Open Educational Resources (OER): A Framework for Adoption and Its Impact Assessment on Learning

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Short Description

While there's general consensus among many stakeholders in the educational sector about the value and the need to deploy open educational resources (OER) as a potential cure to rising costs of instructional and learning materials, particularly textbooks; little agreement exists on how this noble endeavor should be mainstreamed. This could partly be due to complexities and variations in needs of various institutions as well as departments within the same institutions. In other words, there is a lack of universally accepted taxonomy of OER standards and clearinghouse and/or system dedicated to vetting quality and efficacy of OER. Additionally, not much research has been conducted to ascertain whether the adoption of OER in higher education has indeed transformed learning through creation of efficiencies that enable access to quality and effective learning materials (that improve performance) while lowering costs to learners. Debate on whether to adopt or not adopt OER should move beyond cost considerations as the major driver. Instead the debate has to critically evaluate other key elements, as this is a multifaceted issue.

What are OER? According to Wiley, Green & Soares (2012), OER are educational materials - textbooks, research articles, videos, assessments, simulations - that are either licensed under an open copyright license such as, Creative Commons or in the public domain. In both cases, there is free (no-cost) access to the OER and free (no-cost) permission to engage in the "4R" activities when using the materials, including:

- Revise: adapt and improve the OER so it better meets your needs
- Reuse: use the original or your new version of the OER in a wide range of contexts
- Remix: combine or "mashup" the OER with other OER to produce new materials
- Redistribute: make copies and share the original OER or your new version with others

The Need

- More effort in terms of research need to be devoted to explore and understand the cost, selection criteria, barriers, benefits and impact of OER on learning and education.
- There is need for a framework that can answer critical questions about OER and its impact on learning.
- Some critical questions that require urgent answers include:
  - what is the cost and benefit of OER?
  - Has its adoption in higher education transformed learning by creating efficiencies in accessing quality and effective learning materials that improve performance while lowering costs to learners?
  - What are the barriers that hamper the adoption and use of OER
  - What framework can be deployed to aid the use of OER while at the same time helping in assessing its impact?

