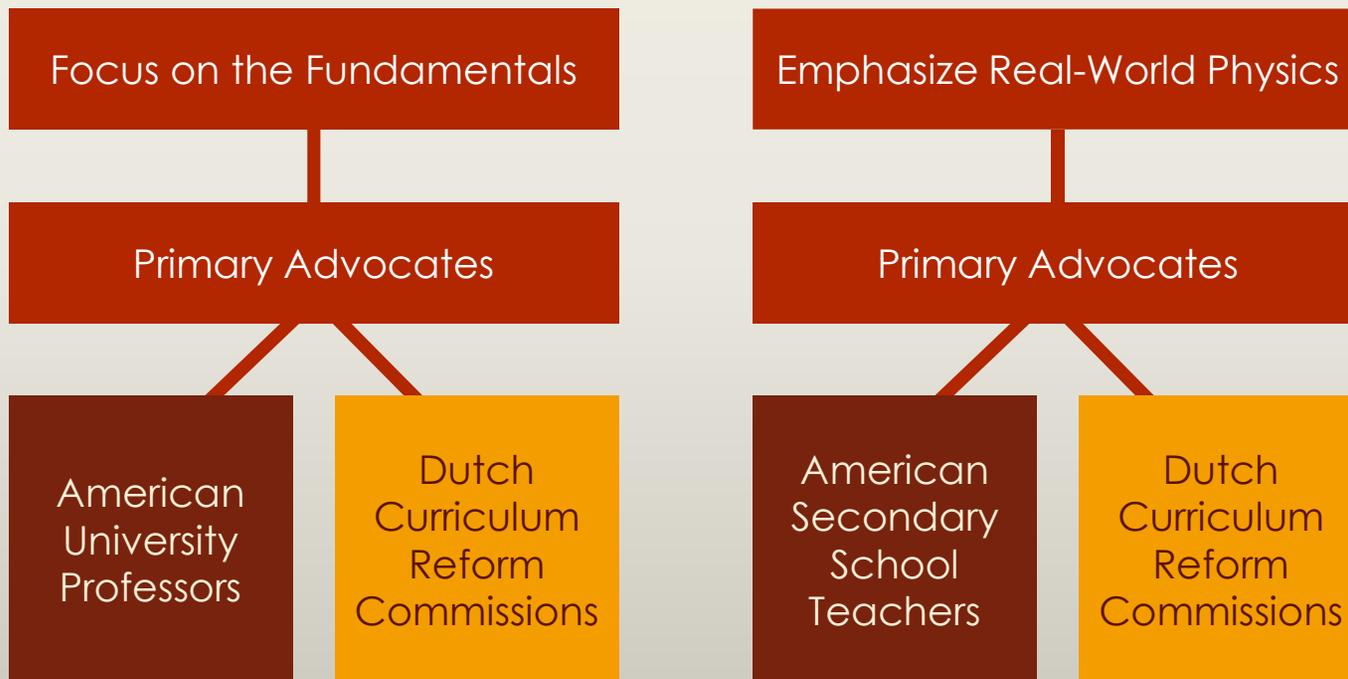


Physics Educator Certification in the United States and the Netherlands

Erin Fosnocht

Rendering the Problem: Methods of Physics Education

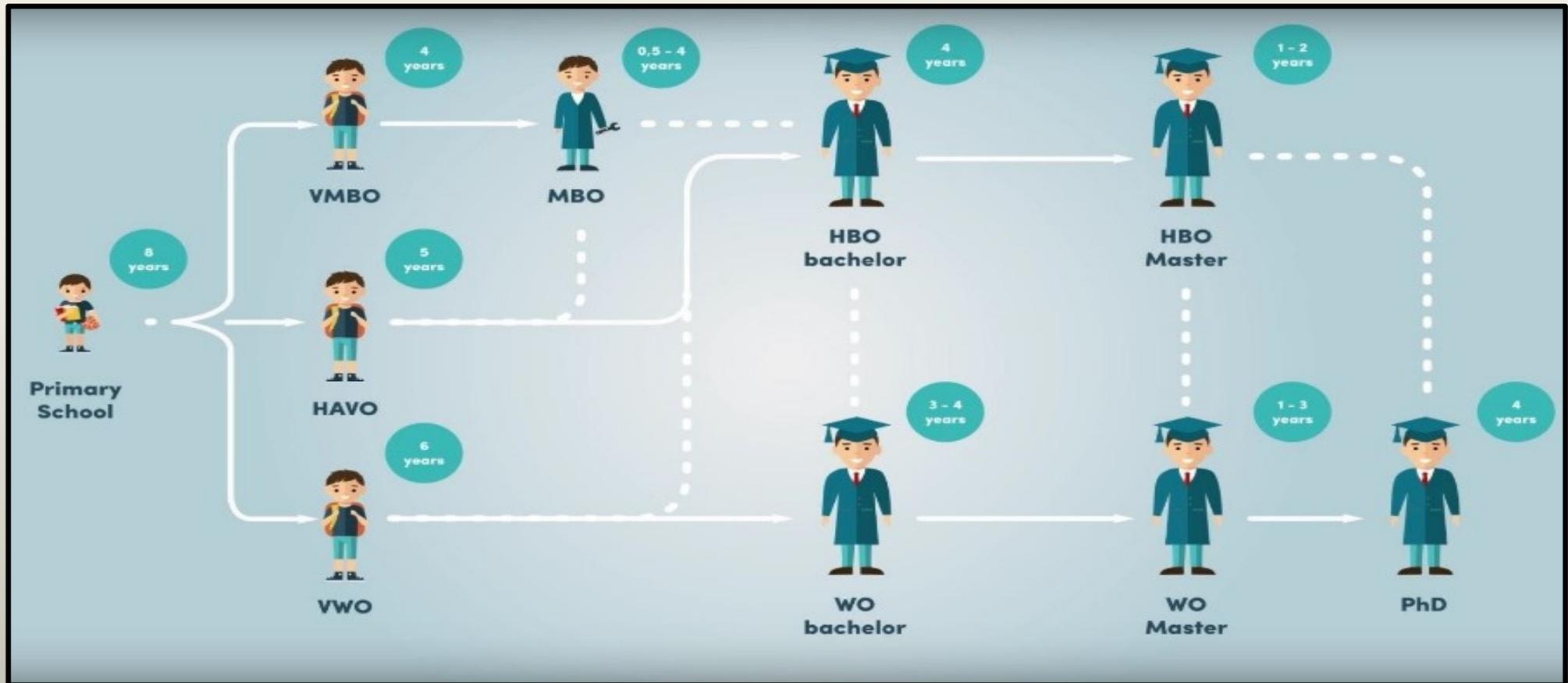
Conflicting Educational Methods



Physics Education in the United States

- Mandatory General Science Course
 - Ages 14-15
 - cursory survey of physics, chemistry, and related topics
- High School Physics in Virginia
 - Not mandatory or encouraged

The Dutch Education System



Physics Education in the Netherlands

- Mandatory for all HAVO and VWO Students
 - Ages 13-15
 - Includes theories, formulas, units, and laboratory activities
- VWO Science Track
 - 3 more years of physics
 - Includes Quantum Mechanics, Relativity, and Particle Physics
- Final Examinations
 - Mandatory for all students
 - Focus on either formula-based or practical physics

Physics Educator Certification

Netherlands

Pathways

HAVO, VWO, or Upper-Level VMBO

HBO Bachelor of Education of Physics

Grade Two Certification

Teaching Years 1-3 of HAVO and VWO

HBO Master of Education and Physics

University (WO) Bachelor's Degree

WO Master of Physics
with Educational
Training

WO Master of
Physics and
Education

Grade One Certification

Teaching Years 1-6 of HAVO and VWO

Personal Perspectives: Dutch Physics Teachers

Ben Groenen



Believes that “ideally, [physics should be] linked with other subjects, but in the higher levels, you must focus on the subject on its own”

Joris de Graaf



Tries to strike a balance between doing “cool stuff” in class and demonstrating the rigor of upper-level physics

Conclusions

Questions?