From:

Preface

"Education that works and work that educates". In June 1994, with the support of the Handwerkskammer Koblenz, an American-German vocational education conference took place under this motto at the University of Texas in Austin. The vocational education researchers and economic specialists on this side and the other of the Atlantic were in agreement that an economic and employment policy is necessary where a systematic vocational training is as equally important as an academic education, as a "career pathway".

Since this conference in Austin the significance and the challenge of a vocational education are more up-to-date than ever. It is necessary to make concrete models for the further development of the education systems in the countries involved using the exchange of experiences and theoretical discussions. The first practical steps along these lines, which are also significant from the point of view of the educational policy, were made with the vocational training of American apprentices in skilled craft companies in the area of the Koblenz chamber.

The Handwerkskammer Koblenz has not been closely connected with the discussion concerning educational policy in the United States just since the beginning of the nineties. Based on, in part, decades of experience in training co-operation with partners in Western Europe - at the beginning in particular in Great Britain and France - the Handwerkskammer Koblenz has become more and more involved in recent years in vocational training projects and the policy on small-scale trade and industry in Central Europe, Asia and Africa. The colourfulness of the cultural conditions and the variety of forms of solutions concerning educational policy, which the Handwerkskammer Koblenz experiences during these activities, ought to form the basis for supporting "best practices" in a transatlantic dialogue on vocational education and for choosing innovative methods for vocational training. The central idea of "Transatlantic Co-operation in Vocational Education" is to invite persons engaged in educational and economic policy and practice to become involved in an education system for the great challenges of the economy and employment.

Handwerkskammer Koblenz, in May 1997

Karl-Jürgen Wilbert

Dr. Bernward Eckgold

Transatlantic Co-operation in Vocational Education:

Projects of the Handwerkskammer Koblenz with partners in the United States and in the European Union

Koblenz, May 1997

Transatlantic co-operation in vocational education:

Innovations for the economy and employment

Cross-border projects on educational courses and subject matters, on teaching methods and the new teaching media - in particular with the modern, multimedia communication techniques -, which have developed in the individual states against a background of different social traditions and economic conditions, open up the possibility of innovation in vocational education. The Handwerkskammer Koblenz with its belief in competitive ideas, in the adoption of interesting elements of education systems and in the cross-border recognition of different educational qualifications, encourages transatlantic co-operation in vocational education. It makes a contribution to flexible structures and modern professions, which are currently under discussion in German politics on vocational education in the "reform project vocational education".

In particular the discussion about and experimental employment of new vocational education strategies, which have increased in the USA since 1993, and which are supported, as is well known, by the policy of the American government, and by many federal states, have had a stimulating influence on the European dialogue concerning new elements in vocational education systems and cross-border acceptance. For some years now the Handwerkskammer Koblenz has been working on the international dialogue concerning the policies of vocational education with partners both in the European Union - from Great Britain and Ireland over France, Luxembourg and Austria to Greece - and also in the USA - above all in Texas -, and in the course of time has successfully carried out numerous projects on international partnership in vocational education. With the know-how on educational policies and on projects, which in the meantime reach as far as Central Europe and Asia, the Handwerkskammer Koblenz suggests in particular the three following sectors for transatlantic co-operation in vocational education.

- Training periods for apprentices and young craftsmen from Germany and also for American high-school graduates in the respective partner country. Depending on the existing level of training and the age of the participants it is a matter of a short, e.g. a one-month training experience, or the participation in regular training courses for several months. In each case certificates are to be issued for the knowledge and skills acquired abroad, which are to be accepted in the sending country.
- Advanced training modules and periods abroad oriented towards a final qualification for young craftsmen and other skilled persons after their initial training. The advanced training examinations taken abroad must be credited towards appropriate qualifications at home. One application which is interesting both in training policies and in the policies of small-sized businesses, is the master craftsman's examination, where efforts should be made to achieve the acceptance of various subjects or individual parts of the master craftsman's examination by the examination boards. The same applies for example to

credits from colleges in the USA or training courses in further and higher education in Great Britain etc.

• Transnational advanced training modules leading to a qualification and dealing with certain common themes, to which each of the project partners contributes his specific abilities (e.g. multimedia and communication technology, laser technology, design,

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global management in small and medium-sized companies etc. This is to be organized as a multilateral project with participation in specific advanced training modules in all the partner countries. The qualifications achieved by the participants in the partner countries are to be certified by examination boards with international members, and these certificates are to be accepted in the partner countries. This is interesting for the advanced training examinations of the German chambers, but also for new advanced vocational training examinations in the USA (e.g. the chambers of commerce together with colleges etc.). The participants for these multilateral qualifications achieve the top abilities on an international scale for the respective project theme.

These types of transatlantic projects ought to begin on a bilateral German-American level. An extension to trilateral or multilateral co-operation would then be meaningful. Starting with the bilateral partnership, further international institutions associated with the partners should participate. On the part of the Handwerkskammer Koblenz these are above all the partners in south-east England, the City College Norwich, the Great Yarmouth College (in part also the King's Lynn College) and the Norwich Chamber of Commerce. The Chambers of Skilled Crafts in Nevers, France and in the Grand Duchy of Luxembourg, and other craft associations in Ireland and Greece are suitable partners.

On the German side the training co-operation is oriented towards the medium-sized businesses, above all the skilled craft sector. The participation of other branches of the economy is desirable. The starting point in Germany ought to be the region of the Chamber in Koblenz, whereby here too there ought to be a tencency towards extensions.

The three transatlantic co-operation projects named permit the derivation of new offers and forms of vocational training, going as far as cross-border acceptance of qualifications. In order to support the conceptional work, scientific assistance from an as far as possible international research group is recommendable, and also from an advisory committee with representatives from business and the educational and economic policies of the partner countries.

