OPEN EDUCATIONAL RESOURCES: A CATALYST FOR INNOVATION IN EDUCATION

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BETTER POLICIES FOR BETTER LIVES

Outline

- What are OER?
- Innovation in education
- Potential of OER in driving innovation
- Challenges: usage and sustainability
- What role can public policy play?
- A few final comments

OER: what are they and what are they not?

Open educational resources are digital learning resources offered on line (although sometimes in print) freely and openly to teachers, educators, students, and independent learners in order to be used, shared, combined, adapted, and expanded in teaching, learning and research. They include learning content, software tools to develop, use and distribute, and implementation resources such as open licenses. The learning content is educational material of a wide variety, from full courses to smaller units such as diagrams or test questions. It may include text, images, audio, video, simulations, games, portals and the like.

OER: what are they and what are they not?

- Not just "stuff on the web"
- Not any digital material or resource is OER
- MOOCs are rarely OER
- The five Rs of OER
  - Retain
  - Reuse
  - Revise
  - Remix
  - Redistribute
- Enabled by IP licensing such as Creative Commons

Benefits of OER

- Benefits of OER are mostly seen with regard to their impact on costs of education, which are significant
  - Although OPEN ≠ FREE
- OER are not in themselves a technological innovation, but they are a force of social and educational innovation made possible by technology
- Still, one has the impression that the systemic transformative impact of 'Open' is greater in science and research than in education
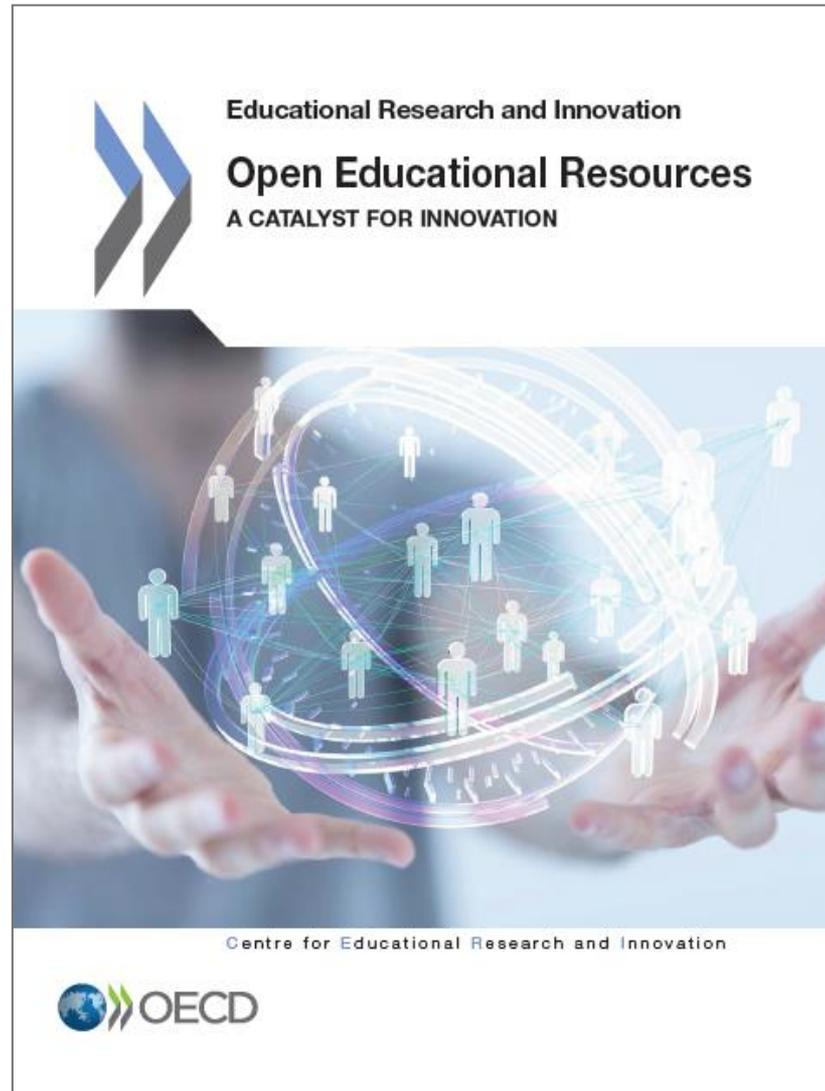
OER and innovation

- Talk based on an OECD Centre for Educational Research and Innovation (CERI) work on the policy benefits of OER, sponsored by the Hewlett Foundation

- Report *Open Educational resources: a Catalyst for Innovation* published in 2015
  - CC-licensed publication, freely available

