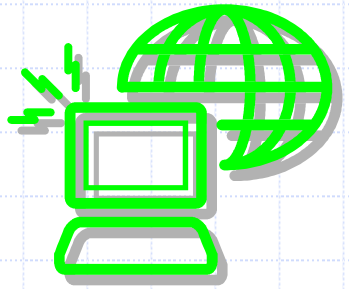
- Changes are slow: International survey results
- University scenario’s
- Strategies, possibilities & examples
- Activity
- Report of the activity and feedback



International comparative survey on the current and future use of ICT in Higher Education: Models of Technology and Change in Higher Education

Betty Collis, Marijk van der Wende
Wim de Boer, Petra Boezerooy, Gerard Gervedink Nijhuis

International research:



- What strategic choices do institutions make with respect to the use of ICT
- Which (perceived) external conditions and developments influence this choice and how?
- What role do external competition/ collaboration play?
- Which internal conditions and measures are taken in order to achieve the strategic targets
- What are the implications of the various strategic choices / models for Technology use, on teaching & learning Time, and on workload and satisfaction of staff?

Methodology

- Countries: the Netherlands, Germany, the United Kingdom, the United States of America, Australia, and Finland
- Actors: decision-makers, instructors, and support staff
- Survey questionnaire

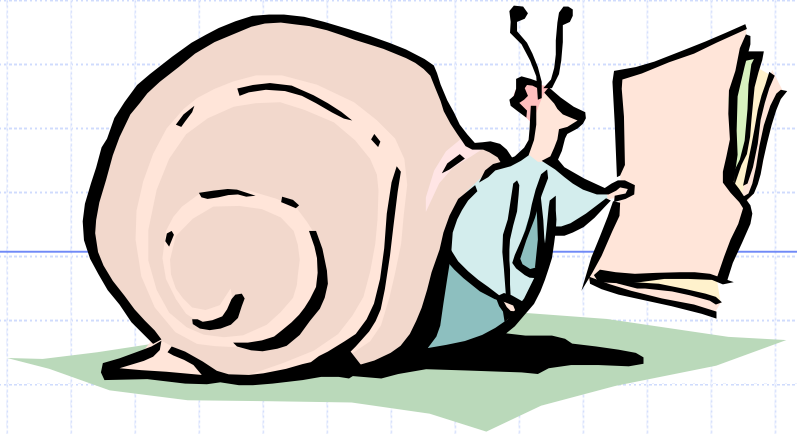
Response

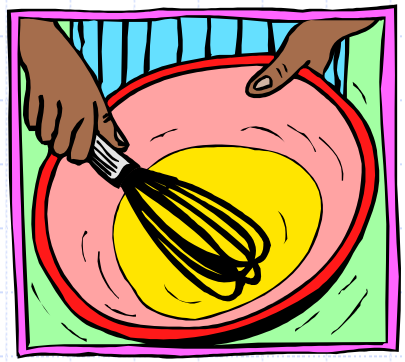
Countries	Number of institutions	Percentage of total sample
Germany	64	36.8
UK	27	15.5
Netherlands	26	14.9
Norway	17	9.8
USA	17	9.8
Finland	16	9.2
Australia	7	4
Total	174	100

Approximately 25% of the German institutions, 50% of the Dutch institutions, 20% of the Australian universities, 30% of all Finnish institutions, 50% of all Norwegian institutions and 27% of the UK universities responded to the survey. As for the USA less than 1% of all institutions responded and only 8% of those addressed.

Trend 1:

Change is slow, and not radical





Trend 2:

ICT in teaching and learning: part of a blend

Lectures are still dominant

Not replacing the instructor

Not replacing the lecture or the book

Teaching Practice

Interaction with the instructor	Very low amount	4.08	Very high amount
Interaction among students	Very low amount	3.73	Very high amount
student participation	individually	2.65	As part of a group
How much Web-based?	None	2.54	Entire course is Web-based
Student communication	face to face	2.22	Only via the computer

Type of learning setting

Typical learning setting (N=690)	Now	Future
	Mean	Mean
On-campus settings for course activities	4.55	4.26
Variations in where and how students participate, in campus-based setting	3.34	3.96
Many students are attending at a distance	2.05	2.80
Students use the home institution as a base but pick and choose their courses from many locations	1.85	2.81

1=little or none, 3=some, 5=very much the case

Influence of ICT in teaching practice:

E-mail systems	3.9
Web resources	3.9
Web-based course management systems	2.5
Wireless solutions	1.7
Planning tools, such as network-accessible agendas	2.3
Externally available courses or modules, accessible via the Web	2.1
Conferencing tools (video, audio, chat)	2.0

1= very little, 3=some, 5=very much

Trend 3:

Instructors doing more, but with no reward

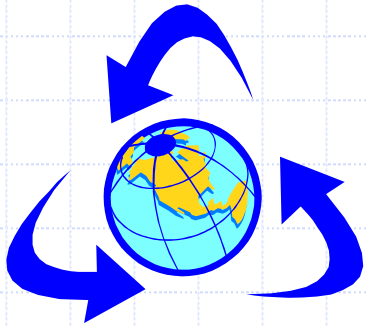
-Offering more flexibility

-Spending more time because of technology

Why the implementation of ICT in HE is slow?

Is there a clear need for change?

Change…



- broader and more diverse students (LLL, from compagnies, international)
- changing roles of instructors
- more-flexible curricula
- new delivery methods
- globalization of higher education

"A mix of on-campus and flexible learning is an ideal mode of delivery for many of the new types of learners. The lifelong learning market for formal university and college courses in knowledge-based economies is at least as great as the market for students leaving high school"

(Bates, 2001)

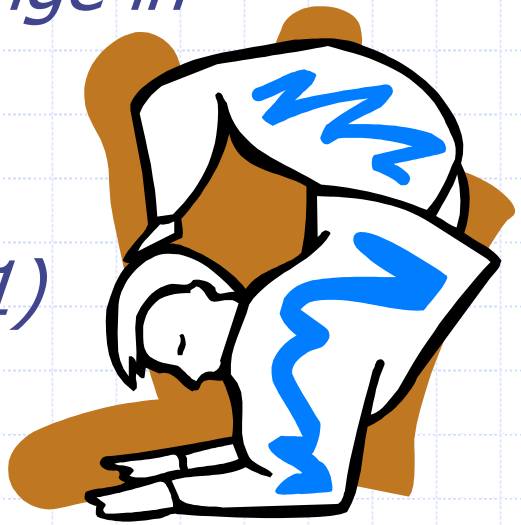
Flexibility as an answer...

