Developing Advanced Work-Based Higher Education

What Germany and the U.S. Can Learn from Each Other

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Currently, many countries are experiencing a strong renewed interest in work-based training.[1] When it comes to discussions in this field, American policymakers usually identify dual apprenticeship training as the "crown jewel" of Germany's admired skill formation system. In turn, their colleagues from Germany frequently travel to the U.S. to inform about the merits of the German apprenticeship model. However, what is often overlooked is that dual apprenticeship training at the secondary level is no longer the only way in which advanced work-based training is offered in Germany. Due to structural changes, such as the shift to the service and knowledge economy and the increased flexibility of labor markets, employers as well as individuals increasingly demand higher-level academic competences. As a consequence, so-called dual study programs in Germany have massively expanded. Dual study programs are apprenticeships offered at the higher education level and they have begun to attract high school graduates with excellent grades. In fact, in terms of recruiting talent, they can compete with prestigious German research universities for talented youth. Yet in the U.S. there are few programs that offer such a combination. Apprenticeships in the U.S. case are mainly organized through private providers or community colleges at the post-secondary level. As Lerman (2014) emphasizes, "Unlike programs in Austria, Germany, and Switzerland, the apprenticeship system in the U.S. is almost entirely divorced from high schools […]."[2] However, community colleges are usually considered a higher education pathway mainly for those who do not manage to gain access to four-year colleges (universities).

In this essay I argue that the U.S. skill formation system might profit from systematically introducing programs similar to German dual study programs.[3] Conversely, the U.S. approach to work-based higher education offers inspiration for policymakers in Germany. Thus, for example, while German higher education still functions as a rather elitist system,[4] community colleges are designed to make higher education accessible, especially for non-traditional and disadvantaged students. It follows that the two countries can mutually learn from each other regarding the development of new pathways of advanced work-based higher education. In the following I discuss German dual study programs and U.S. community colleges as well as co-operative (co-op) study programs. Then I compare the German and the U.S. approaches to show how each of them offers distinct comparative advantages.

Germany: Dual Study Programs

Dual study programs are hybrid organizational forms that integrate institutional and organizational elements from the fields of vocational training and higher education with regard to curricula, governance, and funding structures.[5] The core principle of such programs is that they combine the workplace and the seminar room as two distinct learning environments. Dual study programs are most common in economic sciences, engineering sciences, and computer sciences, but are also growing in other fields such as the health-related sciences. Students apply directly to the firm, which in turn has an agreement with a higher education organization that provides the academic part of the training. All involved parties—the student, the firm, and the higher education organization—are bound by a formal agreement and students stay with the same firm for the whole undergraduate study period. The firm is responsible for financing the in-firm training. It also pays the student a salary, which is typically equivalent to or even higher than that of traditional apprentices in the respective industry. The greatest part of the costs for the academic part of the program is covered by the state, as most dual study programs are offered through public higher education organizations.[6] However, where a firm cooperates with a private higher education organization, it usually bears the tuition fee. Dual study programs usually lead to a Bachelor's degree in about three to four years (dual studies at Master's level are still rare but also growing) and connect two didactical principles, namely practical training and scientific grounding. For example, the teaching staff is composed of both trainers from industry and university lecturers. The original type of dual study programs are those integrating an initial vocational training certificate (the so-called *ausbildungsintegrierende* type). That is, they lead to an official vocational certificate (upper-secondary level vocational training) as well as a Bachelor's degree from the higher education sector.

U.S.: Community Colleges and Co-operative Study Programs

In the following I sketch two key U.S. approaches to advanced work-based higher education: first, apprenticeship training offered at community colleges and, second, co-operative study programs offered by some U.S. universities.

Community colleges are sometimes also referred to as junior colleges, technical colleges, or two-year colleges. They typically offer a low-cost way to gain an Associate's degree in two years and tend to fulfill multiple functions: they extend both vertically from high school to four-year colleges and horizontally from very basic career training to advanced technical education.[7] As such, they play an important role especially for the respective local community in making higher education accessible also to disadvantaged and non-traditional students. The Associate's degree can either provide direct access to the labor market or to the third year of a four-year college. Community colleges also help to prepare high school graduates for higher education studies in cases when they are not yet well enough prepared for college entry (remedial education). Furthermore, community colleges are locations of life-long learning, offering, for example, credit as well as non-credit courses for adult learners.[8] Beyond that, community colleges can offer industry training through apprenticeship programs. Thus, community colleges sometimes cooperate with firms to offer the classroom-based part of an apprenticeship program.[9] A well-known example for this is the "Apprenticeship 2000"[10] program offered by

the Central Piedmont Community College in Charlotte, North Carolina. As Carnevale (2014) argues, community colleges tend to be very good at undertaking several missions; however, it is rarely the case that they excel at accomplishing any single one.[11] For instance, their success in ensuring the timely completion of studies and avoiding drop-out is varied, pointing to a substantial differentiation of community colleges in terms of quality. More generally, community colleges, which usually have an open enrollment policy, are often stigmatized and seen as an option only for those students who cannot gain immediate access to a four-year college, for example, because they do not meet the entry criteria or lack the financial means.