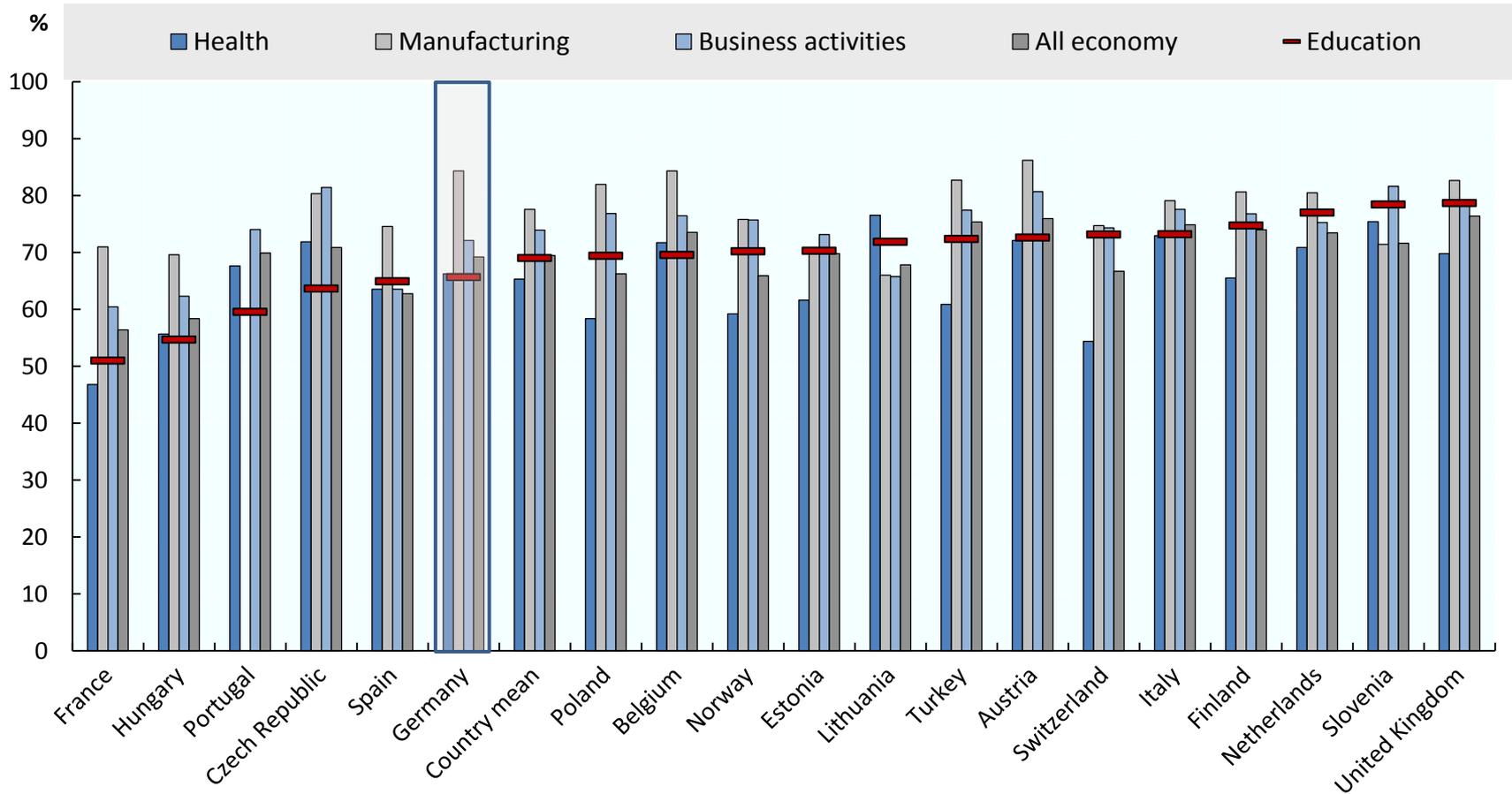# OECD/CERI work on Open Educational Resources
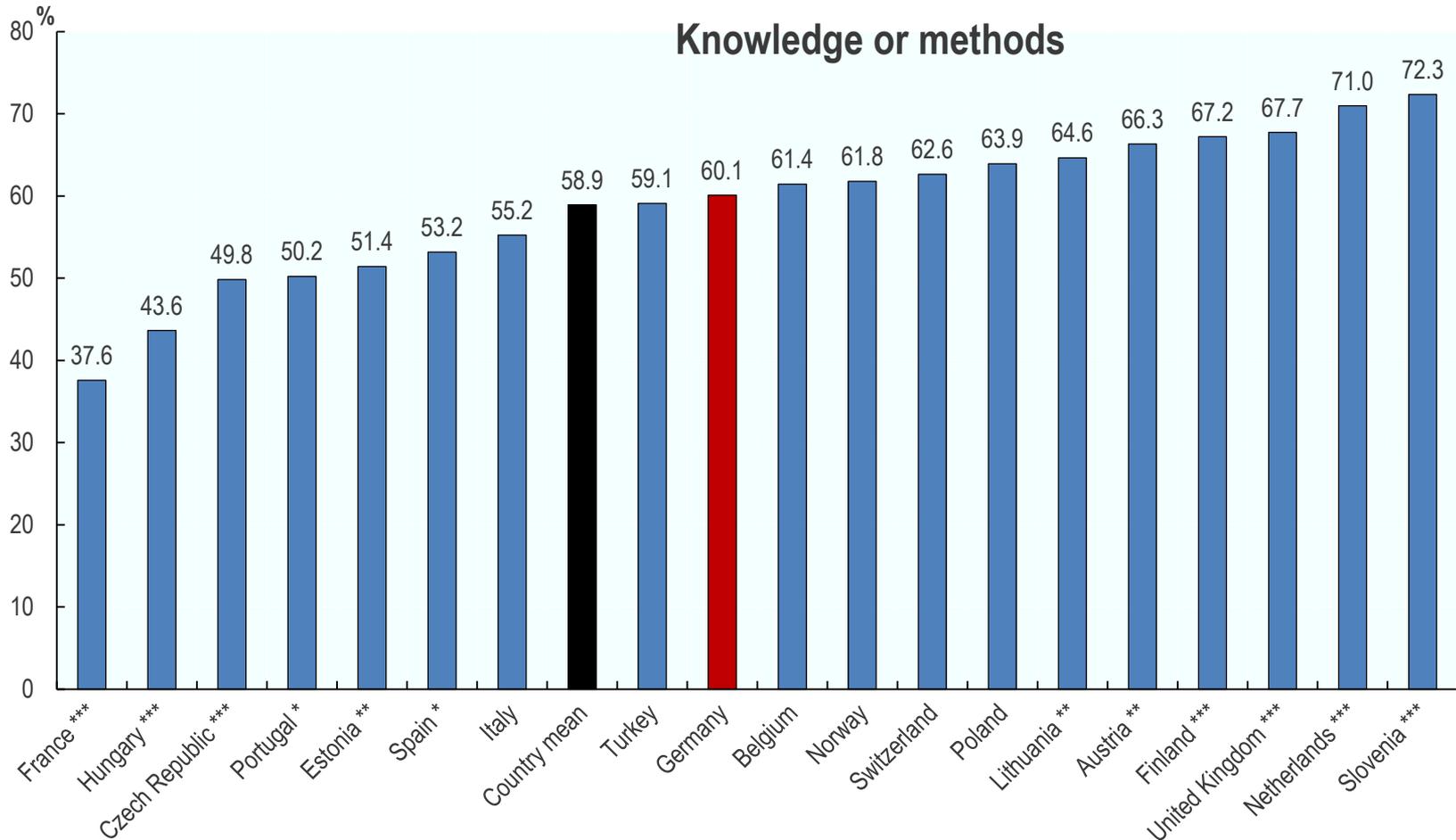
INNOVATION IN EDUCATION

Percentage of graduates working in highly innovative workplaces, by sector, 2005 or 2008

Percentage of graduates working in the education sector in highly innovative workplaces, 2005 or 2008

Knowledge or methods

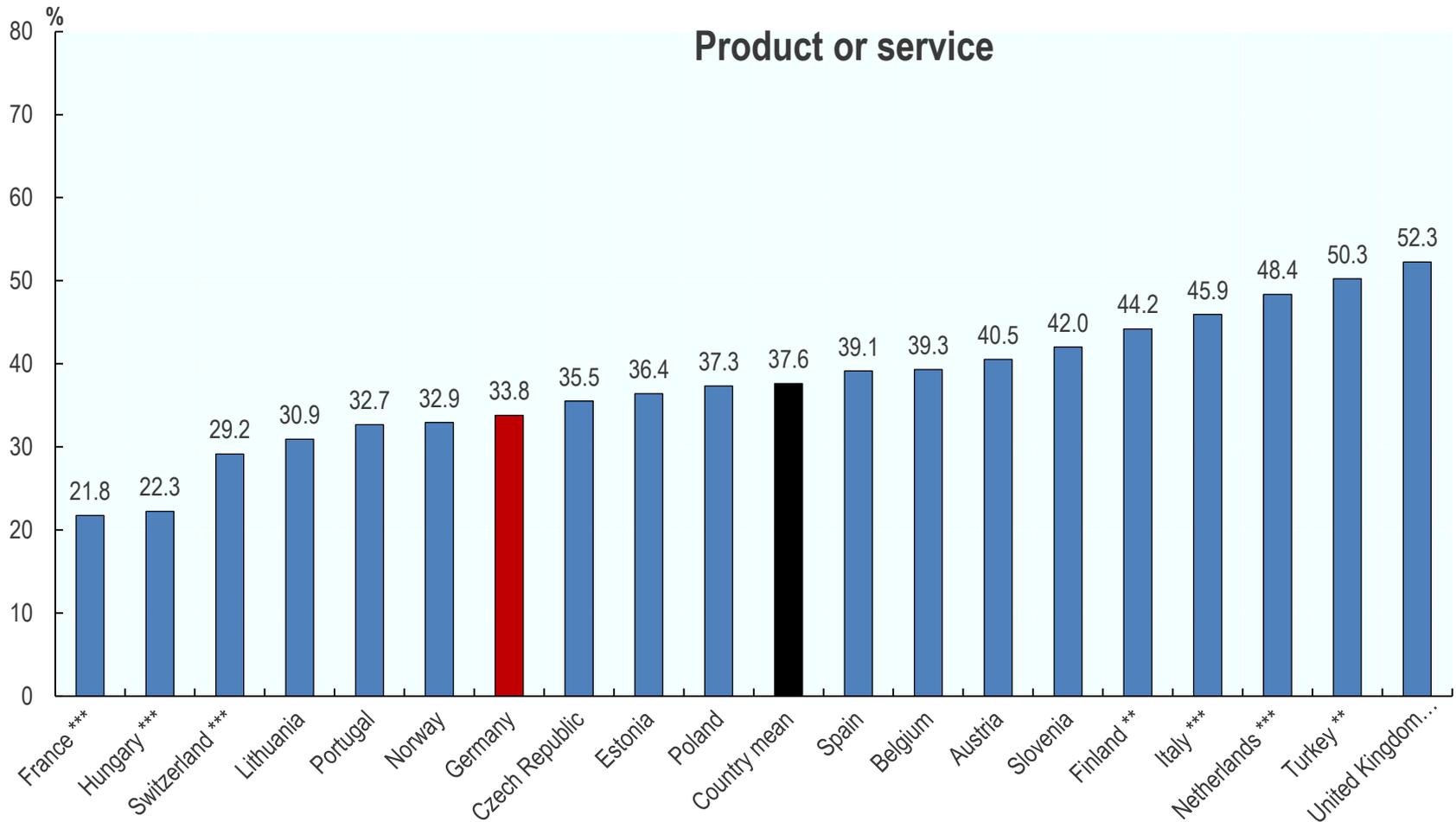| Country	%
France ***	37.6
Hungary ***	43.6
Czech Republic ***	49.8
Portugal *	50.2
Estonia **	51.4
Spain *	53.2
Italy	55.2
Country mean	58.9
Turkey	59.1
Germany	60.1
Belgium	61.4
Norway	61.8
Switzerland	62.6
Poland	63.9
Lithuania **	64.6
Austria **	66.3
Finland ***	67.2
United Kingdom ***	67.7
Netherlands ***	71.0
Slovenia ***	72.3