- often taken as synonymous with distance education: time, place and pace
- But not only:
  - When and where..., also:
  - What (options in course resources)
  - How (options in types of learning activities)
- The key idea is offering *learner choice* in different aspects of the learning experience.

Technology and flexibility

"Flexibility is seen as the key idea, and flexibility requires technology. Thus new developments in technology feature in much of the change in higher education"

(Collis & Moonen, 2001, p. 31)



Main Questions

Which scenarios are emerging with respect to the use of technology in higher education and how can strategic choices be based on them?

Where are we going?

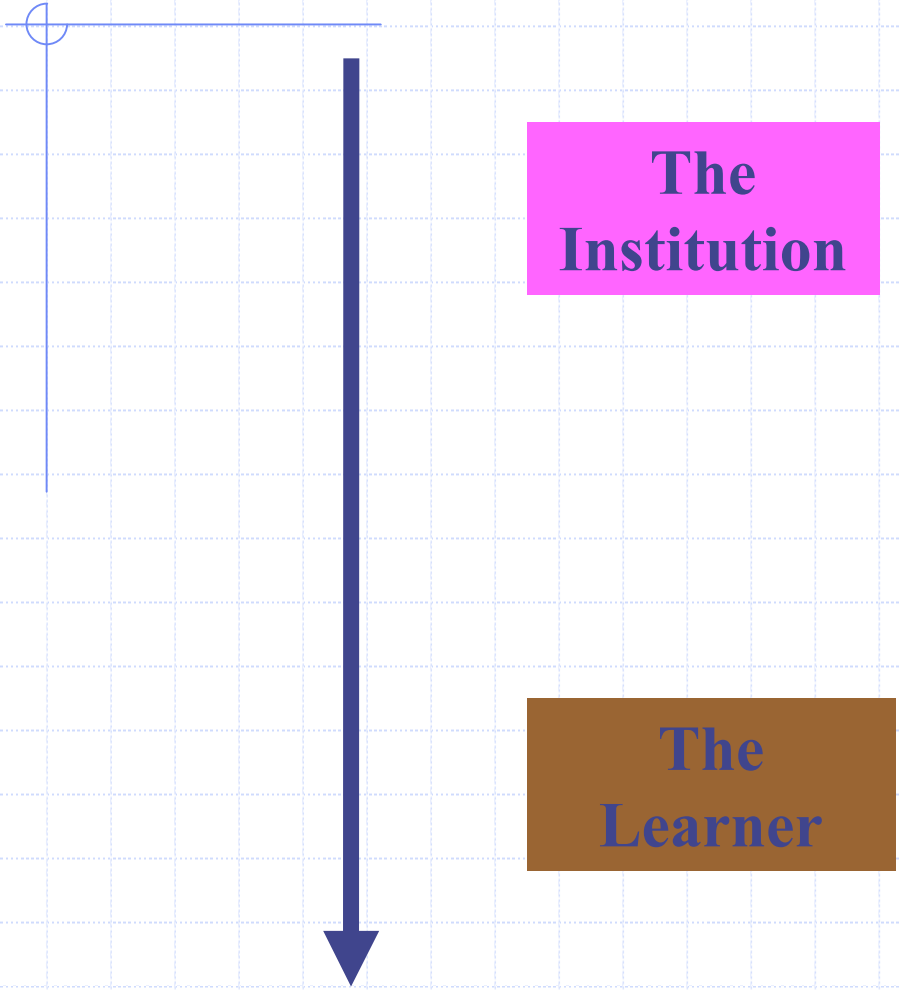
Are there better ways to get there?

Where do you go?

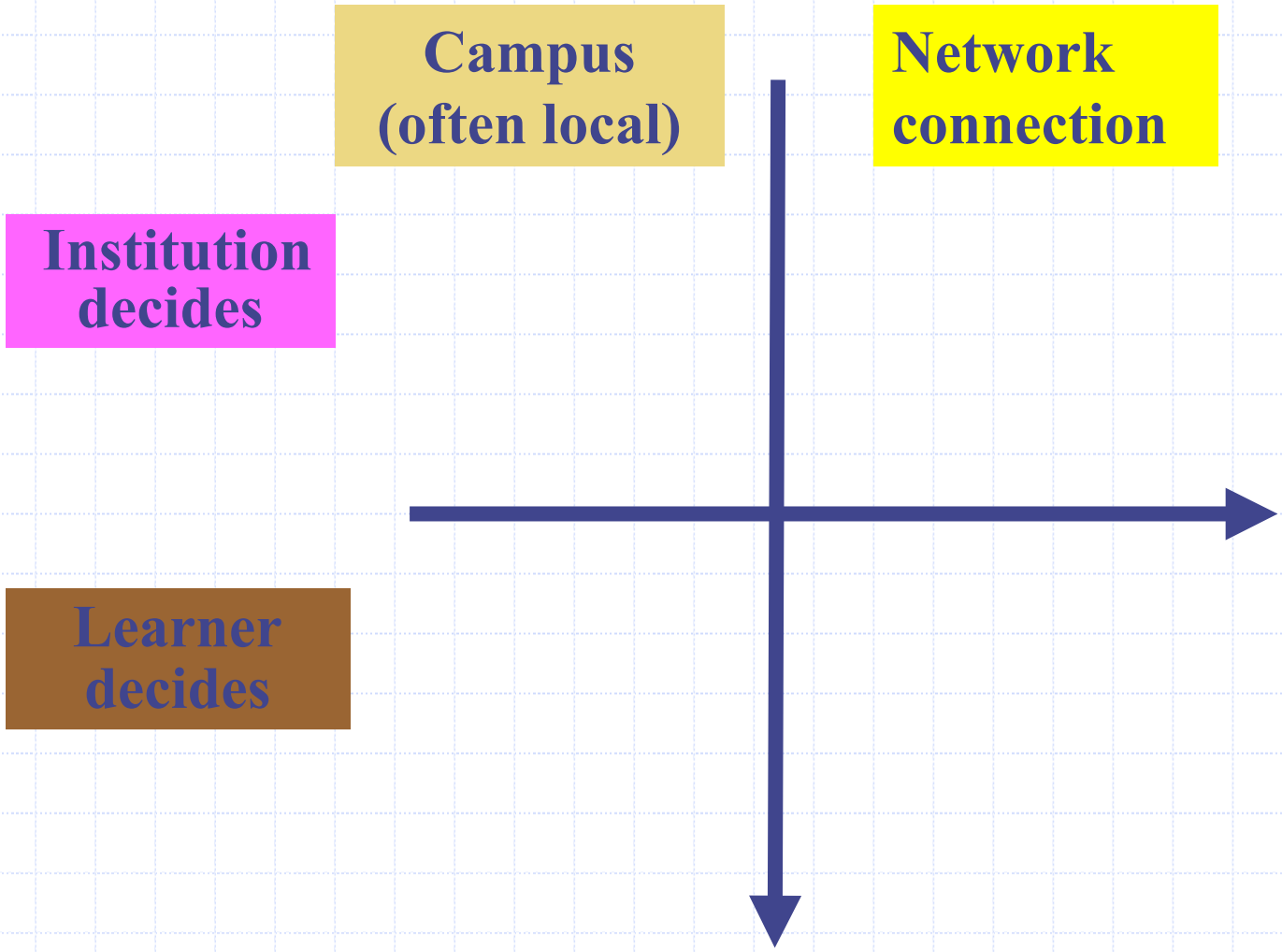
Campus (often local)