Before leaving for the partner country, a condition for the participation in the transatlantic vocational training and advanced training modular system is proof of the acquired satisfactory knowledge of the foreign language and culture of and facts about the target country. An integral part of the project must also be the special preparation beforehand and the assessment on return from the periods abroad, including a project evaluation by the partner institutes.

Costs amounting to approximately 300,000 ECU in three years are expected for the various coopeation projects (without the costs for scientific assistance and the participants). The costs for the participants are calculated at a minimum of 500 ECU per month in the partner country, without the fees for possible courses and without travelling expenses.

The cross-border vocational education partnership is also interesting from the point of view of economic policy. It supports the acquaintance with foreign companies and technologies, with inter-connections in the economy and with the general social conditions in the partner country. Against this background the policies of vocational education and of the economy should strive for a promotion of the projects. It would be a desirable effect if the mutual EU/USA promotion programme for professional qualification, which was aimed until now at the college sector, could also take into account forms of vocational training oriented towards the economy.

Transatlantic Co-operation in Vocational Education:

Projects of the Handwerkskammer Koblenz with partners in the United States and in the European Union

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0. Summary: Recommendations for transatlantic vocational education projects

The forms and contents of cross-border vocational education are changing at present. In former years it was of foremost importance to look beyond the limited national borders and find understanding for other cultural, living and working habits. This must retain its high value in future, too. New tasks for a common educational policy, with particular orientation towards mobility, are arising in the European Community. The international dialogue on vocational education was given particular new impetus recently, due to the steps taken with great dedication in the last years in the United States of America (USA) to set up vocational education there between college education on the one hand and a simple on-the-job training on the other hand, a strategy against drop-outs in education and employment and for a highly-qualified vocational education. Finally an equal challenge is offered by the new co-operation possibilities with partners in the countries of Central and Eastern Europe, but also in Asia. This results in a valuable addition to the experiences concerning vocational education.

Experimental further development in the own vocational education systems, innovative offers for vocational qualifications at a high international standard, and also the support of a policy on small-scale industry and of the economic relations, particularly for small and medium-sized companies, beyond the borders are the objectives of a transatlantic vocational education co-operation, recommended by the Handwerkskammer Koblenz. The Chamber contributes to this transatlantic dialogue on vocational education with its experiences and partnerships in Europe, America, Asia and Africa. A transatlantic co-operation in vocational education seems particularly interesting under the following two aspects:

• In the member states of the European Union (EU) the imparting of "European

ability" is becoming an increasingly important criterion for the quality and attractiveness of vocational education. The further development of national education systems should therefore be oriented, among other things towards the "Europability", namely the cross-border imparting and acceptance of vocational "credits" (European Credit Transfer System), as a contribution to mobility and co-operation. This should also be pursued beyond Europe. In view of the close economic inter-connections between the European Community and North America, the integration particularly of US-American education offers and forms, e.g. in the field of new technologies, is desirable.

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Apart from this policy of integration and mutual recognition of (vocational) training units, which is oriented directly towards flexibility, particularly the great number and diversity of different educational traditions and solutions offer a wealth of ideas, which ought to be used for the further development of cross-border (national) education systems. The Handwerkskammer Koblenz has many years of experience concerning vocational education and project co-operation with partners in the United Kingdom, in France, Ireland, Greece and Luxemburg. In Germany the Handwerkskammer Koblenz led the way in this field with its apprentice-exchange project with the Norfolk Technical Colleges.

In a project partnership outside the area of the European Union, concerning the policies of vocational training, it is recommendable to also include systems of (vocational) education existing on other continents in the discussion, especially those in the United States of America. The reform discussions and projects of the federal American government and also of individual federal states, regional authorities, as well as economic and/or private groups on a regional level, concerning a better linking of the education system with the employment system, are interesting and important incentives for the further development of vocational education systems. On a medium term basis the American-European model projects could also be the basis for an expansion to include completely different educational traditions and contents, for example through partners in Central and South-Eastern Europe or Asia, with whom the Handwerkskammer Koblenz is also connected through projects concerning economic and vocational training policies and job experience projects.

In the international education sector, the Handwerkskammer Koblenz is directly involved in the discussion, due to numerous cross-border projects in Europe, but also in the USA, as well as due to studies, expert exchanges etc. The Handwerkskammer Koblenz offers to include its abilities for the development of concepts and for the implementation of cross-border

- exchange projects with apprentices, students, instructors and young skilled persons,
- methodical-didactical or curricular work as well as
- strategies concerning educational and economic policies for new forms of vocational education

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in European and transatlantic co-operations, to help with the organization of discussions about educational policies and to develop, employ and evaluate new, experimental, vocational training initiatives with international partners. Against a background where small and medium-sized companies are receiving economic support, co-operation in vocational training not limited by European and transatlantic borders seems interesting, in particular in the three following sectors:

Implementation of stays abroad during vocational training, which either serve to provide a brief look at the technology, economy, work organisation, living environment and culture of the respective country, or which enable the participation over a period of several months in vocational training, leading to a final qualification, in accordance with the respective legal regulations of vocational training in the partner country. The exchanges between apprentices of the Handwerkskammer Koblenz with partner institutes in England, Ireland, France and Austria, some of which have already been offered for many years, are an example of this, but also the project concerning vocational training for craftsmen for American apprentices in training companies in the region of the Koblenz chamber of skilled crafts. Even in the case of training periods, which do not lead to examinations, certificates ought to be developed for the achievements reached in the training phases of the international partners, which are recognized as a training module in the country sending the apprentices, perhaps as part of the dual vocational training in Germany or as a module in the British qualification scheme, or for example in US-American programmes at High Schools or Community Colleges etc. The dual vocational training system in Germany, which is based on the principal of binding national minimum training standards, permits the acceptance of qualifications achieved abroad, as

stays abroad are planned in the course of the training period, and certificates from the foreign partner for examination achievements can be credited towards the training course examination "Betriebsassistent/in im Handwerk" (managerial assistant).

