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Improving Medical Education will Improve the International Evaluation of Universities

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A smart idea

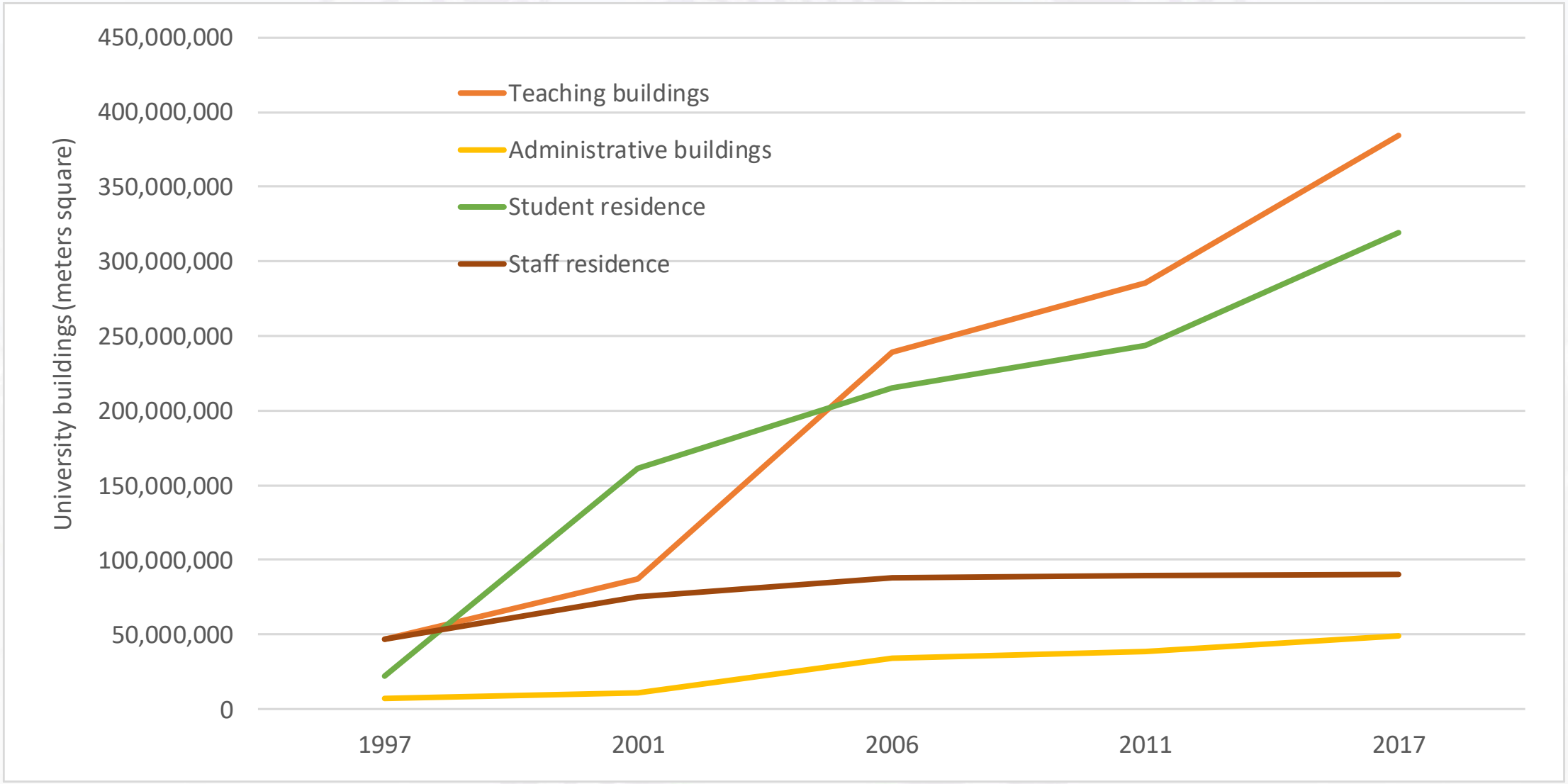
Where we are