Network connection

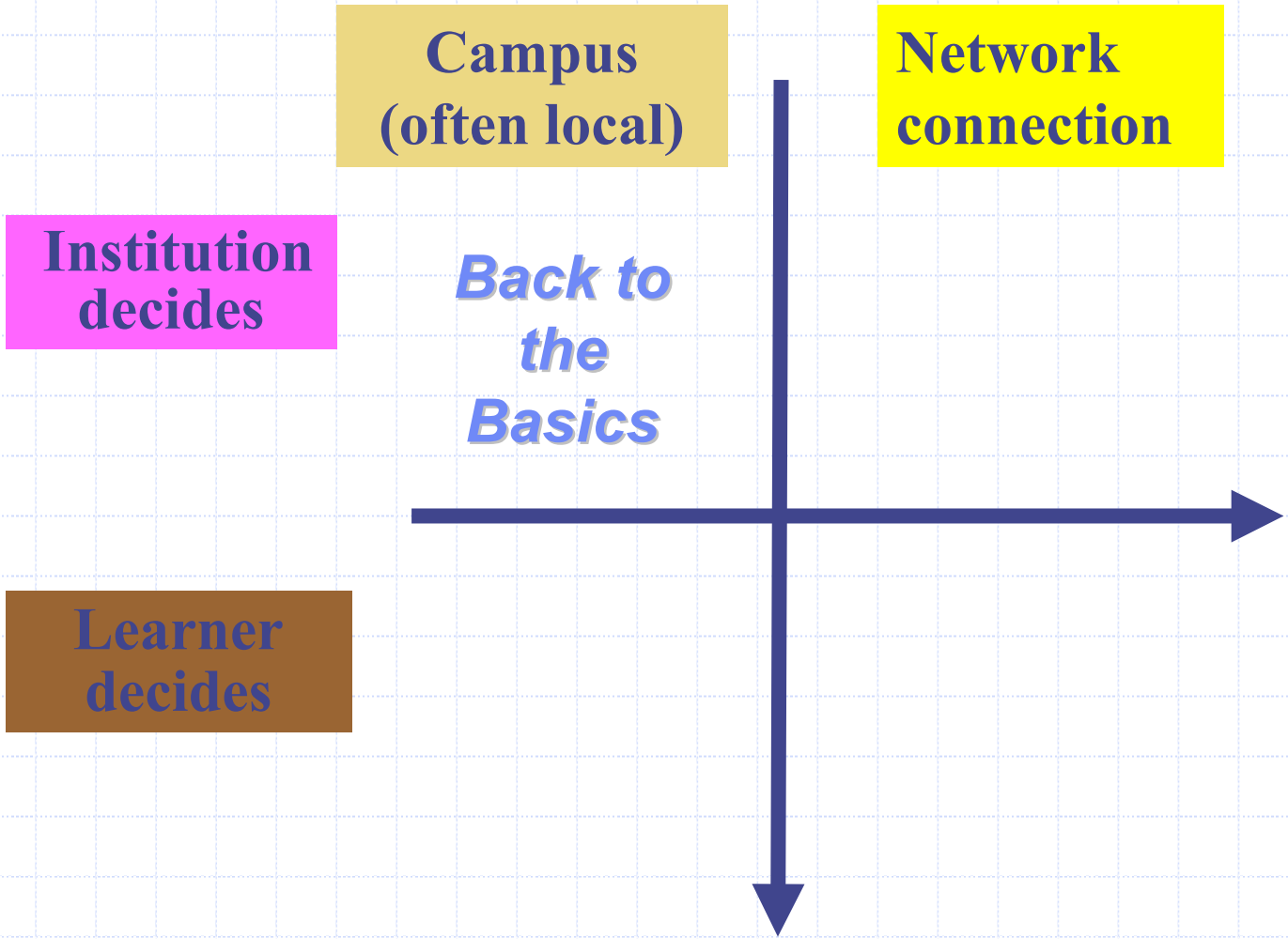
Who decides what and how students learn?