Percentage of graduates working in the education sector in highly innovative workplaces, 2005 or 2008

Product or service

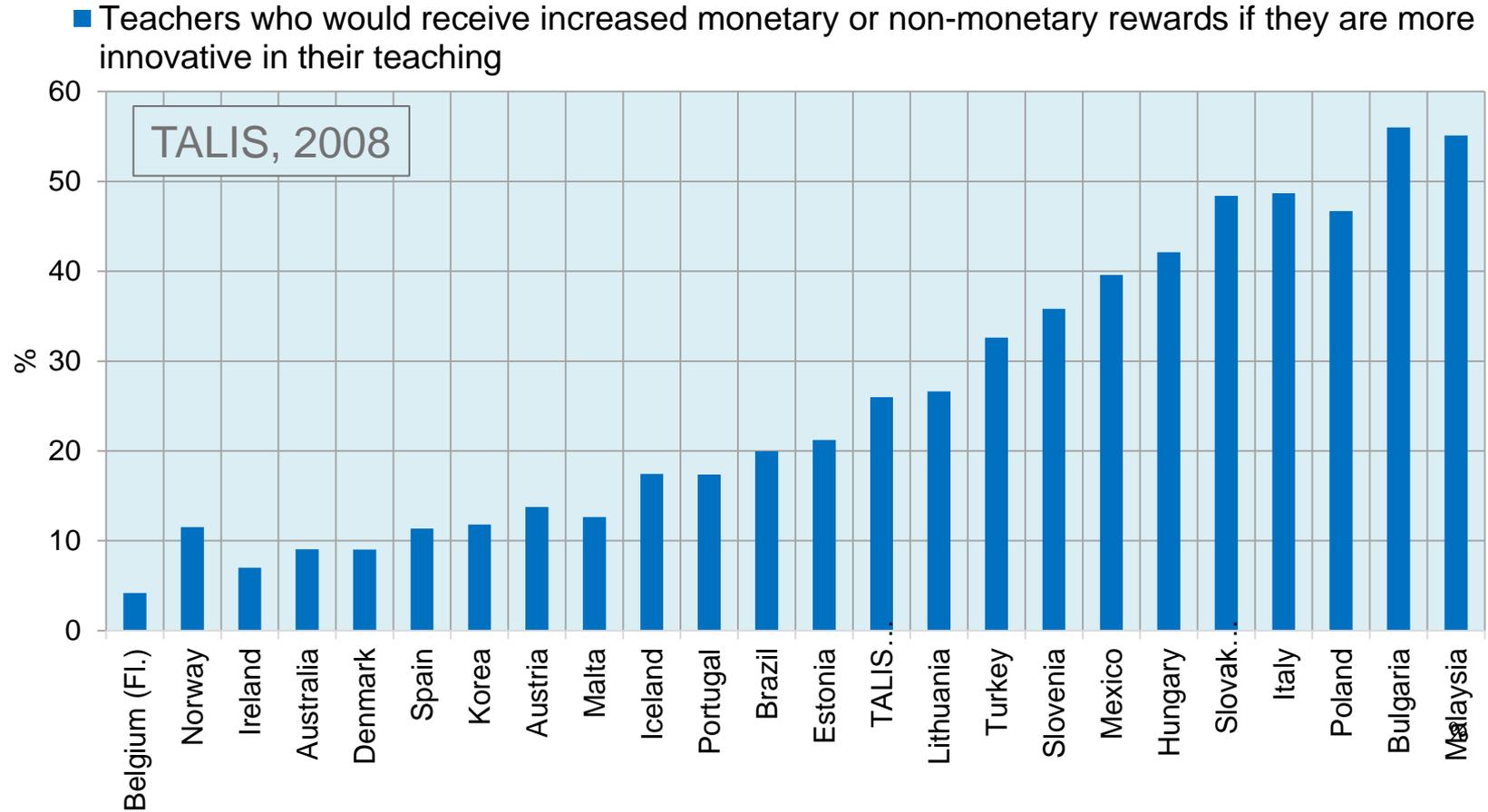| Country	%
France ***	21.8
Hungary ***	22.3
Switzerland ***	29.2
Lithuania	30.9
Portugal	32.7
Norway	32.9
Germany	33.8
Czech Republic	35.5
Estonia	36.4
Poland	37.3
Country mean	37.6
Spain	39.1
Belgium	39.3
Austria	40.5
Slovenia	42.0
Finland **	44.2
Italy ***	45.9
Netherlands ***	48.4
Turkey **	50.3
United Kingdom…	52.3

Percentage of graduates working in the education sector in highly innovative workplaces, 2005 or 2008

Technology, tools or instruments

%

Country	Value
Germany ***	19.1
Netherlands ***	23.7
Norway ***	25.5
France ***	28.6
Hungary	28.8
Poland	30.4
Finland	32.7
Slovenia	33.9
Switzerland	35.8
Belgium	36.1
Country mean	36.4
Austria	37.1
Czech Republic	37.3
Portugal	40.4
Spain **	42.9
Estonia **	44.2
Lithuania	45.3
Italy ***	45.7
Turkey ***	51.2
United Kingdom…	53.0

Teachers feel not rewarded by innovation

■ Teachers who would receive increased monetary or non-monetary rewards if they are more innovative in their teaching

