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BIG CHANGE QUESTION

Should vocational education be part of secondary education?

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Introduction

Secondary education has become increasingly important in education policy reforms around the world. Many countries would like to see all their young people complete upper secondary education as a basic educational requirement. Secondary education policies vary internationally regarding the role of vocational and technical education. In Germany, Switzerland and Austria, for example, most students in upper secondary education attend vocational programs, which are mainly conducted in enterprises (dual system). In some other countries, such as the United States, New Zealand or Japan, most of students at upper secondary level study in general education programs.

There is a global debate whether vocational education should be part of school based upper secondary education. Some insist that vocational and technical education is better placed in post-secondary education or at secondary level in the private sector. Two scholars, Manfred Wallenborn and Stephen Heyneman, debate this issue in this Big Change Question.

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Vocational Education and Training (VET) is delivered in many countries by upper secondary public and private schools. For decades, donors, specialized institutes and think tanks involved in international cooperation have discussed whether school-based VET is an efficient investment in developing countries. Some experts argue that resources should be shifted to other sectors of the education system. The economics of education approach underlines this argument. The role of VET is important in national debates and international cooperation even if many countries do not meet the basic requirement for effective vocational education such as a well functioning labour market or good recruitment policies.

But an economic orientation to education is not the only reason to support reforms of secondary level vocational education. It should be noted that VET systems do not work like economic systems. They are driven by various interests of employers, politicians, trade unions, providers, students and parents as well as by educational objectives. Social status, employability, equity and available financing all influence education and training apart from socio-cultural patterns. The economic arguments are only one side of the coin. New contributions to the discussion of school-based VET must approach the problem more comprehensively, including economic arguments.

Some of the structural weaknesses of school-based vocational training are the following:

- Training in industrial and modern crafts trades is costly and in a rapidly changing world needs constant updates of infrastructure and content. If a country is not able to finance new equipment and the training of teachers, the quality of VET will rapidly decline, absorbing resources that might be used in more efficient ways.
- Ministries of Education favor educational rather than training approaches, in which the curricula remain stable for a long time and only partly relate to the practical skills and competencies that are required by labor markets.
- Limited resources for updating schools lead to isolation of vocational programs from work realities: outdated competencies are counter-productive to the employability of the graduates.
- Schools are largely insulated from a dynamic economy which is strongly influenced by globalized markets and competitiveness. Teachers and school leaders may therefore not always be the best experts to prepare young people for the world of work, while in most cases a structured dialogue between schools and entrepreneurs is missing.
- Publicly organized training does not systematically use the knowledge of social partners, such as employers and unions, to shape reforms and innovation.

[1] The views expressed are those of the author and not necessarily those of the European Training Foundation.

Despite of all these well known structural problems many countries opt for school-based VET at the upper secondary level. The reasons for this have little to do with economic or world-of-work arguments to use resources more efficiently.

Socio-cultural perceptions and historical pressures work against the recognition that work-based learning in VET could be a better option for many young people. This missing 'mental shift' (ADB 2008, p. 126) is exacerbated by political beliefs that technical as well as general secondary education are both a fundamental civil right the public must assure for citizens. For example, one Central Asian country recently rejected donor-driven research on the national VET system which would have closed ineffective rural VET schools with outdated programs. In addition to their education role, schools are also considered a mode of social assistance in this country where the systems for social welfare are not working well. They feed students and reduce formal unemployment rates. Schools have many functions, not just the educational responsibilities assumed by many donor agencies.

The debate among experts reveals the complexity and the constraints which many countries encounter in creating new education and training policies. The context is far too complicated as to be simply reduced to a direct economic rationale, a point that should be recognized by the agencies involved in international VET cooperation. Even in the developed countries educational policies are a matter of more than just economic criteria.

Nevertheless, there are good arguments for certain types of VET to remain in secondary schools even if organized and delivered in different ways. At least three general rationales are important for the discussion of school-based VET, coming primarily from the perspective of socio-economic development:

- future requirements of the labour force in certain sectors of the globalized economy;
- contribution from VET to economic, social and ecological sustainable development; and
- public and private investments for education and training.