Putting these together…



4 Scenarios for Change



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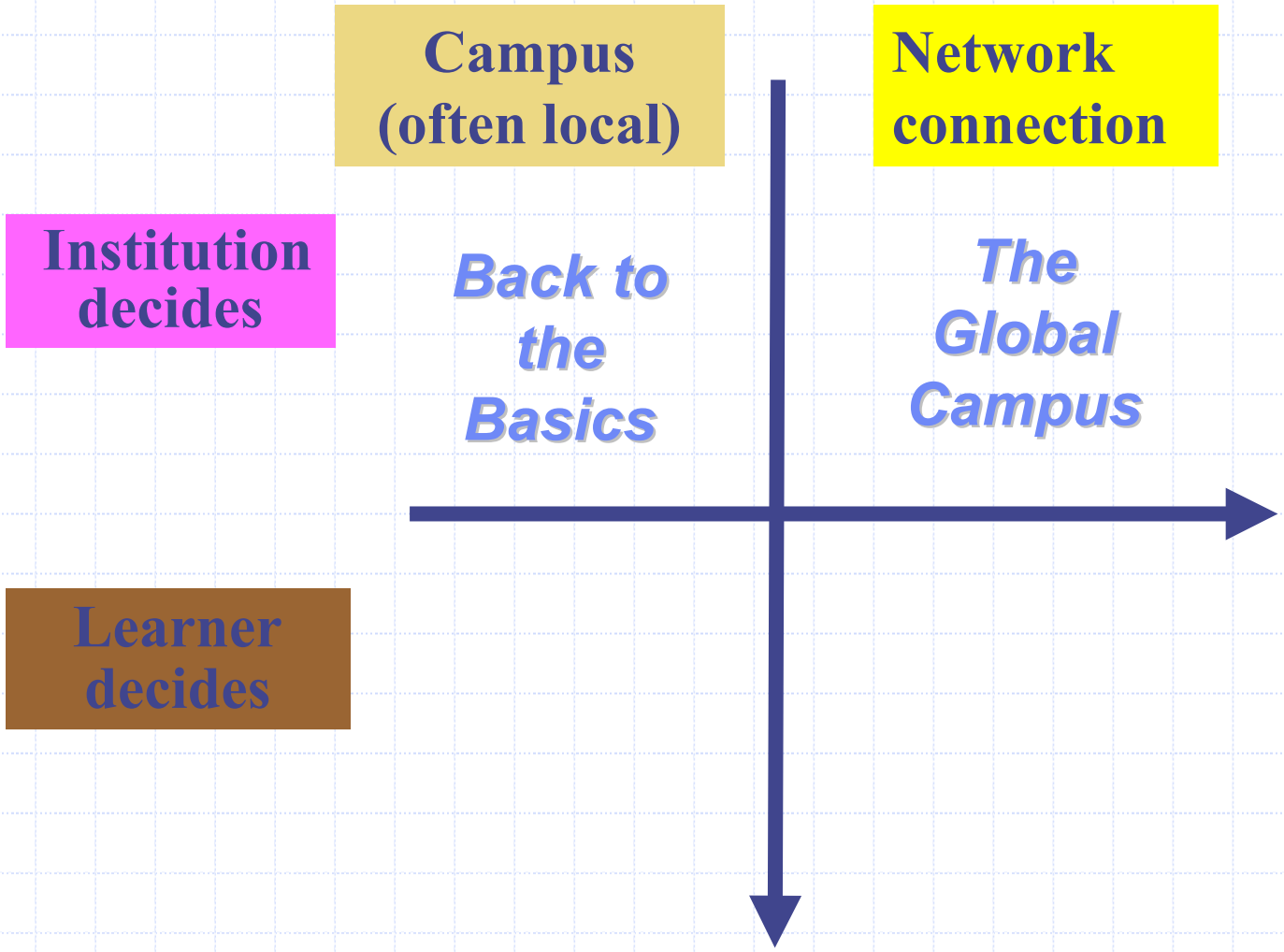

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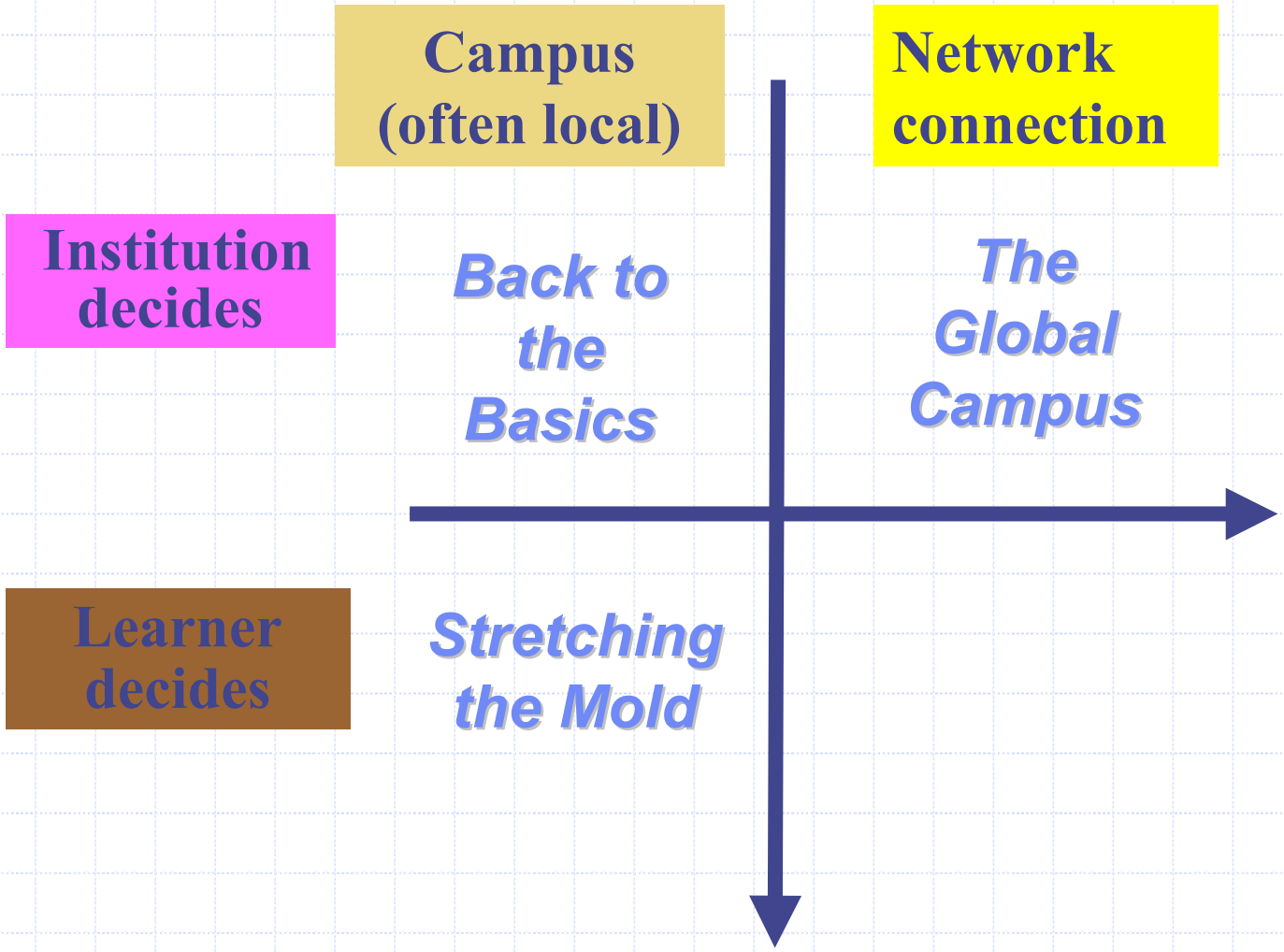