TALIS, 2008

HOW CAN OER DRIVE INNOVATION IN EDUCATION?
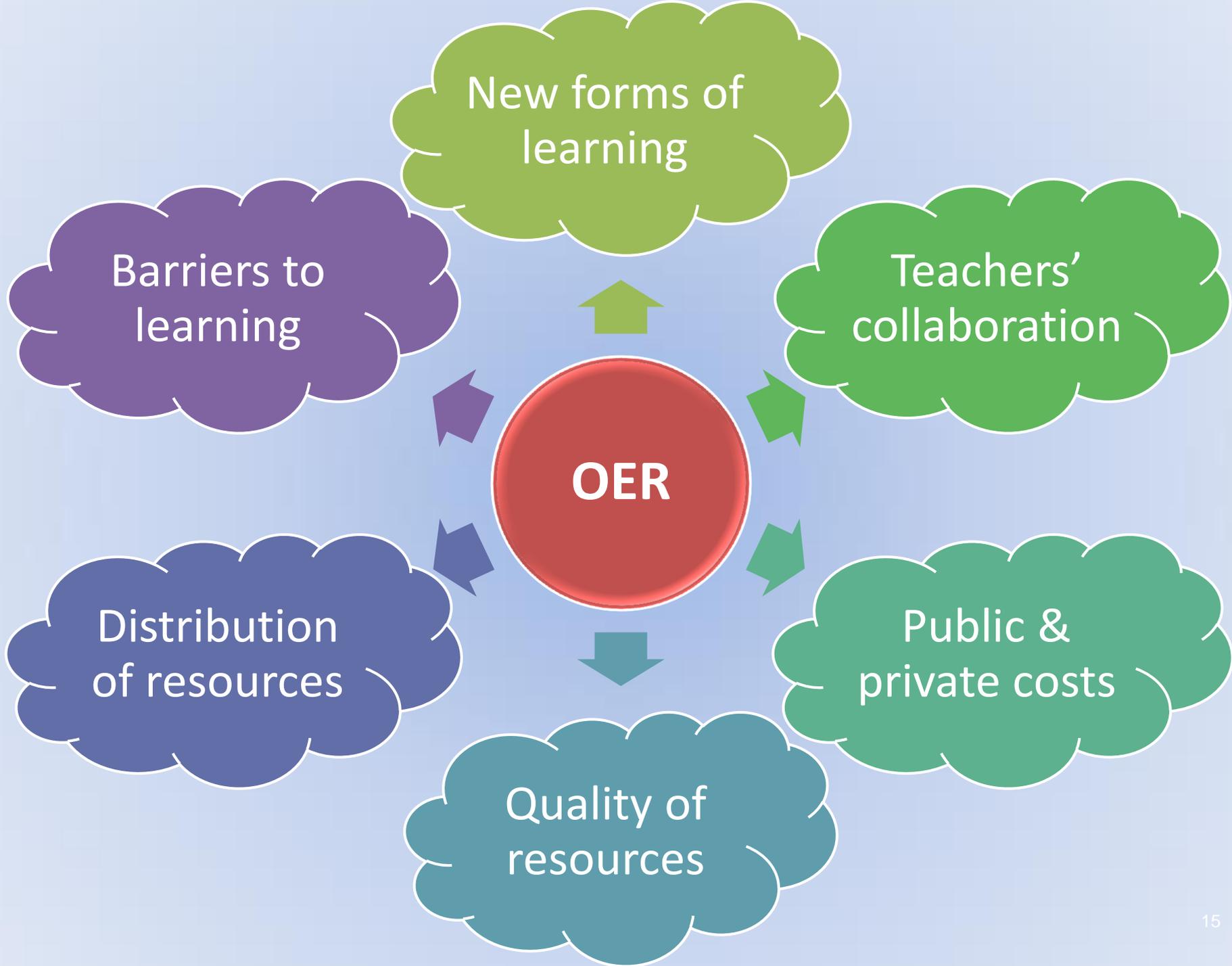
Relative strength of policy benefits of OER