Notable Latest Research Findings

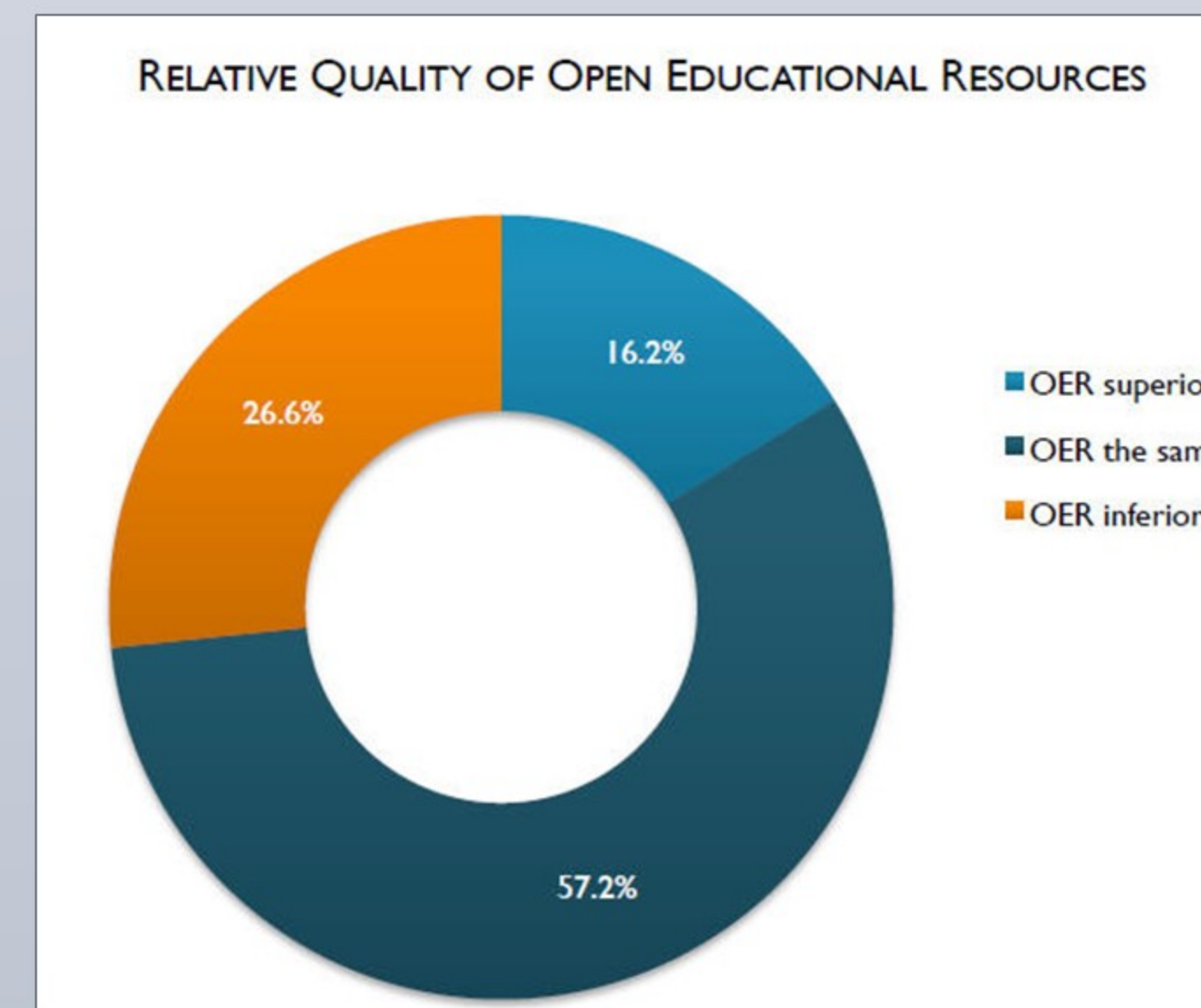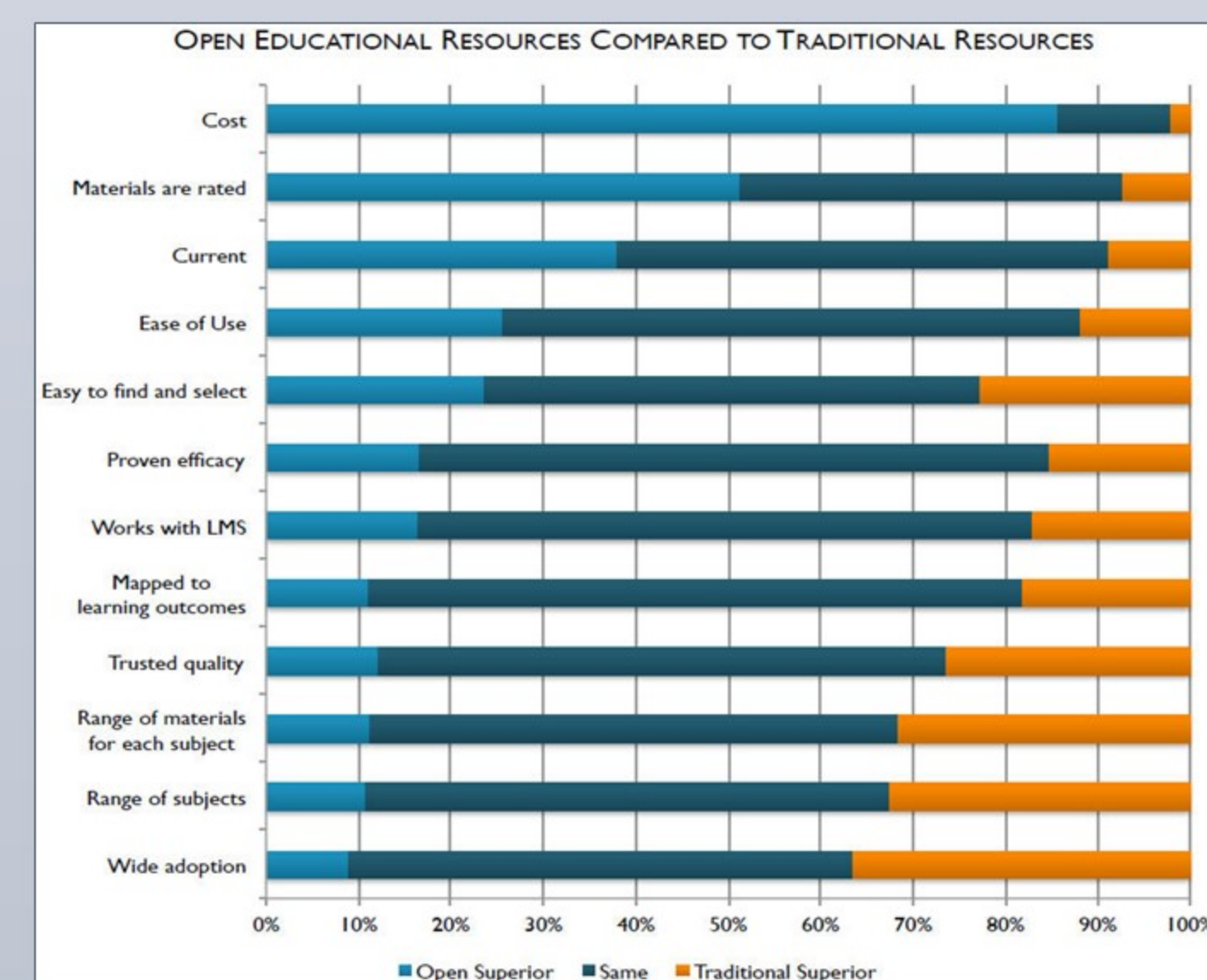Allen and Seaman (2014) in their national survey report note that:

- Faculty consistently cite a limited number of criteria for selecting OER. Proven efficacy and trusted quality rank the top at (59.6%) and (50.1%) respectively; while cost, faculty ratings, supplied by the institution raking the lowest at (2.7%), (2.6%), and (2.9%) respectively.

- In terms of OER materials regularly used, the faculty reported that images, videos, video lectures/tutorials and homework exercises were regularly used accounting for (89.3%), (87.8%), (60%), and (55%) respectively. The least likely to be used as reported was slides and class presentations at (8.9%).

MOST IMPORTANT CRITERIA FOR SELECTING TEACHING RESOURCES

TYPE OF OPEN EDUCATIONAL RESOURCE USED
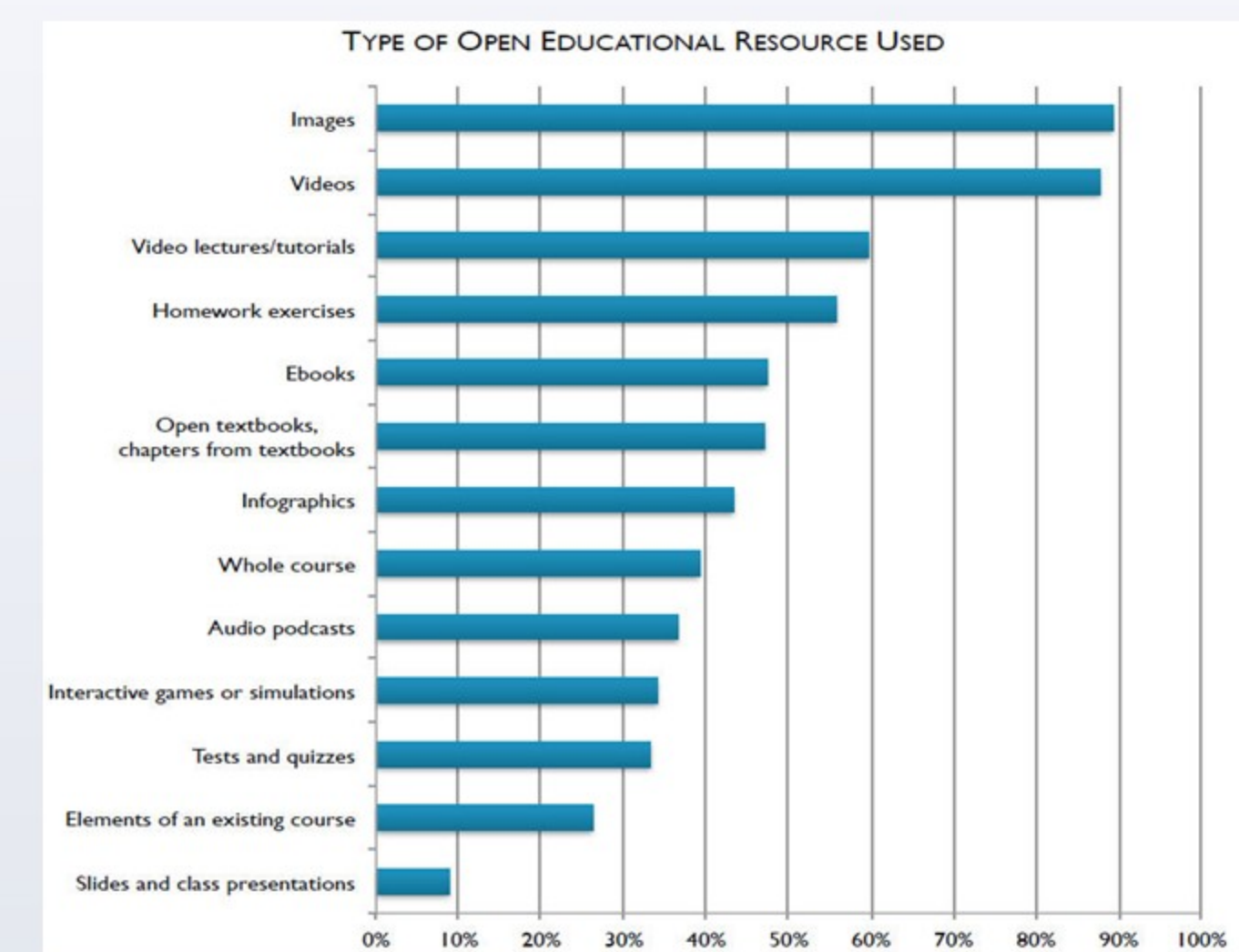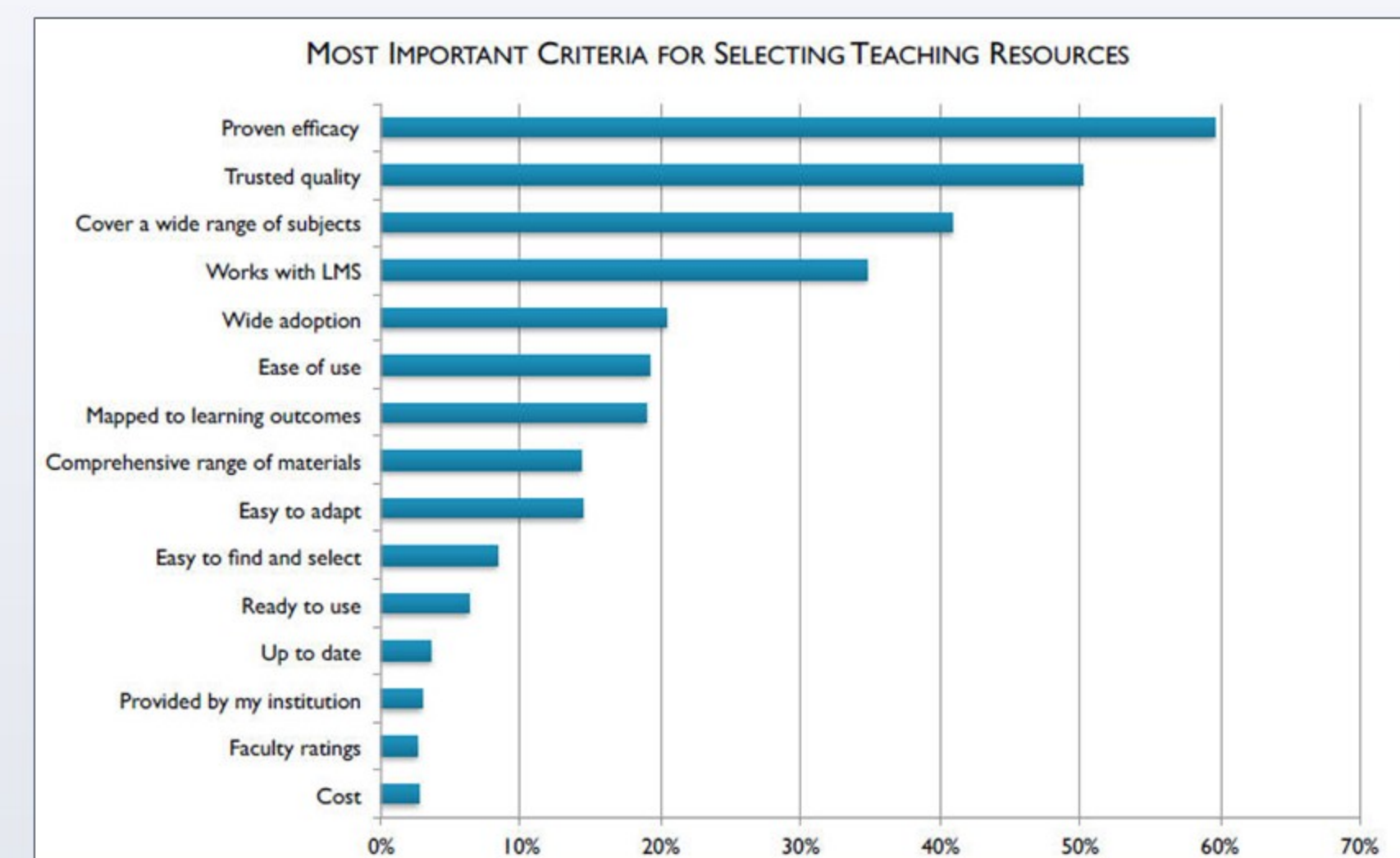
- It's interesting to see the differing roles faculty have in selecting OER based on institution type. Faculty decision role is lowest in private for-profit as compared to private not-for-profit and public with (72.5%), (95.8%), and (90.1%).

