

NSFs and USQF: What are we talking about today?

Dr. Katherine Caves

Chair of Education Systems, ETH Zurich

katie.caves@mtec.ethz.ch

What is a Qualifications Framework?

Qualifications frameworks are classification systems that define **education levels** from early childhood to the highest degrees in terms of **learning outcomes** and allocate different programs to levels and **types**.

More than 150 countries have NQFs. The US does not.

Education Levels: ISCED

Level	Label	Description
0	Early childhood education	Education designed to support early development in preparation for participation in school and society. Programs designed for children below the age of 3.
	Pre-primary education	Education designed to support early development in preparation for participation in school and society. Programs designed for children from age 3 to the start of primary education.
1	Primary education	Programs typically designed to provide students with fundamental skills in reading, writing and mathematics and to establish a solid foundation for learning.
2	Lower secondary education	First stage of secondary education building on primary education, typically with a more subject-oriented curriculum.
3	Upper secondary education	Second/final stage of secondary education preparing for tertiary education or providing skills relevant to employment. Usually with an increased range of subject options and streams.
4	Post-secondary or non-tertiary education	Programs providing learning experiences that build on secondary education and prepare for labor market entry or tertiary education. The content is broader than secondary but not as complex as tertiary education.
5	Short-cycle tertiary education	Short first tertiary programs that are typically practically-based, occupationally-specific and prepare for labor market entry. These programs may also provide a pathway to other tertiary programs.
6	Bachelor's or equivalent	Programs designed to provide intermediate academic or professional knowledge, skills and competencies leading to a first tertiary degree or equivalent qualification .
7	Master's or equivalent	Programs designed to provide advanced academic or professional knowledge, skills and competencies leading to a second tertiary degree or equivalent qualification .
8	Doctorate or equivalent	Programs designed primarily to lead to an advanced research qualification, usually concluding with the submission and defense of a substantive dissertation of publishable quality based on original research.

UNESCO Institute for Statistic (2012). International Standard Classification of Education ISCED 2011; Montreal. UIS/2012/INS/10/RE.
<http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-2011-en.pdf>

What do those “equivalent” qualifications look like in practice?

Most common level-6 (Bachelor’s-level) PET qualifications in Switzerland

343 Federal Diploma of Higher Education: The top 10 qualifications, 2019

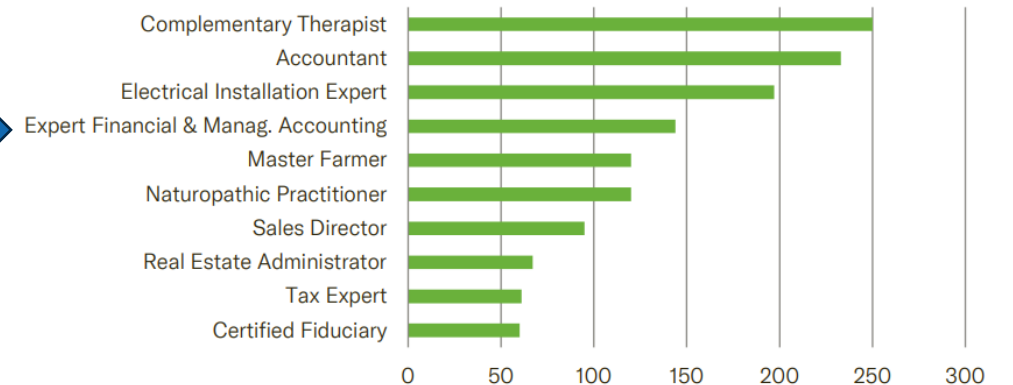
Data: FSO



Most common level-7 and -8 (Master’s- and Doctoral-level) PET qualifications in Switzerland

344 Advanced Federal Diploma of Higher Education: The top 10 qualifications, 2019

Data: FSO



Learning Outcomes: European Qualifications Framework

Level	Knowledge	Skills	Responsibility & Autonomy
4 HS	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
5 AA	Comprehensive, specialized, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others
6 BA	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialized field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
7 MA	Highly specialized knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research. Critical awareness of knowledge issues in a field and at the interface between different fields	Specialized problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams
8 PhD	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialized skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

European Qualifications Framework: <https://europass.europa.eu/en/description-eight-efq-levels>

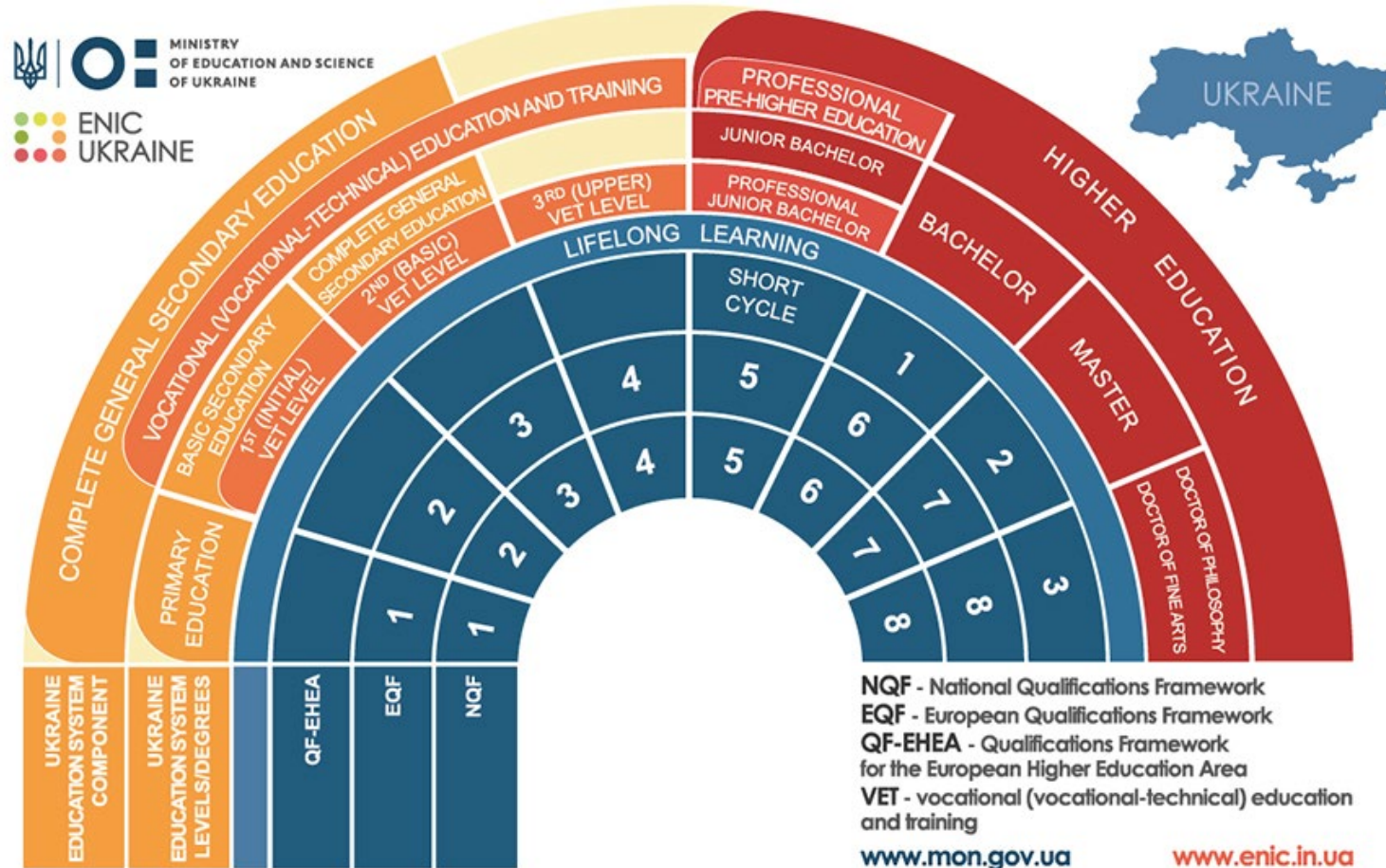
Types of Education

United States Qualifications Framework (USQF)				
USQF Level	Qualification	Description	Program(s)	Vocational
9	Doctoral		Doctor of Philosophy (Ph.D.)	
8	Master		Master of Arts Master of Science Master of Fine Arts etc.	
7	Professional Doctorate	First professional degrees	Doctor of Medicine Doctor of Dentistry Doctor of Optometry Doctor of Veterinary Medicine Juris Doctor Pharm.D. Master of Divinity	
6	Post-Baccalaureate	Additional undergraduate study in a different field of study	Post-graduate certificates / Post-bachelor's certificates (e.g. teaching credential)	
6	Bachelor	4-5 years, first degree	Bachelor of Arts Bachelor of Science	
5	Associate	2-3 years, post-secondary vocational, science or arts programs	Associate of Arts Associate of Science	Associate of Applied Sciences degree in a technical or applied field
4	Post-Secondary Non-tertiary	Short-term academic programs in business, health, trades, cosmetology	Certificate Diploma Occupational-specific vocational certificate	Post-secondary vocational apprenticeship, e.g. electrician, plumber, carpenter Certificate/Diploma
3	Secondary / High School	4 years	High school diploma High School Equivalency Diploma (HiSET) General Educational Development (GED) Award International Baccalaureate (IB) diploma	Vocational Secondary
2	Middle School		Adult Basic Education (ABE) Diploma	
1	Kindergarten - Elementary			
0	Early Childhood Education	Preschool / Pre-K		

