

Swiss Apprentices Get New Futures

By Kim Hays

For someone who wants to understand the Swiss emphasis on job-related education, this article about the vocational training process is still useful, even though it was first published in 2003 in 'Swiss News' magazine. Today, as then, approximately two-thirds of all young people in Switzerland choose some form of apprenticeship in their teens; however, in comparison to 2003, many more of them now go on to attend one of the Universities of Applied Sciences. For example, this article mentions the Zürich UAS having 6,000 students; today that figure is over 20,000.

*Young people with what this article calls a *Berufsmatura* or vocational baccalaureate can get a bachelor's degree in many more subjects than were available to them in 2003. Not only economics, engineering, the building trades, and computer and other kinds of technology are open to youngsters. Now they can also study music, theater, art, food science, physiotherapy, social work, tourism, nursing, and other occupations in life and health sciences at a UAS. Primary school teachers also get their training within the UAS system.*

Currently, Switzerland has a youth unemployment rate of around 4%; in the UK it's 12% and in the Euro area as a whole it averages 20%. This article helps to explain why the Swiss do so well at finding jobs for their young people. More information is available on the website of the government's State Secretariat for Education, Research and Innovation [SERI](#).

In Switzerland, around two-thirds of the youngsters who finish their compulsory nine years of school become apprentices. But don't let the medieval sound of that fool you. It's true that the apprenticeship program in Switzerland dates back to the Middle Ages, but today it's part of a complex vocation-education program involving everything from remedial job training to university diplomas.

During the past decade, the Swiss professional-education system has been overhauled and modernized in response to several recently passed federal laws, and the revisions won't be complete until at least 2010. Despite all the changes, however, the backbone of the system remains in place: a well-supervised combination of on-the-job training and regular classroom learning. This is still considered the best way to teach young people a profession, whether it's in business management, nursing automotive engineering, or baking.

For hundreds of years, young Swiss were trained in their occupations by masters, who were authorized to take apprentices by their trade guilds. The guides eventually evolved into modern trade associations, which continued to be responsible for young workers. Not until 1930 was a federal law passed to create national standards for apprenticeships in most professions. One of the requirements introduced by this law was vocational education in the classroom as well as on the job.

Today most apprentices spend one-to-two days a week at vocational school, learning a combination of subjects: academic, like math and foreign languages; money-related, like bookkeeping and business law; and practical, like chemistry for cooks and physics for

electronics specialists. The remaining three days a week are usually spent at a bank, advertising agency, plumbing firm – wherever the apprentice can learn and practice the skills of his or her future profession and be supervised by an expert in the trade.

This pattern of training is more common in the German-speaking part of Switzerland than on the French side, where many young people have traditionally done the hands-on section of their training in workshops attached to their *écoles des métiers* (trade schools). Recently, the two approaches seem to be converging – firms in western Switzerland are now more involved in vocational education, while more German-speaking apprentices are getting their work experience in *Lehrwerkstätten* (training workshops) instead of on the job.

Hands-On at a Training Workshop: Niccolò Cacci (18), first year apprenticeship

"During eighth grade the teacher kept telling us that we had to pick a career, so I snooped at a couple of firms and decided I wanted to specialize in electronics or computer science. But I just didn't get around to applying for apprenticeships. So I did a tenth school year, and that fall I sent out 25 applications to computer companies. I also applied to electronics and mechanics firms and to the 'Lehrwerkstatt', which was the place I liked best of all. Then I waited, and in the end, I didn't get accepted anywhere. But at least I was on the waiting list at the 'Lehrwerkstatt' and finally I heard I'd gotten in. What a relief!

I started there in August and so far I'm extremely happy. It's a four-year program to become a computer specialist, and they hope we'll all do a 'Berufsmatura'

along with qualifying for the federal license. Two-and-a-half days a week we're in the workshop building equipment and learning how computers work."