University evaluation

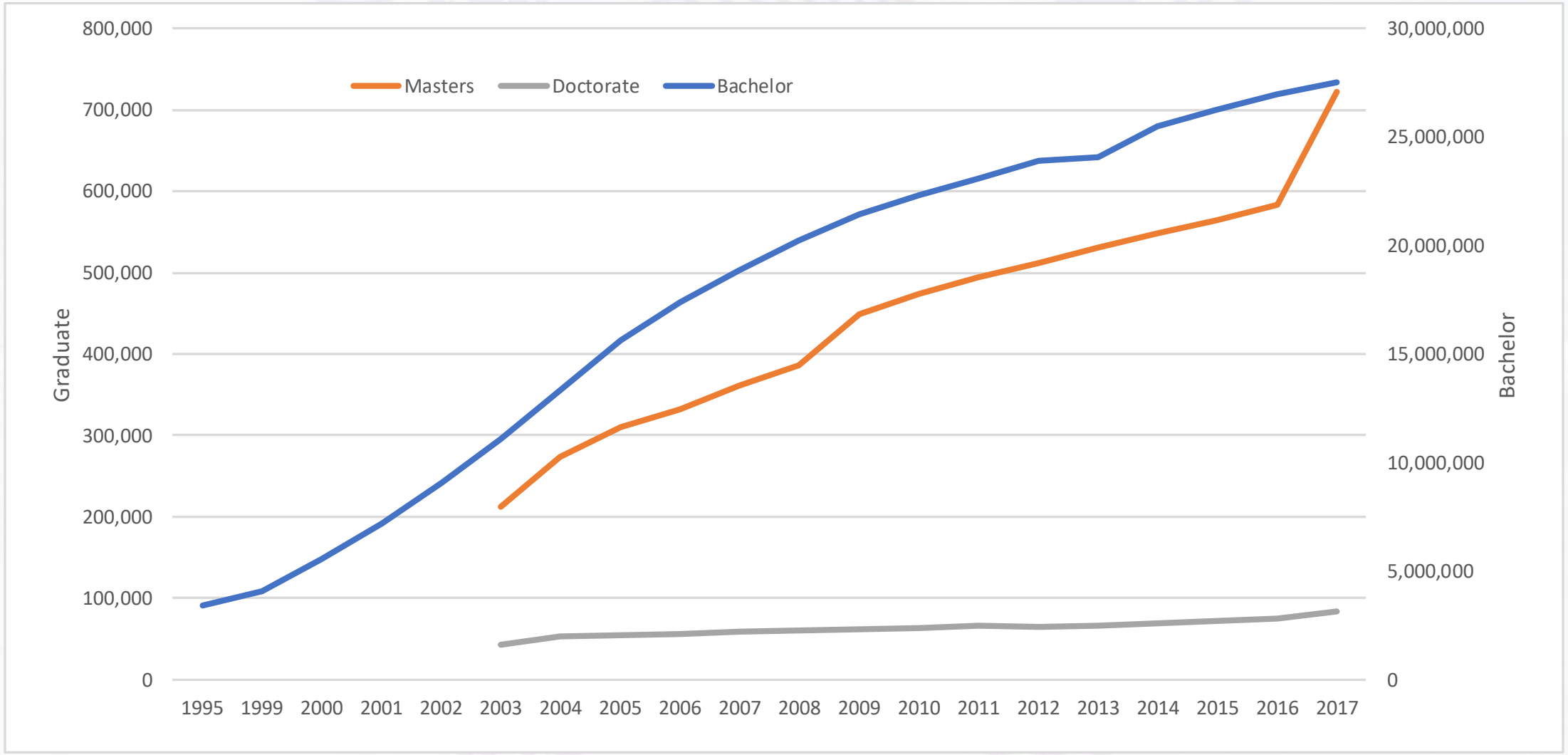
Improving medical education

Where we are

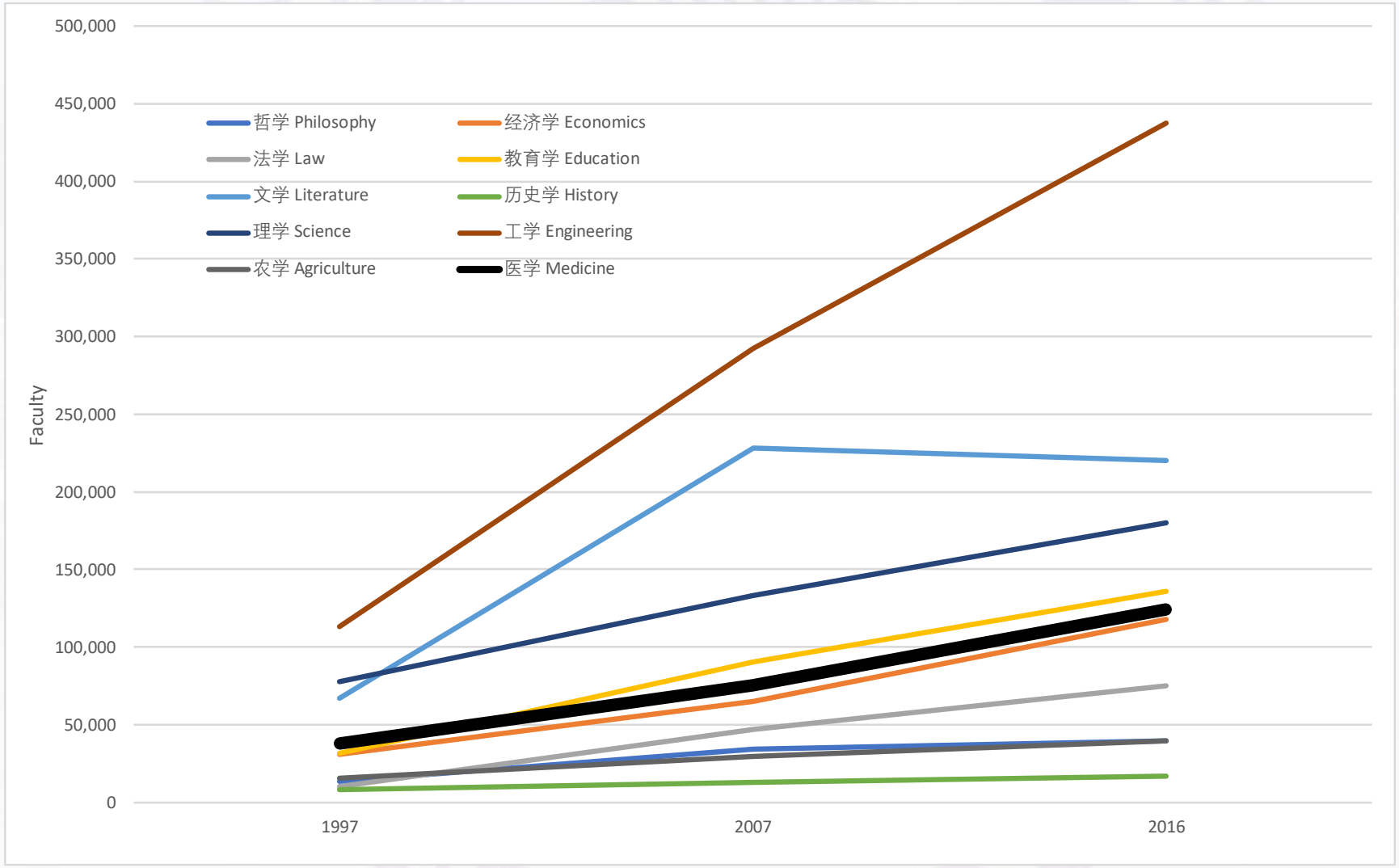
Building continues
不断增加的建筑



China enrolment growth
中国招生规模的扩大



Many new medical faculty
众多新增医学院系