Number of countries agreeing to statement as major, minor or not an argument for OER
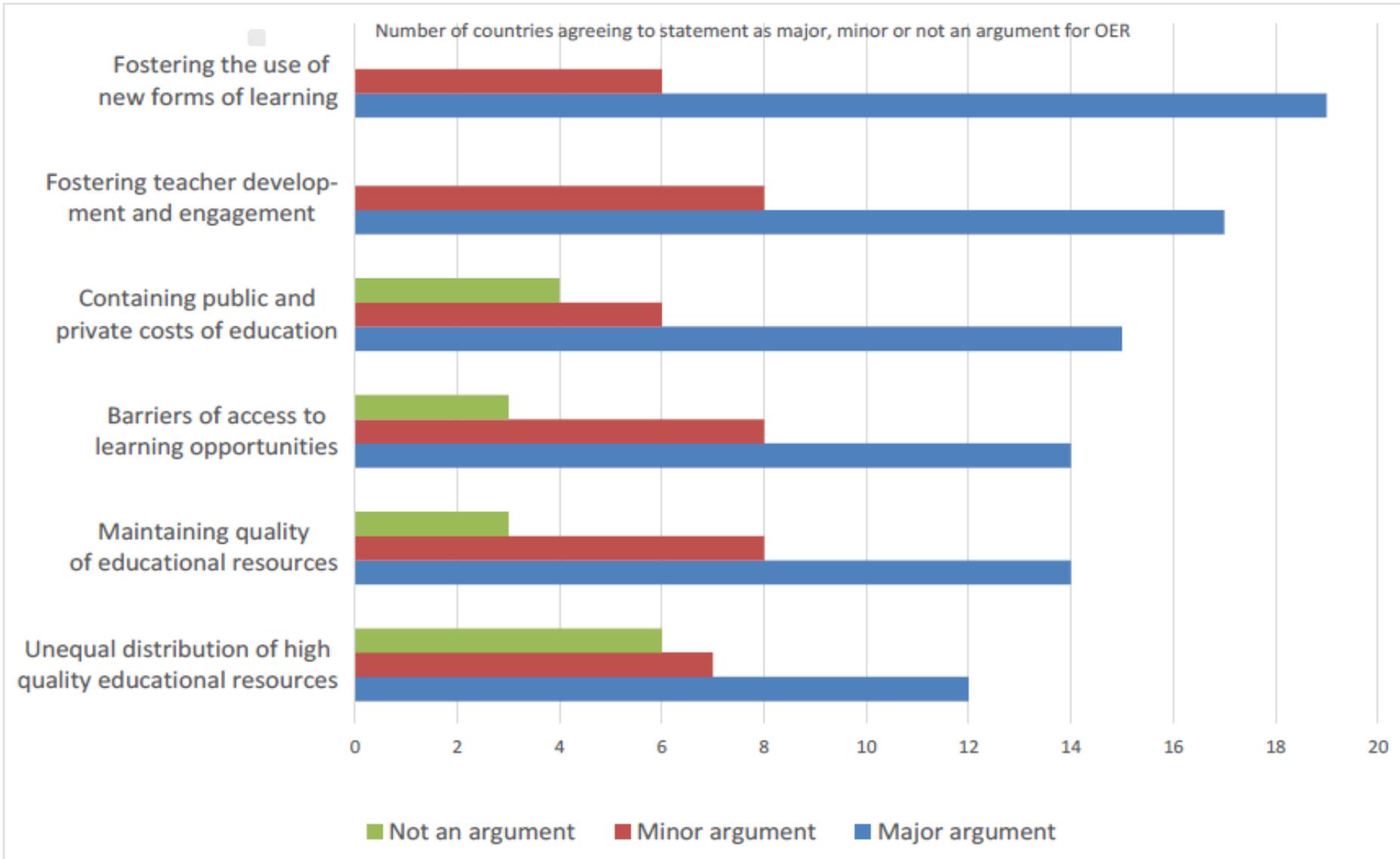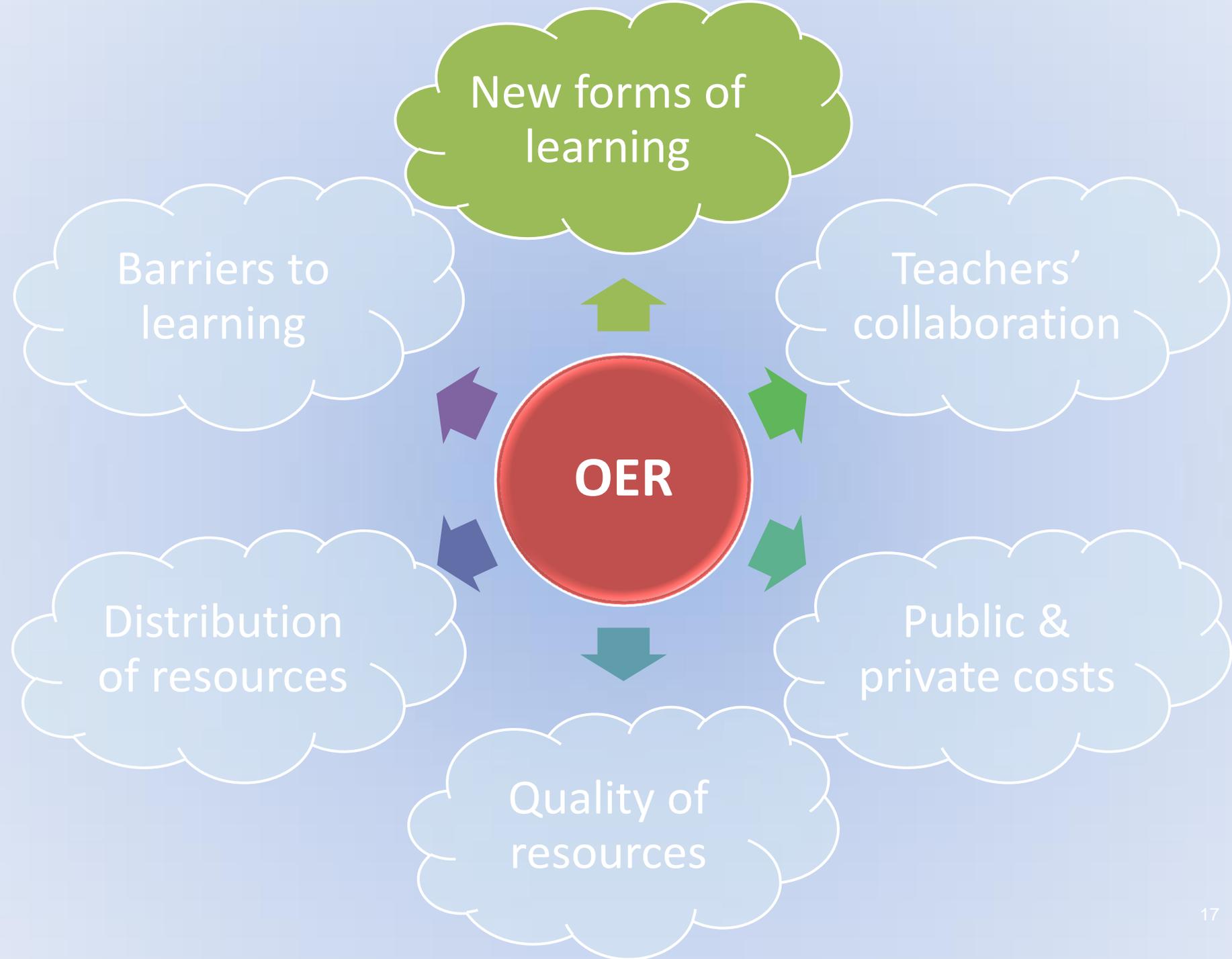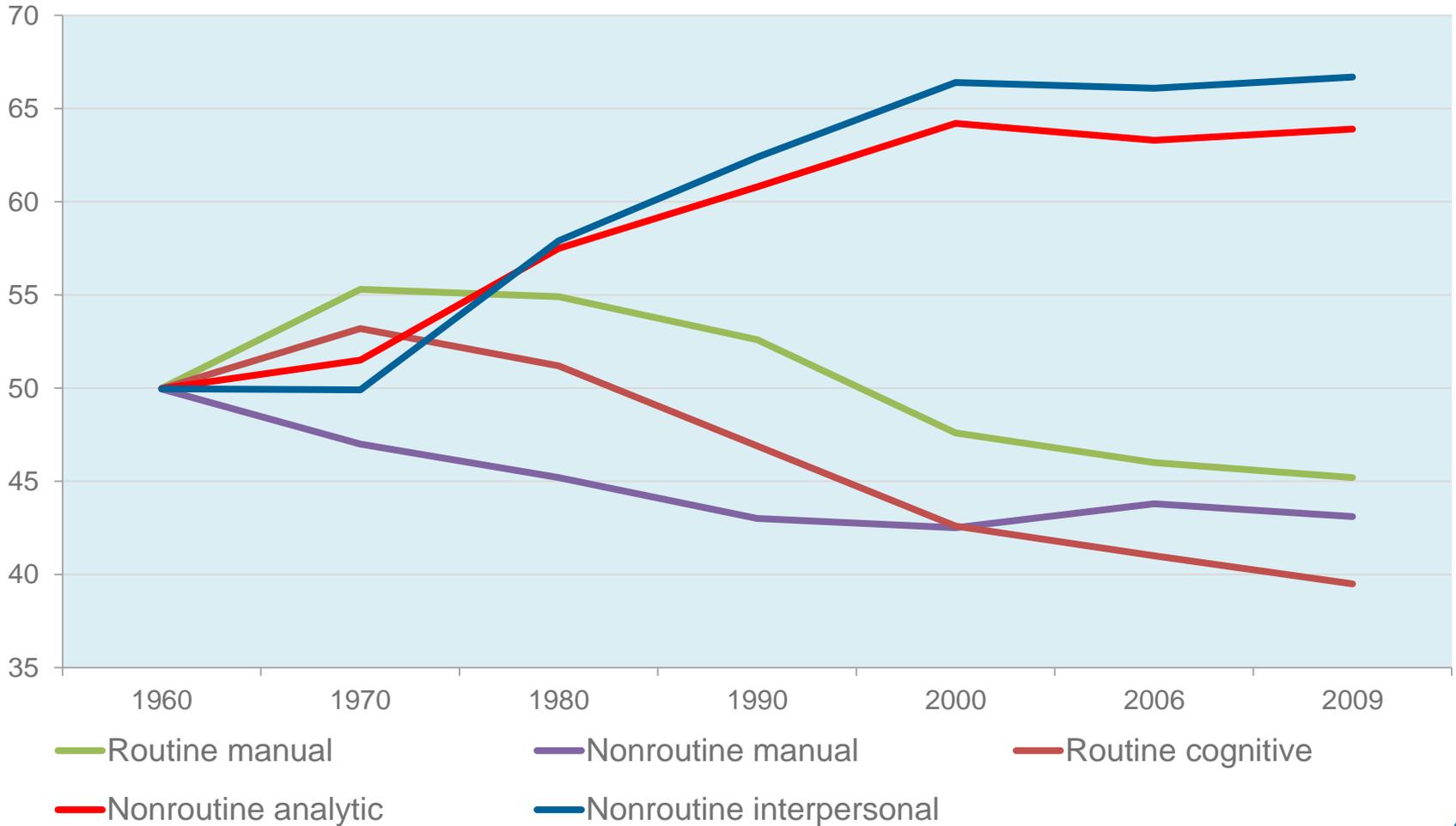
Fostering 21st century learning

- In reality, most OER are content-focused, to be used in existing educational settings

- At best, augmenting the teaching-learning process and the resources used

- But 21st century learning requires a focus on more innovative skills development and pedagogies

- The relevance of OER lies not only in the quality of content, but also the quality of the learning it facilitates and the kind of skills development it supports

Changing skills demand

Mean task input in percentiles of 1960 task distribution

Legend:
- Routine manual
- Nonroutine manual
- Routine cognitive
- Nonroutine analytic
- Nonroutine interpersonal