Greater Flexibility

According to Hugo Barmettler of the Federal Office for Professional Education and Technology, the goal of the newly revised professional-education law (*Berufsbildungs-gesetz* or *loi sur la formation professionnelle*) is flexibility. "There will no longer be strict curricula laying out everything a scaffold-builder or an executive secretary should be taught. Instead, there will be nation-wide criteria for each profession, listing the general skills that someone in each job needs to know. This will allow schools and businesses to change the way a job is taught if the needs of the profession change. For example, until recently some secretarial colleges were still requiring stenography. It's not useful anymore, but since the regulations said it had to be taught, it was. We hope that kind of rigidity will be eliminated by the new law."

Barmettler is talking about making it easier for young people to adapt as their individual jobs and even their professions change with the development of new technologies. No longer, for example, are apprentices today trained to be one of eight types of mechanics; instead, they are trained as poly-mechanics, who have the background for all eight jobs. Similarly, the sixteen different machinist jobs that used to exist in vocational training schools have been reduced to four, and a new profession called "food technologist" has been created that combines the skills of a number of different occupations, from candy-maker to brewer.

A flexible vocational education also makes it possible for people to change professions entirely. "Youngsters who do apprenticeships have to pick their professions at 14 or 15, when many of them are really too young to know what they want to do," says Stefan C. Wolter, director of the Swiss Coordination Center for Research in Education. "So it is often the parents who guide their children's choices. In their 20s, with their training and a few years of full-time work behind them, many young people want something else. It's important that our vocational schools provide a general education, as well as the specialized theory needed for a particular occupation, to make it easier to retrain."

Changing Professions: Karin Luginbühl (43), graphic designer

"By the time I was 14 I knew I wanted to be a shop-window decorator – that was my dream profession. It took four years to train, apprenticed three days a week to a department store and attending commercial art school. For a number of years I enjoyed my profession

– I would work six months as a decorator, travel for half a year with the money I'd earned, and then come back and get another job."

At 26, I started to feel dissatisfied when I realized that there was nothing new to learn. So I spent the next seven years working as an independent furniture dealer; I took courses in carpentry and got people to teach me restoration techniques. When that fell through, I spent another year as a window decorator and was so unhappy I quit. I realized then that I had to find another profession, and that's when I got interested in computer graphics."

From then on, I knew what I wanted – I just had to pursue it. First I talked myself into a low-paying job as an intern at a multimedia graphics atelier, then I enrolled at the School of Design in Zürich, and finally I started doing free-lance work in typography and web-design to earn money to pay for my schooling and beef up my portfolio. When the internship at the multimedia place ended, I got a series of part-time jobs at different ad agencies, and last summer I completed a three-year course in typographic design. My training cost me Sfr30,000 and I have spent the last seven years working insanely hard, but now I'm content. I feel like there will always be new and interesting projects to work on, and I already earn much more than I ever could have as a window decorator."

Permeable Layers of Learning

Today's watchword in the field of vocational education is *Durchlässigkeit* – we might call it 'permeability'. What it means is that fewer Swiss are going to be trapped in dead-end jobs or out-of-date professions because they only completed *Realschule* or didn't have the credentials to go on to university. Instead, the walls that used to limit opportunity have become permeable: if they work hard enough, children with the most basic of compulsory educations can now end up at Zurich's Federal Institute of Technology; a teenager who has completed *Gymnasium* can change his or her mind about becoming a lawyer and attend one of the new Universities of Applied Sciences instead.

From Baker to Economist: Stefano Camuso (37), director, Procedo AG

"I apprenticed to a baker and got my federal baker's license in three years. Four years later, I had just signed up to take the master-baker's exam when I noticed a rash on my skin. I tried to ignore it, but it got much worse. It turned out that I was allergic to flour; there was no way I could continue in my profession. It was a shock, but I realized that after seven years of

baking, I now had a chance at the age of 22 to learn something more intellectually challenging.

I decided to do a business course with an emphasis on computer science; luckily, my disability insurance paid for it. Part of the program was a year-long internship, and my year at a large computer company went so well that they hired me back after I finished my training. I worked there five years and then went on to a software-consulting firm.

Even though I was doing very well at work, I wanted more education. So between 1995 and 1997 I studied on weekends to become a federally licensed organization specialist, and from 1998 to 2002 I went to school every Thursday evening and all day Friday and Saturday to earn a UAS degree as a business economist. Meanwhile, in March 2002, I started my own company. Now I'm taking a break from school, but in the computer field, you never stop learning.