China graduates by field

中国各领域毕业生数

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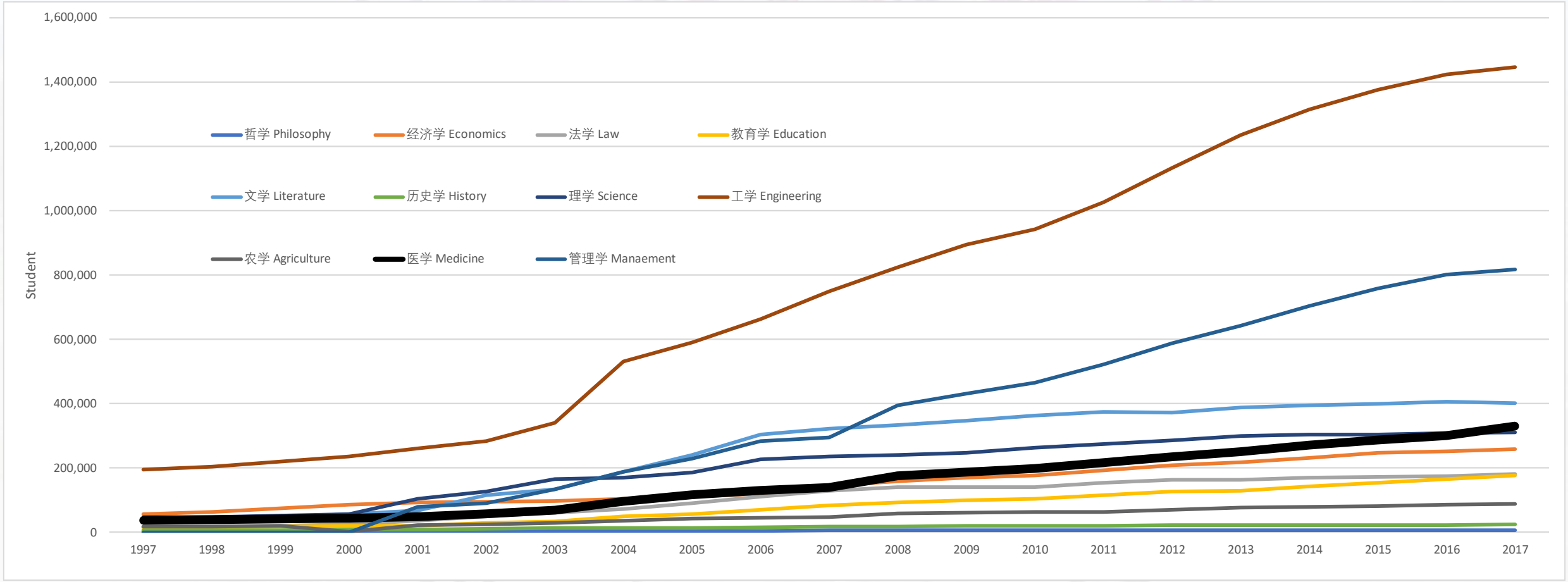

Doctoral enrolment by country
各国博士招生规模

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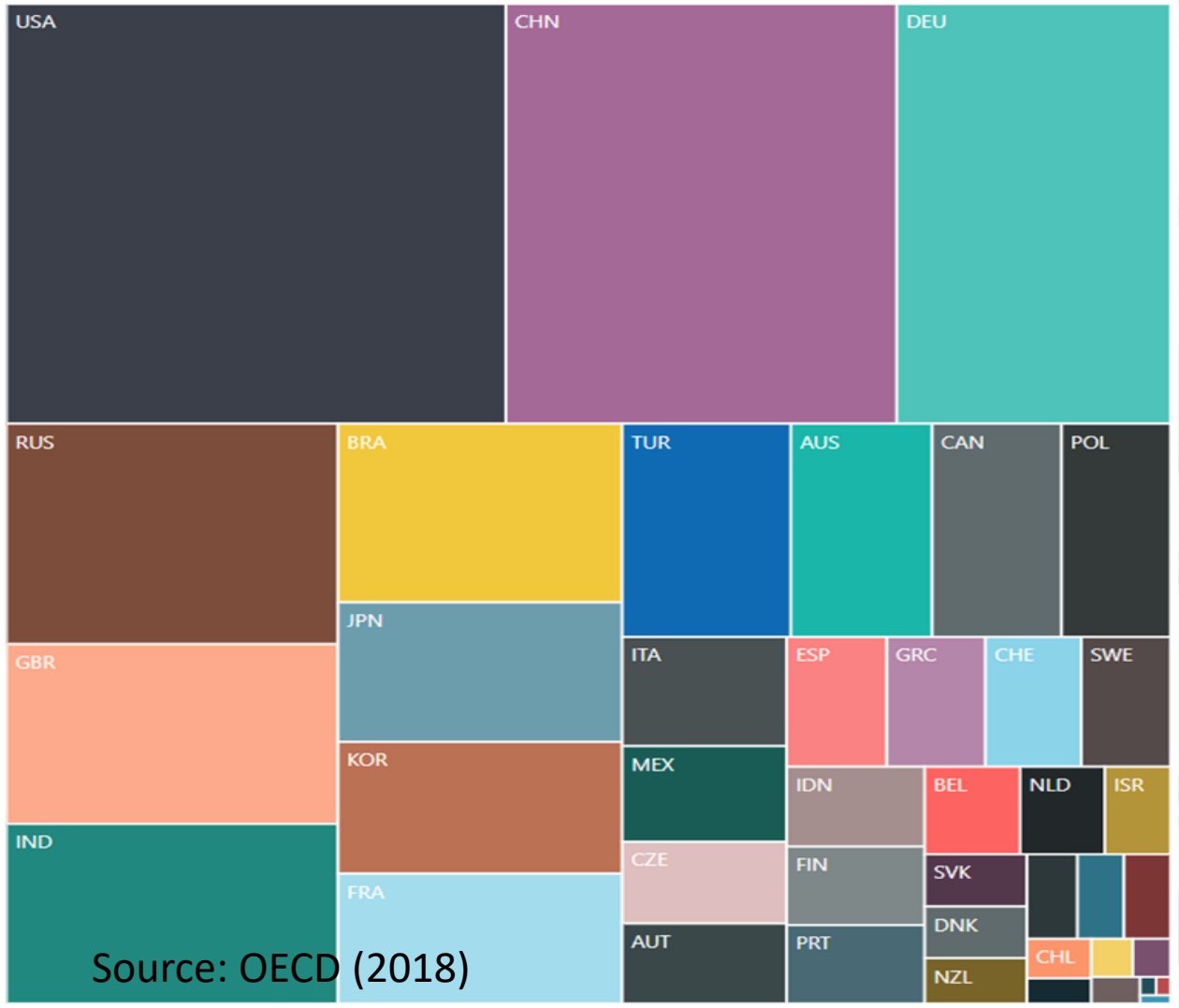