In addition to an increasing level of generic and technical qualifications, two other present trends are relevant for the competencies of the future. First, in developed countries, there is a tendency to service sector dominated economies. Qualifications in the commercial and service trades rely on a combination of generic competencies and constantly changing technical skills. The technical skills and qualifications could be achieved relatively easily in school-based VET as well in inter-company training centres. The qualification profiles in these areas build heavily on general education. The technical qualifications do not require a very sophisticated infrastructure and technical equipment. Moreover, these professions have an affinity to academic studies.

This makes secondary technical education in these fields relatively cheap in terms of unit costs. If the school-based training for the service sector is combined with some internships and constant feedback from the world of work, there might be good results. Students might have a relatively easy time finding suitable employment. In Latin American countries the rates of return from technical

secondary education delivered in schools are higher than those than from general education (World Bank 2007).

Second, the globalized economy creates new challenges and threats for all countries. There is a trend in northern countries towards the knowledge society with a growing service sector and a static or shrinking industrial sector. Industrial production has been partly transferred to other countries. Formerly only production processes, which required unskilled and cheap labour, had been outsourced from the North to the South. Nowadays many middle income countries are producing at a high technological level, which requires a complex mix of general and technical qualifications for employees.

It is questionable whether school-based training centres are the pertinent answers to these challenges. Industrial and complex handicraft production needs solid training that combines the acquisition of general and technical competencies. The infrastructure is costly and constantly changing and requires work experience as well as constantly updated curricula and well trained teachers. Some countries, such as Brazil, deliver such modern industrial training in a centre based mode, because the private sector pays a levy for the costs of these centres. In a traditional secondary VET program without these funds, the training would not have economic impact and would not create employability for students.

Public secondary VET programs in dynamic industrial areas show clearly the structural deficits of school based training with outdated infrastructure and teacher qualifications. Yet these programs are still common. For example, in Egypt more than 55% of all secondary education students participate in these type of VET schools (Arab Republic of Egypt/Ministry of Education 2008).

Vocational education and training can make significant contributions to economic, social and ecological progress. But this requires, in many countries, a different focus on school-based VET and reforms that do not consider schools as the exclusive learning environment. If VET were considered in terms of increasing productivity from individuals and enterprises and contributing to more employment and self employment, the structural limits of school based secondary VET would be more evident. Many countries are strengthening ecological aspects of VET: reducing the greenhouse effect and pollution are part of many efforts, but only a well qualified labor force has suitable skills to adjust technological processes to minimize energy consumption and thus reduce pollution.

Moreover, school-based VET should be reconsidered in relation to appropriate private and public investment in relation to socio-economic development. Sometimes secondary VET is costly for the public and for private beneficiaries, and does not lead to better employment opportunities in stagnant environments. Outdated school based VET in a dynamic economy can widen the mismatch between qualifications and demand. In these cases further investments in school-based VET will not lead to high returns and general secondary education is the best 'vocational education,' because it offers more individual options and flexibility for the future rather than an outdated technical education in public schools.

Every country—including least developed countries—needs a certain segment of the labor force with solid qualifications for the modern economy. That is why VET will continue to be needed. But it is not very likely that public schools will train

specialists in high skill areas such as aircraft maintenance or telecommunication. This should be considered as a task of the private sector, which in many cases has developed intercompany training programs.

In many countries the craft and industrial sectors deliver formal and non-formal vocational training. These private initiatives are not only related to high-tech training but take place as well in the informal sector. Donors should look more carefully to these training modes rather than focusing on questionable school based systems. The only option that should be regarded cautiously is so called 'on the job training' that exploits young people rather than training them.

There are policy options in countries where the private sector has accepted that globalization changes the production process and the conditions of work constantly and with consequences for skills. A pilot stock taking of existing training activities and a well balanced country specific relation between public and private training in secondary schools might open a new dialogue between partner countries and donors. It seems therefore, that many VET schools or programs in industrial and craft trades should be closed down. But there is still a place for VET on the secondary and post secondary level to train in less costly areas of the business and service sector. More intelligent modes of delivery and stronger links from education to the world of work are required to diminish transitional costs from training to work.