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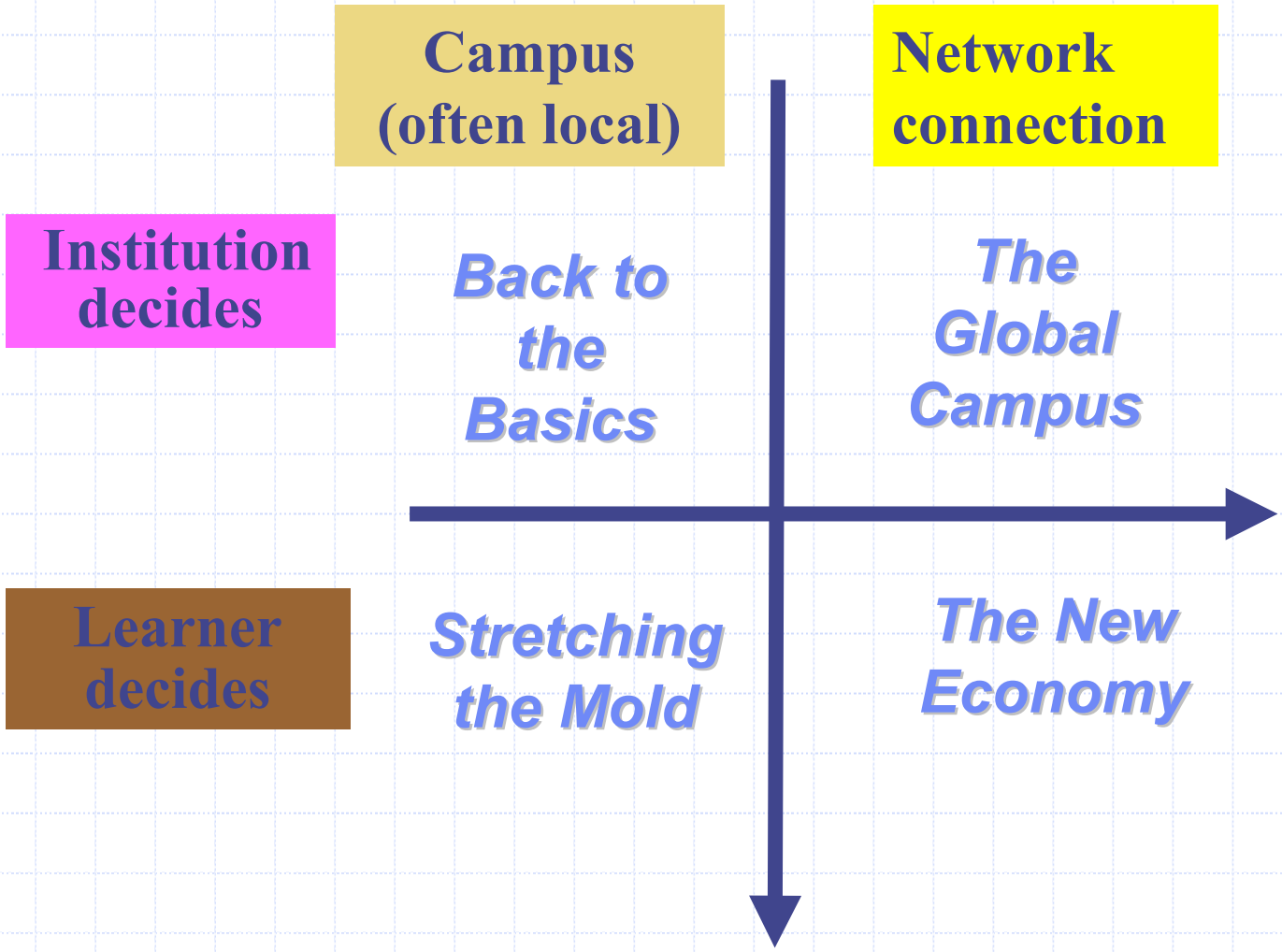
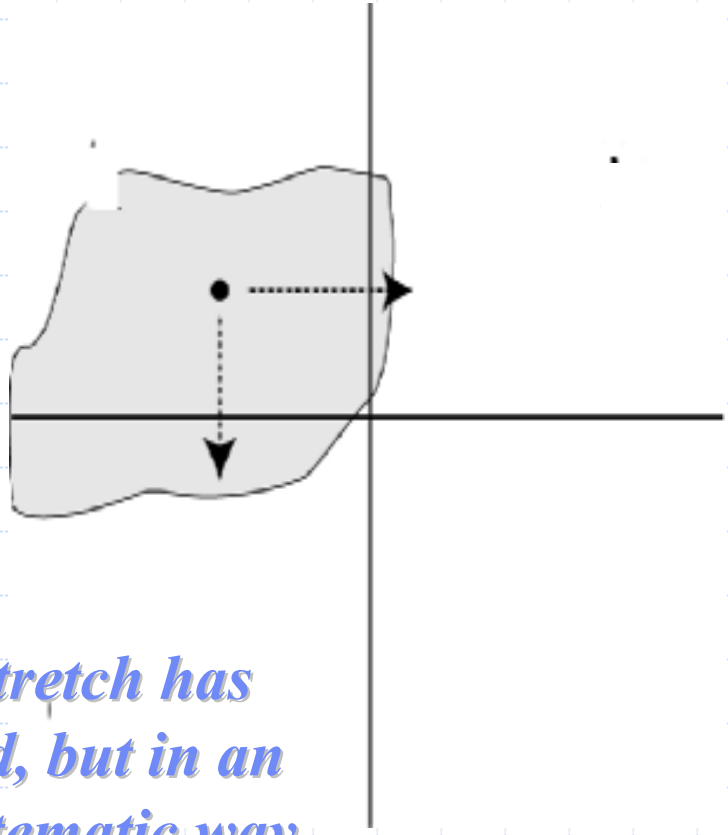
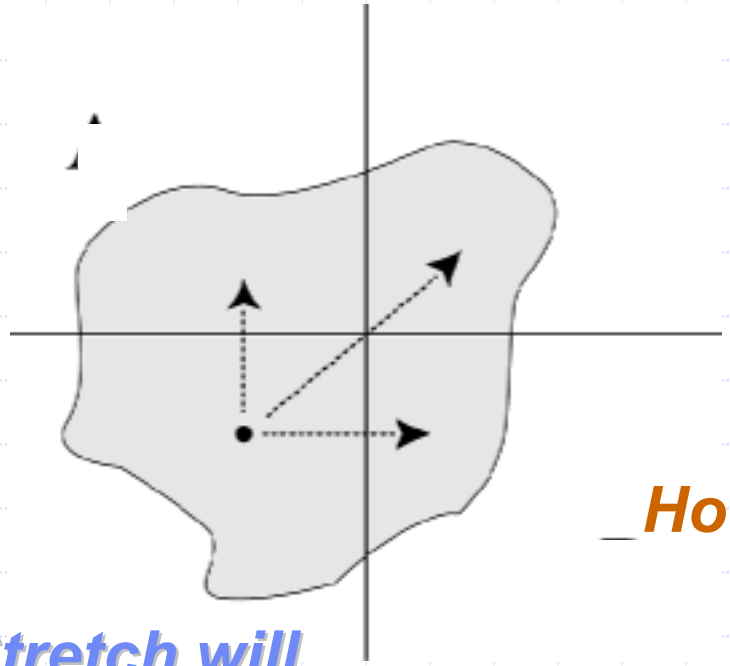