Source: OECD (2018)

- In 2017 there were 2.17 students enrolled globally
- Doctorate not yet ‘massified’ but becoming more common
- Just 12 countries do 80% of doctoral education
- Emerging contributors still growing to reach 1-2% of population with doctorate
- Asia playing increasing role
- Doctoral education essential to academic career, and increasingly other careers
- Doctoral education is perhaps most complex and conservative form of education

Taking a deeper look

深入剖析

- Growth in scale and relevance
- Diversification of programs
- Varying standards
- Changing workforce needs
- Uncertain graduate capabilities
- Students diversifying and expanding
- Aligning funding, regulation and provision

→**Need to 'future-proof' MEDICAL EDUCATION to align with 21st century needs**

University evaluation

Main evaluation approaches
主要评估方式

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Approaches

- Accreditation—university, faculty, professional, program
- Program and university governance
- Public information and advisory services
- Monitoring and accountability

Evidence

- Institution-level data
- Information on teachers
- Minor information on learners

		Stage		
		Outcome	Process	Input
Level	Learner			
	Teacher			
	University			
	Society			

It is very confusing now

信息时代的混乱与迷茫

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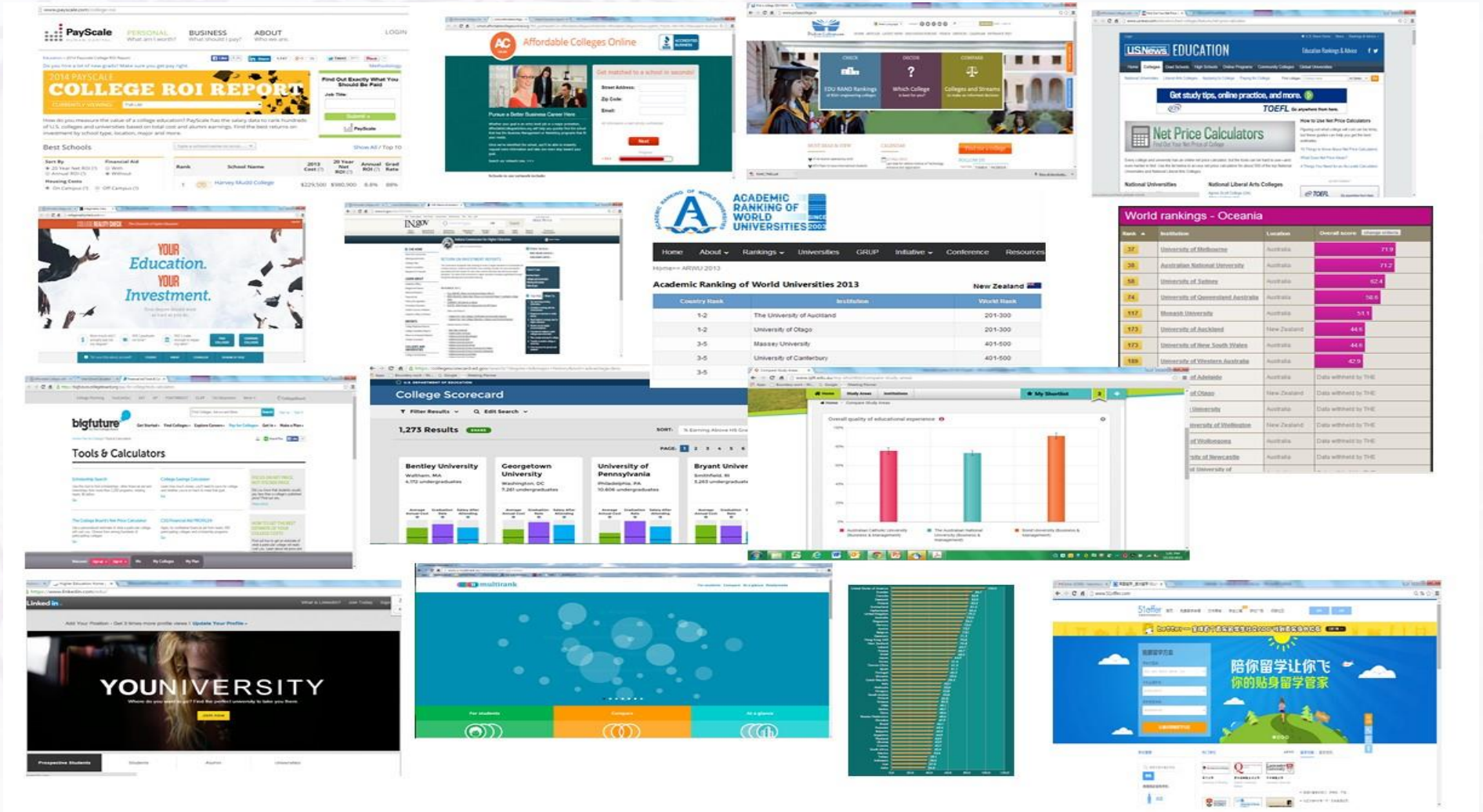
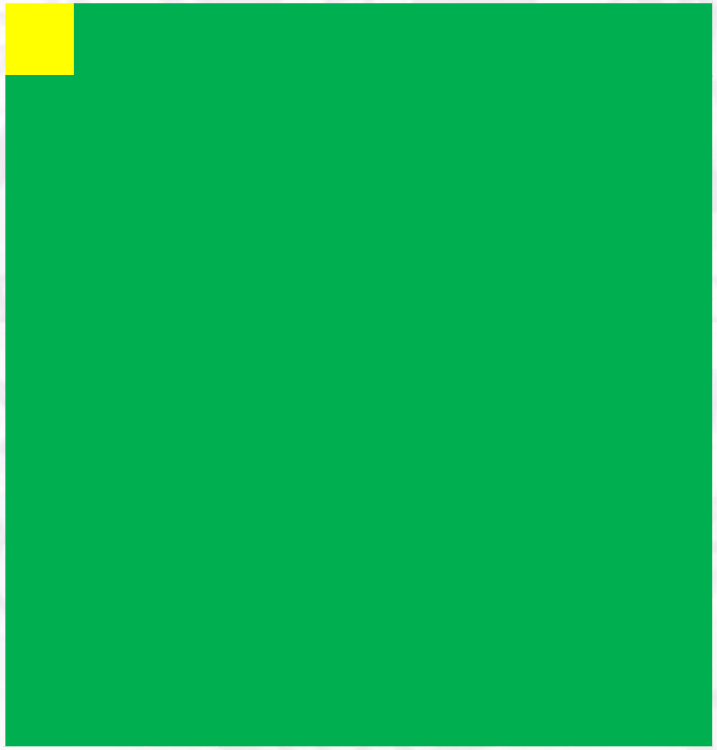
- 信息太多
- 难以辨别质量高低
- 信息不对称
- 难以全面了解市场