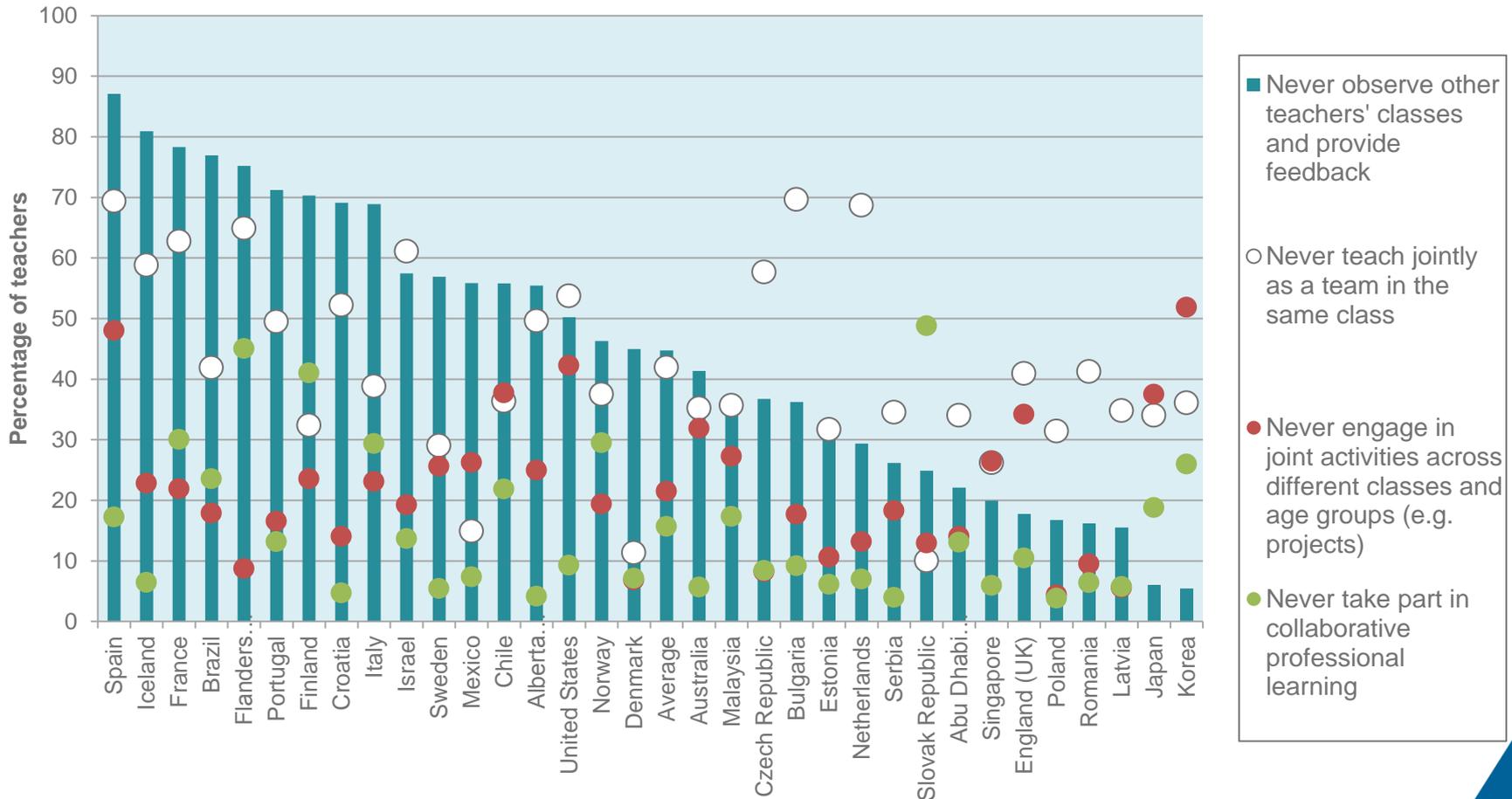# How can OER support innovative pedagogies?

- Changing the role of learners from passive consumers to active producers

- Fostering peer-to-peer learning

- Stimulating problem-based learning

- Enriching learning resources through collaborative practice

- Enhancing the social and emotional context of learning

- …
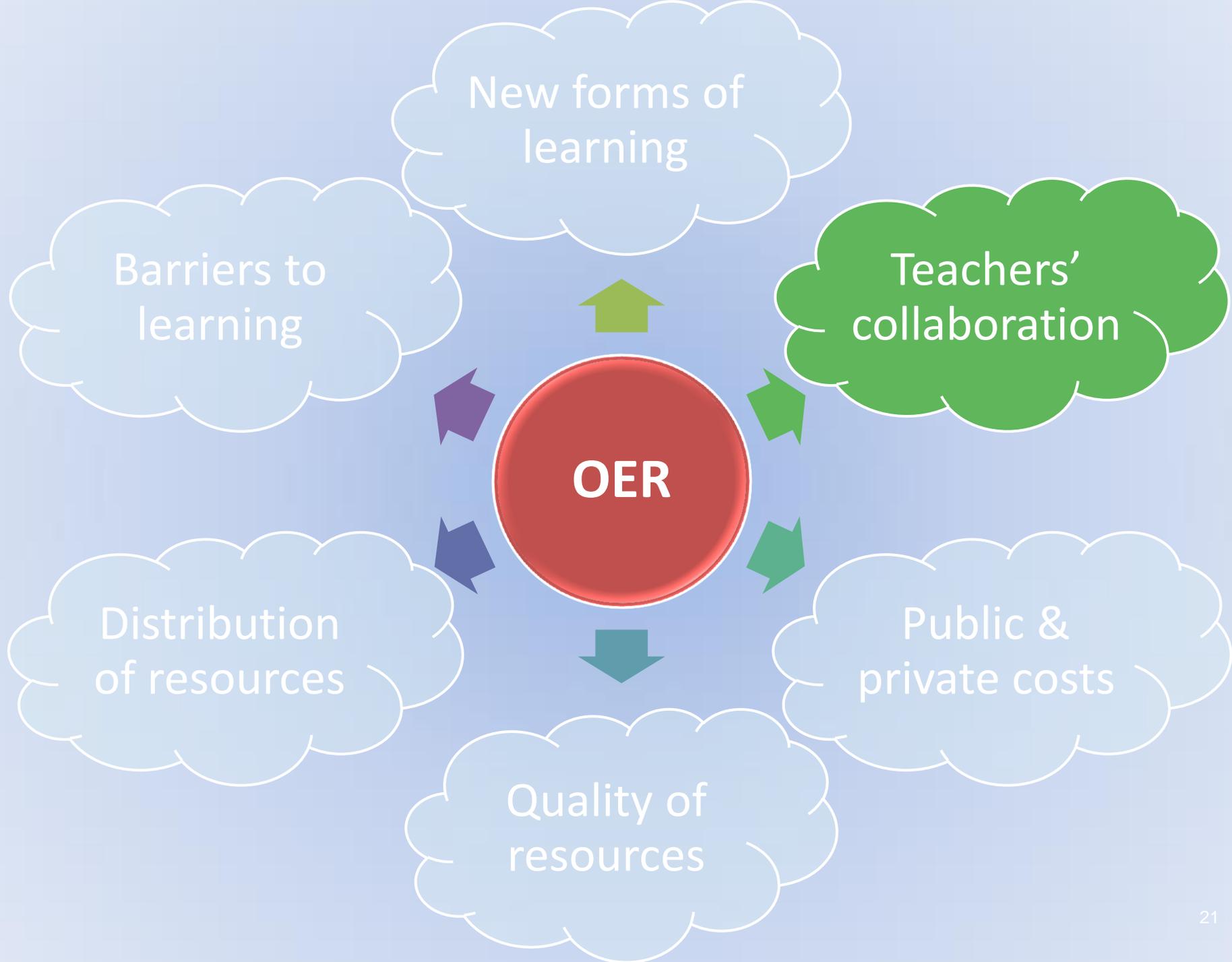
Collaboration and sharing are still not well developed among teachers

Percentage of lower secondary teachers who report never doing the following activities

Legend:
- Never observe other teachers' classes and provide feedback
- Never teach jointly as a team in the same class
- Never engage in joint activities across different classes and age groups (e.g. projects)
- Never take part in collaborative professional learning

How can OER support teachers' collaborative practices?