Development and implementation of modular, vocational training on selected themes with the specific characteristics of the partner institutes and with the crediting of the achievements in the vocational and college training sector. On an experimental basis the achievements reached in further vocational training with the international partners are to be credited towards the comparable further vocational training or examinations of the respective partner countries. For this purpose, e.g. in the context of the German master craftsman examinations, not only should it be possible to attend parts of the master craftsman courses of the international partners, but also the certificates achieved

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abroad in the four parts of the master craftsman's examination should be taken into consideration. The possibilities which have existed so far for crediting other examinatiom achievements (e.g. from colleges/universities) for parts and/or subjects of the master craftman's examination ought to be extended as a model to certified vocational final qualifications from abroad. The same applies to the acceptance of examinations within the framework of particular legal regulations for further vocational training examinations of the chambers. This could be considered for vocational training examinations in modern technologies, business economics, design and so on.

• Establishment of a transatlantic - west European and US-American - qualifying project with a certificate for the participation in mutually-developed further training modules issued by an international examination board for further training. A multilateral qualification of this type, related to a final examination, should include on the one hand elements of practical further vocational training and work in the partner countries, and on the other hand telelearning - using modern information and communication technology on a multimedia and interactive level. Such a transcontinental, multilateral project helps in the research, use and evaluation both of experimental forms and methods of recognized vocational further training leading to a final qualification in accordance with the "added value" of the partner (for example, computer-aided technologies in a partnership with Austin/Texas), and also of new multimedia forms of learning in the sectors of demanding further vocational training, for instance in the form of "practical tele-training", as also recommended by the European Commission for short, individual adaption qualifications in a "virtual and interactive working environment".

The acquisition and proof of a satisfactory knowledge of foreign languages and cultures on the part of the participants before the project begins are a matter of course. This calls for appropriate preparation and subsequent assessment measures in the country of origin, someone responsible for looking after the partipants and the project in the country of destination and a transnational evaluation of the project.

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The proposed transcontinental partnership projects for vocational education increase the understanding and mobility in the cross-border area. In addition they contribute to the further development of vocational education systems in the partner countries by combining different educational traditions and solutions. With innovative offers of modular training and flexible courses in a cross-border programme the transnational co-operation project of the Handwerkskammer Koblenz wants, among other things, to make a contribution to the "Reform project vocational training", as discussed in early 1997 in the German educational policy. It is recommendable to plan scientific assistance for supporting the transatlantic partnership projects, which ought to be provided by a group of international academics. An advisory council with representatives from the partner countries would also be a good idea.

A transatlantic training partnership requires both conceptional and financial support through the educational policy of the partner countries. Since the local conditions and the cross-border exchange possibilities of companies and economic regions are improved by a co-operation in the field of vocational training, the economic policy of the partner countries ought also to co-operate financially. For the participation of the Handwerkskammer Koblenz in projects for the transnational planning, implementation and evaluation of modules of vocational further training leading to a final examination - preparation for the master craftsman's examination, master craftsman's examination and multilaterial qualification - costs amounting to a total of approximately 300,000 ECU are to be expected over three years. For a transcontinental project

in vocational training the costs for each participant in the individual measures (without travelling expenses and course fees if necessary) amount to approximately 500 ECU per month. In addition there are the costs for the scientific assistance.

1. The aims of the educational policy in the USA and in Europe

In the European qualification sector the European Commission wishes to support the "best practices" of the vocational training systems of the member states of the Union, which best satisfy the common objectives. The methods of vocational training systems, which have been tested primarily in the European and Asian areas, ought also to be included in the development of the US-American vocational training systems, through an international bench-marking system. In many states a great deal has been set into motion in the vocational educational policy, opportunities are opening up to develop national systems and to increase the flexibility of the individual, and the economic exchange, by means of cross-border training projects. For this purpose the Handwerkskammer Koblenz wishes to contribute its abilities, ideas and initiatives.

a) The significance of a vocational education

In its white paper "Teaching and Learning" on the educational policy of the late nineties, which was published in 1996, the European Commission emphasized the great significance of vocational training, of the equal importance of imparting theoretical knowledge and acquiring practical knowledge alternately, the improvement of the quality of vocational training with

regard to the increasing technical, economical, ecological and other demands in the materialistic and in the methodical-didactical sector, and also the necessity of a flexible and easily understandable education system. A high-quality vocational training system should also make an active contribution to the reduction of unemployment, provide incentives for economic growth, and above all create or improve the transition from school education to vocational training and occupation - up to self-employment, in particular in small and medium-sized companies. With the Union Agreement in Maastricht in 1992 the European Community also received for the first time its own competence for promoting vocational education.