Reforming VET should take into account the development of the national economy, well defined national priorities and the socio-economic environment. VET should be perceived in a socio-economic rather than only in a social context. Only policies that contain smart medium- and long-term objectives and socially agreed interests can foster systemic adjustments towards more efficiency and sustainability in VET.

The structural limits of school-based VET for future performance in some economic sectors like crafts and industry means that the initial question of this article must receive a differentiated answer:

- less training and more general secondary education in countries where a wide spread industrial and modern crafts sector does not exist
- close down school based VET for modern industrial trades in countries and regions which cannot mobilize the necessary resources for quality programs
- partly revised secondary school based VET in rapidly developing or developed countries, which agree to spend the money in public or semi public VET centres, co-financed by the private sector or
- a new division of work between the public schools and the private sector concerning responsibility, financing and conducting VET programs
- updating constantly school based VET for service sector occupations.

Targeted VET programs for special groups are necessary as well—mostly in developing countries. These programs should be context related, which is quite different from training in public VET schools.

Stephen Heyneman

At worst the question of either/or with respect to vocational education in secondary school is illegitimate; at best it is simply outdated. Since the 19th century educators have been concerned with what should constitute basic skills for everyone and what should constitute specialized skills for the few. It was common to assume that deep knowledge of science, mathematics arts, humanities and literature were for the more capable and the few, and that vocational preparation in fields such as metal and woodworking were for those who could not absorb or profitably utilize academic skills.

But with 18–22 year old university attendance rates at over 50% in many OECD countries, with increasing portions of students made up of adult learners, and with the frequent movement from community and technical colleges into universities and vice versa, past assumptions about who should prepare for the higher education labor market and who should prepare for vocational education labor market no longer apply. Moreover, the content and definition of 'vocational' has shifted. Typing used to be for secretaries in offices; now it is a required skill in some for all who wish to enter a secondary school. English used to be a language classified in the humanities; today it is a tool as necessary for a pipe fitter as a poet. Agriculture used to be targeted to those who wished to enter farming; today horticulture is a high demand business skill in the suburbs.

History teaches us that the problem with the policy of having vocational education in secondary school has little to do with vocational education; rather it has to do with the assumptions of who should learn it, and why those who learn it should be prohibited from entering selective universities. In other words the problem lies with the social restraints associated with those who learn vocational education.

Also the problem lies with exuberant claims of advocates who wrongly think that vocational education is more likely to reduce youth unemployment, prevent youth from being alienated, and cause them to not engage in anti-social activities. These social claims about the virtues of vocational education were common to all colonial authorities as well to the leaders of the independent countries in the 1960s (Heyneman 1971, 1972). Claims that vocational education was more 'practical' were endemic in the United States as a counter to the social influences on youth of the 1960s (Heyneman 1976, 1978), and following that, the same claims helped power the semi-religious push in the United States for 'career education' (Heyneman 1979).

The same assumptions help to explain the reason why vocational education had a monopoly over World Bank education assistance to developing countries between 1962 and 1980 (Heyneman 2003a), which created a significant waste of assistance because vocational and 'practical' facilities were underutilized (Heyneman 1985). It took a long time for this waste to be set right (Heyneman 1986, 1987). The prevalence of the belief in vocational education's economic efficacy helps to explain the political importance of Philip Foster's argument titled the 'vocational school fallacy in development planning' (Foster 1966) not only to the World Bank but to every development assistance agency (Heyneman and Lykins 2008). What

Foster titles the 'vocational school fallacy' however remains prominent in countries as diverse as Egypt (Heyneman 1997) and the Russian federation (Heyneman and Gill 1997). Even today, the simple lessons of having employers pay for and control the content and direction of vocational education is neglected in Europe (Heyneman 2003b).