What we know is not enough

我们目前对高等教育的理解远远不够

顶尖精英大学（前50）
世界一流大学（前200）
普通本科院校（18000）



- 目前有关高等教育的信息大多集中在全球前1%的精英大学，人们对普通大学，尤其是不在主流排行榜上的大学了解甚微
- 我们需要新的信息来了解并推动剩余99%的世界高等教育机构的发展
- 我们需要扩展现有的信息库，从而增强整个系统的实力

Pressing need to innovate
迫切需要创新

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- Global student demand could reach 400 million by 2030, up from 100 million in 2009
- Economies maturing/booming—more educated workers and tertiary education needed
- Global brain race—competition for higher credentials
- Longer lives and welfare constraints—longer careers and more retraining
- Limited relevance/scalability of elite education models for universal scale of provision
- Emerging institutional and workforce models
- New accountabilities and financial pressures from many sources

We must learn more
我们需要学习更多

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- Persistent focus on inputs we know outcomes and processes also matter
- Growing global interest across many sectors in impact and value, and higher education starting to lag
- Pressing need to focus on individuals as well as institutions and systems
- Must look beyond university research to consider other functions of higher education
- Dynamic insights proliferate but higher education yet to seize new opportunities

→**We need insights that help institutions and people understand how to best engage, create, and contribute with higher education**

Improving medical education

Good, but not good enough
好，但是不够

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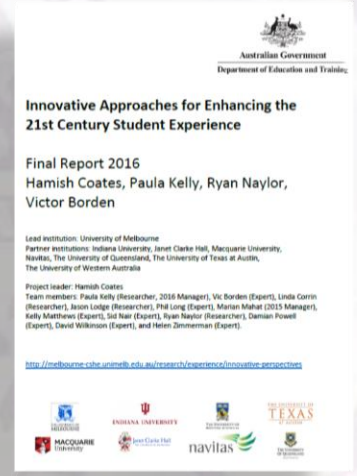
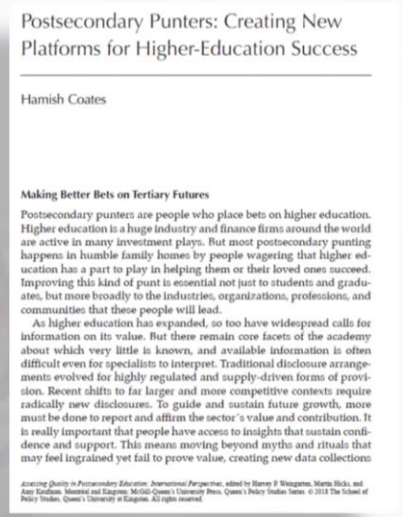
- Medical education has robust program accreditation and evaluation
- Schools and teachers engage in continuous improvement
- Graduates have access to global opportunities
- **BUT: there is <u>little generalisable information</u> about what medical graduates know and can do, and whether graduates have met minimum standards**


Australian Government
Department of Education and Training

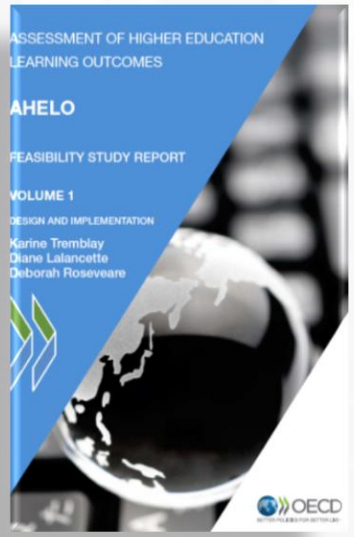
Innovative Approaches for Enhancing the 21st Century Student Experience