In the domain of universities, some four-year colleges offer co-operative study programs. In co-op programs, students usually rotate between the university and a variety of firms. However, typically the students first apply to the university and then try to find an employer that accepts them for a co-op phase. There is no general standard with regard to whether the firm pays the students a salary or whether it bears the tuition fees. Co-op programs typically lead to a Bachelor's degree, but not to a formal vocational training certificate. It is common that students complete co-op phases with different employers during their Bachelor's studies, i.e., not just with one firm. Two of the most well-known providers of co-operative studies are Northeastern University[12] and Kettering University.[13] Yet, while co-op study programs are not a recent phenomenon in the U.S., in quantitative terms they are marginal in the U.S. higher education system.

The Comparative Advantages of the German and the U.S. Approaches

Germany and the U.S. feature distinct approaches to work-based higher education. In Germany, work-based higher education has only recently become a major factor in the national skill formation system, given that the traditional domain of work-based training is the secondary level. However, dual study programs have been expanding rapidly and they are very likely to continue to increase in relevance. In the United States, advanced forms of work-based higher education are offered through community colleges but also by universities through co-operative study programs. Given these distinct approaches, what, if anything, can policymakers from the Germany and the U.S. learn from each other?

In Germany, a community college approach to advanced industry training could benefit local communities as it would facilitate access to higher education especially for disadvantaged and non-traditional students that otherwise lack opportunities to enter higher education. In contrast, traditional universities in Germany are still struggling (or indeed ignoring) to provide the support needed by disadvantaged and non-traditional students. While universities of applied sciences offer more practice-oriented Bachelor's and Master's programs than traditional research universities, they have experienced significant academic drift as they increasingly strive for research excellence and tend to target best-performing students whenever possible. One key reason for the limited openness of German universities is the elitist approach adopted by large parts of the German university leadership and the body of professors as well as the lack of financial resources. As in the U.S., community colleges in Germany could serve as a bridge to traditional universities via transfer credits. In fact, community college programs could also be added as complementary departments to already existing German universities, as it is sometimes practiced in the U.S.[14]

In addition, co-operative study programs in the U.S. can provide inspiration for the reform of dual study programs in Germany. In German dual study programs, students commit to work with the same firm for the entire duration of undergraduate studies. In some cases, this can lead to a strong dependence on this one employer who might or might not use this structural power to mainly provide firm-specific training, thus potentially limiting the students' flexibility to choose another employer after graduation. This problem could be addressed if, as in the U.S., students have the possibility to do co-ops with different employers. As a result, students would get to know different workplaces relevant to their field of study and, after graduation, can make a more informed and independent decision when choosing their future employer.

However, vice versa, dual study programs can also offer inspiration for the U.S. approach to work-based higher education. A key strength of dual study programs is the ideal of a high degree of curricular integration between the two learning environments of the higher education organization and the firm. This ideal tends to be very challenging to implement on the ground.[15] It partly derives from a long-standing German tradition of collective governance in the field of work-based training through the key stakeholders, such as educational organizations, employers, trade unions, and state agencies. A key illustration of this are dual study programs integrating a formal vocational training certificate and a Bachelor's degree (*ausbildungsintegrierende* type). In these programs, especially, the chambers are involved as they are in charge of performing the examination for the vocational training certificate. In order to foster the cooperation of all involved actors and enhance the fine-tuning between the learning experiences in the higher education organization and the workplace, it could be worthwhile to explore whether co-operative study programs in the U.S. could offer a double qualification of a Bachelor's degree and a registered apprenticeship certificate. An additional advantage of this model is that if a student realizes that achieving a Bachelor's degree is too demanding, there is still the fallback option of gaining a registered apprenticeship certificate instead of dropping out from college without any certificate qualifying for entry into the (skilled) labor market.

Another potential advantage of apprenticeship training being offered by universities is that this can serve to boost the reputation of apprenticeships overall. Experiences from countries such as Germany or Switzerland[16] show that the attractiveness of the apprenticeship training system as a whole is boosted if it in fact also offers a viable pathway for those individuals that have in fact the option to join a traditional university. If some of these students are seen to choose advanced work-based higher education, this can increase the standing of apprenticeship training in the view of students, their parents, as well as (future) employers more generally.

Strong Potential for Mutual Learning between Germany and the U.S.