Today, of course, vocational education belongs in secondary education, or more appropriately, it belongs to secondary school-age youth. In some instances it may be delivered through schools. If delivered through schools however, it would be wise to consider the drawbacks as outlined by Manfred Wallenborn. These include lack of flexibility, the psychological distance between the school and the workplace, and insufficient resources leading often to outdated equipment and curricula.

In other instances vocational education may be delivered through employers or private training companies. In some instances vocational education should be financed by the public; in other instances it should be financed by the employer or by students themselves. In many instances a combination of financing sources may be appropriate. The source of financing should be determined, in part, by the degree to which the vocational skills are portable from one employer to another or from one industry to another. The more portable the skills being taught, the more justifiable it is to involve public financing. But no country should prohibit those who wish to acquire vocational skills from entering a university; in fact, their acquisition should be a normal part of the education experience for everyone.

Manfred Wallenborn

Stephen Heyneman's remarks on my initial statement focus on two important issues. His comment, I understand, signals a historic and socio-cultural message. I mentioned in my comments the diverse and context related interests and attitudes of such groups as employers, trade unions, students and parents in relation to vocational education and training. This makes educational reform complex. It might even favor inefficient modes of organizing VET to respond to demands from special target groups, whether the acquired qualifications lead to employment or not.

Moreover, ongoing social and economic development is a main driver for changing perceptions of stakeholders about relevant issues in education and training. What might have been a solution for yesterday will not work today. This makes the contextualization of VET an important requirement. Emerging technologies and the need to learn new competencies have an additional impact on attitudes and interests of different social actors in developing VET.

This analysis confirms the guideline that VET reforms in developing countries must follow ownership and policy outlines related to local circumstances. The absence of coherent national reform strategies does not justify a 'we know what is best for you' attitude of donors. Today, there are many methodological approaches to establish a structured dialogue about VET reform and to develop new policy outlines based on shared ownership.

The prevailing attitudes and priorities of the partners are always derived from a specific socio-cultural background. A given context might even foster new approaches to school-based VET despite economic and structural arguments for another kind of efficient and effective practice. But this knowledge is not easy to transfer and implement in educational contexts. It would help to avoid reform policies that are overly ambitious so as to avoid implementation problems.

The economies in developing and transition countries follow their own cultural patterns but not the preferences of donors. Employers' and trade unions' considerations about their involvement and responsibility in VET are country specific as well. Private firm payments through levies for VET programs in Western Europe follow socially agreed standards whereas public responsibility in (Central) Asian countries for VET follows cultural standards but of different kinds.

Heyneman reminds us to respect socio-cultural diversity and derived educational priorities as a starting point for the dialogue with our partners about VET reform, taking into account the structural deficits of public driven VET in many fields. The economic rationale for education and training is an important cornerstone in international development of VET because resources should always be optimised. But political consensus around reform may follow the economic arguments only partly, both in developing and developed countries. New VET policies for reform are more complex. Driven by many different interests they don't look only to the economics of education. This is the reason why there always will be a wide range of different delivery modes of VET in secondary education.

Stephen Heyneman

Dr. Wallenborn is correct to point out that social demand for vocational education 'may favor inefficient modes of organization.' The problem is that the source of the demand is rarely from the families of the secondary school students and more likely to be from political authorities looking for a 'place to park' youth they believe may be dysfunctional. His comment, too, that VET in developing countries must 'follow ownership and policy outlines from the locals,' in a globalized world might be interpreted as being patronizing. Wherever situated, vocational systems should live up to common standards of efficiency and effectiveness. Wallenborn mentions that half of the Egyptian youth are allocated to vocational secondary schools. This is not a ringing endorsement of the system in Egypt, but the opposite. Donors may or may not have the right advice (I have seen both right and wrong advice from donors), but surely no developing country needs to be told 'to follow their own preferences.' I never worked in a country, developing or not, which didn't follow its own preferences. Sometimes those preferences were intelligent; on other occasions they were dead ignorant and wasteful of public resources. In the latter case a common rule should apply: the truth about their inefficiency should be public. Simply because a country is 'developing' does not mean that wasteful vocational education policies are excusable.

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