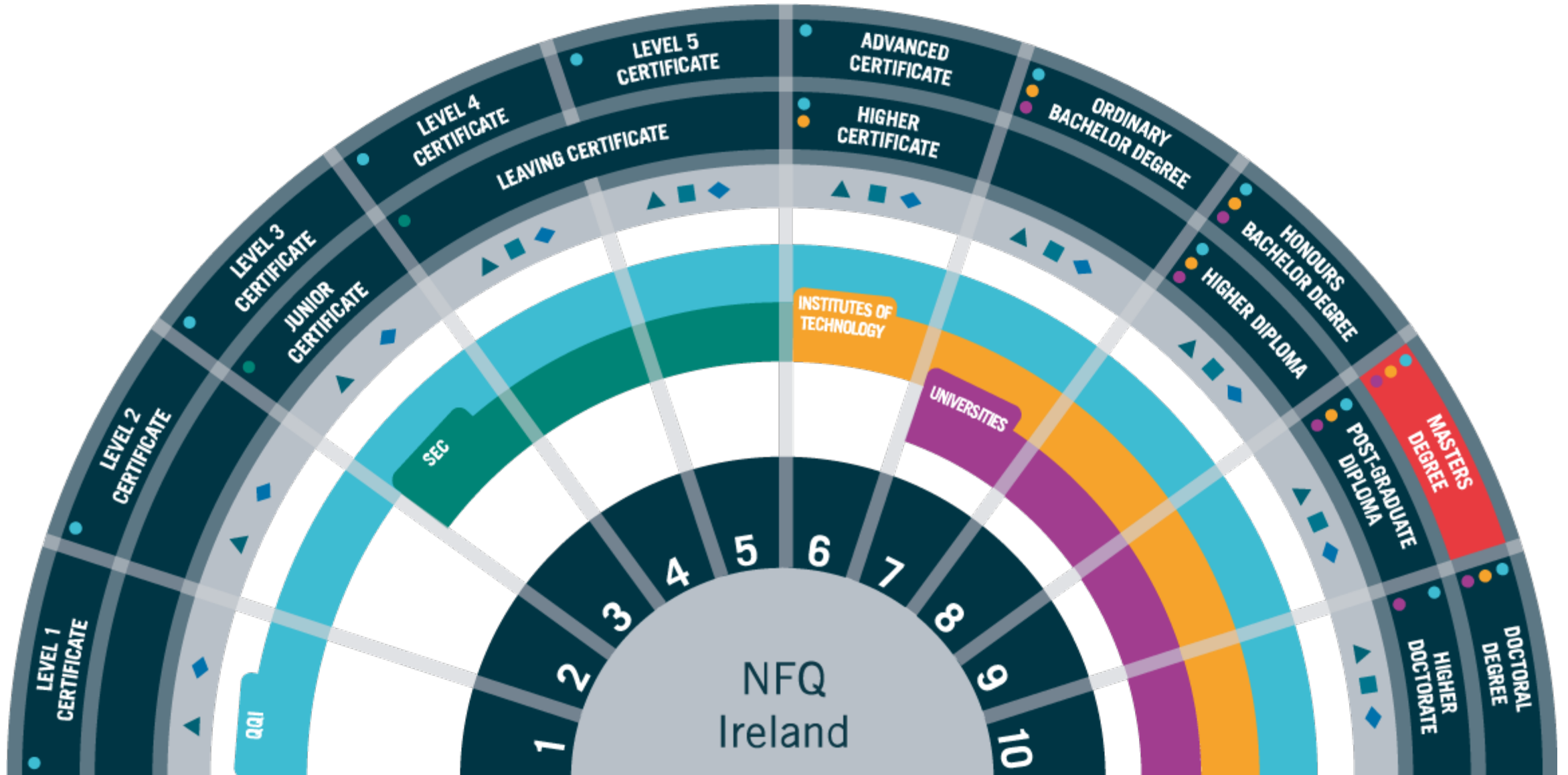
Types of Education

NATIONAL QUALIFICATIONS FRAMEWORK OF UKRAINE

Approved by the Resolution of the Cabinet of Ministers of Ukraine № 1341, dated November 23, 2011,
as amended by the Resolution of the Cabinet of Ministers of Ukraine № 519, dated June 25, 2020



Types of Education



Types of Education

Australian Qualifications Framework (AQF)

HIGH SCHOOL	TAFE NSW	UNIVERSITY	AQF Level
		Doctoral Degree	Level 10
		Masters Degree	Level 9
	Graduate Diploma Graduate Certificate Bachelor Honours Degree		Level 8
	Bachelor Degree		Level 7
	Associate Degree Advanced Diploma		Level 6
	Diploma		Level 5
	Certificate IV		Level 4
	Certificate III		Level 3
	Certificate II		Level 2
	Certificate I		Level 1
Senior Secondary Certificates of Education (HSC in NSW)			

Summary: What are Qualifications Frameworks?



Education Levels



Learning Outcomes



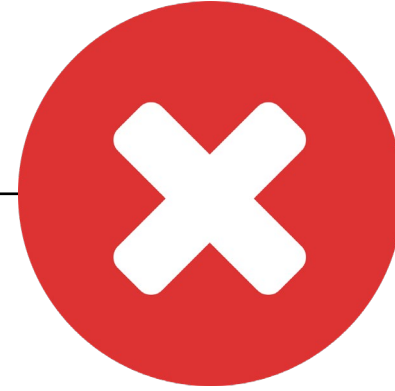
Education Types

What can NQFs accomplish, and what can't they?

What can NQFs accomplish, and what can't they?



- ✓ Mobility
- ✓ Permeability
- ✓ Recognition



- ✗ Implementation
- ✗ Program quality
- ✗ State authority

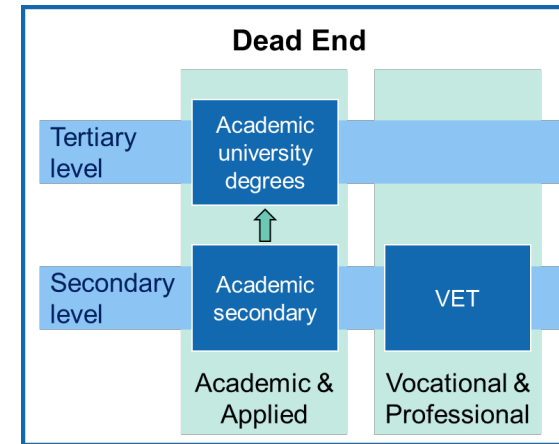
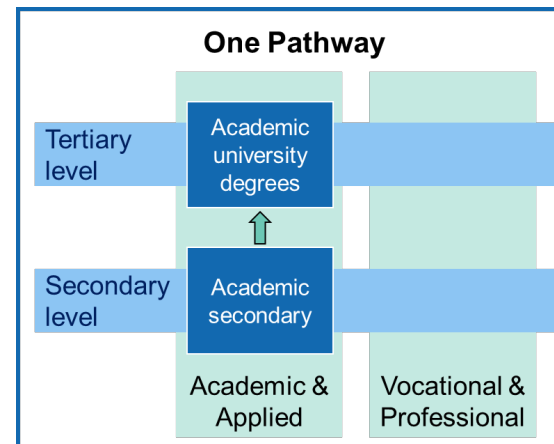
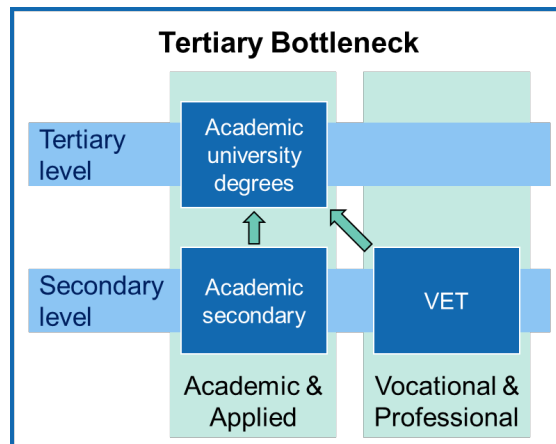
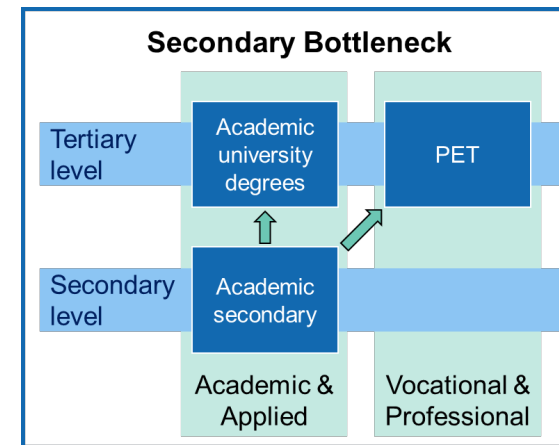
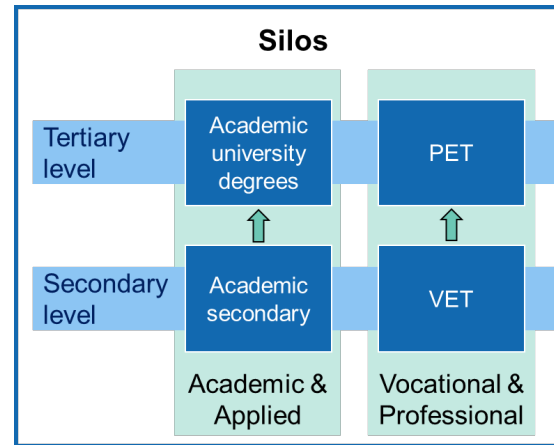
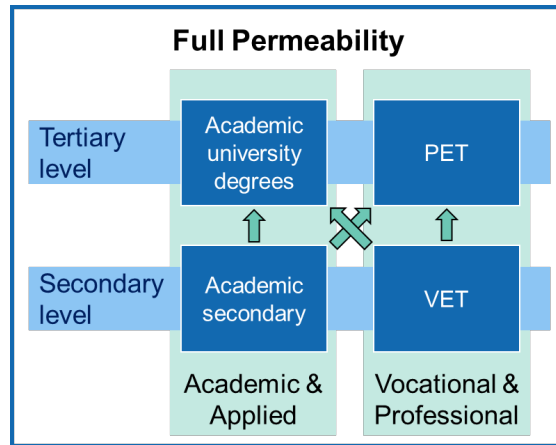
✓ Mobility

