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Take Tech – Connecting Economy and Education at an Early Stage

TAKE TECH is an EU-funded *Leonardo da Vinci - Transfer of Innovation* project and lasted from the 1st of October 2011 until the 30th of November 2013. It aimed to enhance and transfer the successful TAKE TECH method from the region of Styria in Austria to several European partner countries. This project can be seen as a well-structured example for the imperative of EU-projects to strengthen the European economy by developing innovative pedagogic and for this reason it is exemplary for the close conjunction of economy and education as a part of the European education strategy.

ADUMBRATED EMBEDMENT OF LEONARDO DA VINCI IN THE HISTORY OF EUROPEAN EDUCATION PROGRAMMES

Since its early beginning in the 1950s[2] the common European education strategy has been largely focused on strengthening the European economy by defining common and initially unaccommodating goals concerning the employment market. In the 1970s these soft approaches were concretised and in 1973 the first Directorate-General for research, sciences and education was implemented by the German, Ralf Dahlendorf (Becker/Primova 2009, 3. et sqq).

In the same year the so-called "Janne-Report"[3](European Commission 1973, 60. et sqq.) was published and this paper can be seen as a basic step towards common European education programmes. Especially in the field of education, European member states defended themselves very consequently against

[1] Brainplus (Austria).
[2] ECSC (European Coal and Steel Community) – Contract 1951 and EEC (European Economic Community) –Contract 1957. Both organisations are precursors of the European-Union.
[3] This report has been ordered by the European Commission and contains the results of an independent work-group which has been led by Henri Janne.

foreign influences and common European ideas. Education was treated like "national property" which had to be protected. Finally the European community recognised the chance of "soft influence" on national systems by using common programmes, priorities and activities and their financial appeals. This in 1976 the first European Education Programme was implemented (Gutknecht-Gmeiner 2012, 397.).

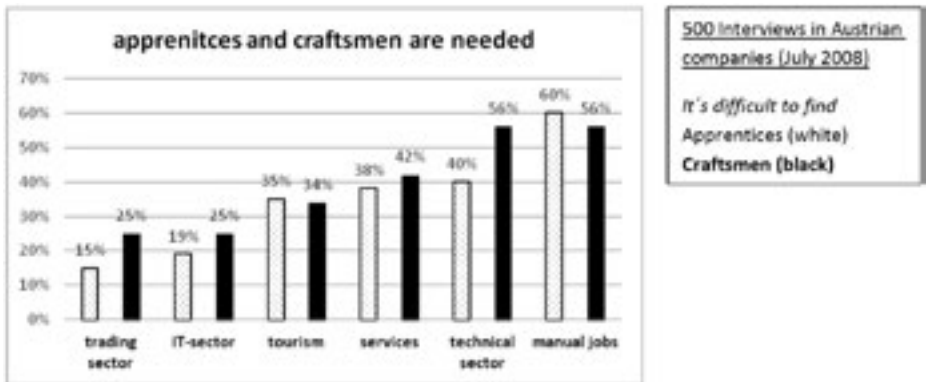
Since 1976 several European education programmes have been executed and *Leonardo da Vinci*, the programme for vocational education and training since 1995, can be seen as one of the most popular "brands" in this field. It acts directly in that sensitive divide between education and economy. Especially in the last decade and with advancing economic problems fostering the labour market and training vocational skills have become more and more essential. Product and innovation life cycles have become shorter and shorter and this fact requires a high qualitative knowledge- and innovation transfer system (Santoro/ Gopalakrishnan2000, 299.). Knowledge transfer can be seen as the sensitive link between education and economy (Locket et al. 2000, 661.) and for this reason *Leonardo da Vinci* contains the so-called "*TOI-Projects*"[4]. These transfer-projects increase the innovation potential (van Wijk et al. 2008, 836.) of all participating parties and are relevant parts of a common European way to stay innovative and competitive in the future. They enable the transfer of innovative pedagogic concepts etc. to a wider European public.