Although the Swiss school system varies from canton to canton and even from community to community, a review of elementary, secondary, and tertiary education as a whole shows that the move toward permeability has affected schooling as early as seventh grade. All Swiss children attend primary school, which lasts six years in all but six cantons; they also attend grades 7-9, but by then most of them are split into groups. Those with the least interest in academics do three years of basic education; this is known by names like *Realschule* or *section pratique*. Those with middling academic abilities move on to what is generically called *Sekundarschule* or *section generale*. Finally, the most academically included pupils who are bound for *Gymnasium* (i.e. four years of university preparation) may be siphoned off into a program known as *Untergymnasium* or *section pré-gymnasiale*.

In the interests of increased permeability, at least eight cantons have eliminated the pre-gymnasium division of secondary school, and in the city of Basel there are no divisions at all. In addition, many cantons that separate pupils by ability are nevertheless allowing kids from both levels to take a number of classes together or to attend, for example, math class at the *Realschule* level and all other subjects in the more advanced *Sekundarschule*. According to recent statistics on this phase of schooling, which is referred to as Sek I (since it is the first level of secondary education), 28 per cent of all Sek I pupils attend *Realschule*, 57 per cent attend either *Sekundarschule* or *Unter-gymnasium*, and 15 per cent attend combined programs.

Not surprisingly, most pupils who complete three years of preparation for *Gymnasium* end up going there; most pupils who complete *Realschule* or *Sekundarschule* enter an apprenticeship program.

Until recently, this meant their chances of ever attending university were limited to non-existent. Today that has changed, thanks to two new concepts: the *Berufsmatura* or *maturité professionnelle* and the *Fachhochschulen* or *hautes écoles spécialisées*, which are referred to as Universities of Applied Sciences (UAS).

A Passport from Apprenticeship to University

If you attend *Gymnasium*, your passport to one of the 10 cantonal universities or two federal institutes of technology is the *Matura*, the diploma you earn for graduating successfully. Today, it is also possible to do enough extra class work as an apprentice to earn what is called a *Berufsmatura* or vocational baccalaureate. Like the academic baccalaureate granted by a *Gymnasium*, the *Berufsmatura* is also a passport to university, in this case, to one of the seven federal Universities of Applied Sciences.

Margaret Martin is a consultant at the Federal Office for Professional Education and Technology who has spent the last decade working to introduce the *Berufsmatura* into Switzerland. "The diploma was first granted in 1997, if you don't count pilot projects. Since then, more people have earned it every year. It's extraordinary that we were able to introduce a new educational concept so fast, achieve such high quality education within such a short time, and have it so readily accepted by everyone."

Martin explains that what made the *Berufsmatura* relatively easy to implement was that something like it was already offered in many cantons by a group of schools called '*Berufsmittelschulen*' (literally, 'professional middle schools'), which provided access to technical colleges all over Switzerland. Much of the work required to introduce the new *Berufsmatura* was a matter of achieving consistency among the programs that already existed, as well as encouraging more schools to offer it. Today, there are two models for getting the diploma. An apprentice can either work for it during the apprenticeship, going to school two days a week instead of one and taking block courses during vacations, as well as working three full days a week. Or it is possible to finish the apprenticeship and then do an extra year of schooling, either full-time or while working.

Berufsmittelschule in Electronics: Stefan Räss (43), software engineer

"I've had a very straightforward time getting my professional education. I wanted to specialize in electronics, and I applied for an apprenticeship at big firm called Hasler, which took 60 of us apprentices. During the first year we were all together, doing one day of school and three days of work a week. Then 20

of us, those with the best grades, were switched over to the 'Berufsmittelschule' [today, the equivalent of a school offering a 'Berufsmatura']. When I finished at the age of 20, I had a federal license to practice electronics and automatic access to technical college. First I took a break – I did my military service and spent some time traveling – and then I did three years of college and immediately got a job as an electronic engineer. A few years later, my firm paid for me to do a seven-month course in software engineering. And since then I've been learning on the job with the different companies I've worked for."