- Educational mobility
 - Individuals and providers can understand the education system and its options more easily, facilitating **progression and transitions** between pathways/fields of study
- Geographic mobility
 - An NQF allows for **referencing**, or understanding how a qualification from one place relates to the qualifications in another place.

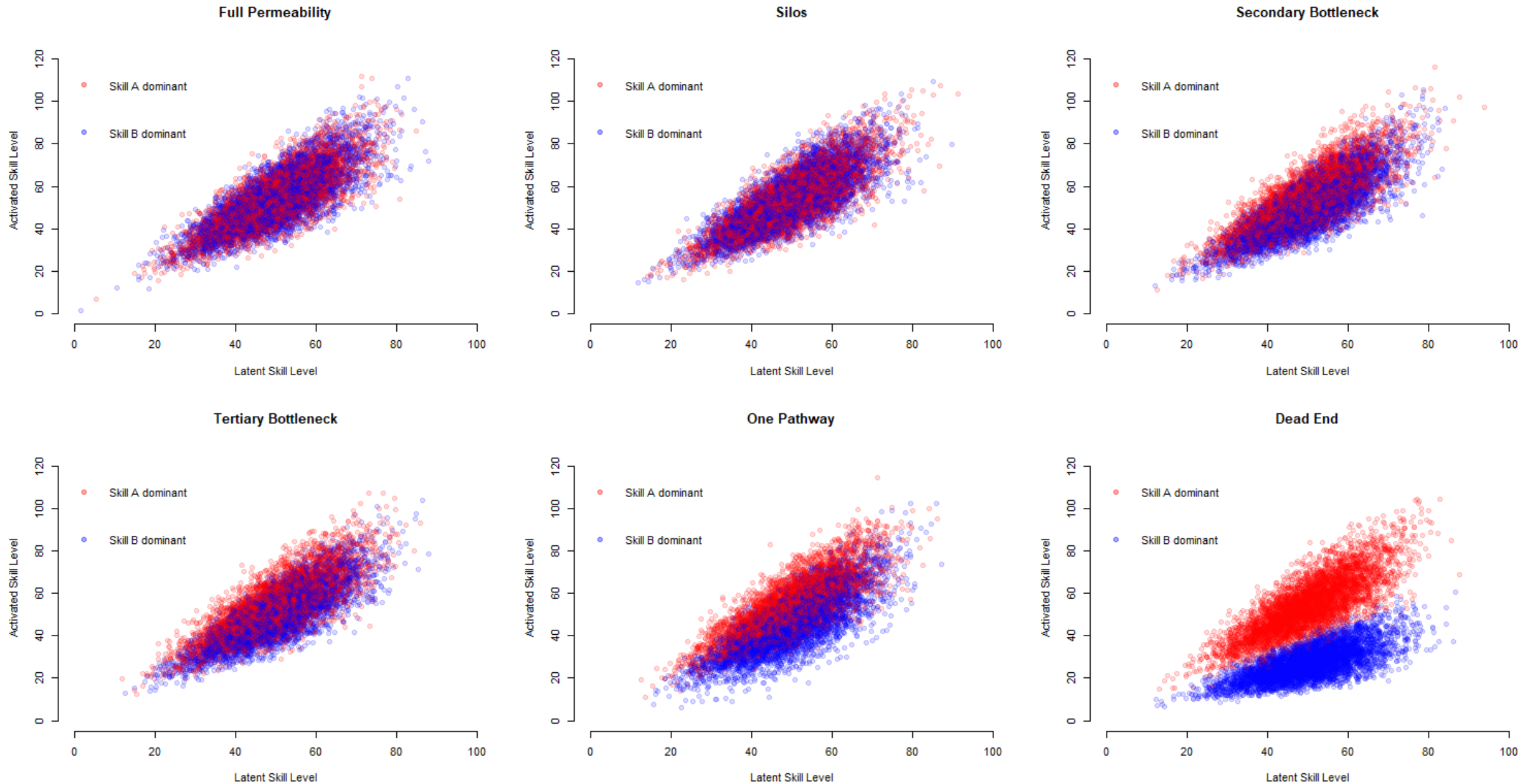
Referencing: How an Australian might move to Europe

AQF		EQF
10	Doctoral Degree	8 Third cycle degrees (Doctorate) Higher professional qualifications EE: occ. qual. 'chartered engineer'
9	Masters Degree	7 Second cycle degrees (Master) Higher professional qualifications CZ: 'Chemical engineer product 'manager'
8	Bachelor Honours Degree Graduate Certificate Graduate Diploma	6 First cycle degrees (Bachelor) IE: Honours Bachelor Degree Higher professional qualifications DE: 'Master Craftsman (certified)'
7	Bachelor Degree	
6	Associate Degree Advanced Diploma	5 SCHE qualifications Higher professional qualifications
5	Diploma	
4	Certificate IV	4 Upper secondary general education certificates; VET qualifications
3	Certificate III	3 Secondary education certificates; VET qualifications
2	Certificate II	2 Lower-secondary education Basic VET qualifications
1	Certificate	1 Primary education certificates Basic VET qualifications

- ✔ Education system **permeability** requires **opportunity** and **access**
NQFs can support both.