Final Report 2016
Hamish Coates, Paula Kelly, Ryan Naylor, Victor Borden


Postsecondary Punters: Creating New Platforms for Higher-Education Success

Hamish Coates

Making Better Bets on Tertiary Futures



‘Traditional’ assessment

传统评估

- Academics working alone
- Within single institutions
- Using technically non-validated materials
- Arbitrary mapping to curriculum
- Single-subject focus
- Delivered using dated methods
- Scored normatively by uncalibrated markers
- Adjusted to fit percentile distributions
- Reported using grades and thin feedback

→ Such practice can make it hard to evaluate and value what learning has taken place…

Why generalisable data counts
为什么归纳性数据很重要

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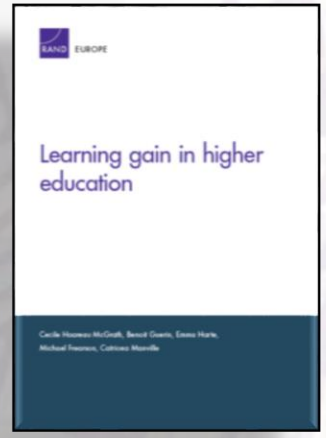
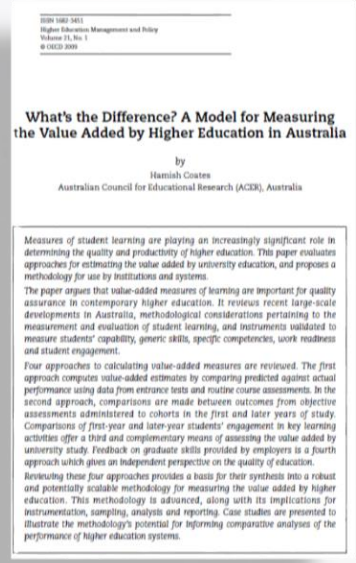
- Need to reassure the public about the quality of medical education
- Rapid expansion in medical schools; growth in the number and diversity of learners and graduates
- Need for outcomes data on education to balance that on research performance
- Data from formative assessments not fit for broader purpose
- Globally, higher education is moving into an era that involves more focus on outcomes

Benefits and opportunities
益处与机遇

- Ready access to a common independent objective data
- Objective data for benchmarking and quality improvement
- Cross-check internal assessments and assure standards
- Move beyond indirect proxy measures of quality
- Review effectiveness of curriculum and teaching innovations
- Prevent convergence around limited outcomes indicators