From the survey: Current situation?



The Stretch has started, but in an unsystematic way

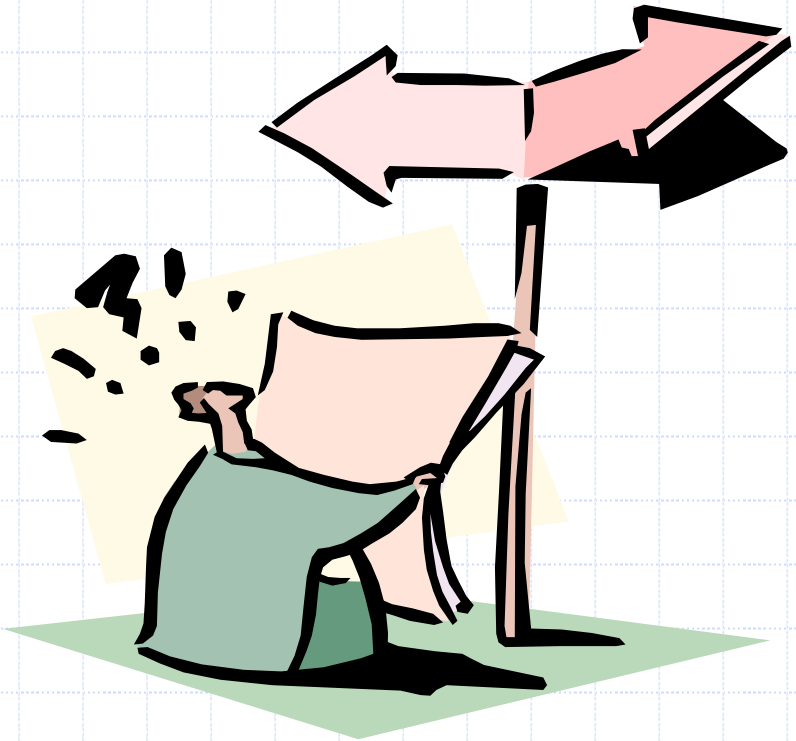
Expected situation (5 years hence)?



How to get there?

The Stretch will be more systemic

… by helping instructors to be systematic about *Stretching the Mold*



- **By a Model and "Flexibility Dimensions"**
- **By tools in our course-management system**