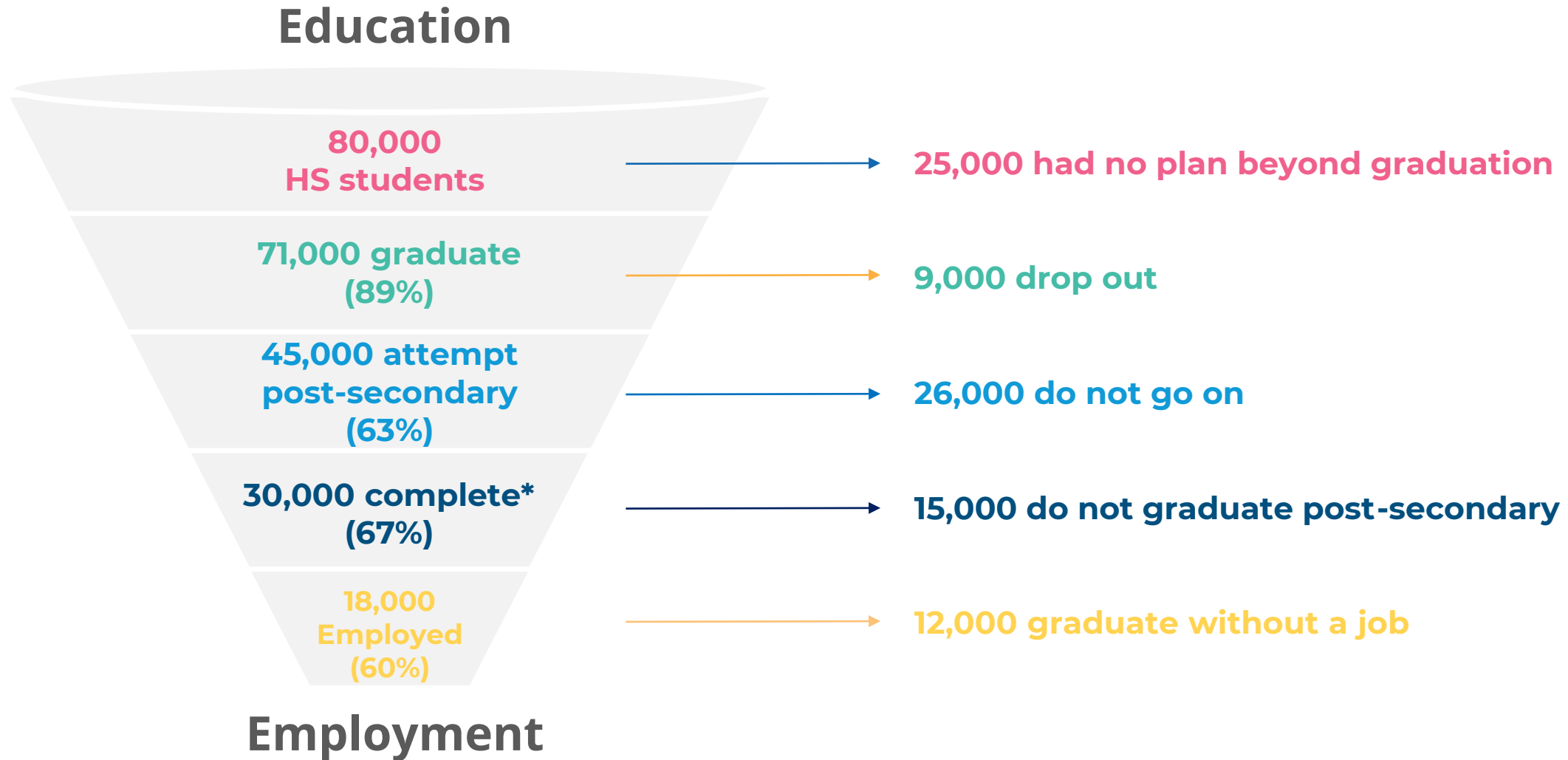


Permeability shapes an education system's maximum potential



Permeability is a big missing piece in the US, especially opportunity

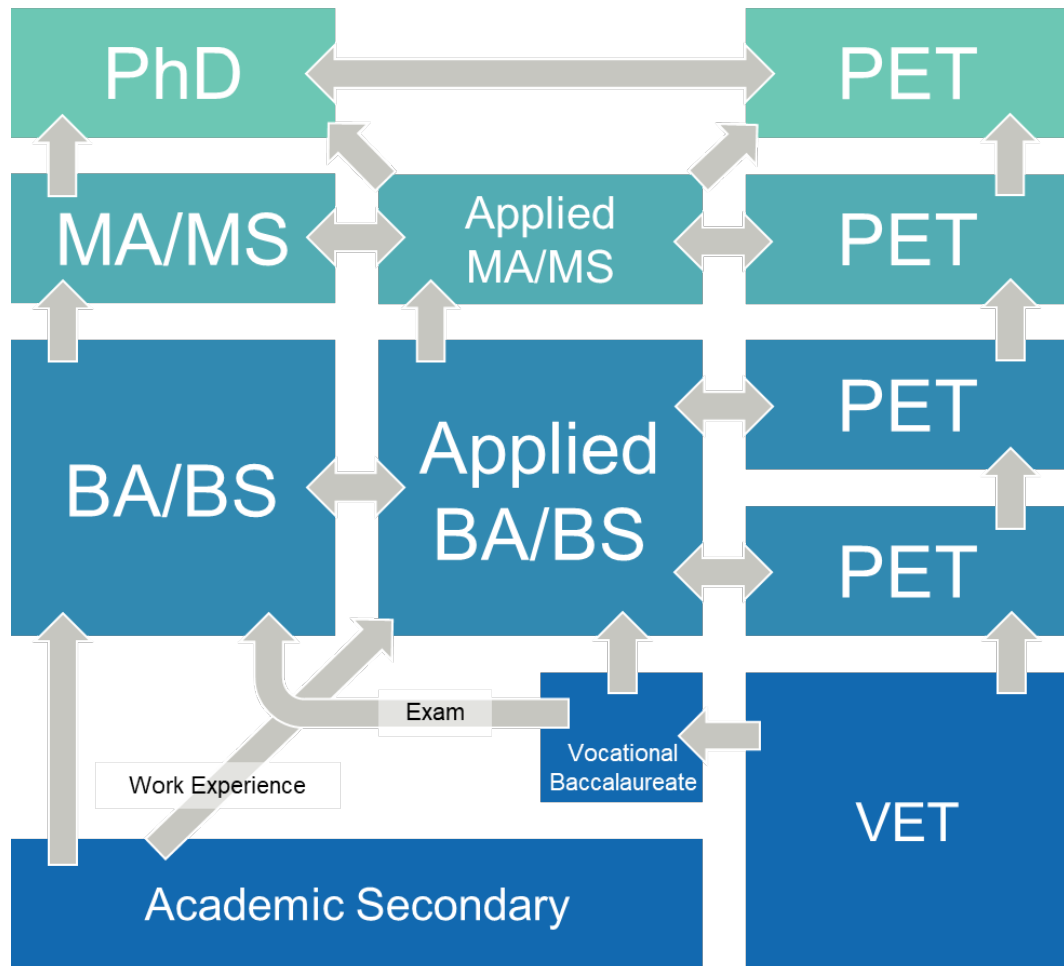
Slide from Indiana CEMETS team 2019



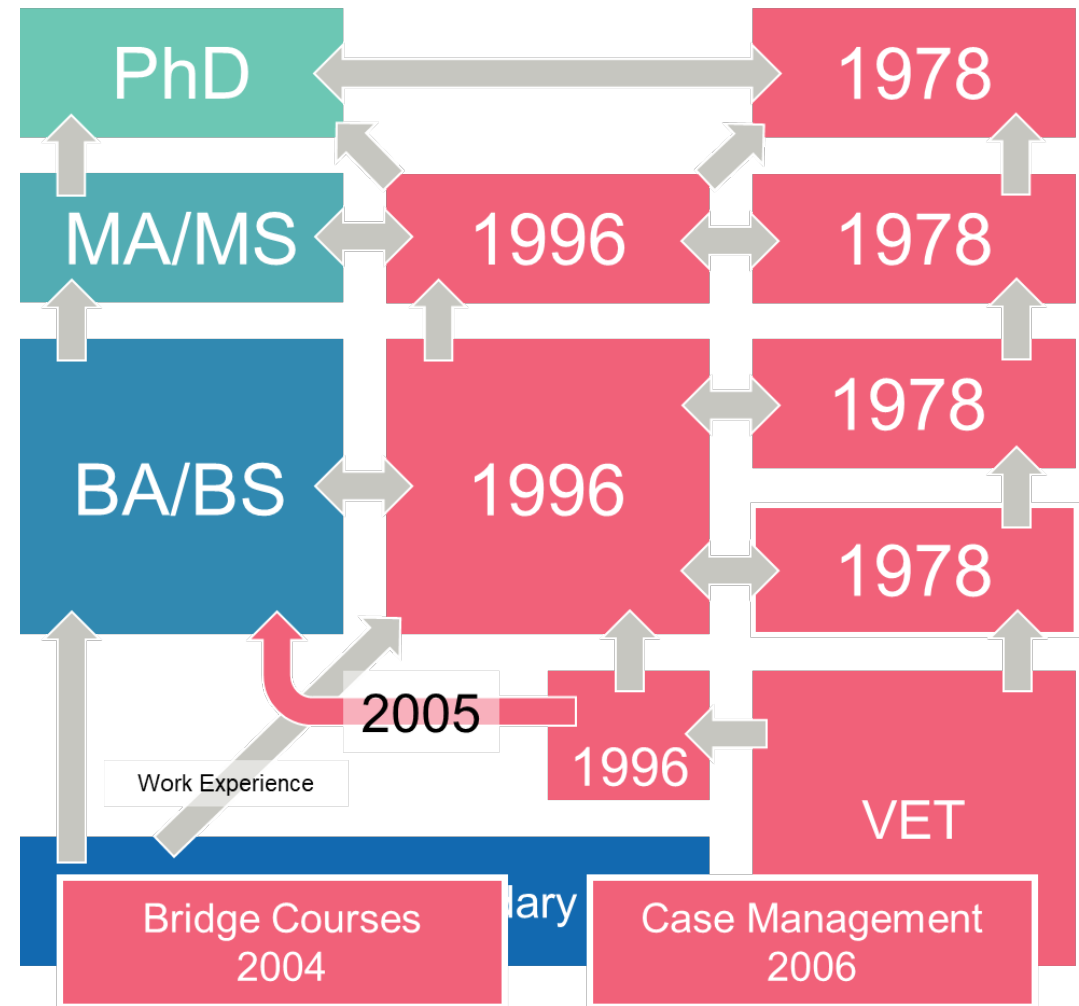
✔ **Recognition:** NQFs can help define a path back into education



❌ **Implementation:** An NQF builds a map, not a road
 Switzerland example of system before 2008 NQF



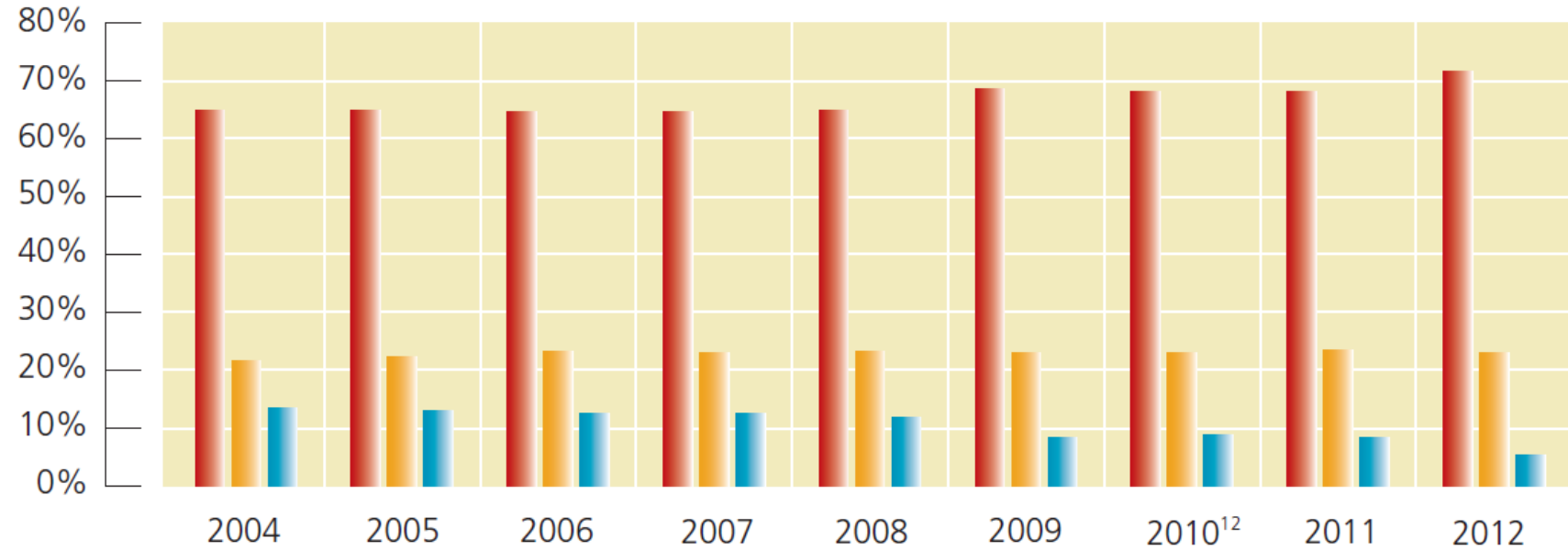
Swiss System (Simplified)