Stefan Wolter sees the *Berufsmatura* as a very important tool for attracting bright young people into the vocational education system. "Outside of Switzerland it is not well understood that you can become a very successful architect, engineer, computer scientist, or business manager by following a vocational education path rather than an academic one. It has always been possible, but now we've simplified the system and institutionalized it at a national level. Today a young person can complete a *Gymnasium Matura* or a *Berufsmatura* at about the same age, and both can go on to university. We want to be sure that parents and young people understand this and see the advantages of the new system."

University or Not? Helena Zulauf (17), second-year apprentice

"I've been interested in advertising since I was a kid. For half a year in 8th grade I worked every Wednesday afternoon for a graphic designer, and I organized a couple of days snooping at the firm where I became an apprentice. I used a job broker to help me get an apprenticeship there, and it must have worked, because 200 people applied, and I got the job.

Now I go to vocational school two days a week, and the other three days I work at the firm. It's great. If I manage to get a 5 {grade} average [the equivalent of a B] after three years, then I'll be able to do a fourth year and get a 'Berufsmatura'. I don't know if that will work out or, if it does, if I will want to go to UAS. Eventually, I think I want to work in marketing or for an ad agency.

Turning Sixty Technical Schools into Seven Universities

The seven Universities of Applied Sciences are an organizational amalgam of over 60 schools, most of which already existed.

They are run by the cantons, but the federal authorities help to fund them and set up minimum requirements for their courses of study. In 2001 all the UAS programs were evaluated by international peer review

for academic quality, to help the schools prepare for their accreditation at the end of 2003.

At UAS you can major in engineering, architecture, economics, management, agriculture, sports, and design, and during the next decade you will be able to add social work, music, fine arts, and health-related professions to the list. Eventually, teacher training will be there, too; at present, it is still the responsibility of the individual cantons. According to international standards of classification, the degree offered by a UAS can best be described as a bachelor's with additional practical experience; the federal government calls it "an applied, professional, science-based education."

Becoming a Teacher, 1986 vs. 2003: Karolin Weber (40), teacher and textbook author

"At 16 I decided I wanted to be a kindergarten teacher, but before I started the three-year training program, I did a year at the school of design. From 20 on I taught kindergarten, and while I was teaching, I did 100 hours of coursework that qualified me to supervise interns and also took lots of art classes. Then, in 1990, I got a job at a private teacher's training college, teaching future teachers how to do arts-and-crafts with children. Recently I was asked to write the section of the Swiss teachers handbook on art projects for grades K-4. Today, however, I wouldn't get my job without a Matura and several years at University."

The universities take different forms. The UAS of Zurich, for example, with around 6,000 students, is made up of nine schools, only two of which are located outside the city of Zurich. The UAS of Western Switzerland, on the other hand, with over 5,000 students, serves all six French-speaking cantons and has 16 different schools located from La-Chaux-de-Fonds to Geneva to Sierre.

An important fact about UAS is that you don't have to have a *Berufsmatura* to get in. Indeed, one of the universities' goals is to offer continuing education to people who are already working and want to upgrade their skills or change professions. In 2002, among the students enrolled in their first year of a UAS program, 52 per cent had qualified for admittance with a *Berufsmatura*, 17 per cent with a *Gymnasium Matura*, and 11 per cent with an entrance exam. The remaining 20 per cent were admitted on the merits of their work experience.

Thomas Kramer is a psychologist who works as a career counselor at the Professional Information Center in Lyss. He is greatly encouraged by the flexibility that recent reforms in the vocational-education system have made possible. "The whole

process is much less rigid than it used to be,” he says. “Today you can apprentice yourself at 15, get your federal mason’s license at 18, and then work at your trade until you are ready for the master-mason’s exam. If you pass, you can get into UAS and become a civil engineer, and with the UAS degree, you can even go on the Federal Institute of Technology in Zurich or Lausanne for a Doctorate.”

One of the best aspects of the whole UAS system is that if you attend the university that serves your canton or region, courses are essentially free. Nevertheless, many people still choose to attend accredited private professional-education programs, because of their reputation or great accessibility; these are offered throughout Switzerland by firms like Feusi and AKAD.