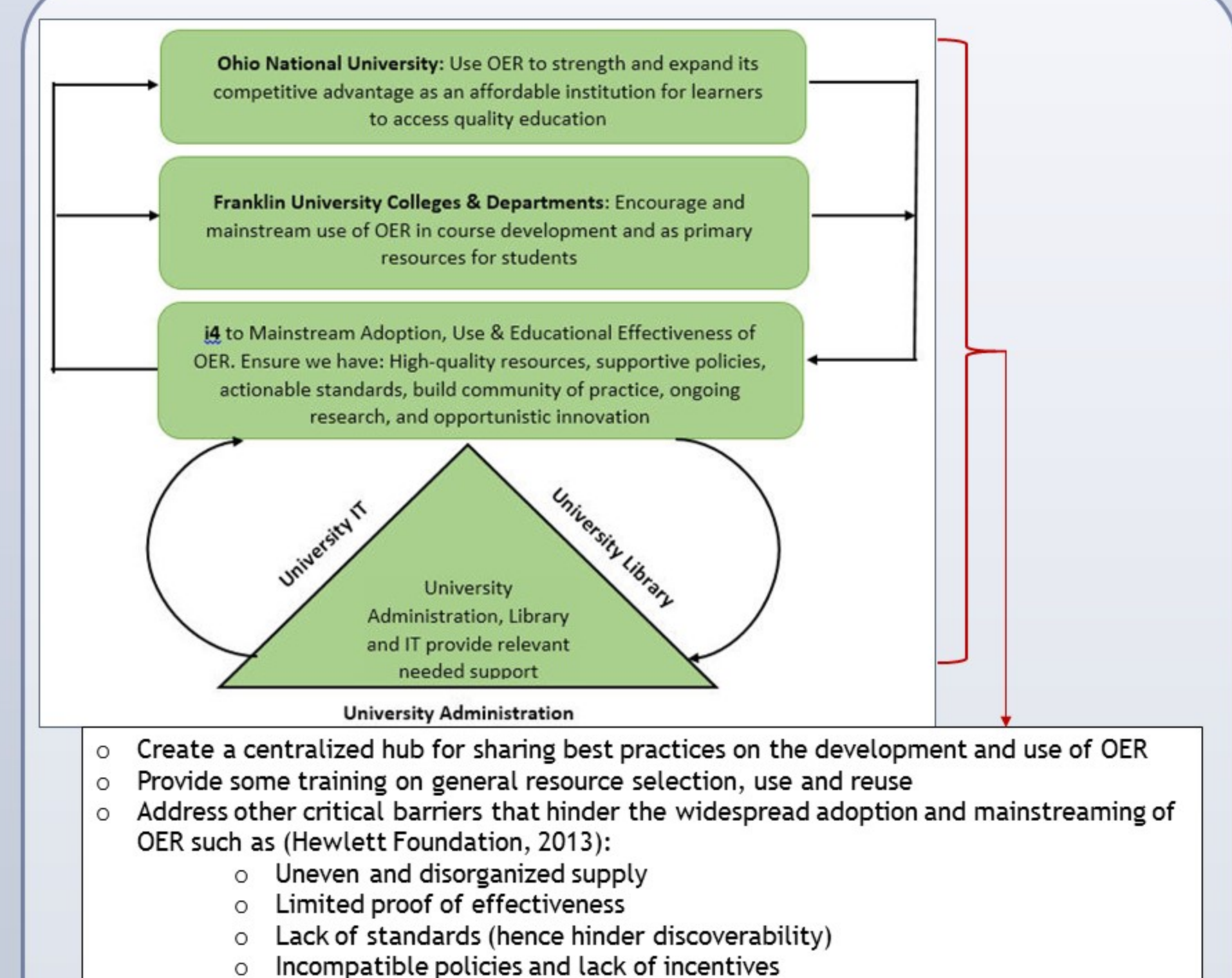FACULTY HAVE A ROLE IN SELECTING EDUCATIONAL RESOURCES
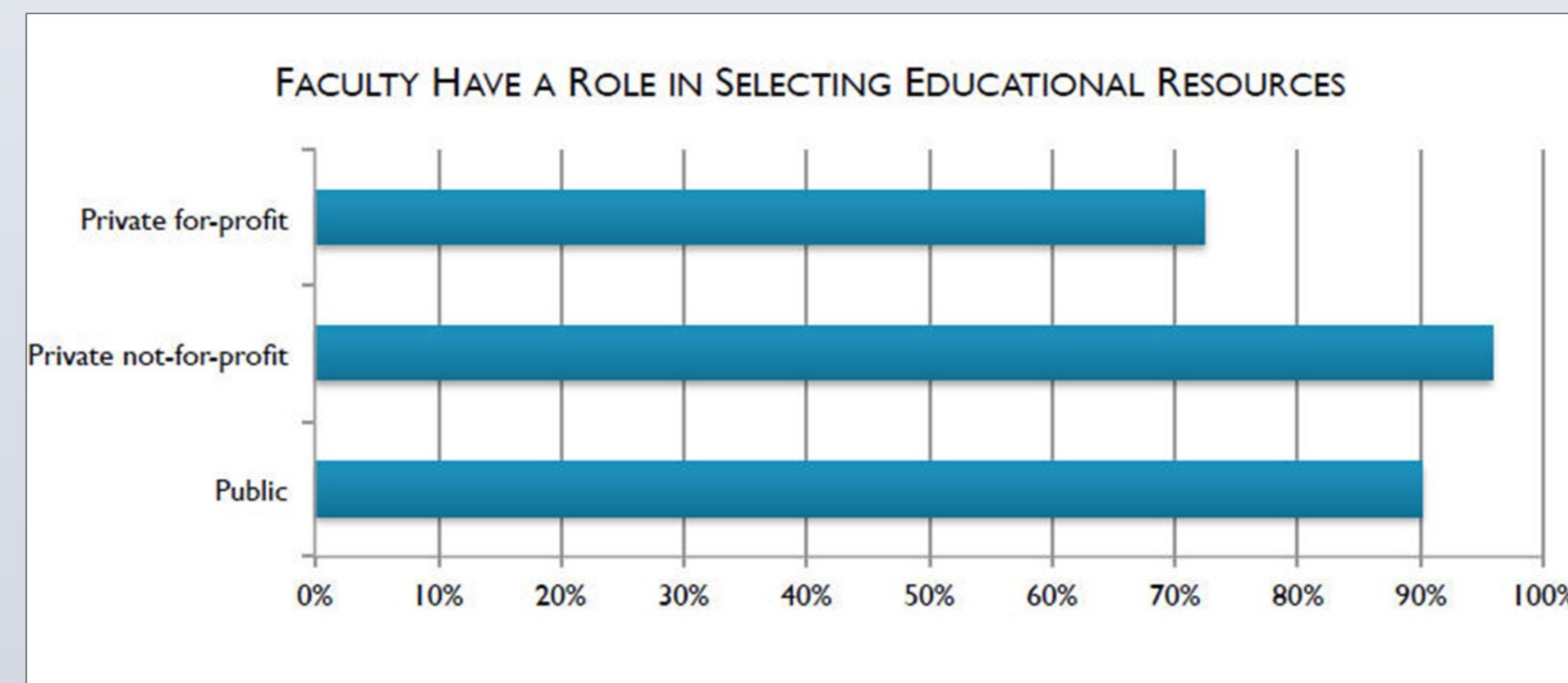
- Comparison of OER to Conventional Resources: Faculty reported that OER were superior to traditional resources in terms of cost, ranking of materials, currency of materials, and ease of use (85.7%), (51.3%) and (38%) respectively. Traditional materials were ranked superior to OER in terms of mapping to learning outcomes, trusted quality, range of materials, range of subjects, and wide adoption as seen in the figure below. Moreover, a majority of faculty (57.2%) ranked OER and traditional equal in terms of quality.