- Training and professional development for teachers on using OER

- Using OER in teacher training and teacher professional development

- Collaborative production of OER

- Sharing practices among teachers in professional communities of practice

- Stimulating teachers in reusing, revising, remixing and redistributing of OER

- …

CHALLENGES
- USAGE

- SUSTAINABILITY

- INSTRUCTIONAL DESIGN

Usage of OER in the system

Iterative process in the OER lifecycle

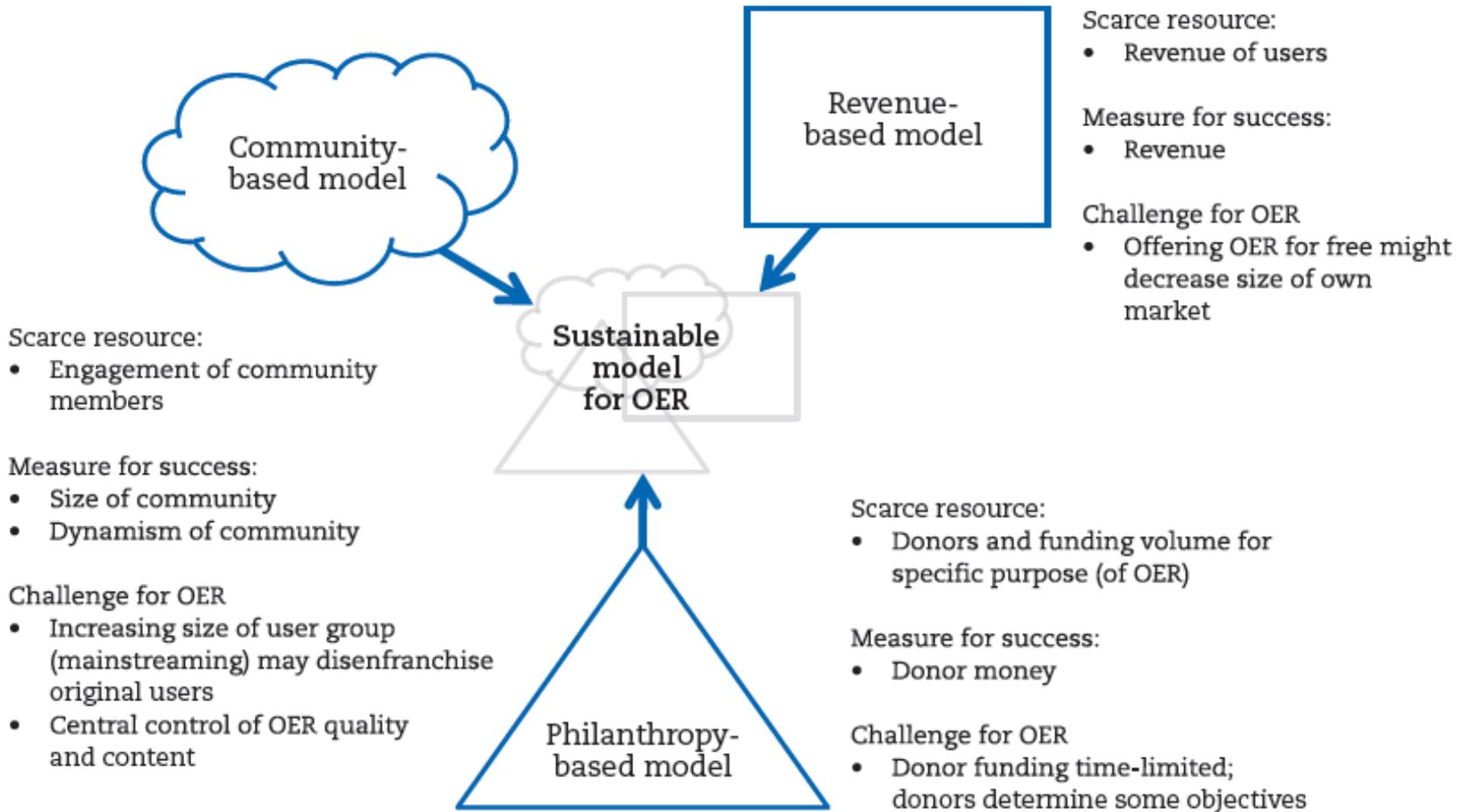| Process	Outcome	Person(s)
1. Production	Product (OER)	Producer
2. Ascription	Metadata	Producer User
3. Adaptation	Metadata New product	User *Producer-User ("prosumer")*

Usage of OER in the system

- OER has great difficulties of breaking out of the community of believers and closed communities

- Mainstreaming still problematic

- Depositories still isolated

- Usage of OER is not yet well registered and monitored – tracking of sharing practices needed

- Evidence suggest that revising and remixing are still not frequent

Financial sustainability: three models of cost recovery in OER initiatives

Community-based model

Revenue-based model

Scarce resource:
- Revenue of users

Measure for success:
- Revenue

Challenge for OER
- Offering OER for free might decrease size of own market

Sustainable model for OER

Scarce resource:
- Engagement of community members

Measure for success:
- Size of community
- Dynamism of community

Challenge for OER
- Increasing size of user group (mainstreaming) may disenfranchise original users
- Central control of OER quality and content

Scarce resource:
- Donors and funding volume for specific purpose (of OER)