A smart idea

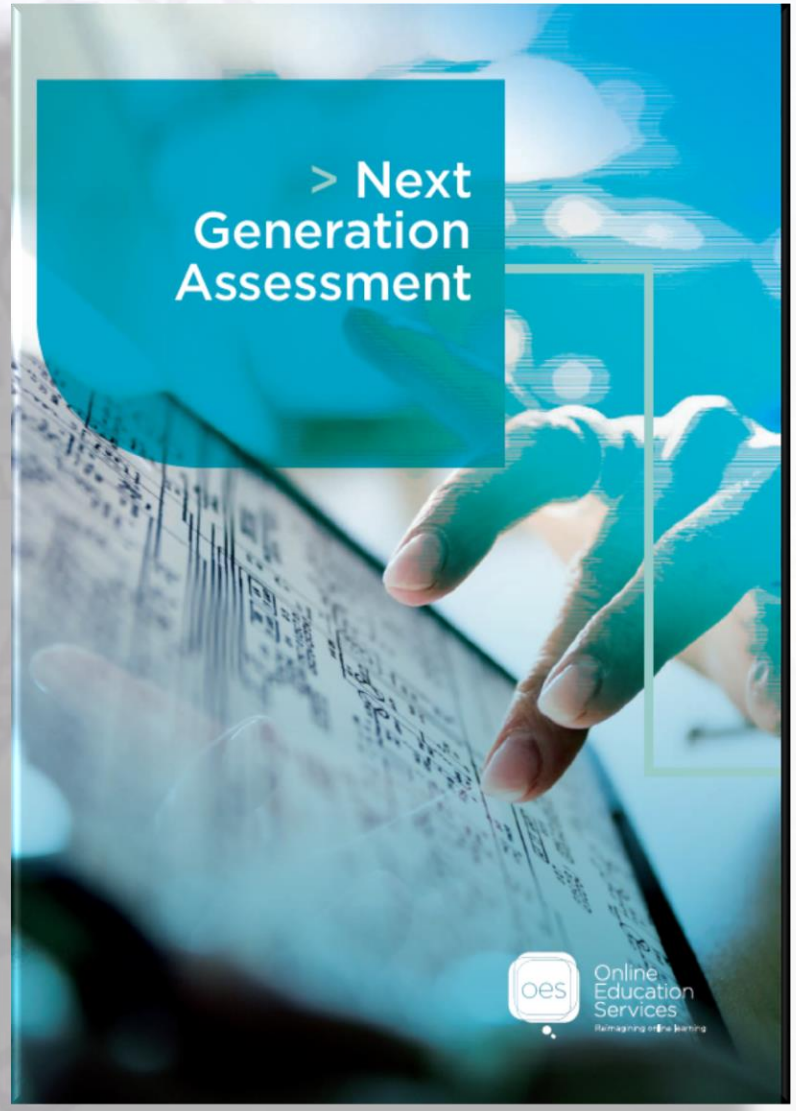
Drawing from research

从研究绘制

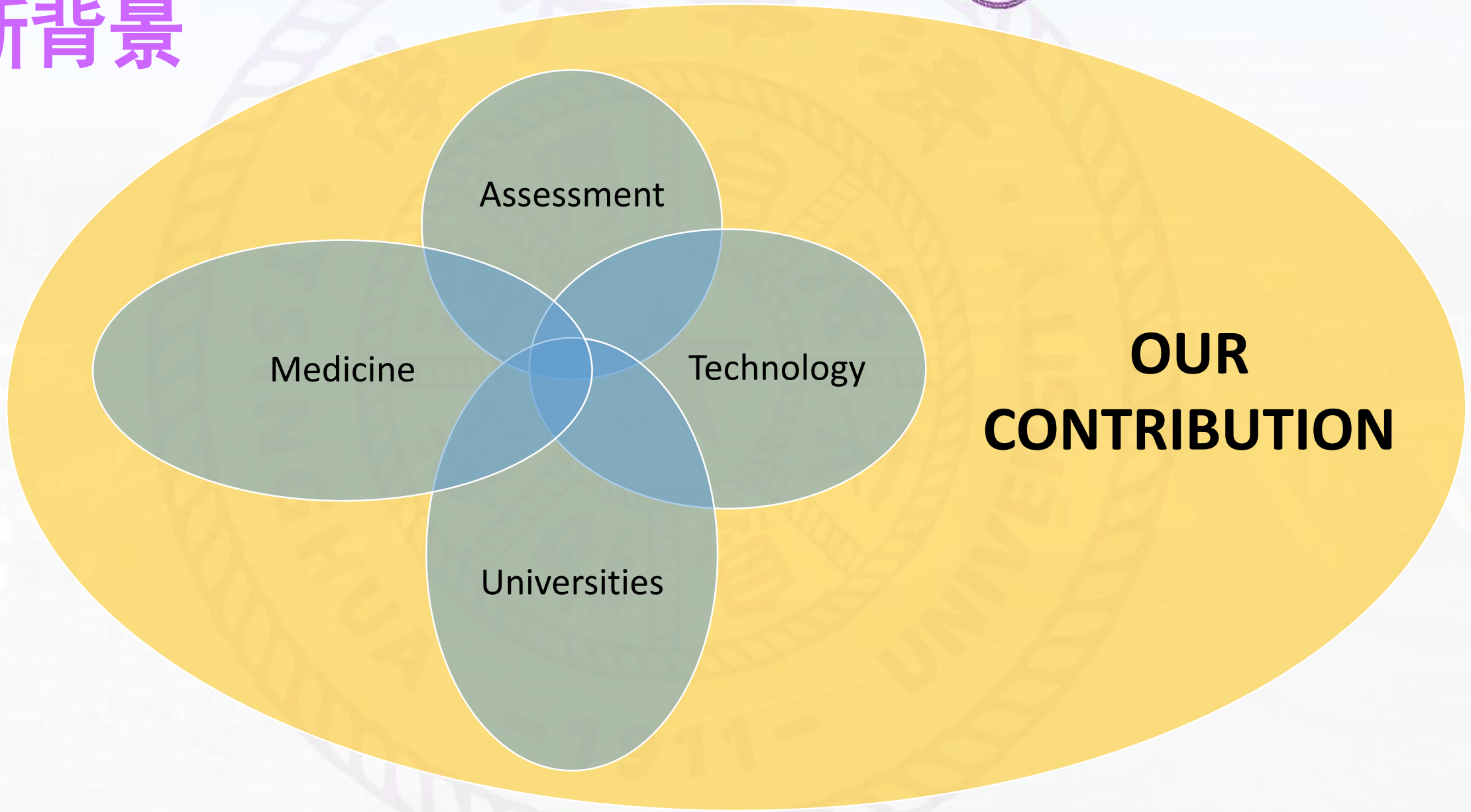
Aha!

啊哈！

- Must improve student assessment!
- Build collaborative/shared and generalisable formative assessment of pre-clinical learning/skill outcomes
- Get information on **student outcomes**
- Examine **growth and value-added**
- Understand and improve **academic productivity**



Innovation background
创新背景



Degrees of sharing
共享程度

Scholarly collaboration among interested schools

- Formalised library of test items that teachers share, and embed
- Results are shared, enabling generalisability
- Builds expertise, enables diversification, yields common data and, links practice with QA

Consortium-led capability test

- Single, independent, common test
- Focus on core pre-clinical or final-year curriculum
- Pitched 'above content'
- Engaged capability building

Independent national licensing examination

- Licensing exam run independently
- Most stringent generalisable assessment
- Comprehensive measurement of specific competencies
- Expensive and detached

Designing optimal sharing
设计最佳共享模式

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These phases/activities parameterize a generic value chain which can be used to create a strategy canvas to model any different kinds of assessment:

Planning	Development	Implementation	Analysis	Reporting
• Governance • Leadership • Management	• Mapping resources • Specifying outcomes • Selecting formats • Drafting materials • Qualitative review • Quantitative review • Material production	• Designing administration • Organising facilities • Managing students • Administering assessments • Resolving problems	• Collating results • Marking and verifying • Producing data • Cross-validating results	• Producing grades • Analysing and commenting • Reporting and benchmarking • Reviewing and improving

→ **Different forms of sharing can be planned…**

Contributors
合作者

- Build **COLLABORATIVE ASSESSMENT** leadership that has required authority, expertise and participants
- Start by leading core team and build out once value of the assessment is established
- Involve academic capability development in assessment / leadership as part of the value chain and contribution

Proven assessment science and practice

经过验证的评估科学与实践

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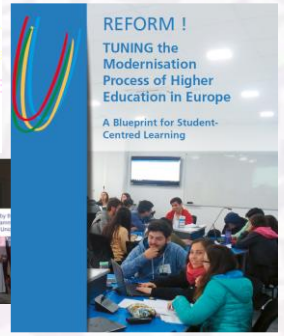
QAA
UK Quality Assured