Private Night Classes: Markus Moser (23), Carpenter

“I never liked school-work; I did Realschule, not Sek. By sixth grade I was already thinking about being a house carpenter, so I snooped with two different masters, and then did my apprenticeship with one of them. It was four years of training, just him and me – the firm was tiny – and when I finished in 2000, I was already a bit bored. Still, after my military service I went back and worked a few months with my old master, then I tried four months with a furniture maker, but it was even more boring.

In April 2000 I quit making furniture and in mid-June I had to go back into the military to train as a corporal, so I got work laying wooden floors, and it was a very good job, so I’m still there. But I’ve decided that I want more education, so I’m taking five semesters of technical business courses, two evenings a week after work. When I finish at 25 I’ll be qualified to head up a project team. Until then I can keep on laying floors; the boss supports my getting an education. I don’t know if I’ll stay in the wood business afterwards or look for something else. But I don’t regret becoming a carpenter – I’m sure it will come in handy no matter what I do.”

Attracting More Women to Applied Science

In 1970, women made up only 30 per cent of the young people who finished apprenticeships and earned a federal license to practice a profession. By 2000, that figure had increased to 47 per cent and, in addition, 36 per cent of those earning a *Berufsmatura* that year were women. One of the goals of the revised Professional Education Law is to bring even more women into the *Berufsmatura* programs and the new UAS system. This will mean making technical professions more attractive to young women, the

majority of whom choose to become office workers, sales personnel, nurses, social workers, and teachers.

Traditionally, young women who have finished secondary school and want to take a few more years of general education without the strong academic emphasis of *Gymnasium* have attended a two- or three-year program at a *Diplommittelschule* or *Handelsmittelschule* (literally, a ‘diploma-’ or ‘trade-middle-school’). Apart from languages, math, social sciences, and so on, the two types of schools also offer preparation for further education, *Diplommittelschulen* in the fields of teaching, health, office work, and art; *Handelsmittelschulen* in office work and sales. Today both of these school systems are being upgraded and integrated with the *Berufsmatura* program, in part by adding hands-on training to what has up until now been mainly a classroom-based education. It is hoped that these changes will bring more women into the UAS system.

Another way to attract women into a wider variety of science-based professions is to offer new types of *Berufsmaturen*. One of these is a *Matura* in biology, ecology and chemistry that has only been offered for the past three years. Its purpose is to prepare young people for what have been nicknamed the green professions, such as farming, landscape architecture, food processing, and veterinary medicine. Frank Vincent, who has been responsible for implementing this *Matura* at the Strickhof School in Zurich, is enthusiastic about the flexibility of the program. “You can combine study for the *Matura* with an apprenticeship, or else you can do it while you are working full-time. Some people then do further study at one of the applied science universities; others go right to work – as a fully qualified veterinary assistant, for example.”

Currently, the green *Matura* is only offered at seven locations in Switzerland, but Vincent is convinced that its popularity will spread, persuading other schools to make it available.

Women and Science: Monika Räss (40), dental hygienist

“When I was 15 I thought I wanted to be a nurse, but I couldn’t start nursing school until 18, so first I did a tenth year at a girl’s school and learned a little housekeeping and simple bookkeeping, followed by a two-year apprenticeship as a dental assistant. It involved making appointments, answering the phone, and mixing the material for filling teeth. The dentist I worked for had a hygienist from the US – there were almost no Swiss in the profession then – and she loved her job and kept encouraging me to try it until she convinced me. It turned out to be very hard work, especially the chemistry lessons, since we attended

lectures with the dental students at the university. But after I finished in the fall of 1983, I had no trouble getting a good job; our school had long lists of openings.

Today there are four schools in Switzerland that train dental hygienists; the training takes three years instead of two and includes more theory. Our profession is recognized by the Swiss Red Cross, and once you have their accreditation, you can go to UAS; it's the equivalent of a 'Berufsmatura'.

The Kids at the Bottom of the Pile

Emil Weinstein is a consultant in vocational training with a broad knowledge of the Swiss education system and a thoughtful perspective. "The advantage of the apprenticeship system as a whole," he says, "is its wide spectrum of acceptance. It can absorb very bright kids, teach them a skill, and set them on their way to advanced education, and it can also absorb kids with poor grades who just managed to pass *Realschule*. But after all the ninth graders have applied to and been accepted at firms and workshops, about 10 per cent still have no place to go."