As apprenticeship training in Germany is expanding (away) from the traditional upper-secondary level and moving to the post-secondary level, where it was already located in the U.S., it can be argued that the American and German systems are becoming more similar while retaining distinct comparative advantages. This essay sketched the respective transition in the German dual education system and, on this basis, asked what lessons the two countries can learn from each other today. German dual study programs may well provide policymakers in the U.S. with concepts useful to increase the curricular integration between the workplace and

the seminar room and to develop complementary high-skilled apprenticeship programs attractive enough to also encourage enrollment of high school graduates who would otherwise opt for a four-year college degree. The German system of work-based higher education, on the other hand, lacks an organizational form like the U.S. community colleges that provides an alternative, multifunctional, and more flexible form of access to work-based higher education. Furthermore, Germany could look to U.S. co-op programs for ideas how to design dual study programs in Germany in which students have opportunities to complete practical training with more than one firm. They thus widen their learning experiences and limit their risk if and when employers focus their training efforts too heavily on firm-specific skills. In any case, the potential for the successful transfer of such institutional and organizational elements is currently supported by a very strong interest on both sides of the Atlantic.[17] In developing new forms of work-based higher education to match today's increased vocational and academic skill requirements, German-American comparisons of workplace-based education and training in higher education offer insights that facilitate policy learning and innovation.

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[1] See P. Nicholson and J. Fortwengel, "European Apprenticeship: A Model for the U.S.?" *AICGS Issue Brief* 49 (Washington, DC: American Institute or Contemporary German Studies, 2015).

[2] R.I. Lerman, *Expanding Apprenticeship Opportunities in the United States* (Washington, DC: Brookings Institution, The Hamilton Project, 2014): 4.

[3] See also L. Graf, J.J.W. Powell, J. Fortwengel, and N. Bernhard, "Dual Study Programmes in Global Context: Internationalisation in Germany and Transfer to Brazil, France, Qatar, Mexico and the US," *Dok&Mat 77* (Bonn: DAAD, 2014), Open Access: http://www.ssoar.info/ssoar/handle/document/41804

[4] J.J.W. Powell, N. Bernhard, and L. Graf, "The Emerging European Model in Skill Formation: Comparing Higher Education and Vocational Training in the Bologna and Copenhagen Processes," *Sociology of Education,* 85(3) (2012): 240-258.

[5] L. Graf, *The Hybridization of Vocational Training and Higher Education in Austria, Germany and Switzerland (*Opladen, Budrich UniPress, 2013), Open Access: http://dx.doi.org/10.3224/86388043

[6] BIBB, *AusbildungPlus in Zahlen. Trends und Analysen 2014* (Bonn: Federal Institute for Vocational Education and Training (BIBB), 2015): 8.

[7] See A.M. Cohen, F.B. Brawer, and C.B. Kisker, *The American Community College (Sixth Edition)* (San Francisco: Jossey-Bass, 2014).

[8] See e.g., AACC, *Community Colleges Past to Present* (Washington, DC: American Association of Community Colleges (AACC), 2015).

[9] See e.g., J.J.W. Powell, and J. Fortwengel, "'Made in Germany' – Produced in America? How Dual Vocational Training Programs Can Help Close the Skills Gap in the United States," *AICGS Issue Brief* 47 (Washington, DC: American Institute for Contemporary German Studies, 2014).

[10] http://apprenticeship2000.com/ (accessed: 27 March 2015).

[11] A.P. Carnevale, "Foreword," in J.S. Wyner, *What Excellent Community Colleges Do. Preparing All Students for Success* (Cambridge, MA: Harvard Education Press, 2014).

[12] http://www.northeastern.edu/ (accessed: 27 March 2015).

[13] https://www.kettering.edu/ (accessed: 27 March 2015).

[14] An example is the University of the District of Columbia Community College: http://www.cc.udc.edu/ (accessed: 30 March 2015).

[15] L. Graf, *The Hybridization of Vocational Training and Higher Education in Austria, Germany and Switzerland (*Opladen, Budrich UniPress, 2013), Open Access: http://dx.doi.org/10.3224/86388043

[16] L. Graf, "The Swiss Apprenticeship System. Its Institutional Specificities and Strengths in International Perspective," *AICGS Transatlantic Perspectives Series* (Washington, DC: American Institute for Contemporary German Studies, December 2014).

[17] L. Graf, J.J.W. Powell, J. Fortwengel, and N. Bernhard, "Dual Study Programmes in Global Context: Internationalisation in Germany and Transfer to Brazil, France, Qatar, Mexico and the US," *Dok&Mat 77* (Bonn: DAAD, 2014), Open Access: http://www.ssoar.info/ssoar/handle/document/41804

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