As shown by the "Indicators for education systems", published in the study "Education at a glance: analysis" by the Organization for Economic Cooperation and Development (OECD) at the end of 1996, states with independent vocational training systems have a relatively low level of unemployment among youths and young people in comparison to the other groups of unemployed persons, than is the case in states with education systems based exclusively or mainly on general education. Among this last group are, according to the OECD study, Spain, Greece and the United States with unemployment rates several times higher than the other unemployment numbers. According to the OECD study, Germany, Austria, Switzerland and Denmark have vocational training systems which are oriented towards the economy and which have much better employment figures, above all compared to states with "unclassifiable" training systems, such as the United Kingdom, Sweden and Norway. The unemployment rate in the population group up to 24 years in Germany is 10 percent lower than the other unemployment rate in Germany. In comparison these unemployment rates among young people in the United Kingdom and in the USA are twice as high, or 2.3 times as high as for the other unemployment groups. Therefore, according to the OECD study, mainly apprenticeship systems lead to an unproblematic transition to qualified employment, and as a result also assure the qualified young follow-up staff, necessary in particular in small and medium-sized companies, at least in a society with western influence.

b) Examples of vocational education systems in partner countries of the Handwerkskammer Koblenz

For many years now - in part for decades - the Handwerkskammer Koblenz has been carrying out projects for vocational training and for dialogues concerning the polices of vocational training

with partners in western Europe. In particular these are partners in the United Kingdom (UK), France, where partnerships have existed for about 25 or 20 years; but also in Ireland, Greece, Luxembourg and Austria with co-operation projects since the end of the eighties. In recent years cooperation projects with partners in Central Europe and Asia, in Africa but also in the USA have been added. The experiences gained and the improvements achieved in vocational training through the mutual project work could be integrated in the cross-borner educational policy and put into practice as new approaches in vocational training. Examples of this were the controlled periods of practical training in Germany together with a French "Lycée professionell", an

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orientation for the field of training and the flexibilisation of the vocational training and advanced training courses of the Handwerkskammer Koblenz, qualifications in quality management systems with Asian partners etc. All these items represent a suitable and secure basis for a transatlantic vocational training cooperation.

In view of a technologically rapidly changing, and, thanks to the modern information, communication and logistics systems, globally connected economy, with a policy of "high skills or low wages" only the first alternative can prove successful. On this side and on the other side of the Atlantic there is an increasing emphasis to be found on vocational training. On the level of a national policy for vocational training, examples for this in the USA were the Job Training Partnership Act 1982 or the School-to-Work Opportunities Act 1994.

Even after the recent re-election of the American president, the Clinton administration placed the advancement of the establishment and development of a vocational training system in the rank of "Top Government Issues" - as is well known, the Government can only pursue an indirect (school) educational policy with a "grants in aid policy" - .The support of activities in the

individual states concerning the educational policy is to be continued. These are meant to create both a smooth transition for young people from a general education at school to a qualified - not just based on simple learning in the American sense of an "apprenticeship" - profession, and also increased competence through vocational training and advanced training. The high dropout rate in the American education system, not beginning at the college level, but already at the high school level, makes political action in favour of vocational training necessary.

The American government, as well as various US states, are determined to achieve this. Certain basic structures already exist in individual states, e.g. the "Workforce Development System for Texas" or the "Maine Career Advantage Program". These American vocational training initiatives are good starting points for a transatlantic co-operation in vocational training. Incidentally, the German Institute for Vocational Education, Berlin was involved in the development of the concept for the vocational education system in the US state, Maine.

An essential feature of the education system in the United Kingdom (UK) is the decentralised distribution of the educational authorities. In England and Wales, for example, the power over the financial and other administration for vocational training is in the hands of the Governing Bodies of the individual schools and colleges. Certain vocational training measures are carried out, on a local level, by the Training and Enterprise Councils (TEC). With the Further and Higher Education Act 1992, the Colleges of Further Education received among other things the status of a Further Education Corporation. The TEC's are responsible for the implementation of the state-financed training programmes, but also for the relationships between school and economy. The percentage of British youths, who attend a further education institution at secondary level or a college - mainly on a full-time basis - after the completion of the compulsory school period, has increased in recent years and has reached a good 80 percent.

In Great Britain vocational training schemes are traditionally offered by Further Education Institutions, by schools and also by colleges. These normally comply with the requirements of the final vocational training examinations, which are officially recognized by the business organisations.. In the technical trade sector the City and Guilds of London Institute (C & G) and the Business and Technology Education Council (BTEC), for example, are particularly important. The qualification certificates issued by the examination boards are controlled and recognized by the National Council for Vocational Qualifications (NCQV), which was established by the British Government in 1986. Skills and attainments, which can be achieved in a certain period of time and at different places, are expressed in the "Units of Competence" and credited within the scope of a NVQ- unit. Specific projects of a local Education-Business Partnership can be financed by the TEC's. Colleges and enterprise councils (TEC's) and involved chambers of commerce (e.g. the Norwich Chamber of Commerce) are suitable partners for co-operation in cross-border vocational training work.

The responsibility for the education system in Germany is determined by the federal state structure. Vocational training and advanced training are part of the responsibility of the Federal government, but on the other hand it is well-known that the vocational school system falls under the responsibility of the Länder (states). The company and the vocational school work together with regards to content and organization within the scope of the dual training system. On a regional level the self-administrative business organisations, the chambers, play a central role as independent authorities for vocational training and advanced training.

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Each year about 600,000 young people begin training in the dual system; that is more than two thirds of the annual school leavers in general education. The rules for vocational training, which originated with the considerable participation of management and work force, stipulate the minimum contents for a good 380 recognized trades in the entire country. At the same time this system offers the opportunity to acquire, at the training stage, supporting and additional qualifications, for example the qualification as "Betriebsassistent im Handwerk" (managerial assistant), parallel to training. The professional and legal competence for vocational and advanced training is primarily the responsibility of trade and industry with a system of further vocational training - e.g. the master craftsman's examination - and other advanced training in the fields of business management, technology, design, law and so on. The different vocational training, due to transatlantic co-operation.