SOCIO-ECONOMIC BACKGROUND AND NEEDS

The project idea of TAKE TECH is based on serious problems in the European economy. Many companies complain of the difficulty of finding young, motivated and well-trained employees (chart 1). Especially in technical professions the European economy has a lack of thousands of young skilled workers and apprentices every year and this problem is not a typical Austrian phenomenon (chart 2). Loosing apprentices means loosing future craftsmen, innovativeness and competitiveness. Hence it is essential to attract young people´s interest in apprenticeship, especially in technical or scientific fields to keep the European Economy as innovative and creative as possible in the near future.

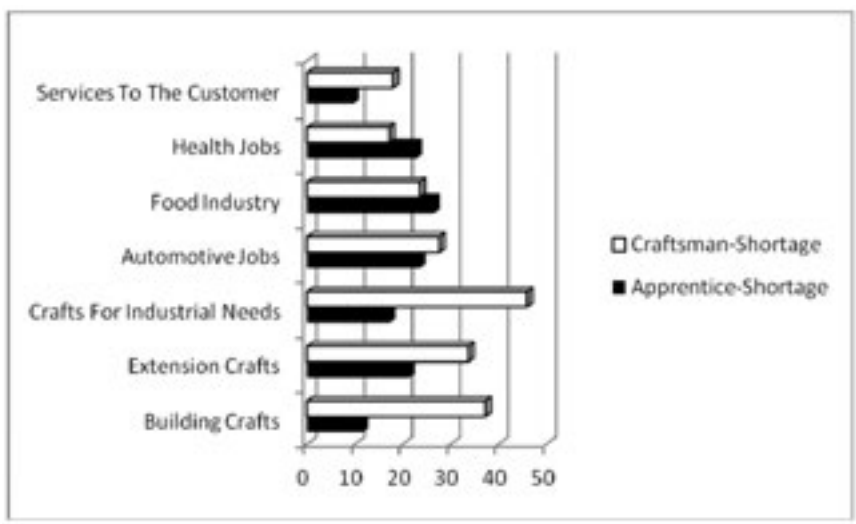
[4] TOI – Transfer of Innovation.

Figure 2: Job market situation in Austria



Source: Author's own.

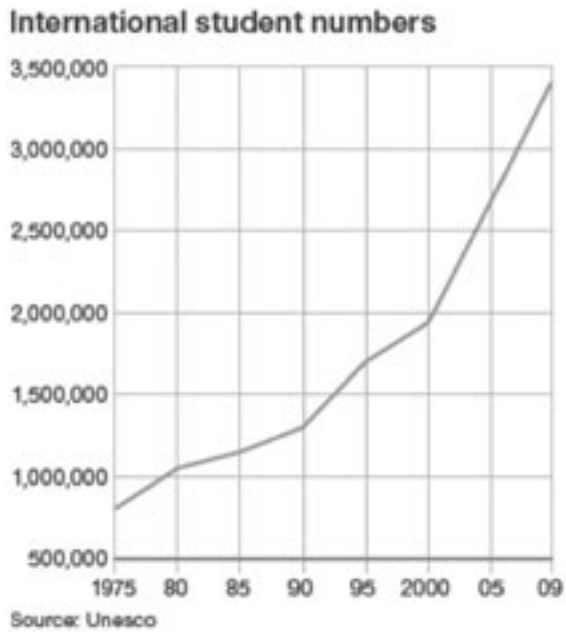
Figure 3: Shortage of craftsmen in Germany 2007



Source: http://dhi.zdh.de.

It is both an international trend and fact that young people, especially from industrial countries, do prefer higher education and more and more youngsters are studying at different universities (chart 3) now. Although many countries had to face massive economic problems in the last decade this trend is still forging ahead. Apprenticeship and manual jobs or craftsmanship do not seem hold much interest for young men and women. On the one hand a higher education level has sustainable positive effects on social structures etc., but on the other hand well-educated, trained and motivated apprentices and craftsmen are essential parts of society.

Figure 4: International student numbers



Source: www.bbc.co.uk.

The largely loose or even missing contacts between schools and enterprises, or in other words, between education and the economy are the main reasons why a well-coordinated matchmaking between schools on the one hand, who dispose of the potential craftsmen of the future, and the economy on the other hand, that could offer them profitable, interesting and promising jobs, is so important. Only a smooth cooperation between education and economy can secure a region as an industrial location.

