

Should we teach general skills in vocational education? Evidence from 19 developed countries¹

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Whether upper secondary vocational education should primarily teach occupation-specific skills or should also aim at providing pupils with general skills is a hotly debated question. Recent research suggests that in many countries, vocational educated graduates from non-tertiary education experience higher quality school-to-work transitions than their academic educated peers, suggesting that occupation-specific skills are crucial in quickly finding a matching job. However, evidence also strongly suggests that early career education-to-job matching may come at a price. The relatively high returns to vocational education in the early career peter out during the career, and in the long run, academic educated workers appear to be better off. This regularity has been explained by assuming that the lack of general skills make vocational educated less flexible on the labour market, which would hamper their ability to find jobs outside of their field if they are unemployed.

Although this seems plausible, these assumptions have not yet been tested. One of the problems is that we lack information on specific skills and as such cannot directly assess the development of these skills over the life course, nor can we assess the effect of these skills on labour market outcomes. In this paper we develop an innovative model in which we assume a certain relation between the development of general and specific skills in vocational education. This development can either be seen as a trade-off (based on time-on-task theory: spending time on one type will come at the expense of time on another) or as complementary (based on theories on the development of expertise: the development of general and specific skills go hand in hand). The two models predict a totally different effect of general skills on labour market outcomes. In the 'trade-off regime' the effect of general skills on outcomes will be very low or zero at the start, and substantially increase over the life course. In the 'complementary regime' the effects of general skills over the life course for the vocational educated will be more or less flat.

We use data from the Programme for the International Assessment of Adult Competencies (PIAAC) to explore the relationship between general skills and labour market success of 20-55-year-old workers from 19 developed countries with advanced economies. Focusing on people who completed education at ISCED levels 3 or 4, we assess the differential role of general skills in predicting earnings for academic and vocational educated workers for different age groups. The results indicate that general skills affect earnings of vocational educated workers during all phases of their career, not just at later phases but also right from the start. As we assume that in the start of their career, vocational educated workers are mainly rewarded on the basis of the vocational skills and not their general skills, this implies that the development of general and vocational skills is largely intertwined. Only in so-called dual systems do we find evidence of a trade-off relation.

These findings have major implications for curriculum design of vocational education systems, which should not just aim at teaching occupation-specific skills that enable quick education-to-job matches, but also strive to inculcate general skills, because these form the basis on which these specific skills can effectively be developed at the start of their career and at the same time will help workers to remain employable and productive later in their careers.

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