2. Aims of transatlantic co-operation projects in vocational education

a) Synergies of the individual vocational education systems

In order to use synergies for innovations in the field of vocational training, it is recommendable to take various training sytems in Europe into account - e.g. in Germany and in the United Kingdom - and as an example initiatives in vocational training in the USA - e.g. in Texas. An example of this follows with comments on the essential features of the vocational training systems in these three partner countries:

In the United States

- long phases of orientation and transition possibilites in the education system at the responsibility of the individual and according to his/her achievements,
- regional or local areas of responsibility; more and more united, but also with "compacts" supported by individual companies for a school-to-work-system,
- great diversity of responsible organizations and offers for vocational training measures in the fields of intermediate and post-intermediate training

In the United Kingdom

• free access to vocational training offers according to individual skills and interests,

- modular qualification for specific skills and accomplishments
- awarding of certificates by examination boards in a system of recognized examination institutes,

In Germany

- training on the profession principle with a direct and comparable professional qualification for the entire sector,
- responsibility of the economy, through training in a company with financial selfadministration
- vocational training as an equally important part of the education system and as a basis for further education.

In a transatlantic training co-operation each partner country contributes its own specialities. As a result new offers can be developed, which are compatible with the national education system, and new approaches can be used as models.

b) Conditions for transatlantic co-operation in vocational education

Above all since the beginning of the first term of office of the American president, Bill Clinton, the Handwerkskammer Koblenz has been integrated in an intensive German-American education dialogue. Various, high-ranking delegations of politicians, executive personnel and experts in economy, education and science visited the Handwerkskammer Koblenz, especially in 1993 and 1995. In addition since 1993 several studies from Koblenz have been included in the reports of various project groups - appointed in part directly by the Clinton Administration. At the same time the Handwerkskammer Koblenz was involved in various conferences and discussions concerning vocational training - e.g. in Texas.

Parallel to this exchange of ideas on the educational policy, a more intensive co-operation developed between the Handwerkskammer Koblenz and companies, Chambers of Skilled Crafts, school authorities, universities, as well as a Capital Area Training Foundation Austin/Texas, initiated and financed by the regional industry and the municipal administration in Austin. As an integral part of this co-operation between Austin and Koblenz, from 1995 to 1996 American apprentices took part in normal vocational training in Germany - the length of which was reduced because of academic knowledge acquired in the USA (High School leaving

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examination). On 19.12.1996 seven male and female American apprentices were able to receive their examination certificates or certificates for successfully passing parts of the final apprenticeship examination. This project for vocational training in a skilled craft for young Americans in Germany was able to give a clear idea of the features and conditions of a dual vocational training.

At the beginning of 1995 the young people from Austin accepted the challenge of a completely different, namely a vocational training method, in a different cultural sphere and far away from their former familiar and personal surroundings. This committeent is a remarkable achievement. The necessity of finding one's way in a professional atmosphere after school education, which

many a young German often finds difficult, in spite of vocational preparation and information provided by the school, the employment authorities and the economy, together with the for American youths not unusual "floundering period" - occasionally led to a change in the choice or method of vocational education - in as far as the logical ideal American method of a college education after intermediate vocational training was not chosen.

For this reason, for the continuation of the apprenticeship project agreed between the project partners in Austin and Koblenz - but also for other mutual vocational training projects - more preliminary information about vocational training should be supplied (analog to the Career Education at High School). The selection of the interested youths in the USA should be more intensive. Apart from supplying evidence of a sufficient knowledge of German, this should also include a knowledge of the economy, politics and culture. In order to avoid disappointments and frustration among the participants, the selection in the USA should be carried out carefully and with an adequate length of time before departure to Germany.

For a project for apprentices in Germany precise details of the interested parties and the professions they wish to train for should be available about six months before the long-term stay (e.g. apprenticeship) begins, so that an appropriate training post can be found. Furthermore, before the apprenticeship begins, accommodation for the training period must be found. For a stay of apprentices or students, young qualified craftsmen or other skilled persons from Germany in the USA, corresponding preparations and a selection procedure in Europe would also have to be assured. The pedagogical department at the Handwerkskammer Koblenz acts as a professional and socio-educational liaison office, particularly for training companies and their apprentices.

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3. Transatlantic co-operation projects in vocational education

Based on national and international studies, in which the Handwerkskammer Koblenz was often directly or indirectly involved, American politicians and experts in the fields of education and economy have expressed clearly interesting fields of action concerning American vocational training policies - for example for initiatives in accordance with the School-to-Work Act - , which ought also to be elements of a transatlantic training co-operation.

National vocational training standards, economic institutions as independent authorities for vocational training, vocational training in the form of career development (and not just a training programme for certain target groups of the labour market in the anglo-saxon meaning of "apprenticeship"), the integration of the Community Colleges and the avoidance of tracking, in other words the employment of equal standards and a range of options in vocational and general education, are the important and common fixed points of a transatlantic vocational training co-operation. At the same time they are a suitable base concerning educational policy for vocational training and advanced training projects. On the basis of the existing national education systems all possibilities for flexibility ought to be used - these exist traditionally in particular in the USA, but also in Germany in the form of additional qualifications and in advanced vocational training - to develop innovative forms of vocational training together. For this purpose the three following fields of co-operation in particular can be taken into consideration.

a) Vocational training and training periods for young Americans and Europeans in their transatlantic partner countries

As a practical part of German-American training co-operation, but also as a concrete offer for young Americans, the possibility of normal or part-time participation in a dual vocational training system should still be offered. Both for reasons concerning teaching methods in a group and for reasons of stability and the possibility of the comparison and assessment of projects, the individual groups of participants from the USA in Germany or Europe - and also vice versa - ought not to have a minimum size of less than 15 young people. Apart from a good knowledge of the German language, proof of a satisfactory knowledge of German and European economy, politics, culture and the society should be provided before departure. For this purpose collaboration with institutes in the USA in the areas of culture and language or economics and language (e.g. the Goethe Institute or the Carl Duisberg Society) is recommended.