Consequently in 2009 the SFG-Styrian Business Promotion Agency (www.sfg.at) launched a regional initiative on behalf of the Economic Department of the Government of Styria, which is still running quite successful. The aim was to give companies the opportunity to inform students of the broad scope of activities and excellent career prospects they offer in technical and scientific professions. Young people aged between 8 and 18 from all types of schools in Styria are provided with a wider, more sensitive and more objective view that will help them to make informed decisions on their professional future. Furthermore, the initiative intends to counteract current trends leading away from traditional apprenticeships as mentioned before. Specifically targeted, well-coordinated and sustainable matchmaking activities, combined with specific training contents for both parties, teachers and enterprises, are the ideal solution to bring the fields of economy and education together.

STRUCTURE AND CONTENTS OF TAKE TECH

In its entirety TAKE TECH consists of a number of individual measures, e.g. seminars, workshops for teachers and companies, company visits etc. The matchmaking activities as part of TAKE TECH company visits that take place during the regular „TAKE TECH Action Weeks" are the final point of the initiatives. Each year in June/July, companies have the opportunity to register with TAKE TECH and inform the organisers of their individual focus and special demands. During the summer months, preparation work and a pre-selection of schools matching the demands of the respective companies are carried out.

Schools interested in TAKE TECH can register at the beginning of the school year. They also have the opportunity to present their content-related and technical focus to the organisers at this early stage. The general rule here is that the earlier and the more detailed all information and individual demands are communicated, the more success can be achieved.

After that, the matching stage begins. At this phase, the wishes and demands of schools and companies receive special attention. In the time before the "Action Week" in November, both sides can prepare for their joint work in the future, supported by personal coaching, numerous preparation workshops and seminars, as well as networking events. During and after this week, interested pupils can post comments on the Take Tech Facebook site where they can also take part in a competition. Furthermore companies have the opportunity to present themselves on that Facebook site and get in touch with pupils, teachers, parents and other companies.

After the "Action Week" further common activities are organised in order to consolidate the contacts established and prepare schools and companies for the extension of their networks. This way, TAKE TECH accompanies its partners throughout the entire year, forming a closed circle.

The goals of TAKE TECH can be summarised as follows (step by step):

- provide information and training opportunities for teachers of all grades to help them with the preparation and follow-up of company visits,
- provide information and training opportunities for representatives of companies to facilitate target-group specific preparation, execution and follow-up of company visits for students,
- promote communication and cooperation between schools and companies,
- eliminate prejudices against apprenticeships and other forms of professional training in technical and scientific fields,
- raise awareness in companies of the power and relevance, but also of the needs of students as a „resource",
- increase the quantity and quality of students who wish to enter a career in a technical or scientific field,
- increase the density of qualified staff in companies,
- secure innovative power and thus competitiveness within the European economy in the medium and long term.

Summarising, it can be stated that TAKE TECH is a collection of various concerted measures that form an ideal tool to strengthen the European economy by giving companies access to the important resource „student". Therefore, TAKE TECH represents the perfect symbiosis between schools and companies, which is of immense importance for Europe as a business location.

THE EU-PROJECT TAKE TECH

Due to the overwhelming success of TAKE TECH on a regional level it was decided to expand the initiative to other European regions. With the goal to establish and spread TAKE TECH on a European level, the EU-project TAKE TECH was developed by the company *brainplus-Projektmanagement Schabereiter* (www.brainplus.at) in cooperation with a number of partner institutions. It is part of the EU Leonardo da Vinci programme and aims to strengthen Europe as a business location by, as was already mentioned, bringing companies and schools together and arousing young people's interest in technical and scientific professions. Thus in spring 2011*brainplus* wrote the proposal which was positively evaluated by the Austrian national agency.

Figure 5: Logo "Lifelong Learning Programme"

Source:http://ec.europa.eu.

A multi-professional project team with members from countries with very different economic structures was established. The task of this team was to ensure the long-term success of the project and achieve the highest possible level of quality:

The *Styrian Business Promotion Agency SFG* from Austria and „inventor" of TAKE TECH operated as a lead partner. Mr. Schabereiter from *brainplus* acted as a sub-contracted project-manager and was responsible for project management and project coordination.