Workshop: using the models

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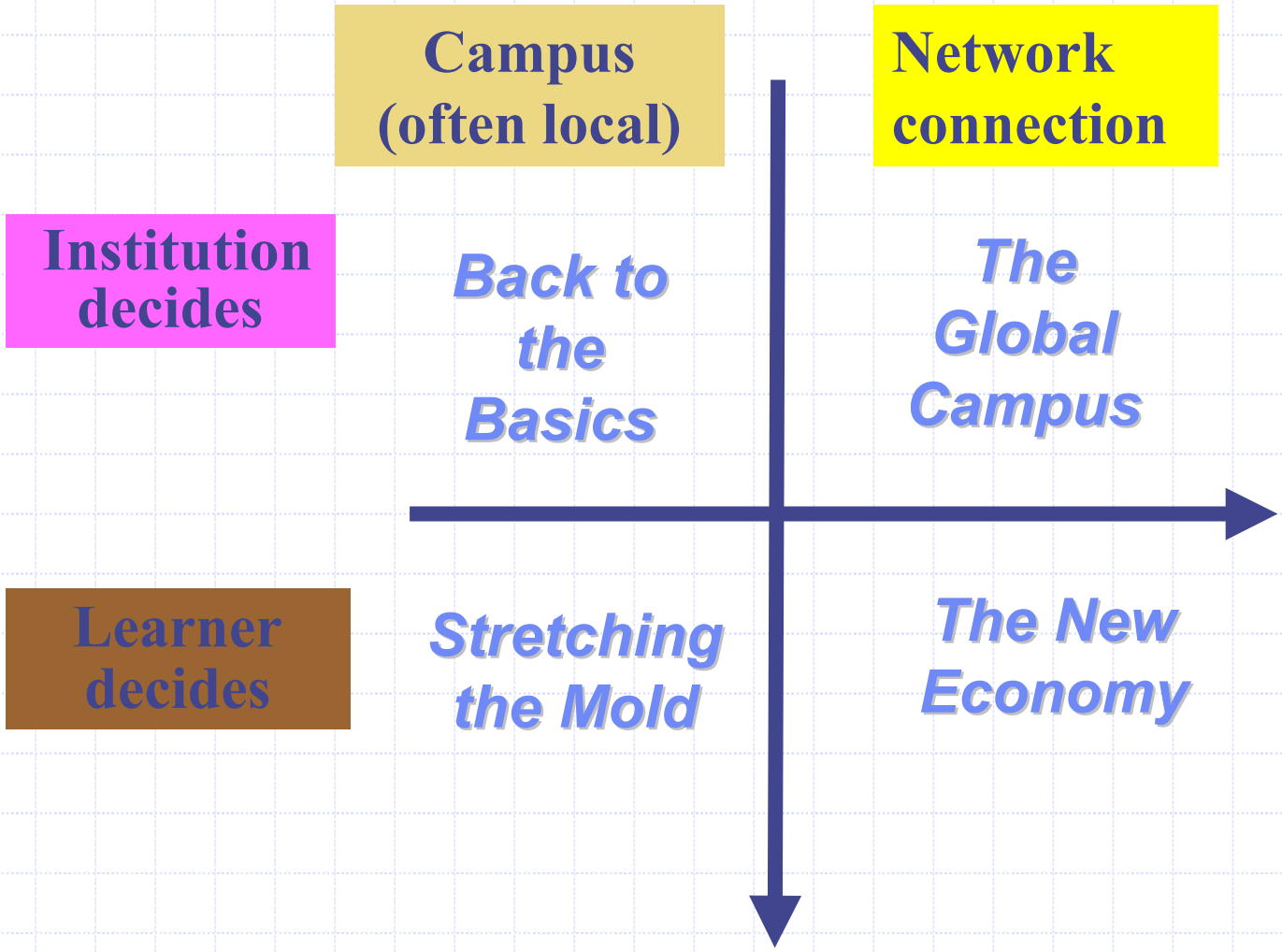
Activity 1

Example 1

Two examples: what scenarios?

Example 2

4 Scenarios for Change



Activity 2

- Make groups of 5 persons, choose one university as a case
- Steps:
  - Where to focus upon?
  - What choices do you make?
- Approach:
  - Investigate your problems with your target groups, pedagogies and learning routes. Be specific.
  - Make choices for types of flexibility, pedagogy, use of technology and implementation

What is your goal?

- New cohorts? (LLL, Learning on the job, distance learning, international students)
- New pedagogies? (Active learning, self study, group-based learning)
- Interpersonal or planning flexibility?
- Be more efficient? (do more with the same number of staff)
- Combination of …?

What options in flexibility do you choose?

Time
Content
Entry requirements
Instructional approach and resources
Delivery and logistics

Options in Flexibility (Collis)

time:
for starting and finishing
for submitting assignments and interaction
Tempo/pace of studying
Moments of assessment
content:
Topics of the course
Sequence of different parts of a course
Orientation of the course
Key learning materials of the course
Assessment standards and completion requirements

entry requirements:
Conditions for participation
instructional approach and resources:
Social organization of learning
Language to be used during the course
Learning resources: Modality, origin
Instructional organisation of learning
delivery and logistics:
Time & place for contact
Methods, technology for support and contact
Types of help, com. available, technology req.
Location, technology for participating the course
Delivery channels for course information, content, communication

What choice in pedagogy?

- Learning as knowledge acquisition versus learning as participation
- Group based vs individual
- Authentic vs academic problems
- …

What technology for course support do you need? How?

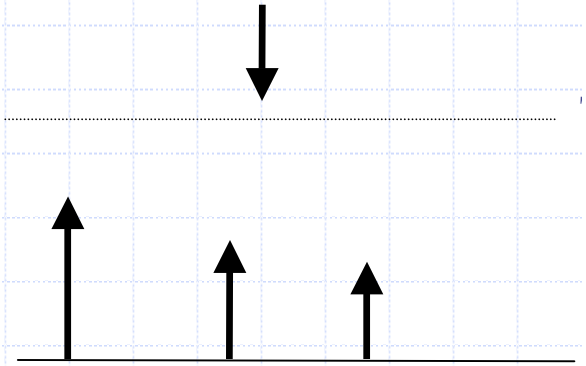
- Publication, information dissemination
- Communication
- Collaboration
- Information and resource handling
- Specific for teaching and learning purposes
- Port folio; pdp
- Testing
- Self study
- For course integration

In an integrated environment? i.e. an ELO:

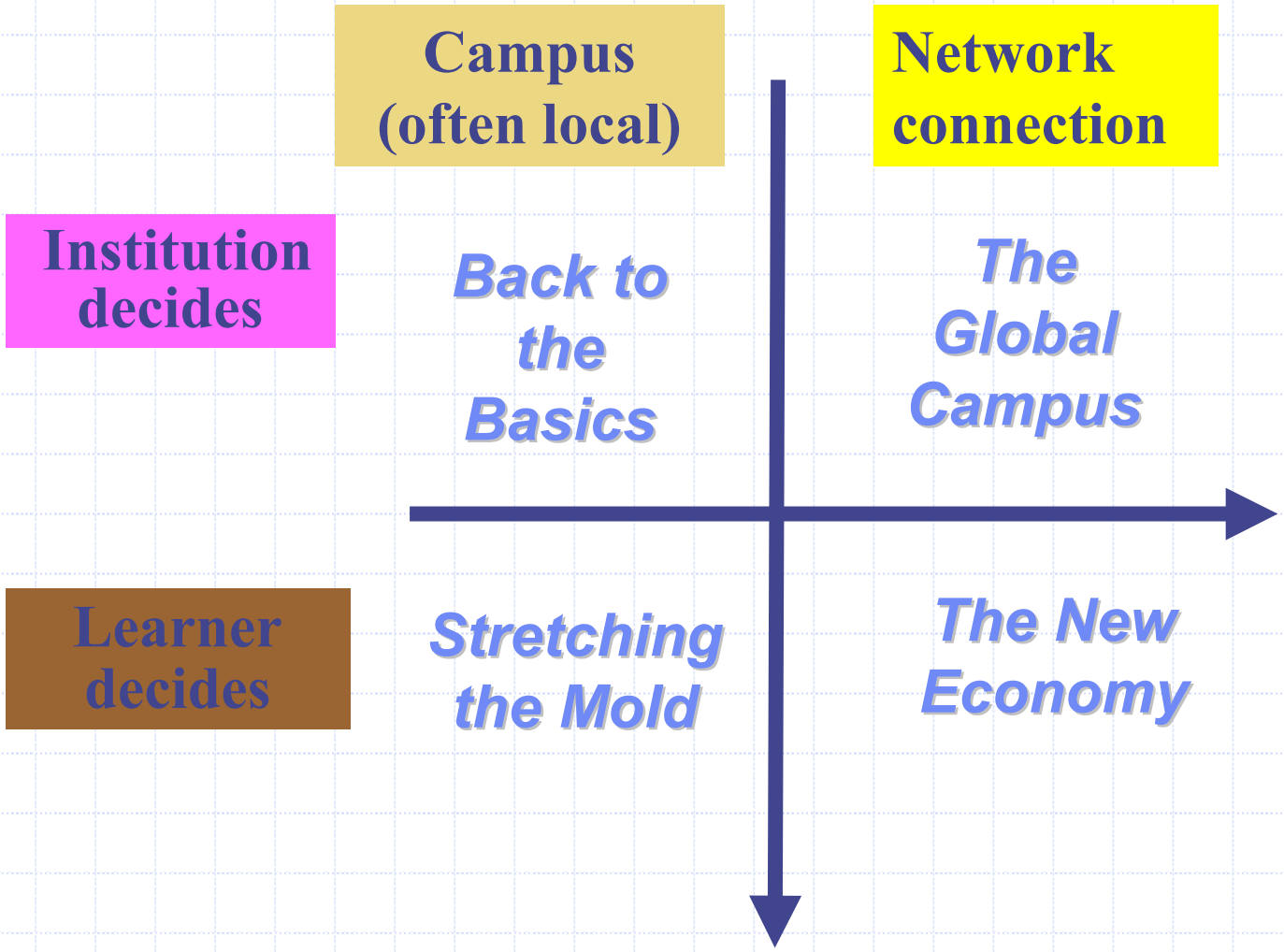
- Course organization
- Lectures, contact sessions
- Self-study, assignments
- Major assignments
- Testing
- Mentoring, communication not specific to the above list

How implement?

- 4-E model factors:
  - Environment
  - Ease of use
  - Engagement
  - Educational effectiveness
- What term, support, means, ….?

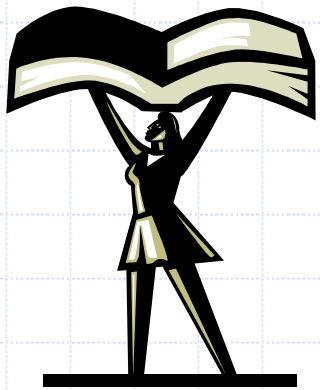


Which quadrant are you in?



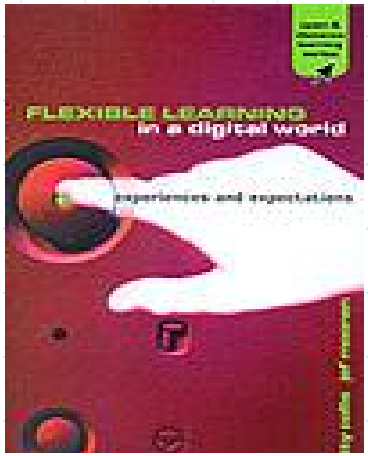
Report

- Your main problem / focus
- Choices (flexibility, pedagogy and technology)
- Your implementation ideas
- Which quadrant you are heading



For more information?

- W.f.deboer@utwente.nl; http://users.edte.utwente.nl/boerwf
- Collis, B., & Wende, M. van der (2002). Models of technology and change in higher education: An international comparative survey on the current and future use of ICT in HE http://www.utwente.nl/cheps/documenten/ictrapport.pdf
- Betty Collis & Jef Moonen, 2001 (http://www.kogan-page.co.uk/)



From the survey: The United Kingdom

The UK institutions report among the highest scores on the use of ICT in typical courses, although the actual range of ICT options and tools used seems relatively low. Scores for various types of flexibility offered (including teaching language) are among the lowest and there are no very high expectations for the future in this respect. This seems to be related with the low scores on the effects expected from changing student demand (lifelong learning or international students) and of the contribution that appropriate ICT use can be make to good education. It is well understood that international students are an important target group of UK institutions, but apparently this is perceived as an on-campus activity in traditional face-to-face learning settings, rather than by using ICT or distance learning options. Finally, the UK institutions are among the least concerned about foreign competition and thus demonstrate among the lowest scores on the effect of this on their ICT policies.