OPEN EDUCATIONAL RESOURCES COMPARED TO TRADITIONAL RESOURCES

RELATIVE QUALITY OF OPEN EDUCATIONAL RESOURCES

- OER superior — 16.2%
- OER the same — 57.2%
- OER inferior — 26.6%

Mainstreaming OER At Franklin University

To help address the need for OER and barriers limiting its greater use highlighted in this poster; as well as move forward the debate on how best to mainstream OER, the following model is being proposed as a starting point for Franklin University. The model will serve to raise awareness as different stakeholders at the university work together to pilot and launch new ways of using and mainstreaming of OER in teaching and learning. In addition, the model will serve to unify and advance the disconnected pockets of OER use at the institution.

The International Institute for Innovative Instruction (i4) will be the key player driving the adoption and use of OER in course design as well as assuring high quality resources are used, propose relevant policies and standard to advance mainstreaming of OER, encourage research on OER, and undertake opportunistic innovation in the use of OER. The university administration, IT, and the library will be critical in providing all needed relevant support to advance the use of OER while the departments, colleges, and Ohio National University will be the launching pad of OER at Franklin University (See the model).

Ohio National University: Use OER to strength and expand its competitive advantage as an affordable institution for learners to access quality education

Franklin University Colleges & Departments: Encourage and mainstream use of OER in course development and as primary resources for students

i4 to Mainstream Adoption, Use & Educational Effectiveness of OER. Ensure we have: High-quality resources, supportive policies, actionable standards, build community of practice, ongoing research, and opportunistic innovation

University IT — University Library

University Administration, Library and IT provide relevant needed support

University Administration

- Create a centralized hub for sharing best practices on the development and use of OER
- Provide training on general resource selection, use and reuse
- Address other critical barriers that hinder the widespread adoption and mainstreaming of OER such as (Hewlett Foundation, 2013):
  - Uneven and disorganized supply
  - Limited proof of effectiveness
  - Lack of standards (hence hinder discoverability)
  - Incompatible policies and lack of incentives

Evaluating the Impact of the Proposed Model and OER

The effectiveness of the proposed model to measure the impact of OER at Franklin University and beyond will be undertaken using Mulder's research framework. The framework will be used to test different suppositions of OER. For example, learning will be more flexible with the use of OER.

Research Framework of six impact areas with key attributes that can be used to evaluate the impact of OER (developed by Prof. F. Mulder)

Learner	Teacher	Learning material	Learning Process	Educational system / institution	Societal context / government
Ability	Competence	Pedagogy	Pedagogy	Human Resource Management	Regulations
Motivation	Attitude	Information Communication Technology	Information Communication Technology Support	Information Communication Technology	Infrastructure
Style	Roles	Information Communication Technology Support	Support	Practices	Funding
Effort	Commitment	Development	Personalization	Formal/Informal	Public/Private
Orientation	Reflection		Flexibility	Assessment/ Credentialing	Inclusion
User	User	Utilization	Collaboration	Reputation	
Performance	Professional/ Scholar		Communities	Enrolments	Publishing
Participation	Collaboration	Accessibility	Openness	Policies	Policies
Satisfaction	Quality	Quality	Outcomes	Sustainability	Sustainability
Expenses	Cost	Cost	Accessibility	Accessibility	Accessibility
			Quality	Quality	Quality
			Cost	Efficiency	Efficiency
			Business Model	Business Model	Business Model

Conclusion

While OER have been around for slightly over 10 years, with its dramatic debut of MIT's Open Courseware in 2002, OER have not significantly disrupted and altered the traditional model of higher education. Concerted effort in mainstreaming OER must continue in order to realize its many benefits: low costs, delivery of greater learning efficiency, promotion of continuous improvement, encourage translation and localization of content, offers equal access to knowledge for all.

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