Major Reform Years

The Swiss implementation story: ~10% attainment rate growth in 8 years

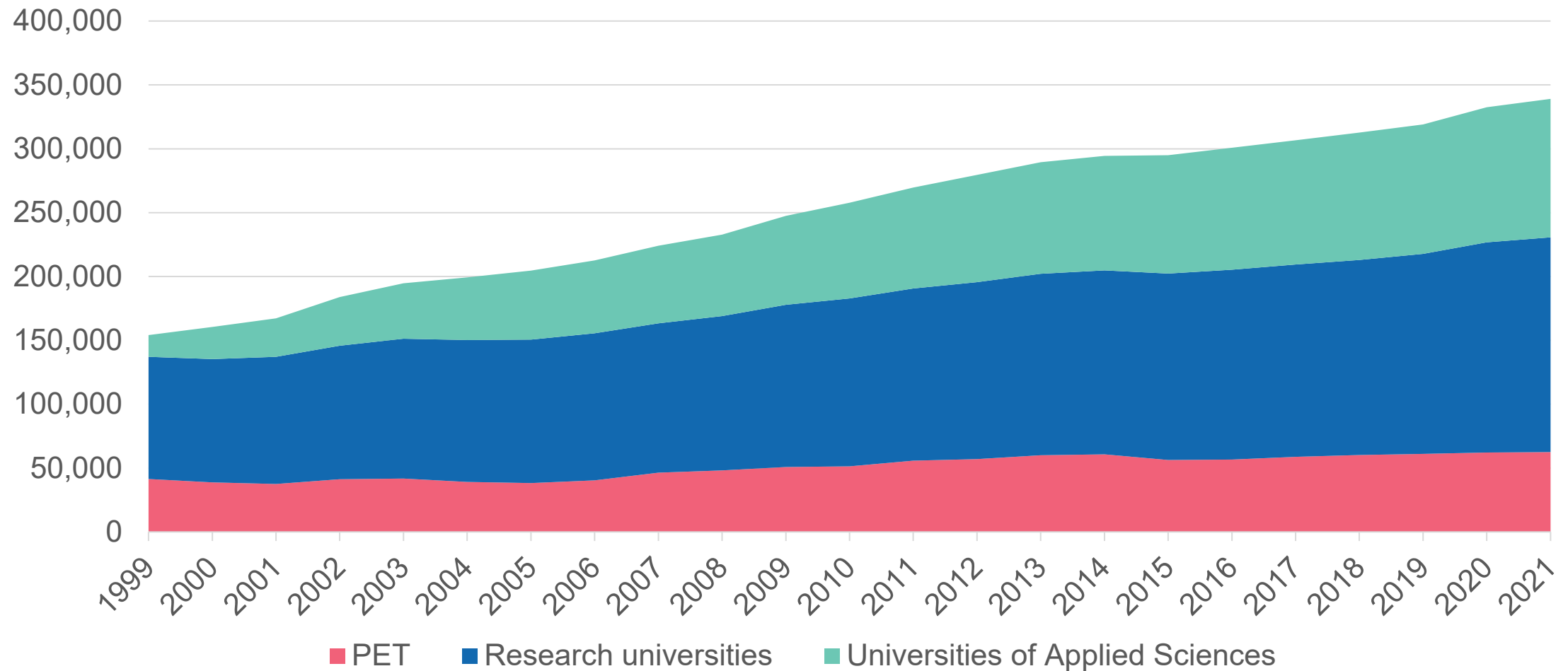
Upper-secondary level qualifications¹¹



VET	■	64.9%	64.9%	64.6%	64.6%	65.0%	68.7%	68.2%	68.2%	71.6%
General education	■	21.7%	22.2%	23.2%	23.0%	23.3%	23.0%	23.0%	23.4%	23.1%
No upper-secondary level qualifications	■	13.4%	12.9%	12.2%	12.4%	11.7%	8.3%	8.8%	8.4%	5.3%

Source: https://www.sbf.admin.ch/dam/sbf/en/dokumente/berufsbildung_underschweiz-faktenundzahlen2016.pdf.download.pdf/vocational_and_professionaleducationandtraininginswitzerland-fac.pdf

There is room for more opportunity: Swiss tertiary enrollment 1999-2022 by type (After UAS was established in 1996)

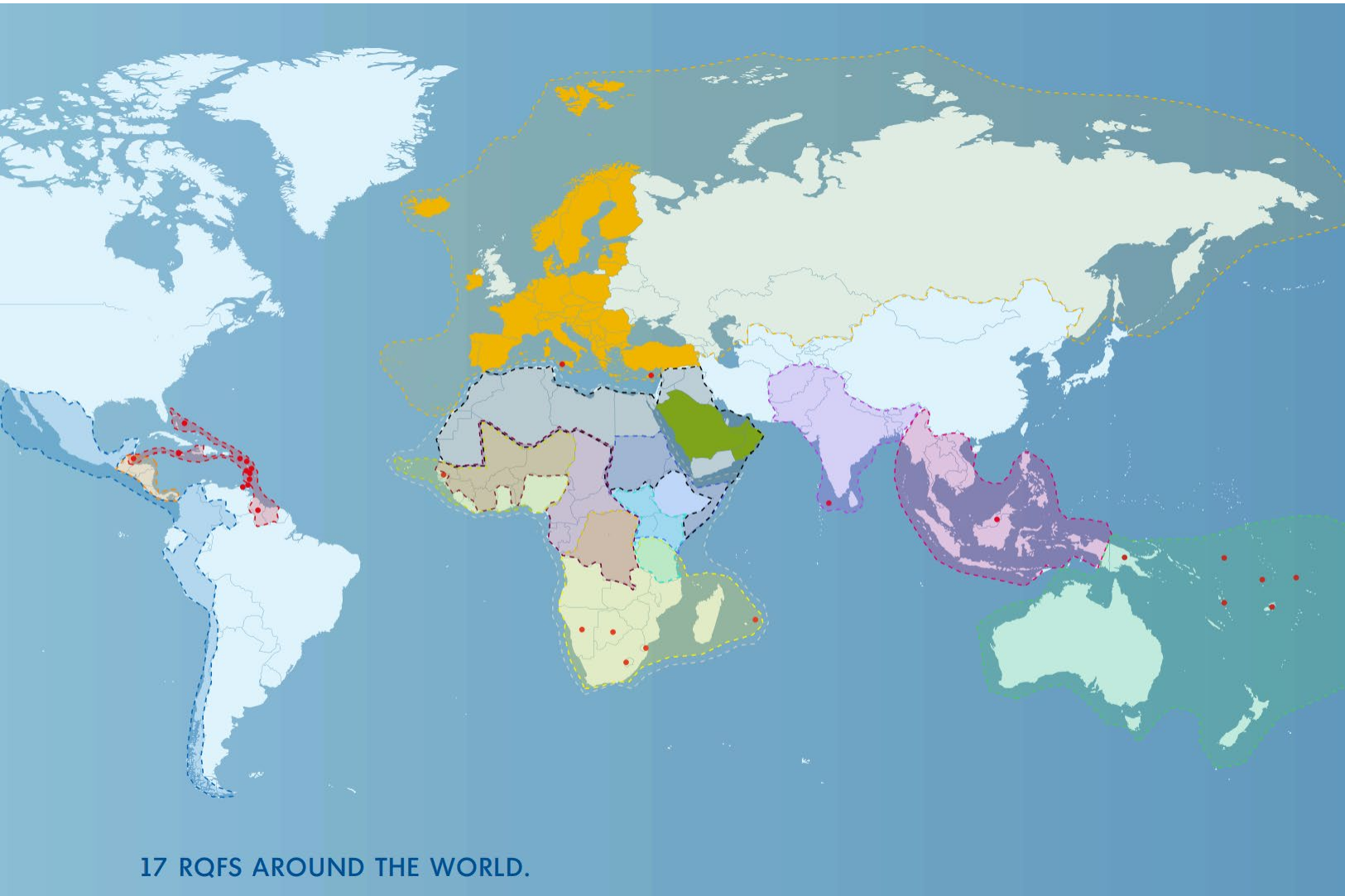


Source: Swiss Federal Statistical Office

❌ Program quality: An NQF can help but it does not ensure quality alone

How an NQF can support quality	Challenges
<p>Functional differentiation and specialization across types</p> <p>Different requirements and stakeholders for different program types</p>	<p>Existing power structures and policies</p> <p>NQF does not accredit programs, although qualifications authorities/systems can</p>
<p>Quality assurance mechanisms for levels</p> <p>Well-enforced learning outcomes can help individuals and employers understand levels</p>	<p>Takes personnel and resources to reference every potential qualification to levels</p> <p>Constant updating required</p>

❌ State authority: The US does not have a national education system



A **regional qualifications framework** approach probably makes sense.