The *Styrian Economic Society (STVG)* from Austria maintained a close partnership with SFG and carried out numerous TAKE TECH measures in cooperation with SFG. The Styrian Economic Society has at its disposal personnel with a high level of pedagogical expertise and was therefore mainly responsible for educational matters.

The *Union of chambers of commerce of Veneto* (EIC) from Italy disposes of a vast network within the Italian economy. With its ability to open the doors to Italian enterprises and facilitate successful cooperation with them, EIC was an essential partner for TAKE TECH.

The same applies to the Bulgarian *Chamber of Commerce and Industry Dobrich (CCI Dobrich)*, although it has to be mentioned that this is apart from its close ties to Bulgaria's national economy.

The *Central Transdanubian Regional Innovation Agency (KDRIU)* is a regional facility from Hungary, which is mainly dedicated to the promotion of economic development. Within in the project KDRIU organised the course "Train the Trainer".

The Greek youth organisation K.A.N.E played an essential role in the success of the project and has been primarily responsible for „TAKE TECH in schools".

Junior Achievement EESTI (JA) is an Estonian organisation, which offers a variety of training for teachers. With its focus on teachers, JA covered the third side of the „Take Tech triangle" between students, companies and teachers and thus ensures a holistic project approach.

Roughly speaking, the EU Project TAKE TECH focused on two main aspects:

a) Further development of the existing TAKE TECH modules in specific areas

b) Transfer of the TAKE TECH methodology to the partner countries

a) Further development of TAKE TECH

As part of the EU project two separate modules, „TAKE TECH in schools" and „TAKE TECH in companies", have been developed and written down in two separate handbooks in addition to a general project information handbook. Each handbook was written and designed differently to reach the very different target groups of schools and companies. Furthermore a TAKE TECH film has been produced for informational use. All products have been based on already existing working documents, extended by numerous tools and methods which are the basic part of transferring TAKE TECH.

b) Transfer of the TAKE TECH methodology

The core and main purpose of the entire project was the transfer of the extended methodology to the following partner countries: Bulgaria, Estonia, Greece, Italy and Hungary. Therefore, a centralised training programme for TAKE TECH trainers had to be developed. All documents have been translated into all partner languages, so the courses can be held on a national level in the partner countries.

DISSEMINATION OF TAKE TECH

With the website www.take-tech.eu a platform has been established that informs of TAKE TECH´s contents and goals and provides support for those involved in the project. It has been translated into all languages of the partner countries, maintains its own download area and provides a list with useful contacts to national partners. A TAKE TECH film is available in the download area of the website and informs of the project and its goals. It can either be used in an educa-

tional context as an inspirational opening video for teaching units or shown as part of TAKE TECH events and trainings as well as seminars and workshops.

Furthermore an Austrian Facebook site http://facebook.com/sfg.taketech was installed where schools can present themselves and users can post comments and inform each other of TAKE TECH companies. The site can also be used to prepare students for company visits. Added to which, companies have the chance to present themselves to students as attractive future employers with excellent career and training opportunities.

SUMMARY

After finishing the EU-project it can be stated, that it has been really successful. About 170 companies and more than 4,000 pupils from several European countries took part in the different TAKE TECH activities and TAKE TECH will be continued in Austria and adapted in some other countries. The project has shown that it is necessary to connect economy and education to strengthen the competitiveness of the "company Europe". Actually both sectors can be seen as very different "worlds", but it is an absolute must to bring them together. Only a strong unity of both parties will be successful in the future.

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HUNGARIAN SUMMARY

A TAKE TECH az Európai Unió Leonardo da Vinci – Innovációtranszfer projekt által támogatott program, amely 2011. október 1. és 2013. november 30. között zajlott. Célja a Stájerországban sikeres TAKE TECH módszer elterjesztése volt számos európai országban. A program egy jó példája az európai gazdaság Európai Unió által szorgalmazott innováció és oktatás révén történő fejlesztésének. A tanulmány a projekt főbb elemeit mutatja be.