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After having passed the admission test, the young people in the USA ought to receive detailed information and documents about their training company, about social and vocational surroundings, about the place they will be staying etc. in a preparation seminar, before they leave their country for Germany. For the preparation of such stays abroad, the modern communication technologies serve the purpose well. Training preferences, which should be as precise as possible - especially in the case of the participation in a regular training course - must be submitted to the Handwerkskammer Koblenz at least six months before the training begins, whereby the time for starting participation in a regular training course ought to coincide with the

normal start of the training periods, around August.

For the young Americans a complete training period in Germany, which has been shortened due to knowledge attained at school in the USA, or a modular training period in a training company in Germany, represent qualification phases which must be used intensively. These training periods in Germany cannot be a part of a distinctive individual orientation phase or repeated amendments to the branch of training. For this purpose the young people from the USA must provide evidence that the choice for a certain branch of vocational training is more or less firm - for example by means of an appropriate period of training experience in an American company -. Support measures from the schools are also conceivable, as employed and proved in the USA to improve the transition from school-to-work, e.g. in the form of offers from the High School for Cooperative Education and for Vocational Academies, or consistently in the transition from the High School to the Community College in the form of the Tech Prep programmes.

With a background of the elementary American understanding for flexible methods of education, which as a matter of principle keep open the access to a (four-year) course of studies at college, in particular for the acceptance of a final qualification in vocational training acquired in Germany it should be meaningful, to give this offer of a training period a firm position at the end of High School and at the beginning of college studies. For this purpose concrete solutions will have to be found with the schools in the USA, which are participating in the projects, how qualifications acquired in Germany through vocational training or modules of a vocational training course can be accepted as an integral part (individual subjects) of a High School Diploma or a two-year Associate Degree or Certificate. An approach along these lines would at the same time also be interesting for the German educational policy discussion on parallel vocational training and academic qualification (qualified craftsman's certificate and general certificate of education).

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As experience with school-to-work transition projects in Texas and Maine shows, American enterprises are prepared to make a financial contribution for "career advancement" plans in concrete vocational training projects. This proved to be the case, for example, with the Koblenz apprentice project in 1995/96, with financial contributions from Texan enterprises and the integration of the Greater Austin Chamber of Commerce concerning educational policies. Whether projects like this in the USA could be supported by the federal government on the grounds of the School-to-Work Act, will have to be reviewed.

Analog to the selection process and the preparation seminars for American youths, this must also apply to apprentices or young skilled craftsmen from Germany or Europe in enterprises or colleges in the USA. In a selection process proof of a knowledge of the language, culture, society and economic policies has to be provided. The same applies for the concrete wishes concerning

advanced vocational qualifications in the fields of technology, economy, design and socialcommunications, among others. Due to the new communication technologies, information can be exchanged and processed before the training period abroad begins. In the case of a potential group of participants consisting of German skilled craft apprentices, it would be a good opportunity to offer this as part of an additional qualification as "Betriebsassistent/in im Handwerk" (managerial assistant) running parallel to the vocational training, as regular stays abroad are planned for this further vocational training, which essentially takes place at the same time as the apprenticeship.

During the apprenticeship training periods abroad represent training measures outside the place of vocational training. The first stay for young apprentices or skilled craftsmen/women from Germany in the USA could be planned for autumn 1997 or 1998. Against a background of different education systems, the project for the young German participants in the USA ought to be structured along interdisciplinary lines. After a preparation seminar, which lasts for about a week and takes place immediately before departure, the vocational training period with the American partners is meant to last about a month and finish with a certificate.

b) Attainment of the master craftsman's qualification with international advanced training modules

Advanced vocational training which takes place at an early stage in the individual training and working life (as the first element of a training process which accompanies a person through his/her life) is a promising strategy for economic success in a rapiudly changing economy - either as an independent business owner, or as a specialist on the management staff of a company.

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In the German skilled trades these functions are fulfilled by the preparation for the master craftsman's examination (professional work and advanced vocational training) and the master craftsman's examination. They guarantee new trainees for skilled craft companies in the technical, economic, legal and professional education fields. At the same time the master craftsman's examination represents an element of a business and employment policy oriented

towards the small to medium-sized companies. The qualification as a master craftsman should therefore be introduced on an international level as a contribution to an educational policy as well as to a policy concerning the small and medium-sized companies. At the same time the international recognition of this advanced vocational training should be pursued, suitable advanced vocational training modules of international partners should be admitted in the master craftsman's qualification, and the recognition of parts of these modules or of the entire module should be developed as a model. With a globalization of trade relations the integration of the master craftsman's examination in international qualification models is only logical.

As is well-known, the master craftsman's examination consists of four separate examination sections (master skills, theory of the subject matter, business management and law and the principles of teaching a profession). Academic qualifications acquired in the European Economic Area can be accepted in Germany as parts of the master craftsman's examination. In addition, due to bilateral agreements, the master craftsman's examinations in individual trades can be put on the same level. This was arranged between Germany and France, as well as between Germany and Austria by means of appropriate agreements between both countries. A consideration of foreign vocational training qualifications in individual examination subjects of the master craftsman's examination, which had not been planned up till now, ought to be tested and assessed as a model. This would result in a revaluation of advanced vocational training in all the partner countries.

