Should we teach general skills in vocational education?

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An interesting puzzle

- Vocational educated have a smoother transition to the labour market than their academic educated peers (Ryan 2001; Van der Velden & Wolbers, 2003; Levels et al. 2014).
- This advantage seems to reverse later in life (Hanushek et al. 2016), but the evidence is not conclusive (Forster et al. 2016).
- General skills seem to become more and more important, but why would vocational educated still have a better transition?
The dilemma

- Vocational skills serve as ‘safety net’: they protect students at the bottom end against competition by providing some comparative advantage.
- In the beginning of the career, vocational educated are rewarded solely on the basis of these vocational skills.
- But these vocational skills may become obsolete and later in the career more general skills are needed to stay employable.
- The dilemma is: can VET provide a basis for both vocational and general skills?
The empirical problem

• In most surveys like LFS, we observe certain patterns in the school-to-work transition or the later occupational career, but lack data on the underlying mechanisms: the skills that people have.

• In adult literacy surveys like PIAAC we do have information on general skills, but not on vocational skills: this can lead to wrong conclusions.
Two theories on the joint development

- The ‘Complementary Regime’: the development of general and vocational skills go hand in hand (based on theories of expertise development and authentic learning).
- The ‘Trade-off Regime’: the development of both is unrelated or even negatively related (based on time-on-task theories).
- These two theories predict a different effect of general skills over the life course for the vocational educated (under the assumption of initial rewards based on vocational skills).
Data

- PIAAC: 19 countries (excl. AU, RF, CY, BE, IT), 9,500 respondents (CA 20% sample).
- Selection of fulltime working male employees, aged 20-55.
- Highest level of education: ISCED 3 or 4.
- Vocational versus academic education.
- 3 age groups: young (20-29), prime age (30-44) and old (45-55).
- Controls for years of schooling (different sublevels in ISCED 3 or 4).
Wage premium numeracy across the life course

- Young age workers
- Prime age workers
- Old age workers

Academic educated
Vocational educated
General systems

- Young age workers
- Prime age workers
- Old age workers

Academic educated
Vocational educated

20,000
15,000
10,000
5,000
0,000
Dual systems

- Young age workers
- Prime age workers
- Old age workers

Academic educated vs. Vocational educated
Conclusions (1)

• General skills are important for success: not only for the academic educated, but also for the vocational educated.
• These skills are important for all age groups, not just for the prime age and older workers.
• But the role is different: in the beginning of the career, general skills matter because they correlate highly with vocational skills. Later in the career, general skills directly affect wages, because they are key in staying employable.
Conclusions (2)

- As wages for vocational educated are primarily driven by vocational skills, this points to a complementary regime: the development of vocational and general skills go hand in hand.
- The only exception are countries with a dual system: here we find evidence of a trade-off.
Policy implications

• Need to integrate the teaching of general skills in VET.
• This is easier in school-based settings than in dual systems.
• But even in school-based settings, this is not automatically achieved. Need for authentic learning environments that integrate general skills with subject-specific tasks.