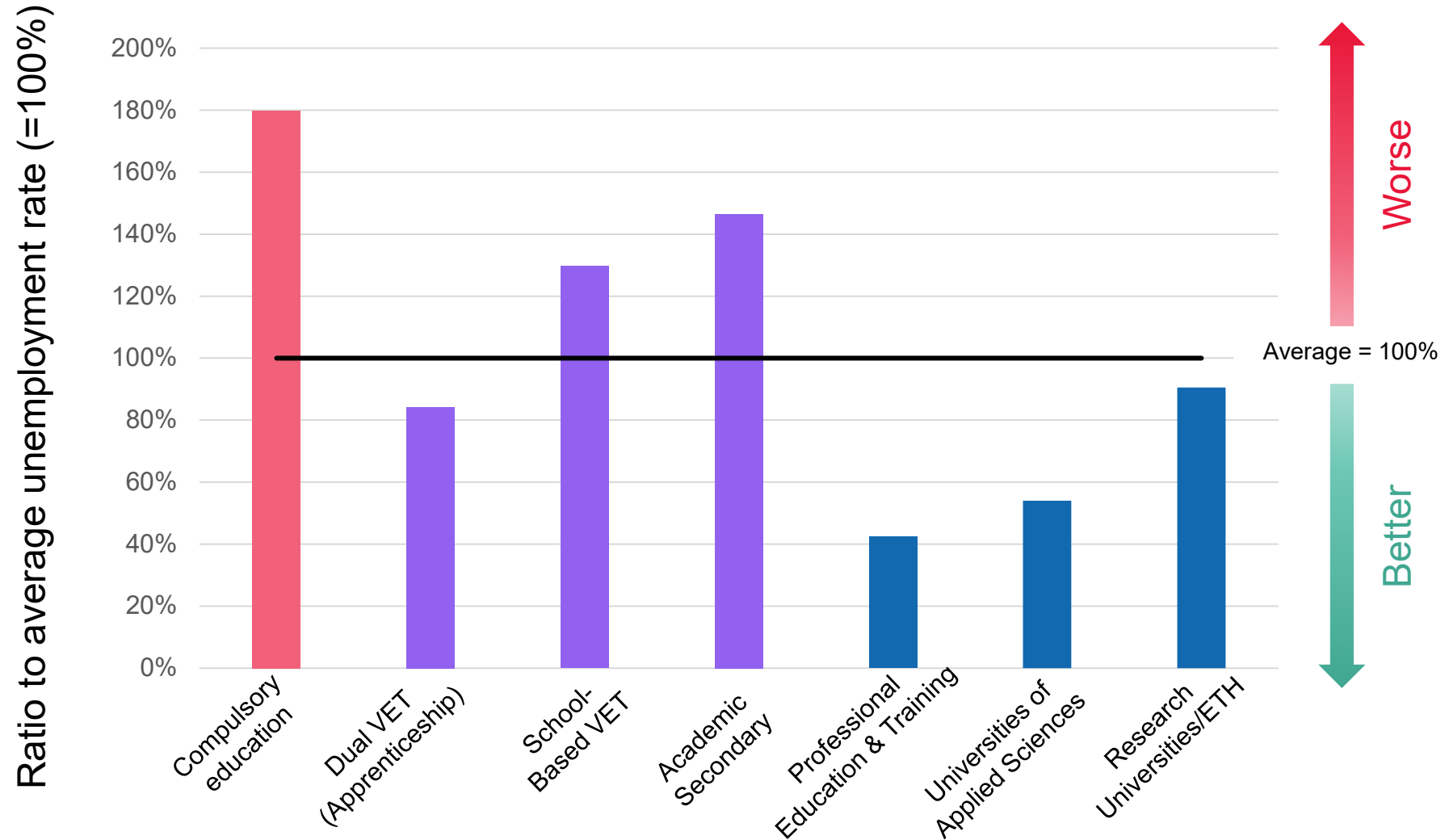
RQFs are non-binding soft policies designed to support and align NQFs in the area.

An NQF in the US could support and align **state qualifications frameworks**

Discussion

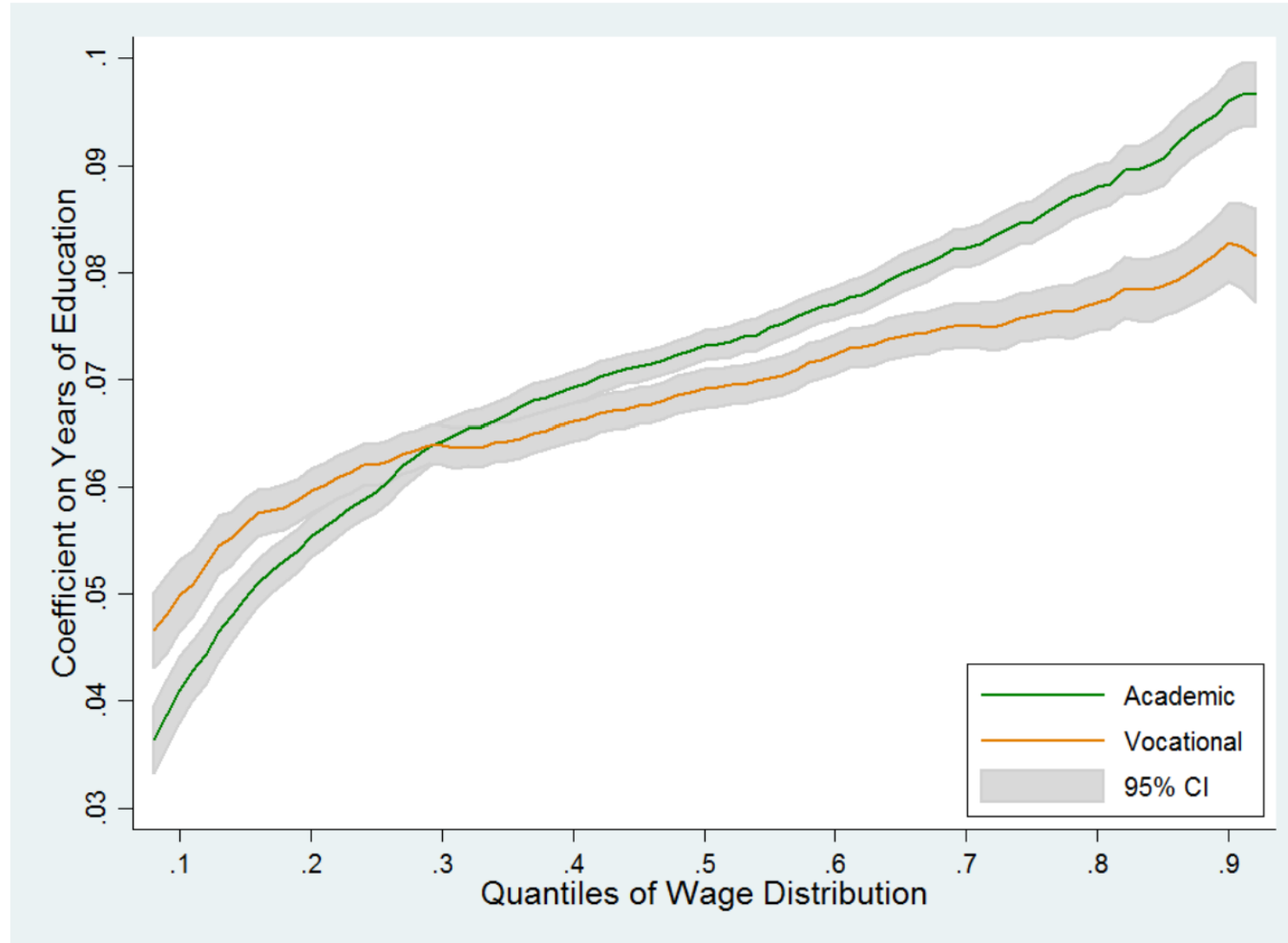
Appendix

Opportunity matters: Unemployment rate by highest level of education



An academic-only system serves the top part of the wage distribution

Figure 3: Returns to Vocational and Academic Education, QR Estimates



Source: Balestra, S., & Backes-Gellner, U. (2017). Heterogeneous returns to education over the wage distribution: Who profits the most?. *labor Economics*, 44, 89-105.