The examination requirements in the practical and theoretical part of the master craftsman's examination are usually made up of a piece of personal work for the examination and a piece of work made under test conditions (Part I of the master craftsman's examination) and the examination of theoretical knowledge (Part II of the master craftsman's examination), and these in turn include individual examination subjects. The same applies to the other parts of the master craftsman's examination. Individual advanced training modules, which were acquired from and certified by the North American or European partner institutes, ought to be recognized as an integral part of the master craftsman's examination. The same ought to apply for advanced training measures of foreign training courses. For this purpose the advanced training modules in accordance with the specific characteristics of the project partners ought to

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be defined, and the participation in the appropriate advanced vocational training schemes should be made possible by means of exchange measures. The awarding of a certificate for modules on the level of the master craftsman's examination, not limited by borders, also represents an impulse towards the international recognition of a master craftsman's qualification. In accordance with the Code for Skilled Crafts, the examination boards for the master craftsman's examination are also to be included in the discussion about the acceptance.

c) Modular multilateral training in the USA and EU leading to a final qualification

The young specialists and management staff of small to medium-sized companies are the target group of a transatlantic, multilateral exchange and qualification project, which will include the specific characteristics of the project partners - e.g. the regional economy - and which ends with a mutual final certificate. This is meant to begin on a bilateral basis between Austin and Koblenz. Later the British partners of the Handwerkskammer Koblenz will be included. These are in particular the Norfolk Technical Colleges - above all in Norwich and Great Yarmouth - and the Chamber of Commerce Norwich, including its local TEC. A further step should be to pursue the inclusion of other European partners of the Handwerkskammer Koblenz, above all the chambers of skilled crafts or of commerce in Nevers (F), Luxembourg (L), Vienna (A) and Thessaloniki (GR).

A programme with several phases is to be developed and prepared: the mutual, internet-aided definition of project themes, the review of the setting of tasks and suggestions for approaches in telelearning, preparation seminars, specific periods of advanced training abroad with theoretical and practical qualifications, feed-back with the companies involved, awarding of certificates for each section by an international examining commission, and finally the evaluation and documentation of the programme. The virtual exchange, which is made possible by the new communication technologies, corresponds with the development of practical TV-instruction currently suggested by the European Commission, for conveying specific individual abilities in a virtual working and training environment, which can then be consolidated and employed abroad.

The responsible authorities for the transatlantic certification of the multilateral qualification on the European side are the chambers in Germany (examination regulations for further education) and the local examination institutions in Great Britain. In the USA experimental solutions, e.g. in the form of the co-operative education system of the four-year colleges, could be applied. Seen from a methodical-didactical point of view, the multilateral exchange combines aspects of

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direct encounters, a practical and specialized theoretical qualification, studies and exchanges over a distance by means of modern information and communication technologies. From a technical point of view the transatlantic exchange could be related to the use of advanced technologies such as computer aided design (CAD), computer aided manufacturing (CAM), stored programme system (SPS), information and communication technology (ICT) and the like, to laser and other cutting and joining techniques, to robotism, to management methods, design and so on.

Apart from the basic enlargement of professional and personal experiences through further training periods abroad, the multilateral exchange also signifies a gain in specialized knowledge and quality. The trilateral to multilateral further training has a common theme, to which the project partners contribute current research results, experience and abilities at a very high level, depending on their specific situation. The multilateral qualification would therefore be up-dated and would show new aspects in each new phase.

Altogether for the German education system the transnational co-operation projects of the Handwerkskammer Koblenz - also against a background of economic support in particular for the small and medium-sized companies - mean innovative approaches for qualifications, which can be attained without regard to borders and which support mobility, and for flexible structures in advanced vocational training. This is, for example, being discussed currently also in Germany in the "reform project vocational education" of the Minister for Education, Science, Research and Technology and of other institutes. The new British government also plays a relevant role concerning initiatives in vocational education. The same applies for the other partner countries.

d) Financing of the projects

Not inconsiderable costs are connected with a vocational training co-operation between partners in Western Europe and the USA, both for developing, preparing and carrying out the project, as well for the assessment work after the project, the socio-pedagogical support for the participants and the scientific assistance. There are also costs for the direct living expenses of the participants. In the case of training periods (for apprentices) abroad, which last longer, not only travelling expenses have to be taken into account, but also the complete living expenses in the partner country, which are considerably higher than living costs "at home". Based on the experience of the Austin-Koblenz apprentice project, these costs amount to about 500 ECU monthly for each apprentice, in addition to the expenses to be paid by the apprentice from the training pay. The project experience also shows that American companies entirely appreciate the the consequential quantifiable and long-term use of an apprenticeship and also become financially involved in the mutual vocational training project - e.g. by way of a foundation. One can assume that the same applies for German companies with regards to a training period in the USA:

During further vocational training financial burdens arise on the one hand for the participants themselves. For the group of particularly successful young qualified craftsmen and -women from Germany it was possible to alleviate these costs with the help of grants for gifted persons in vocational education from the Federal Ministry of Education, Science, Research and Technology. At the same time investigations must be carried out as to whether similar promotion programmes exist in the USA (or in other European partner countries). In addition further costs arise for the individual further vocational training measures, which are not covered by the fees for participation.

Vocational training periods abroad probably involve, to an even greater extent than university studies, becoming acquainted with companies, technologies and inter-connections in the economy. The costs for overheads and for the implementation of the programmes, as well as for the scientific assistance for transatlantic education co-operations, ought therefore to be jointly financed by the economic policy in addition to the educational policy. In the case of a transatlantic vocational education co-operation efforts should also be made to achieve support through the EU-USA education programme. In some sectors financing possibilities are also offered by the German Marshall Fund successor's programme.