European Qualifications Framework

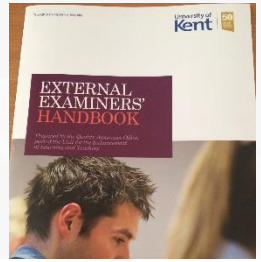
DQP

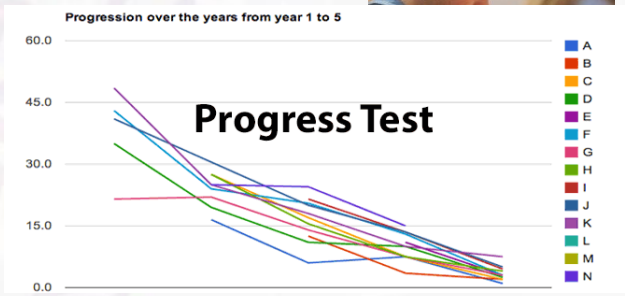
Australian Qualifications Framework

Tuning



AAC&U VALUE RUBRICS





HEIghten®

ahelo
Assessment of Higher Education Learning Outcomes

AMAC

KoKoHs

AMAC proves feasibility…

AMAC具备可行性

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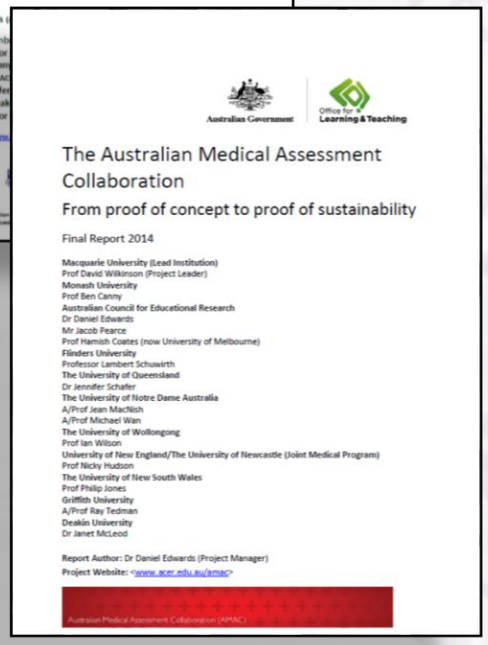

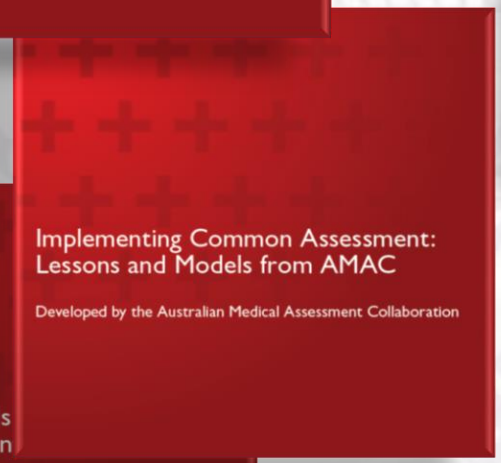

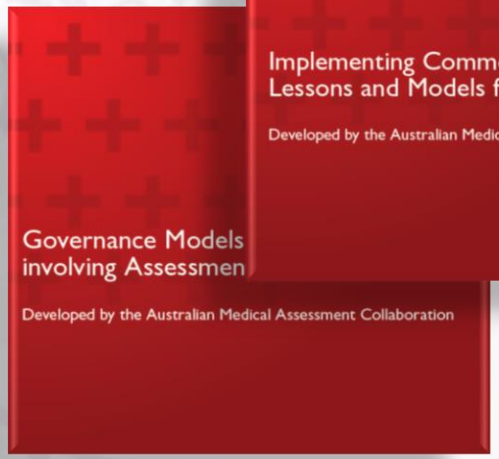

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Let's talk about next steps and get moving!

让我们共议未来之路，一同前进

Constructing Higher Education for the Global Era: Proving Student Competence

Tsinghua University
2019.10.26-27

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Tsinghua ACSD
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Over three centuries of scholarly publishing

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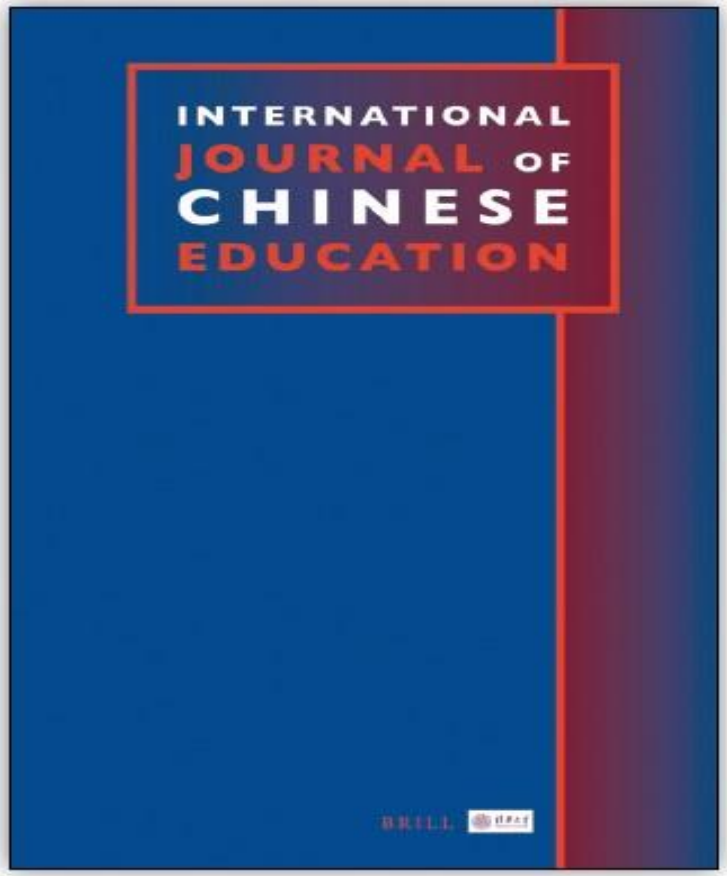

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