School-based VET does not help youth labor markets, but dual VET does



School-based VET

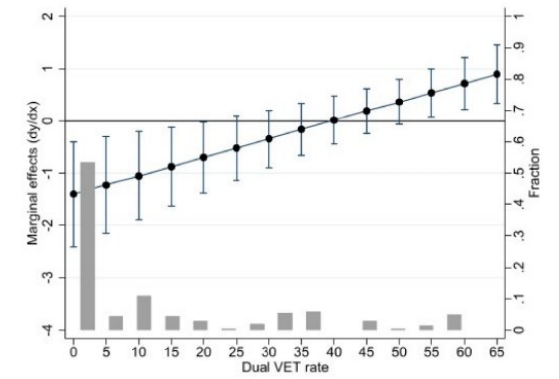
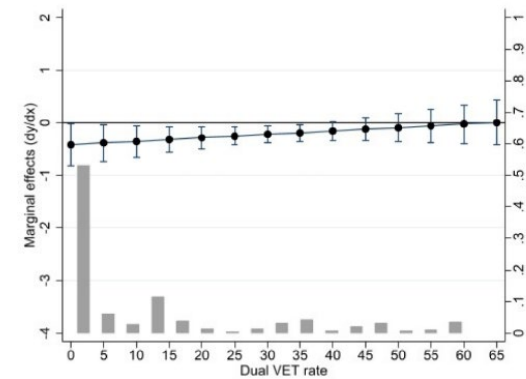
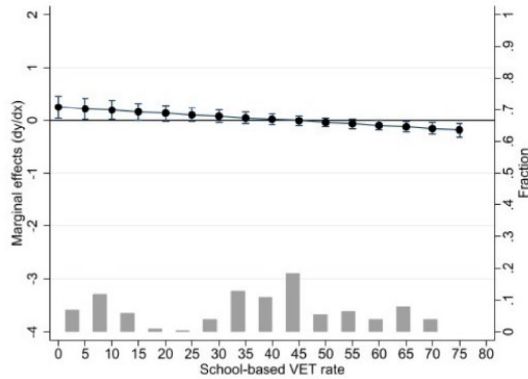
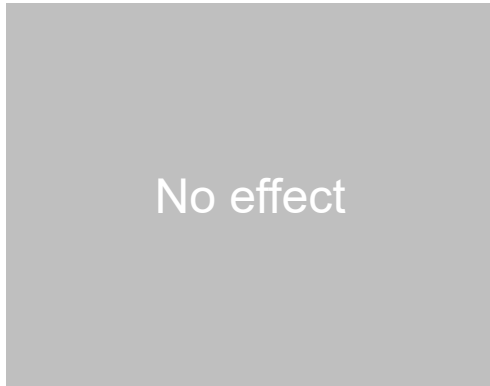
Dual VET (Apprenticeship)

Unemployment

Long-term unemployment

Unemployment

Long-term unemployment

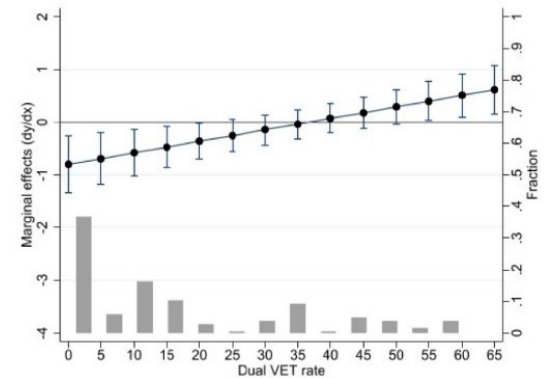
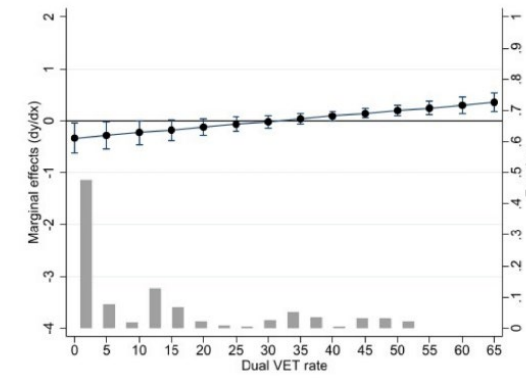
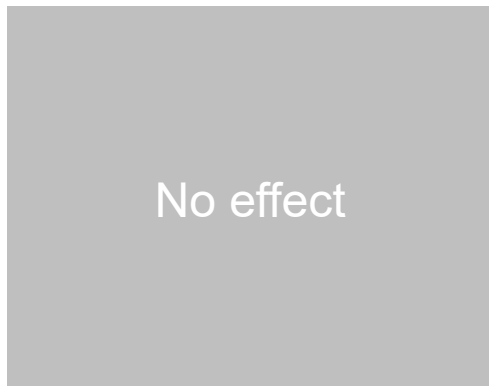
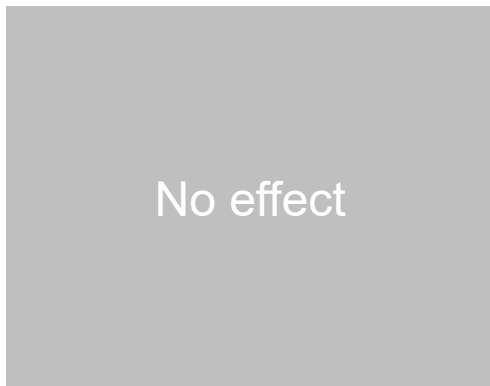


Involuntary part-time

In-work at-risk-of-poverty

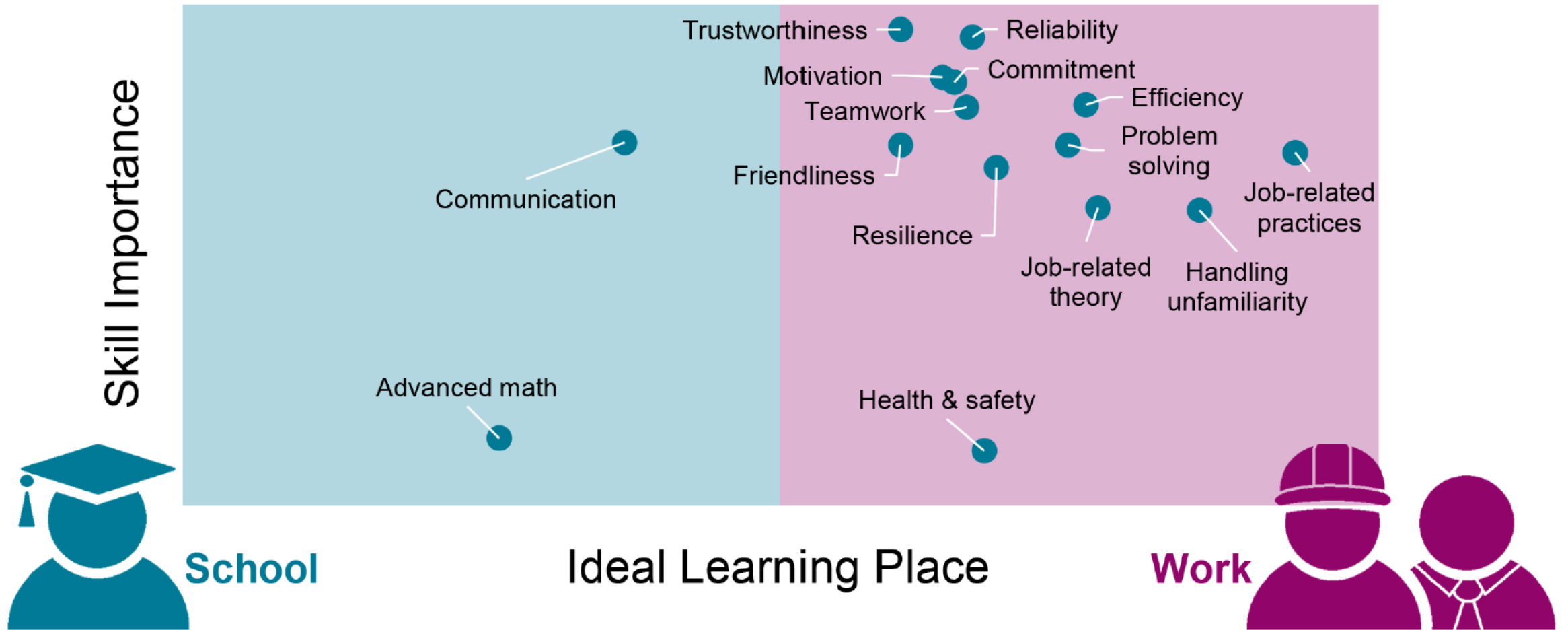
Involuntary part-time

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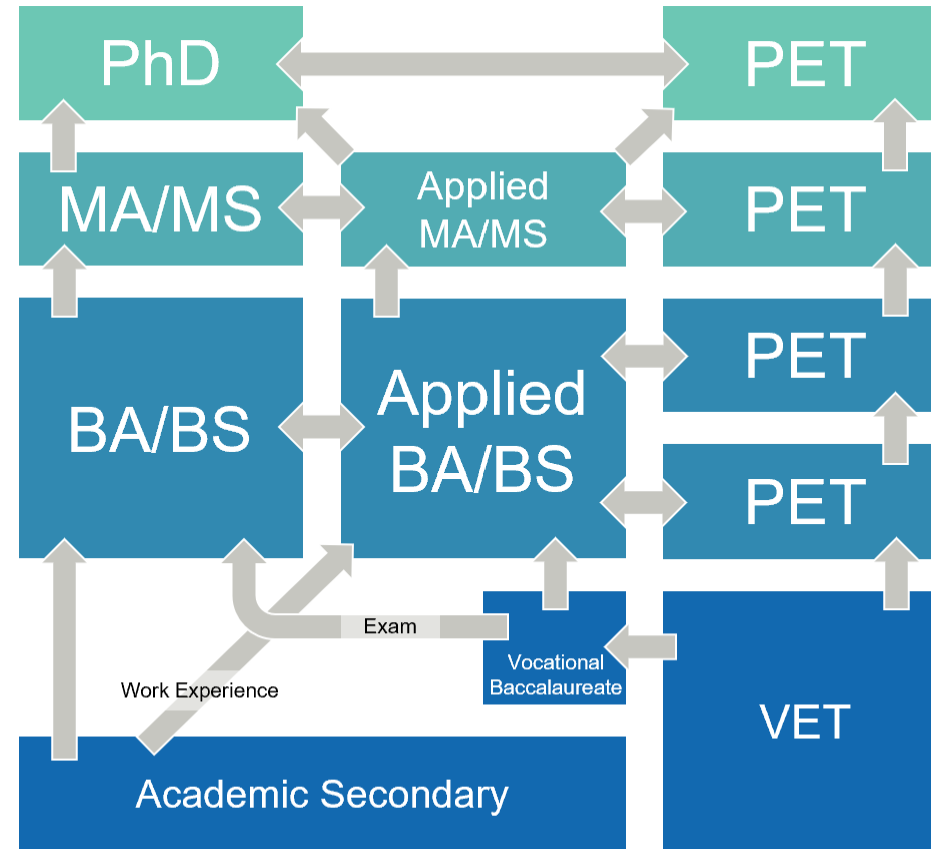
Why does linkage matter?