Measure for success:
- Donor money

Challenge for OER
- Donor funding time-limited; donors determine some objectives

Philanthropy-based model

Instructional design

- In most cases OERs are very traditional in design
- Recent development of OERs tend to become more sophisticated in instructional design
  - Adaptive, flexible courseware
  - From single modules to integrated courseware
  - Simulations, virtual laboratories, educational games
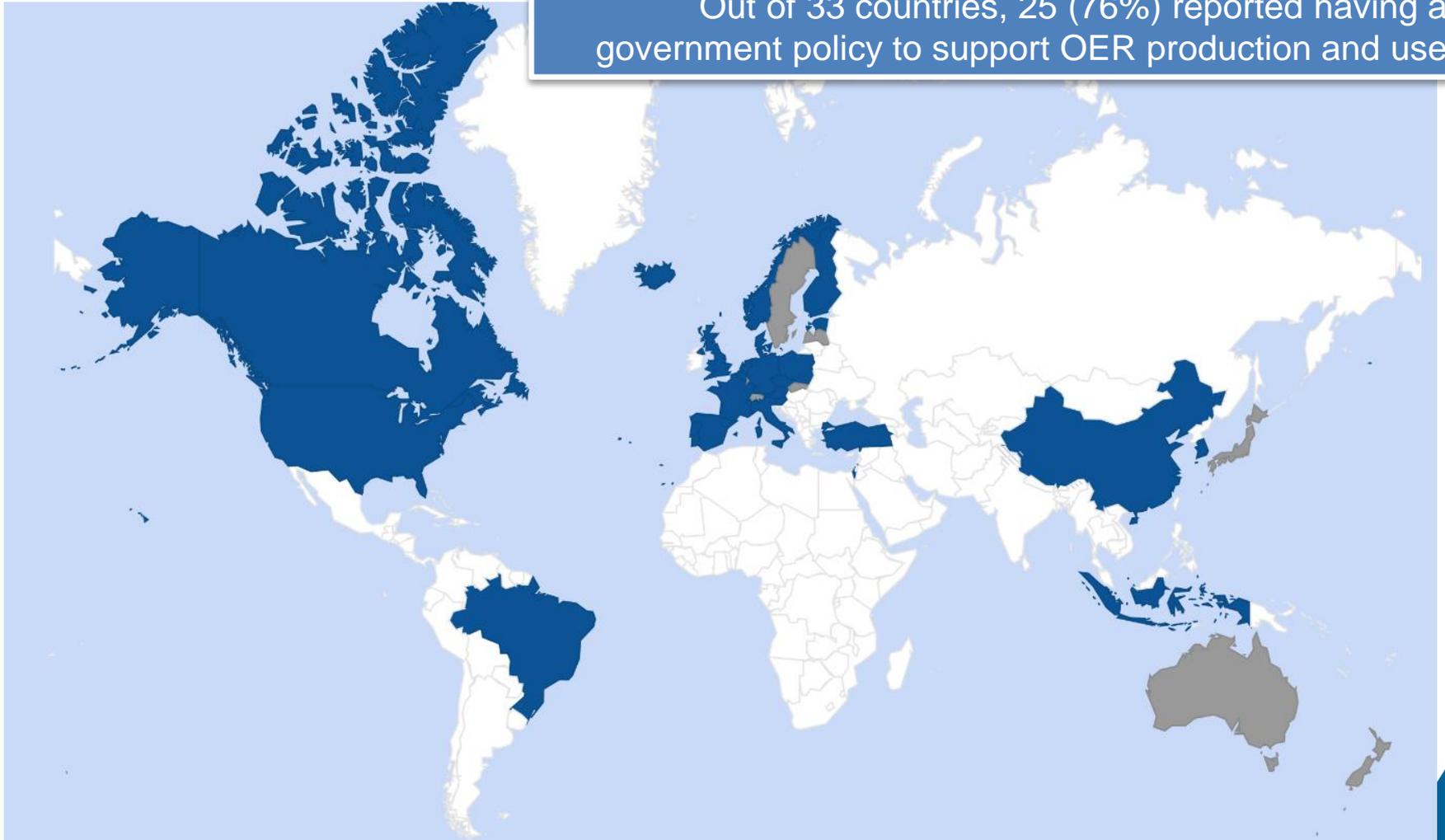 - Real-time formative assessment

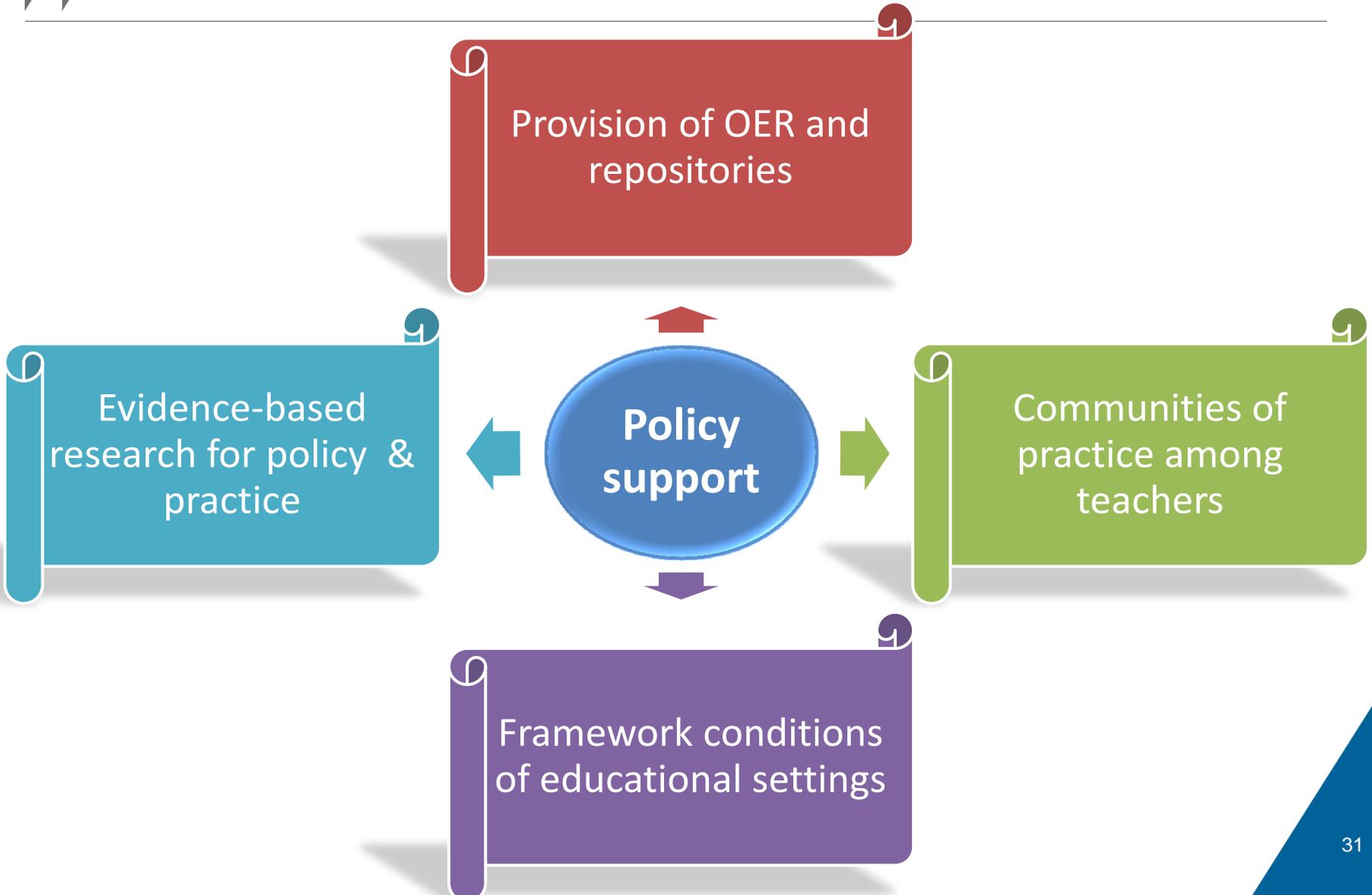# HOW CAN EDUCATION POLICIES SUPPORT OER?

Governments' support of OER through policy instruments - coverage

Out of 33 countries, 25 (76%) reported having a government policy to support OER production and use

Source: CERI/OECD government survey

How can educational policies support OER?

Provision of OER and repositories

Evidence-based research for policy & practice

Policy support

Communities of practice among teachers

Framework conditions of educational settings

Governments' policy support found in 4 key areas

- Policy helps to establish repositories and supports the provision of open licence materials.

- Policy helps the establishment of communities of practices within the teaching body, to encourage production and use of OER.

- Policy can change the framework conditions of formal educational settings, by modifying rules, promoting new tools and reassigning the division of labour.

- More research is necessary to better understand the potential and the usage of OER for policy and practice

FINAL COMMENTS

Some conclusions and final comments

- Ultimately, the systemic impact of OER will depend on the contribution it makes to improving teaching and learning, to facilitating 21st century skills development and to foster new collaborative professionalism among teachers

- Being 'open' is a necessary but not a sufficient condition for OER to have transformative impact comparable to paradigmatic change in science

- OER should be able to exploit and demonstrate its intrinsic superiority over proprietary materials in their substantive quality, but also in their capacity for pedagogical innovation

- OER policies and support structures are needed on national level, but equally at local and international level

Thank you !

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