In particular in the case when project participants stay for a longer period in the partner country, the different systems concerning work and residence permits, social security and taxes ought to be taken into consideration. For example it was necessary to labour through the regulations concerning fixed place of residence, residence permit, training contract and work permit for the above-mentioned apprentices from Texas, in a very short time in Germany. In principle the national regulations for residence and work permits make the cross-border training co-operations possible. A particular need for taking care of the participants arises in partnership projects, especially in longer project phases (this is guaranteed for example in the case of the Handwerks-kammer Koblenz by the Pedagogical Dept. (PA)). Twin town partnerships can also be helpful where the general care of the participants is concerned.

e) Scientific assistance for the projects

The international projects ought to be scientifically assisted and analysed both for the feedback to the transatlantic dialogue on educational policy, and also for the assessment and qualitative improvement of the cross-border vocational education projects. As a result it should be made possible on the German side to set up a connection to other projects of German-American co-operation in vocational training, e.g. of the federal institute for vocational training for the project in the US state Maine. On the USA side an interlinking with other initiatives for vocational training - for example, through the Center for the Study of Human Resources at the University of Texas, Austin - would be desirable. The University of Koblenz also has specific competent abilities in the areas of education and of information and communication technologies. An international project advisory council would also be a good idea.

f) Digression: General social and cultural conditions for vocational education systems

Vocational education, that is to say the introduction of young people to a responsible occupation through training according to the requirements of the labour market or of individual companies or of a group of companies, is dependent on historical experience, social conditions and the economic-technological possibilities in the individual countries. It is therefore no coincidence, but rather the reflection of common intellectual roots and cultural traditions, that independent vocational training systems are to be found above all in Denmark, Germany, Austria, Poland, Switzerland, in the Czech Republic as well as in Slovakia and in Hungary. These are all Central European countries which have had the same economic and social foundations of guilds, autonomous associations and co-operative economic solutions since the Middle Ages.

It is therefore also not surprising that in Greece, for example, there is no tradition of an independent vocational training system such as the dual system, as in Greek history, in comparison to Central and Western European history, there are hardly any signs of craftsmen and merchants joining together to become guilds and craft guilds or the like. In Great Britain the medieval apprenticeship system of the guilds lost more and more importance since the introduction of the liberty to establish and carry on any trade. The Statute of Artificiers of

1563 with legal regulations for the apprentice system of the craft guilds was not actually abolished until 1814, but already in the eighteenth century it had hardly any significance any more under the impression of liberal economic ideas. The deregulation, which was initiated by the British government at the beginning of the eighties in this century, finally reduced vocational training courses to a merely marginal type of training, whereas at present individual, alternating forms of training are being revived again with the National Vocational Qualifications System and alternating qualification modules of a new type of apprenticeship.

From the Middle Ages Germany and France show different political developments. In the Middle Ages the French queen succeeded in overcoming the minority powers and in setting up a strong central authority, up to the peak of absolutism in the 17th century. This was probably partly responsible for the present-day national, uniform and centralist education system in France, in which the level of the school qualification reached is usually more important than the practical qualification when starting a career for the first time. In France the apprenticeship has a greater significance merely in Alsace and Lorraine. With alternating periods of practical job experience, especially together with the Lycée Professionnel, young people who are more talented on the practical side are to be given a promising education option up to the level of Baccalauréat, and also the connection between the worlds of education and work is to be promoted.

After the dispute about colonial power worldwide and finally the English victory over France, an Anglo-Saxon tradition dominated in North America from the middle of the 18th century. The events of 1773 in Boston/Massachusetts were, however, not only the signal for the wish for political independence of the North American states, but they were also the expression of the individual striving for freedom, which manifested itself finally in 1776 in the US-American declaration of independence. Open access, the flexibility of educational courses and the local political responsibility characterize the North American education system up to the present day. Current reforms in the USA therefore continue the existing structures of High Schools and Colleges, and want to create a connection between school and company, for example by means of alternating training courses. The possibility of definitions of recognized skills certificates for the whole of the USA ought, however, to be viewed with sceptism.

The social and educational traditions and present-day fundamental orientation of the education systems, which serve as an example, show clearly that innovative forms of vocational education can be developed if there is a mutual conviction for a vocational education with economic responsibility in the context of an economic and social policy oriented towards the medium-sized companies.

4. Prospects

The transatlantic co-operation in vocational education produces new forms of vocational education by means of combining different experiences, offers of specific vocational qualifications - in particular in the fields of hi-tech, multimedia and creative design - and through the integration in the discussion concerning educational policy. On an international scale it promotes projects on the principle of best practice. With a consistent orientation towards the economy, with standards relating to a sector and special field, in particular also the small and medium-sized companies in the USA and in the EU can benefit from and participate in projects of the transatlantic education initiatives. Not only do they profit in general, due to an improved vocational education system based on internationally recognized and adopted "best practices", but by participating because they gain knowledge and skills in top areas in accordance with the specific features of the partner institutes. Therefore, on the German part suitable vocational colleges and universities ought to be integrated on a medium-term basis.

As a secondary effect the transatlantic co-operation will also promote economic co-operation between companies in the partner countries. An equal appeal is therefore made both to the companies and to the economic and (vocational) educational policy for direct integration in this transatlantic vocational co-operation and its support. After all, the co-operation also helps the understanding of the people on this side and on the other side of the Atlantic for each other, and for the cross-border co-operation - in the field of economics as well as in the political and cultural areas.

In the economic policy the course is set for the European economic and currency union and for the EURO. If education and the labour market do not want to be overrun, they must stop orientating themselves on the patterns of small, cut-off states and concentrate more on their aims.