Example: Key skills are better learned at work



Source: [Renold et al., 2017](#)

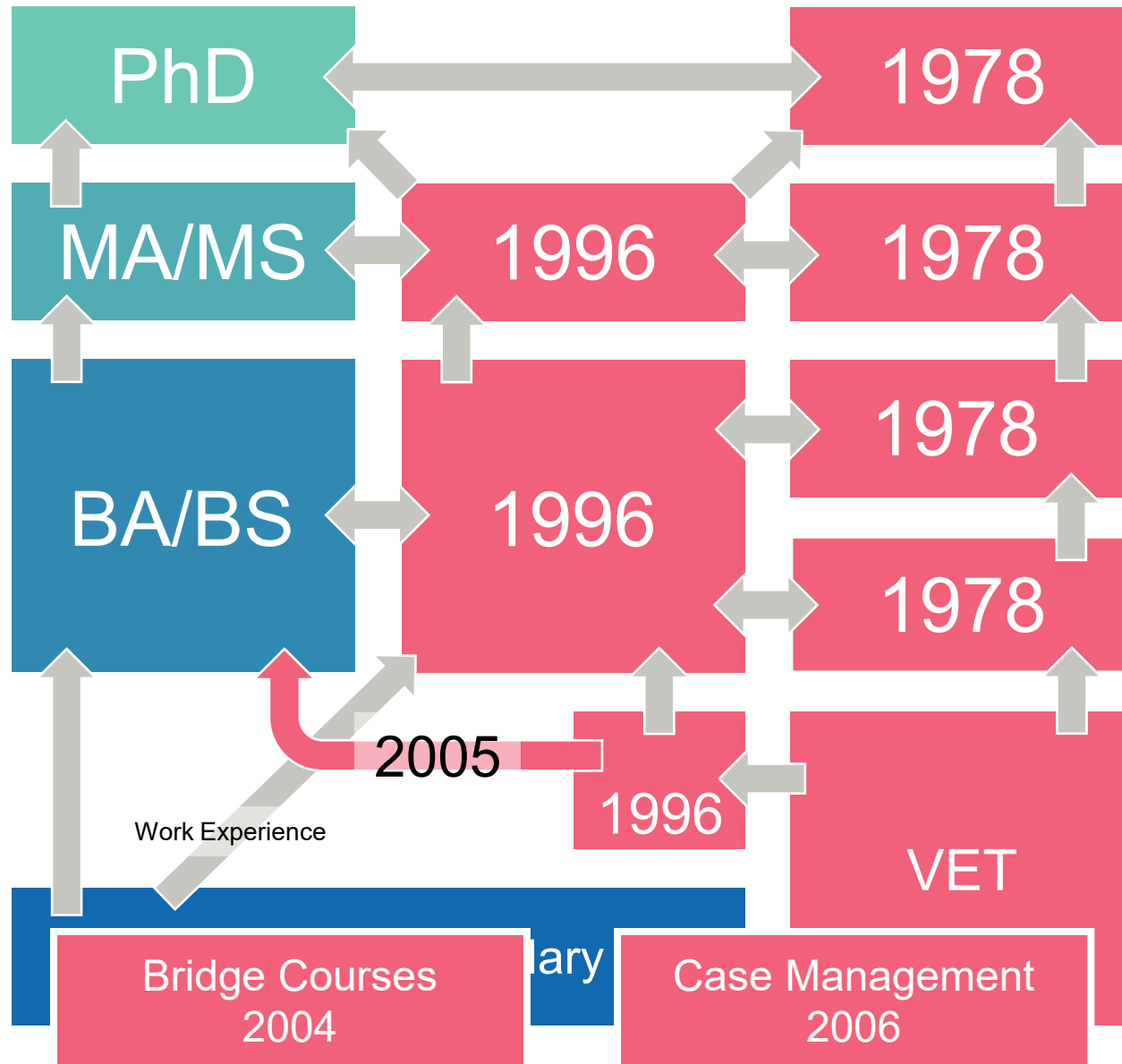
Simplified Swiss system



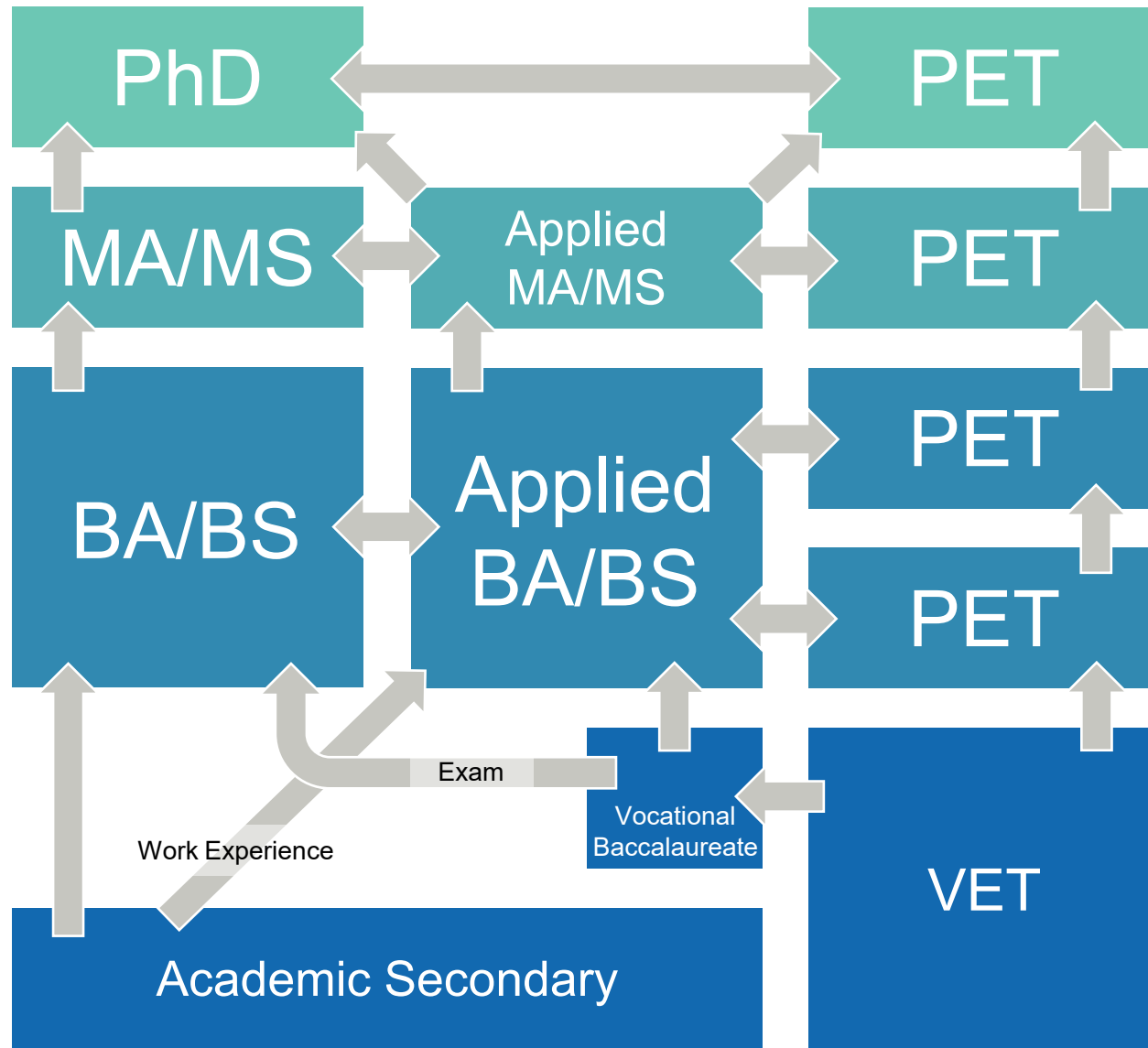
Swiss System (Simplified)

VET= Vocational Education and Training (Secondary Level)

PET= Professional Education and Training (Tertiary Level)



Major Reform Years



Swiss System (Simplified)