Many of the problematic 10 per cent are youngsters with non-Swiss cultural backgrounds whose lack of language skills and family support has caused them serious problems in schools. Others, Swiss and non-Swiss alike, lack the maturity at 15 to make a transition to the working world or are behind in their development. The solution for many of them is a voluntary tenth school year to encourage their strengths, correct their particular weaknesses, and build up their confidence. As a vocational counselor, Thomas Kramer has recommended tenth school years to many young people; in the canton of Bern, for example, it is more or less expected that around 25 per cent of each year's ninth graders will do a subsequent year. Since there are not enough tenth-year places within the public school system, many parents end up paying for it privately.

After the Tenth School Year: Martin Beck (29), chef

"I decided very young that I wanted to be a cook, but I didn't apply for an apprenticeship during the ninth grade because I was in the hospital getting a kidney transplant and had to do a tenth school year. Meanwhile, my father asked a restaurant-owner he knew to take me as an apprentice; I was there for three years. I didn't do any fancy cooking, but I had a lot of freedom, and I learned on my own what I couldn't learn at the restaurant, by going to the fishmonger's to find out how to fillet fish and to the butcher's to learn about cuts of meat.

At 19 I had my federal cook's license, but I decided I needed to know something about service, so I got a one-year waiter's apprenticeship at a five-star hotel in the Alps. After six months, one of the cooks quit, so my boss asked me to take over a small restaurant. For the rest of the year I worked 18 hours a day, waiting tables at lunch and cooking at night. Then I spent a year at a famous hotel in Lausanne. It looked good on my résumé, but actually all I did was clean vegetables and get yelled at – the working conditions were terrible. After that came three years at a four-star hotel in Lucerne with a gourmet restaurant. There I finally learned to do fancy cooking – cold foods, sauces, patisserie, everything – and we all worked together as a team to come up with each day's menus.

My big break was at the Marriott Hotel in Zurich, where they offered me lots of in-house courses in management and customer relations. By 25 I was the main chef of the 70-seat brasserie. I enjoy having apprentices of my own to look after: I try to give them chances to experiment and make mistakes."

Another option for kids who don't get apprenticeships is a year-long program called a *Vorlehre*, or 'pre-apprenticeship,' which – like the tenth school year – helps prepare them for the demands of life on the job. Then there is the *Anlehre*, a sort of mini-apprenticeship that teaches the basic skills youngsters need to get a simple job, like cashier or gas-station attendant. Despite all these options, however, there are still 16-year olds who are not in any kind of job training program.

The Swiss Federation of Trade Unions (SGB) doesn't think this is right, and one of the solutions it proposes is a federal law that would guarantee young people the right to vocational training after their compulsory nine years of school. At present there are many publicly funded programs throughout Switzerland offering help to untrained and unemployed young people, but the new law that the trade union association is working to introduce would ensure that a variety of job-programs existed for all of them. Much of the money for these programs, the unions propose, should come from private companies, particularly from those that don't train apprentices themselves even as they benefit from a well-trained force.

"We want to see private firms and the federal government putting more money into vocational training," says Ewald Ackermann, press secretary of the SGB; "it worries us that many companies are cutting down on the number of apprentices they train or eliminating their programs altogether."

Keeping Companies Involved

Thomas Kramer is also worried about the kids that get left out of the system and proposes the creation of federally funded workshops to teach low-skilled jobs.

As for the role of private companies, Kramer thinks that firms which train apprentices should be rewarded by the government and firms which don't should be fined. "We have to do something; too many companies are just not bothering to take apprentices."

"Millions of American teenagers have jobs while they are in high school, but none of their employers are responsible for training them in a profession," says Emil Wettstein. "That has always been the great strength of the Swiss vocational education system: that private businesses, large and small, have a formalized relationship with the schools, sharing the job of producing skilled workers in hundreds of occupations."

But Wettstein echoes Ackermann and Kramer – fewer firms today are taking apprentices. "The world of work isn't as stable as it was 50 or even 20 years ago; companies don't want to make a four-year training commitment. So a solution that is being tried is for kids to work at four different companies, instead of only one. They still go to school one or two days a week and work the other three, but they learn different skills at different companies. Suppose, for example, that an apprentice was learning to put in wiring. The first year he'd install it in brand-new houses; the second year, at another company, in old houses undergoing renovation. The third year he'd focus on installing wiring for computers at a third company. And so on. It's a solution that more firms should consider."

More Work Ahead

The modernization of Switzerland's professional-education system is not over. The federal government is busy incorporating the cantonal schools for social work, art, music, and health services into the UAS system, and it has not even begun to absorb the teacher training programs. More young people, especially girls, and their parents must be convinced of the value of the *Berufsmatura*; companies have to be wooed or whipped into taking more apprentices; and experimental solutions for the jobless 16-year-olds will continue to be tried.

Something else that has to be dealt with is knowledge inflation – the learning requirements for simpler jobs are getting harder. "Today, even a car mechanic will do a better job if he has been to *Sek* instead of just *Realschule*," says Thomas Kramer; "and bakers and plumbers need more schooling to handle the

technology they confront at work. So it's getting harder and harder for people who aren't good at school to get a good job."

But still he rejoices in the increased permeability of the system, which gives youngsters more opportunities than ever before: to explore different fields, to train in several related occupations at once, to continue their education later in life, or even to change professions completely.

"At least four-fifths of the kids I see in the eighth and ninth grades don't have any idea what job they want to do, but they still have to make a decision. Most of them go with the flow and manage to find something to hang onto, and usually it works out. But if it doesn't, they aren't trapped any more. We can thank the revised vocational-education system for that."

University at Forty: Marianne Stäubli (43), English student

"After ninth grade but before nursing school, I was apprenticed to a wholesale drugstore supplier. In my vocational classes we learned bookkeeping, typing, shorthand, and foreign languages, and I put it all to use at the office. By 22 I was a general nurse on a medical ward, but I had already decided that I wanted to teach nursing, which meant that I had to have experience in medicine and surgery. So I worked three years on different wards, did a year of practice teaching, and then spent one full-year at a school in Aarau that offers advanced training in the health professions. From mid-1987 until the end of 1990 I taught nursing, and after that I took some time off to raise three kids.

I had always loved speaking and reading English, and then a chance came up at nursing school to teach English. I took the English Proficiency Exam and got the job, which I did from 1995 to 2000. By then I realized that I liked English so much that I wanted to study it. I didn't have a 'Gymnasium Matura', but I was still able to take an entrance exam for the University of Fribourg and now I'm in my third year there, working toward a degree in English literature. I don't try to imagine how I'll use it professionally; I'm just enjoying learning.

THE PROCESS OF PICKING A PROFESSION

Age 12-13 (grade 7)

Teachers help kids to analyze their personal strengths and think about what they like to do best and least.

Age 13-14 (grade 8)

Kids talk about different jobs, visit job fairs, go as a class to publicly funded Professional Information Centers, whose staff explains how to look up information about different jobs.

Parent evenings are held at the Professional Information Centers to orient mothers and fathers to the job-search process and make sure they are aware of important deadlines.

Kids (with their parents' help) organize *Schnupperlehre* (literally, 'snooping apprenticeships') in professions that interest them: at a law office, software firm, bank, restaurant, etc. Everyone, even kids who are planning to attend *Gymnasium*, takes days or even weeks off from school for 'snooping'.

Teachers may begin to work with kids on how to apply in writing for apprenticeships; they should certainly be doing this by the beginning of the ninth grade.

Summer:

Banks, travel agencies, and some other types of firms give admission tests during the summer to potential apprentices; kids must not miss these deadlines.

Age 14-15 (grade 9)

Early Fall

By the end of September, all the applications for apprenticeships in private companies or training workshops should be sent out.

Teachers practice job interviews with their pupils, many of whom will be invited to firms for a follow-up interview.

November-January

Kids will find out where they are being apprenticed or if they are going to *Gymnasium*.

Those who aren't successful will consider a tenth school year or some sort of alternative schooling.

Age 16

The new apprenticeships, in tandem with vocational-education classes, begin in August.

Gymnasium begins in August.

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